

6 Biodiversity

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6.1 Introduction

This Chapter includes additional information following Dun Laoghaire - Rathdown County Council (DLR CC) decision to request Further Information dated 25th May 2026 in respect of LRD26A/0051/WEB. In the interest of clarity and transparency, the additional information is shown as tracked changes to this document including any deletions arising from changes made on foot of the further information request.

DNV was commissioned by the Oval Target Ltd to prepare this Biodiversity Chapter in relation to an Environmental Impact Assessment Report (EIAR) prepared for Proposed Amendments to the permitted Large-scale Residential Development (LRD) on lands at St. Teresa's (Craigmore), Temple Hill, Monkstown, Blackrock, Co. Dublin, hereafter referred to as 'Proposed Development', 'Proposed Amendments' or 'Site' when referring to the application Site Area (ABP Ref: TA06D.312325, DLRCC: ABP30380419).

This Biodiversity Chapter 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, 2024) and supplemented by the National Roads Authority (2009) guidelines for Assessment of Ecological Impacts of National Road Schemes. This NRA guideline is considered a relevant and widely accepted reference for ecological assessment in Ireland. Although originally developed for road projects, the guidelines provide a robust framework for Ecological Impact Assessment (EIA), including the valuation of ecological receptors, impact assessment, and mitigation planning. Their methodology aligns with best practice standards such as those set out by CIEEM and is frequently applied across various development types. Inclusion of these guidelines supports consistency, transparency, and professional rigour in the biodiversity chapter of an EIAR.

The purpose of this Chapter 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 effects.
- 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.

6.1.1 Quality Assurance and Competency of Experts

All surveying and reporting have been carried out by qualified and experienced ecologists and environmental consultants. CBH is the author of this Report. BMS contributed to the desktop study. BMcC and TR both completed the breeding bird surveys on Site. SH completed the initial surveys, while LG completed the detector deployment surveys on Site.

BMS is a seconded Ecologist with DNV and has both a BSc (Hons) in Ecological and Environmental Sciences, and an MSc in Carbon Management from the University of Edinburgh. BMS has experience in environmental and ecological data collection, field surveys and report writing and has previously undertaken projects in natural flood management and invasive species mapping. BMS has recently gained experience specifically in undertaking desk studies for stage 1 and 2 ecology notes, Appropriate Assessment (AA) screenings and has supported in the preparation of various ecological reports.

BMcC is an Ecologist and experienced Ornithologist with 12 years of bird survey experience. BMcC is a longstanding and active member of Bird Watch Ireland and has provided Ornithology survey work for ecological consultancies, e.g., vantage points surveys of gulls, terns, raptors, waders, and wildfowl; hinterland surveys of the above as well as riverine species; and breeding waders and country birds. BMcC is highly experienced with all survey methodologies and with surveying all species groups of Irish birds and migrants.

TR has a B.Sc. in Environmental and Natural Resource Management (Hons) and a Post-Graduate Diploma in Environmental Management with GIS. TR is an experienced Ecologist who has specialised in ornithology and terrestrial mammals with over 8 years' experience in ecological consultancy along with a lifetime of personal interest and experience in wildlife management. TR has extensive field experience with further experience and competencies in desktop research, preparing AA Screening Reports, EclAs, Bird Activity Reports and detailed Species-Specific Maps. His ability to deal with and understand a range of species, survey methods and habitats is excellent, having an in-depth knowledge and understanding of EU and Irish legislation.

SH has a B.Sc. (Hons) in Zoology and a Ph.D. in Marine Ecology from University College Dublin, with three years of experience in ecological consultancy to date. SH has a wealth of experience in desktop research, large data analyses, literature review and reporting, as well as practical field and laboratory experience including habitat mapping, invasive species surveys, freshwater and marine fish surveys and environmental DNA analysis. SH has prepared several Stage I and Stage II AA Reports and EclAs. Additionally, SH has authored and supported the preparations of a number of Biodiversity Chapters for Environmental Impact Assessment Reports.

LG is a Senior Ecologist with 5 years of experience in Ecological Consultancy. With a B.Sc. in Zoology (Hons) and a M.Sc. (Hons) in Wildlife Conservation and Management from University College Dublin LG is experienced in desktop research, literature scoping-review, and report writing, as well as practical field experience (e.g., Bat surveys, habitat surveys, invasive species surveys, wintering bird surveys, large mammals, fresh water macro-invertebrates etc.). LG's MSc thesis was a literature scoping review on the ecosystem services provided by Irish bats. He has also completed best practice guidance courses on bat survey and mitigation techniques such as: 'Bat Ecology & Survey' and 'Bat Impacts and Mitigation' both held by CIEEM. LG is experienced in compiling Biodiversity Chapters of EIARs, EclAs, AA Screening and Natura Impact Statements (NIS) reports, and in the overall assessment of potential impacts to ecological receptors from a range of developments. LG is also a Qualifying member of CIEEM.

CBH is a Senior Ecologist with DNV and has a BSc. (Hons) in Wildlife Biology from Munster Technological University (formerly ITT). CBH has a wealth of experience in desktop research, literature review and reporting, as well as practical field and laboratory experience including experience in surveying habitats, plants, bats, birds, mammals, and invasive species. CBH is experienced in the preparation of Preliminary Ecological Assessments (PEA), EclA, and Stage I/Stage II AA Reports, as-well as ornithology reports for renewable energy projects (wind and solar technology). Additionally, CBH has completed, and supported the preparations of several Biodiversity Chapters for EIARs. CBH is also a Qualifying member of CIEEM.

All bat-related surveys, data analysis and reporting were prepared/carried out by CBH, LG, Caitlin Markey (CM), and Kelly Macken (KM).

CM was a 2025 Intern Ecologist with DNV and has a B.Sc. (Hons) in Zoology from University College Dublin. CM has experience in data collection, ecological modelling, report writing, animal handling, and field surveying, including invasive species sampling, animal behaviour monitoring, species identification, and habitat sampling. CM has partaken in projects across marine, freshwater and terrestrial systems, focusing on ecological impacts and invasive species, and has contributed to relevant reports and academic research.

KM is a Graduate Ecologist with DNV and has a B.Sc. (Hons) in Environmental Biology from University College Dublin. KM has a range of fieldwork experience including mammal, bird, and amphibian surveys in addition to freshwater ecology research. Her deskwork experience includes

bat call analysis, habitat mapping, and report writing. KM has contributed to the preparation of several Stage 1 AA Screenings, Stage 2 Natura Impact Statements (NIS), and Preliminary Ecological Assessment reports.

6.1.2 Relevant Legislation and Policy Context

An ecological impact assessment is a process of identifying, quantifying, and evaluating potential effects of development-related or other actions on habitats, species and ecosystems (CIEEM, 2024). The Proposed Development is sub-threshold for an Environmental Impact Assessment (EIA) under the Planning and Development Regulations 2001, as amended.

When an EclA is undertaken as part of an EIA process it is subject to the EIA Regulations (under the Planning and Development Regulations 2001). 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 are a number of pieces of legislation, regulations and policies specific to ecology which underpin assessment of the likely significant effects of the Proposed Development on the receiving biodiversity environment. 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'.
- Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EIARs), Environmental Protection Agency (EPA, 2022).
- 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.
- Flora (Protection) Order 2022.
- The Planning and Development Act 2000 as amended.
- The Planning and Development Act, 2024, as amended.
- 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 the Wildlife Acts (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:

- Dún Laoghaire-Rathdown County Development Plan 2022 – 2028
- Dún Laoghaire-Rathdown Biodiversity Action Plan (BAP) 2021 – 2025

Further details on legislation and policy relevant to the Proposed Development are detailed in Volume III, Appendix 6-I, of the EIAR.

6.2 Study Methodology

This Biodiversity Chapter has been undertaken to support the Proposed Development planning application and assesses the potential impacts that the Proposed Development may have on the ecology of 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.

6.2.1 Scope of the 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 significant effects at the appropriate stage of the Proposed Development.

6.2.2 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 December 2023 and updated in November 2024 and June 2025, relied on the following sources:

- Information on species records and distributions, obtained from the National Biodiversity Data Centre (NBDC) at maps.biodiversityireland.ie;
- Information on Floral Protection Order (FPO) Bryophytes database at dahg.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://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=9cf2a09799d74d8e9316a3d3a4d3a8de>; and
- 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 6.14 References.

6.2.3 Bats

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 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:

- 13.000000: Low.

- 13.000001 - 21.333300: Low – Medium
- 21.333301 - 28.111099: Medium
- 28.111100 - 36.444401: Medium – High
- 36.444402 - 58.555599: High

Additionally, the NBDC website (www.nbdc.ie) was also interrogated for historical records of bats within the R55 10km grid square. According to Collins (2023), Irish bats typically have a Core Sustainment Zone (CSZ) of under 5km. A CSZ is defined as “the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost”. A study by Sheil et al., (1999) found Leisler’s bats (*Nyctalus leisleri*) had a maximum foraging range of 13.4km. A similar study by Waters et al., (1999) found Leisler’s bats flew a mean maximum distance of 4.2km from the roost. The NBDC database offers a maximum search range of 10km. Therefore, this distance was chosen as the most suitable range to assess the effects on bat foraging and commuting.

6.2.4 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, 2024). 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).”

6.2.5 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 EIA reports such as this Biodiversity Chapter 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., effects 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 Biospheres; and
- Regional development plans to identify any remaining sites or areas designated for nature conservation at a local level.

6.2.6 Field Surveys

A suite of ecological surveys have been completed on Site to date. To determine the likely ecological constraints at the Site, a multidisciplinary walkover field survey was carried out on the 6th of April 2023, and repeated on the 11th of April 2025. These surveys covered the following aspects:

- Habitat mapping to level 3 (Fossitt 2000)
- Preliminary Bat Roost Assessment and Habitat Suitability Survey
- Bird Scoping Survey
- Invasive Flora Survey
- A search for signs of protected fauna (e.g., mammals, reptiles, amphibians)

All surveys were carried out at the appropriate time of year by suitably qualified ecologists. Details of the survey methods are given in the below sections.

6.2.7 Previous Surveys by Scott Cawley (2020-2021)

A number of surveys have been carried out at the Site in respect of the previous planning applications. These are listed in Table 6.1. All previous surveys were carried out by Scott Cawley Ltd (2018-2021).

Survey	Survey Year		
	2018	2020	2021
Habitats & Flora (incl. invasive species)	March (3 surveys)	-	May (1 survey)
Mammals (excl. bats)	March (3 surveys)	-	May (1 survey) <u>Camera traps deployed:</u> 17 th Feb – 12 th March
Bird activity	March (3 surveys) June (1 survey)	-	10 th June
Owl survey	-	-	27 th May
Bats	No dates given		

Survey	Survey Year		
	2018	2020	2021
Internal and external roost assessment of buildings and roof spaces	March (1 survey)	December (1 survey)	February (1 survey)
Dawn/Dusk surveys	May (1 dawn survey) June (1 dawn survey)	September (1 dawn + 1 dusk)	May (1 dusk survey) June (1 dawn survey)
Static detectors (2 no.)	25 th May – 7 th June	-	-

Table 6.1 Surveys carried out at the Site of the proposed development in respect of previous planning applications. All surveys in this table have been carried out by Scott Cawley Ltd (2018-2021).

These surveys concluded that the Site contained a badger (*Meles meles*) sett with limited activity, was home to a family of foxes (*Vulpes vulpes*), and hosted a variety of common, mostly urban bird species. The Site was deemed to be unsuitable for bird species associated with SPAs in the vicinity of the Proposed Development.

6.2.8 Habitats and Invasive Flora

A habitat survey of the Site was conducted by DNV on the 6th of April 2023. 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. The results of this 2023 survey were then ground-truthed during the follow up walkover survey completed on the 12th of August 2025.

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.

6.2.9 Bats

6.2.9.1 Preliminary Bat Roost Suitability Assessment

A daytime inspection of the Site was undertaken on the 6th of April 2023 and repeated on the 12th of August 2025, and on the 15th of April 2026. 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. Buildings and 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 and interior 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).

Buildings were assessed for cracks and crevices, or entry points to the roof that might support roosting bats, while trees were searched for Potential Roosting Features (PRFs) such as hollow trunks, knot holes, peeling bark, splits, cracks, and crevices (Collins 2023; Andrews 2018). **In addition to this assessment, a single Horse Chestnut tree was also inspected with an endoscope on the 06th of May 2026.**

Collins (2023) recommends that structures and trees are assessed for their ability to support roosting bats under separate categorisations using professional judgement. Sub-categories to consider for structures are as presented in Table 4.1 (Collins, 2023):

- Negligible – No suitable features observed, however, a small element of uncertainty remains;

- 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 according 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 Mobile Elevating Work Platform (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.

6.2.9.1.1 Endoscope Survey

As aforementioned, an endoscope survey was completed on a single Horse Chestnut tree on the 6th of May 2026 (Figure 6.1). Endoscopes (or inspection cameras) are used during targeted internal inspections of Potential Roost Features (PRFs) where direct visual inspection is not possible (e.g. cracks, cavities, bridge voids, culvert joints). They are:

- Used to confirm presence/absence of bats or bat evidence within inaccessible features.
- Typically performed part of a Preliminary Roost Assessment (PRA) or detailed inspection survey.
- Do not replace emergence/re-entry surveys where suitability is moderate-high.

An endoscope survey can be undertaken year round, but are most effective when bats are active (spring – autumn) for confirmation of occupation, with care taken when completed during the hibernation period. The camera is carefully inserted into the PRF, using minimal lighting, and slowly rotated to systematically search for the presence of bats, droppings, stains/grease marks, feeding remains, and scratch marks.



Figure 6.1 Showing endoscope inspection of Horse Chestnut Tree during the 2026 bat surveys.

6.2.9.2 Preliminary Bat Habitat Suitability Assessment

A Bat Habitat Suitability Assessment was carried out in conjunction with the roost assessment on 6th of April 2023 and again in August 2025. 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.

6.2.9.3 Bat Activity Transect Survey

The Site was assessed by an experienced ecologist in relation to the potential bat foraging habitat and commuting routes. The survey was undertaken to best practice guidance (Collins, 2023 and Marnell et al., 2022) during suitable weather conditions, as detailed below in Table 6.2. The

surveyor was equipped with a Elekon Batlogger M2 detector and powerful L.E.D. torch and head torches and followed the route shown in Figure 6.2 below.

The survey started at sunset and continued for 2-3 hours, along a predesigned transect route with regular point counts, as presented in Figure 6.2.

Survey no.	Date	Sunset Time	Start Time	Finish Time	Weather Conditions	Limitations
Transect Survey 1 of 1	20/05/2025	21:28	21:00	23:00	Start of survey: Dry, wind Beaufort F0, Cloud cover 4/4, visibility 4/4, temp 13oC. End of survey: Dry, wind Beaufort F3, Cloud cover 4/4, visibility 4/4, temp 12oC.	Please refer to limitations section.

Table 6.2 Survey Effort for Dusk Activity Transect Survey undertaken at the Site.



Figure 6.2 Showing Transect Route covered during Dusk Bat Activity Survey (2025).

6.2.9.4 Bat Static Surveys

Static detectors (SM4-FS) statics were deployed to sample the bat activity and species assemblage using the Site during this period of the active season. It is noted that while best practice was referred to in the set up and completion of bat surveys on Site, difficulties arose which necessitated adapting the approach to ensure health and safety of surveyors on Site, please see section 6.3.5, limitations for further information.

The statics were deployed by experienced surveyors who chose two locations with differing features at the Site with potential bat suitability so as to accurately capture a snapshot view of activity on Site, with a focus on suitable habitats.

As such; static 1 was deployed within the woodland to the southwest, and static 2 was deployed within the mature treeline to the northeast, deploying in these two habitats also allowed for a comparison of feature preference by commuting and foraging bats. Both statics were attached to suitably sized trees at both locations.

A final third static; static 3, was deployed in St. Teresa's House to determine its potential for use as a roosting location. The methodology of the static deployment followed the guidance outlined by Collins (2023) and Marnell et al., (2022). Statics were deployed for a minimum of 5 nights, with recording commencing 30 minutes before sunset and terminating 30 minutes after sunrise. Details of Deployment dates and locations are shown in Table 6.3 below. Static Detector Deployment locations are shown in Figure 6.3 below.

Date	Survey Type & Location
11 th June to 16 th June 2025	Static detector monitoring (Static 1 – SW wood)
11 th June to 16 th June 2025	Static detector monitoring (Static 2 – NE mature trees)
12 th August to 18 th August	Static Detector Monitoring (Static 3 – St. Teresa's House)
Not Deployed (see Section 6.3.5, Limitations)	Static Detector in open grassland Habitat

Table 6.3 Survey Effort for Static Detector Surveys undertaken at the Site (2025).



Figure 6.3 Static Detector Locations at St. Teresa's during 2025 bat surveys.

6.2.9.5 Bat Dusk Emergence Surveys

An updated PBRA was completed on the 15th of April 2026, per Section 6.2.9.1 above, in order to have a complete and current assessment of conditions on site, which would determine the level of survey effort required to complete dusk emergence surveys at St. Teresa's for the 2026 survey period.

Dusk emergence surveys were carried out at the Site during the 2026 season. The aim of the dusk emergence surveys was to observe if bats are emerging from the identified PRFs at the Site. Surveyors watch, listen and record any bats exiting/entering any PRFs identified during the daytime inspection. This survey type also aims to identify bat species present on Site and gather information on foraging and commuting behaviour where possible.

As per best practice guidelines (Collins, 2023 and Marnell et al., 2022), emergence surveys should be undertaken in the period from May to September in suitable weather conditions, which was the case with the surveys that inform this Chapter. Surveyors were equipped with handheld full spectrum Elekon bat detectors (M or M2) and night vision cameras (Nightfox Whisker) and were positioned at locations that allowed observation of the previously identified PRFs.

Species identification is made in the field where possible and behaviour such as call type, feeding indications and commuting directions were recorded. All bat echolocation was recorded for subsequent analysis to confirm species identifications. As per best practice, all dusk emergence surveys commenced approximately 15 minutes before sunset and were conducted for a minimum of 1.5 hours after sunset (Collins, 2023) as detailed in the below table (Table 6.4).

Date	Sunset	Start Time	End Time	Weather Conditions at start	Weather Conditions at end
05.05.2026 Building Emergence Survey (1/2)	21:01	20:46	22:46	Dry, cloud cover 25%, visibility 100%, wind 6km/h ENE, temp 10OC.	Dry, cloud cover 0%, visibility 0-25%, wind 5km/h NNE, temp 9OC.
06.05.2026 Tree Emergence Survey (1/2)	21:04	20:50	22:35	Wind F2, dry, poor visibility. Cloud undetermined as below tree canopy, temp 11OC.	Wind F2, dry, poor visibility. Cloud undetermined as below tree canopy, temp 9OC.
26.05.2026 Building Emergence Survey (2/2)	21:35	21:20	23:35	Dry, cloud cover 20%, visibility 100%, wind 4km/h NNE, light air to calm, temp 17OC.	Dry, cloud cover 0%, visibility 20%, wind 5km/h NE, light air, temp 16OC.
27.05.2026 Tree Emergence Survey (2/2) ¹	21:01	20:46	22:46	5% cloud cover, dry, calm, 100% visibility, temp 12OC.	10% cloud cover, dry, calm, 100% visibility, temp 7OC, very cold.

Table 6.4 Details of bat dusk emergence surveys carried out on Site during the 2026 survey period.

Bat emergence surveys comprised surveys of the PRFs identified on the building (St. Teresa's House) and PRFs on any PRF-M rated trees on Site, as shown in Figure 6.16 below. A total of 9 no. Vantage Point Locations were selected to ensure complete coverage of the identified PRFS.

6.2.9.5.1 Dusk Emergence Survey of Building (St. Teresa's House)

¹ Please note that VP1 dusk building emergence survey was covered on 27.05 instead of 26.05 due to resource constraints, this is noted for weather conditions, as it does not change survey cover or completeness and is not considered a limitation.

St. Teresa's House, and a small building extension to the rear (north) were surveyed as part of the dusk emergence survey effort on buildings at the Site. These are the only remaining buildings located on Site. A total of 6 vantage point locations (VPs) were selected to completely cover all potential emergence locations/PRFs on the buildings and are shown below.

The weather conditions for the building surveys (which were conducted on each building at the same time) are described in full along with the total survey effort in **Table 6.4** above. The building locations and surveyor vantage points are shown in **Figure 6.16** below.

6.2.9.5.2 Dusk Emergence Survey of Trees

Initially, three trees located in the eastern scattered trees and parkland habitat on Site were identified as having 'PRF-M' features during the PBRA survey. This included a fallen tree with multiple PRFs and damage, a Horse Chestnut tree with a large cavity, and a tall mature Lime tree (with a knothole cavity c. 6m above ground on north side of trunk), each assessed as having PRF-M features. A fourth tree, a Lime tree, was also found to contain PRF-M features (broken limb stump cavity c. 8m above ground on north side of trunk) during the PBRA, which was included for survey, while the Chestnut tree was inspected using an endoscope on the 06th of May 2026 and bat presence was ruled out (resulting in no further survey effort required for the Chestnut tree). A PRF-M features is noted as "PRF is suitable for multiple bats and may therefore be used by a maternity colony." as per Table 6.2 of Collins, (2023). As per best practice, PRF-M features are subject to two survey visits between May and September, with at least one in the period May to August. These surveys can be conducted with an endoscope, or if the features are inaccessible, can be surveyed using night vision aids via emergence surveys (Collins, 2023). These surveys were conducted during the 2026 survey period and the results of same are included in the results section below.

A total of 3 vantage point locations (VPs) were selected to completely cover all potential emergence locations/PRFs on the trees and are shown below.

The weather conditions for the tree surveys (which were conducted on each tree at the same time) are described in full along with the total survey effort in **Table 6.4** above. The tree locations and surveyor vantage points are shown in **Figure 6.16** below.

6.2.9.6 Data Analysis

Species were identified from recordings using Elekon's BatExplorer software (Version 2.1.10.1). Bat data was analysed and species assigned to each record with reference to species identification guides such as Russ (2012).

Each record i.e., a sequence of bat calls/pulses, is noted as a bat pass; to indicate the level of bat activity for each species recorded. Each bat pass does not correlate to an individual bat but is representative of bat activity levels. Some bats such as Pipistrelle species may continuously fly around a habitat or feature, therefore, it is possible that a series of bat passes within a similar time frame is representative of an individual bat. On the other hand, Leisler's bats (*Nyctalus leisleri*) tend to travel through an area quickly, and as such, an individual sequence or bat pass is more likely to be indicative of individual bats.

6.2.10 Birds

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, (2025). During the surveys, the Site was walked slowly, approaching all habitat within and adjacent to the Proposed Development and scanning and listening for birds. The locations of birds seen and heard were mapped using standard BTO codes and activity symbols.

Each survey consists of a combination of walked transects of the Site (being walked at a slow, ambling pace, stopping to scan priority habitat/features where appropriate) and vantage point observation from fixed points, as required. The flight-line survey component consists of vantage point observation by a surveyor using binoculars and identification guides where necessary to identify all target species in flight over the Site.

All bird surveys were undertaken using:

- Opticron 8x42 binoculars (or equivalent).
- Opticron 20x Telescope (or equivalent).
- Agreed survey methodology.
- A4 map of the survey area.

6.2.10.1 Breeding Bird Survey

To inform an evaluation of the on-site habitats for bird species, three breeding bird survey (BBS) visits were undertaken on a monthly basis between May and July 2025. All survey visits to the Site were completed in the early morning, commencing at or near dawn and lasting approximately 2 hours. Survey dates and weather conditions are presented below in Table 6.5.

Date	Survey Type	Start Time	Duration (hours)	Weather Conditions & Disturbance
20/05/2025	BBS Transect 1	06:15	2.5	Light NE breeze, clear, 0-33% cloud cover, 12°C, excellent visibility.
05/06/2025	BBS Transect 2	06:30	2.5	Light SW breeze, overcast, 66-100% cloud cover, 11°C, excellent visibility.
11/07/2025	BBS Transect 3	07:15	2.5	Light NE breeze, clear, 0-33% cloud cover, 18°C, excellent visibility.

Table 6.5 Details of breeding bird surveys carried out on Site during the 2025 survey period.

6.2.11 Mammal Surveys

A systematic search for mammals was carried out in conjunction with the ecological walkovers completed on the 6th of April 2025.

During this survey, the Site was searched for tracks and signs of mammals e.g., scat, prints, hair, and burrows as per best practice guidelines. The habitat types recorded throughout the survey area were used to assist in identifying the fauna considered likely to utilise the area. This survey was carried out at a suitable time for mammal surveys and no difficulties were encountered in this regard.

Furthermore, any observations of evidence for badgers (*Meles meles*) were recorded, were they encountered 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.

All waterbodies and adjacent habitats within 150m of the Site were assessed for the presence of otter (*Lutra lutra*) and for the suitability to support otters, including the nearby Carysfort

Maretimo Stream. This involved searching for associated field signs, such as spraints, footprints, anal jelly, holts and couches to best practice guidelines (NRA, 2008).

The winter/early spring period is considered to be advantageous when surveying for mammals, due to the vegetation tending to have died back, allowing easier identification of mammal dwellings located in dense scrub.

6.2.12 Badger Surveys

Per the above, a systematic search for signs of badgers was conducted on the 6th of April 2023 in conjunction with the ecological walkovers of the Site. 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.

A repeat search for badger activity was also carried out during the camera deployment on the 12th of August 2025, as detailed below.

6.2.13 Mammal Camera Trap Survey

To assess badger activity and presence, two motion-activated camera traps were deployed across selected habitats within the Site for a continuous period of two weeks (12th August – 18th August 2025). Site selection was informed by prior ecological assessments, habitat suitability, and known or suspected sett locations, ensuring coverage of both active and potentially inactive areas. Each camera trap was positioned approximately 30–50 cm above ground level, facing known or suspected badger paths, sett entrances, or latrine sites, with minimal vegetation obstruction. Cameras were programmed to operate 24 hours a day, capturing still images or short video clips upon detecting movement. To minimize disturbance and scent contamination, all equipment was handled with gloves and installed during daylight hours (Lewns, 2020, TII, 2005, and NPWS, 2025).

The data was retrieved at the end of the two-week period, and all images were reviewed to identify badger presence, activity patterns, and potential sett usage. Environmental variables such as weather conditions, habitat type, and human disturbance were also recorded to contextualize findings. This methodology aligns with best practice guidance for non-invasive mammal monitoring in Ireland and supports robust data collection for conservation and management purposes.

6.2.14 General Fauna Survey

A general fauna survey of the Site was carried out in conjunction with the walkover field surveys on the 6th of April 2025 and the 12th of August 2025. The habitat types recorded throughout the survey area were used to assist in identifying the fauna considered likely to utilise the area, such as reptiles or amphibians (as per HGBI, 1998). This survey considered 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 exist or no targeted surveys were carried out for this assessment.

Furthermore, it should be noted that during the course of all surveys at the Site of the Proposed Development, cognisance was given to other species of fauna that might use the Site. These are included in this assessment where applicable.

6.3 Ecological Assessment

This Biodiversity Chapter 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, 2024); 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.

6.3.1 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 6-2 of the EIAR. 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 Chapter.

6.3.2 Impact Assessment

As per the NRA guidelines (2009), 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 6-2 of the EIAR. 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 which affects 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.

6.3.3 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 6.1.2) were reviewed to identify any potential for negative cumulative impacts with the Proposed Development. Additionally, existing planning permissions from the past five years (from 2020 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.

6.3.4 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 ecological impact assessment 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 ecological impact assessment, 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.

6.3.5 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.
- There have been two vocal, lively, and at times aggressive, dogs present on-Site at the time of the PEA, updated PBRA survey, and for all attempts to undertake bat activity surveys during the 2025 survey period. These may have caused increased disturbance to receptors at the time of the surveys on-site and have led to the delay of the planned bat activity surveys.
- In addition, the methodology for collecting data in 2025 on bat activity, Site usage, and species assemblage was affected, as the surveys had to be adapted, deviating from standard BCT Guidelines, for health and safety reasons:
 - This resulted in completely abandoning the original survey approach, which was replaced with static detector surveys in all instances, resulting in a single activity survey being completed on Site, and no emergence surveys being completed on the building or PRF-M rated trees within the Site.
 - As such: Two static detectors were deployed in the wooded (enclosed) habitats, while a static detector could not be deployed in the open habitat due to the dog presence.
 - Finally, a third static detector was deployed in St. Teresa's House to survey potential bat usage of the building, in addition to a visual internal inspection of the building.

- It should be noted, however, that deviation from standard best practice is permitted under current guidelines where it can be justified by site-specific conditions or health and safety concerns (BCT, 2023). Accounting for this, coupled with the fact that previous baseline surveys completed by Scott Cawley (2018-2021) determined low activity for the Site, with no evidence of roosting, coupled with a precautionary approach applied throughout this assessment, means that this deviation from standard best practice is not considered to be a significant limitation, when considered in combination with mitigation proposed in adherence to a pre-cautionary principle and retention of suitable habitats on site.
- **Additionally, bat emergence surveys were later completed during the 2026 survey period which further support the findings of the previous bat surveys and provide emergence activity data for the Site, which was previously not collected. The findings of which have been provided in this Biodiversity Chapter.**

6.4 The Existing Receiving Environment (Baseline)

6.4.1 Geology, Hydrology, and Hydrogeology

The Proposed Development is located within the Liffey and Dublin Bay Catchment and the Dodder_SC_010 sub-catchment. The closest waterbody to the Site is the Carysfort Maretimo Stream (a.k.a. Brewery Stream) (IE_EA_09B130400) which flows in a north easterly direction past the west side of the Site approximately 0.025km from the Site boundary. The Carysfort Maretimo Stream flows for approximately 0.34km before entering Dublin Bay (IE_EA_090_0000) at Blackrock. The WFD status (2019-2024) of the Carysfort Maretimo Stream is 'poor' and its risk projection is currently under review. The WFD status of Dublin Bay is 'Good' and its risk projection is 'Not at Risk'.

The Monkstown Stream is the next closest to the Site of the Proposed Development; this is situated approximately 0.56km southeast of the Site where it also flows into Dublin Bay after 1.4km. However, the Monkstown Stream is not recognised by the Environmental Protection Agency (EPA) therefore has not been classified with a WFD status or risk projection. There are no EPA monitoring stations within the relevant locations within either stream.

The groundwater body beneath the Site of the Proposed Development is the Kilcullen groundwater body (IE_EA_G_003). The status of this groundwater body is 'Good' however its risk projection is 'At risk'. Groundwater vulnerability at the Site is 'High' with a small section to the west of the Site classed as 'Moderate'.

Soil at the Site is classified as 'Urban – soil concreted over'. Regarding sub-soils, the Site is composed of 'Made soils – concreted or artificial surface' within the northerly half and 'Limestone till (Carboniferous)' consisting of till type subsoil in the southerly half of the Site.

The aforementioned water and ground bodies in relation to the Proposed Development, identified with a potential pathway, are shown below with their relevant WFD (2021) status in Table 6.6.

Waterbody Name	Water body; EU code	Location from Site	Distance from Site (km)	WFD water body status (2019-2024)	WFD 3 rd cycle Risk Status	Hydraulic Connection to the Site
Surface Water Bodies						

Waterbody Name	Water body; EU code	Location from Site	Distance from Site (km)	WFD water body status (2019-2024)	WFD 3 rd cycle Risk Status	Hydraulic Connection to the Site
Carysfort Maretime Stream	IE_EA_09B130400	West	0.025	Poor	Under Review	Adjacent to the site
Coastal Water Bodies						
Dublin Bay	IE_EA_090_0000	North	0.34	Good	Not at Risk	Downstream of the Carysfort Maretime Stream
Groundwater Bodies						
Kilcullen	IE_EA_G_003	N/A	N/A	Good	At Risk	Underlying groundwater-body

Table 6.6 WFD Risk and Waterbody Status

6.4.2 Designated Sites

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats and wild fauna and flora by the designation of Special Areas of Conservation (SACs) and the Birds Directive (2009/4147/EC) seeks to protect birds of special importance by the designation of Special Protection Areas (SPAs). It is the responsibility of each member state to designate SPAs and SACs, both of which will form part of Natura 2000, a network of protected sites throughout the European Community. SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the conservation of Annex I birds and other regularly occurring migratory birds and their habitats. The annexed habitats and species for which each site is selected correspond to the qualifying interests of the sites; from these, the conservation objectives of the site are derived.

All European sites potentially linked to the Proposed Development site have been identified and fully assessed in the AA Screening Report (Stage 1 AA, 2025a) and NIS (DNV, 2025b) accompanying this submission under separate cover. A summary of the AA conclusions is given below in section 5.3.2.1

Other nationally or internationally designated sites potentially linked to the Proposed Development site are identified in sections 6.4.4 - 6.4.6 below.

6.4.3 European Sites – Appropriate Assessment

An AA Screening report was carried out in August 2025, which determined there was potential for impact arising from the Proposed Amendments, in the absence of mitigation measures, and as a result, a NIS was prepared (DNV, 2025).

The following is the conclusion determined by carrying out the NIS assessment:

“This Natura Impact Statement details the findings of the NIS conducted to further examine the potential direct and indirect impacts of the Proposed Amendments at St Teresa’s Lands, Temple Hill, Monkstown, Blackrock, Co. Dublin, on the following European sites:

- South Dublin Bay SAC [000210]
- South Dublin Bay and River Tolka Estuary SPA [004024]
- North-West Irish Sea SPA [004236]
- Wicklow Mountains SAC [002122]

The above sites were identified by a screening exercise that assessed likely significant effects of a range of impacts that have the potential to arise from the Proposed Development. The AA investigated the potential direct and indirect effects of the proposed works, both during construction/infill and operation, on the integrity and qualifying interests of the above European Site, alone and in combination with other plans and projects, taking into account the site's structure, function and conservation objectives.

Where potentially significant effects were identified, a range of mitigation and avoidance measures have been suggested to avoid them. This NIS has concluded that, once the avoidance and mitigation measures are implemented as proposed, the Proposed Development will not have an adverse effect on the integrity of the above European site(s), individually or in combination with other plans and projects. Where applicable, a suite of monitoring surveys have been proposed to confirm the efficacy of said measures in relation to ensuring no adverse impacts on the habitats of the relevant European sites have occurred.

As a result of the complete, precise and definitive findings in of this NIS, it has been concluded, beyond reasonable scientific doubt, that the Proposed Development will have no significant adverse effects on the QIs, SCIs and on the integrity and extent of South Dublin Bay SAC [000210], South Dublin Bay and River Tolka Estuary SPA [004024] or North-West Irish Sea SPA [004236]

Accordingly, the Proposed Development will not adversely affect the integrity of any relevant European site."

As such, European sites are not considered further within this Chapter.

6.4.4 Natural Heritage Areas/ proposed Natural Heritage Areas

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 SAC and/or 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. The Site does not occur within or in proximity to any NHA/pNHAs, however a total of 25 national sites are located within c.15km of the Proposed Development (all pNHAs) as follows:

- South Dublin Bay pNHA (000210) – c. 300m from the subject lands and connected to it via the surface water and foul water networks. This site has been designated for its wintering bird populations.
- Booterstown Marsh pNHA (001205) – c. 1.9km northwest of the subject lands. It is one of the only saltmarshes in south Dublin, is important for overwintering birds, and contains the protected species *Puccinellia fasciculata*.
- Dalkey Coastal Zone And Killiney Hill pNHA (001206) – c. 2.8km east of the subject lands. This site is designated for the range of coastal habitats it contains and due to the presence of several rare plant species.
- Fitzsimon's Wood pNHA (001753) – c. 4.8km west of the subject lands. This site is designated as it is a rare example of birch woodland within the Dublin area.
- Dolphins, Dublin Docks pNHA (000201) – c. 5km north of the subject lands. Designated due to its importance for breeding terns.
- North Dublin Bay pNHA (000206) – c. 5.4km north of the subject lands. Designated for its range of overwintering wetland bird species.

- Dingle Glen pNHA (001207) – c. 6km south. Designated for its variety of woodland and scrub habitats.
- Loughlinstown Woods pNHA (001211) – c. 6.1km south. Designated for its example of demesne woodland.
- Grand Canal pNHA (002104) – c. 6.2km north. Designated for its range of semi-natural habitats along a large linear feature.
- Royal Canal pNHA (002103) – c. 7km north. Designated for its range of semi-natural habitats along a large linear feature.
- Ballybetagh Bog pNHA (001202) – c. 8.1km south. Designated for archaeological reasons, as it contains the remains of numerous examples of Giant Deer.
- Howth Head pNHA (00202) – c. 9.2km northwest. Information on the reasons for designation of this site are not publicly available through the NPWS website; however, they likely overlap with the Qualifying Interests for Howth Head SAC and Howth Head Coast SPA.
- Knocksink Wood pNHA (00725) – c. 9.6km southwest. Designated for its woodland and tufa springs habitats.
- Ballyman Glen pNHA (00713) – c. 9.8km south. Designated for its tufa springs and alkaline fen habitats.
- Dodder Valley pNHA (00991) – c. 10km west. Designated for its range of semi-natural bankside habitats and riverine habitats.
- Baldoyle Bay pNHA (00199) – c. 11km north. Designated for its range of intertidal habitats and wetland bird species.
- Powerscourt Woodland pNHA (001768) – c. 11.5km south. Designated for its flora which includes a variety of woodland types.
- Santry Demesne pNHA (000178) – c. 12km north. Designated for its population of *Hypericum hirsutum* and as it consists of some of the only remaining semi-natural vegetation in the North Dublin area.
- Dargle River Valley pNHA (001754) – c. 12km south. Designated for its example of woodland along a river valley and for the presence of a rare plant species *Lamiastrum galeobdolon*.
- Bray Head pNHA (000714) – c. 12.4km south. Designated for its heathland vegetation and population of breeding and overwintering birds.
- Great Sugar Loaf pNHA (001769) – c. 13km south. Designated for its range of habitats including woodland, scree and heath vegetation, as well as for its geological interest.
- Liffey Valley pNHA (000128) – c. 13.3 northwest. Designated for its range of habitats and the presence of rare flora, including *Hypericum hirsutum*.
- Ireland's Eye pNHA (000203) – c. 13.5km northeast. Designated for its breeding seabirds and coastal habitats.
- Glenasmole Valley pNHA (001209) – c. 13.5km southwest. Designated for its tufa spring and calcareous grassland habitats.

Potential impact pathways (S-P-R links) to relevant NHA/pNHAs are discussed in Section 6.4.8 below.

6.4.5 Irish Wetland Bird Survey (I-WeBs)

An I-WeBS site refers to a designated wetland area in Ireland that is monitored as part of the Irish Wetland Bird Survey (I-WeBS), a national programme coordinated by BirdWatch Ireland in partnership with the National Parks and Wildlife Service (NPWS). The survey tracks population trends of wintering waterbirds and assesses the condition of their wetland habitats. Since its inception over 25 years ago, I-WeBS has covered approximately 250 sites and 750 subsites annually, providing critical data for the conservation of over 50 species of migratory waterbirds. These sites are essential for understanding ecological health, informing environmental policy, and evaluating the impacts of development and climate change on wetland ecosystems.

The nearest I-WeBS site relative to the Proposed Development is Dublin Bay. This site contains multiple subsites stretching from north of Howth to the south at Killiney Beach and Bay, as shown in the below figure (Figure 6.4).

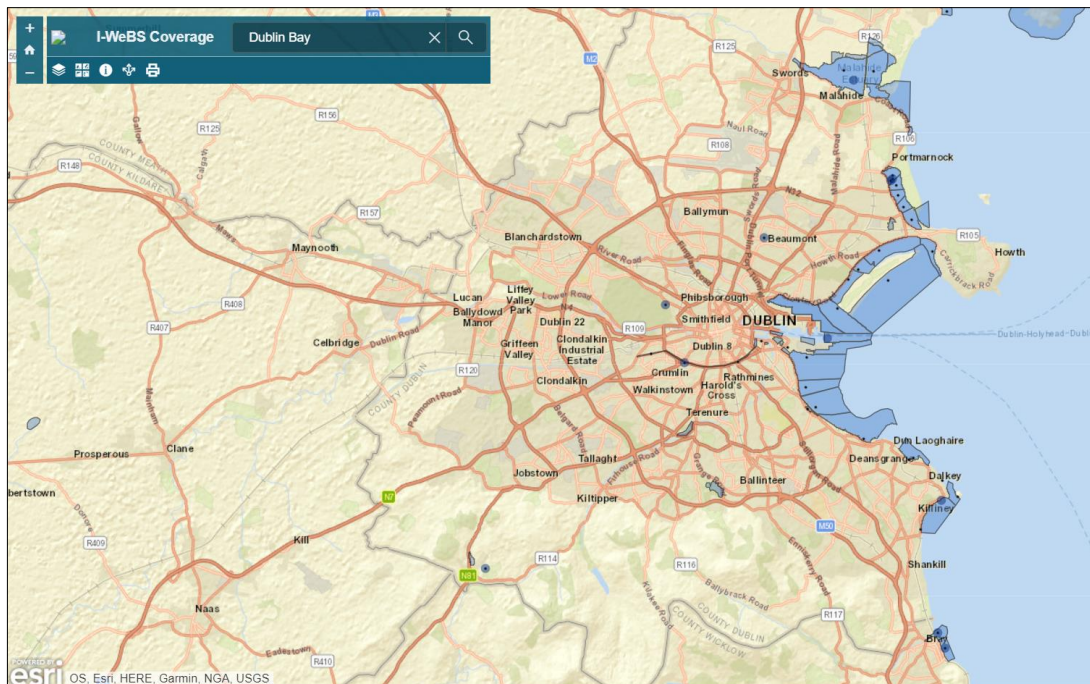


Figure 6.4 Dublin Bay I-WeBs Site (I-WeBS, 2025).

6.4.6 Other Designated Sites

The Site is situated within Dublin Bay Biosphere UNESCO Site (site code IRE+1) which includes the entirety of Dublin Bay, including green space in the city, as shown in the below figure (Figure 6.5). Apart from this, the Proposed Development Site does not overlap with any other protected designated site.

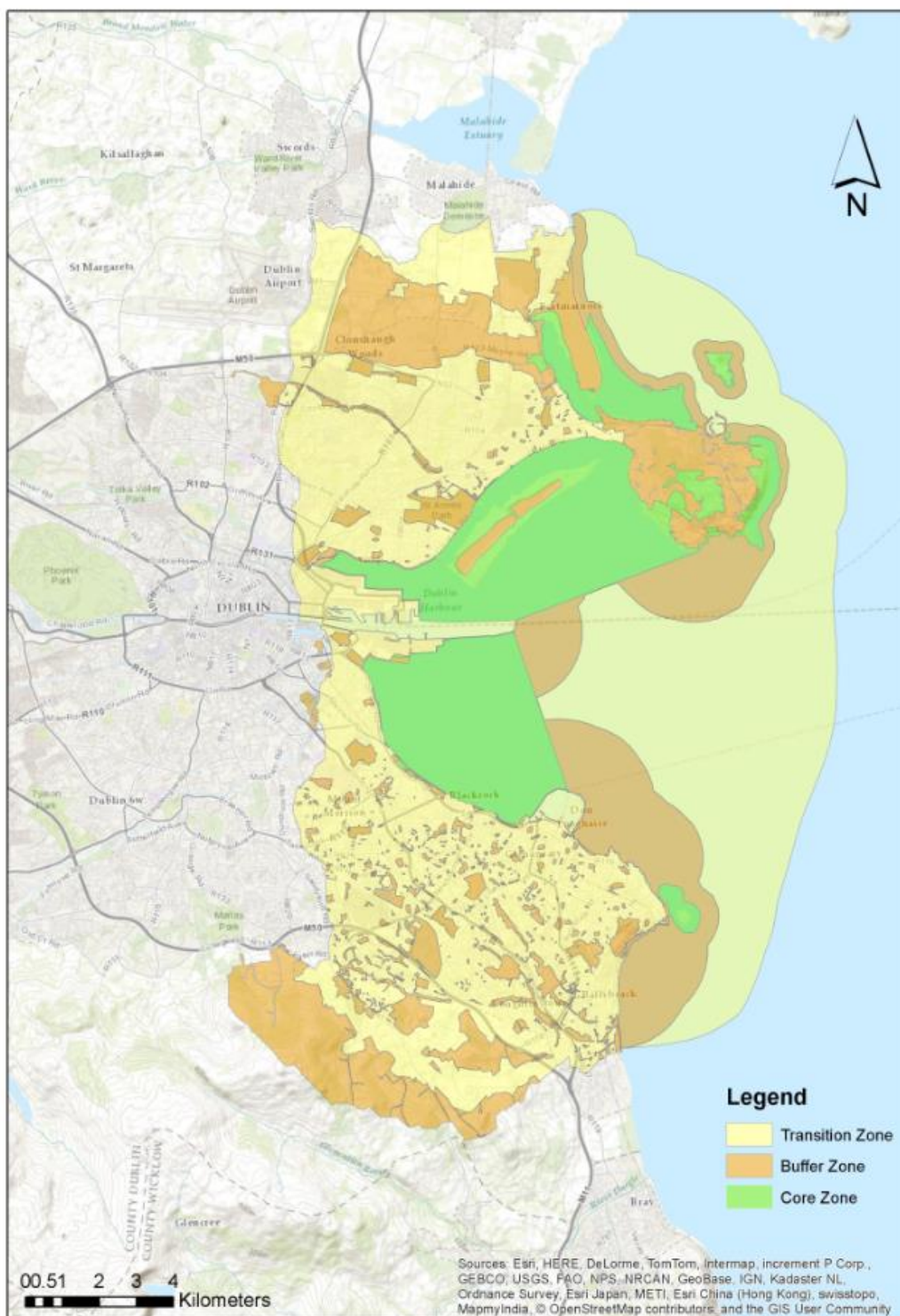


Figure 6.5 Dublin Bay Biosphere UNESCO World Heritage Site (Dublinbaybiosphere.ie).

6.4.7 Summary of Designated Sites

The aforementioned I-WeBs sites form part of the national monitoring scheme for wintering waterbird populations in Ireland, and some overlap can be observed between these sites and SPAs in the vicinity e.g., South Dublin Bay and River Tolka Estuary SPA (004024). North Dublin Bay SAC (000206) is also a designated national nature reserve and Ramsar wetland site; North Bull Island.

However, the AA Screening and subsequent NIS report provided for this project (DNV, 2025) determined that there was no potential for significant negative impacts on any SAC or SPA

designated Sites owing to the proposed project. Accounting for this, and, given the intervening distance between Dublin Bay, and associated protected aforementioned sites; Ramsar, I-WeBs site (and sub-sites contained therein), etc. and the Proposed Development, the potential for impact owing to the project is unlikely to occur.

6.4.8 S-P-R Links to Designated Sites

Potential SPR links/ impact pathways are discussed in the following sections in the context of the Proposed Development as described in section 6.5.

6.4.9 Direct Pathways

6.4.9.1 Hydrological Pathways

The Site is situated within Dublin Bay Biosphere UNESCO Site (site code IRE+1). Dublin Bay Biosphere contains three different zones, which are managed in different ways:

- The core zone of Dublin Bay Biosphere comprises 50km² of areas of high natural value. Key areas include the Tolka and Baldoyle Estuaries, Booterstown Marsh, Howth Head, North Bull Island, Dalkey Island, and Ireland's Eye.
- The buffer zone comprises 82km² of public and private green spaces such as parks, greenbelts, and golf courses, which surround and adjoin the core zones.
- The transition zone comprises 173km² and forms the outer part of the Biosphere. It includes residential areas, harbours, ports, and industrial and commercial areas.
- During Construction Phase, works are proposed to be carried out on Site. These works, and in particular, groundworks, have the potential to produce sources of pollution in the form of siltation, fuel spills, etc.

The Proposed Development Site is located approximately 1.5–2 km inland from the nearest edge of the Dublin Bay Biosphere and lies outside its core, and buffer zones, as well as any European site. However, it does lie within the transition zone. The surrounding area is heavily urbanised, with low to moderate ecological value and no protected habitats, wetlands, or notable flora or fauna present on-Site.

A small stream, the Carysfort Maretimo Stream, lies approximately 2.5 metres from the Site boundary and provides a hydrological connection to Dublin Bay **and associated downstream non-European designated sites**. This introduces a potential pathway through which surface water runoff and associated pollutants could travel into the wider UNESCO-designated (**Dublin Bay**) environment. While the stream's urban nature and lack of sensitive aquatic habitats suggest minimal ecological risk, this potential pathway has been acknowledged and assessed in the accompanying AA Screening and NIS reports, which conclude that no significant impacts on sensitive species or habitats are anticipated.

Therefore, any potential impacts arising on sensitive species and habitats of Dublin Bay, and Dublin Bay Biosphere UNESCO site have been assessed and mitigated for in the accompanying AA Screening and NIS reports by proxy.

The Proposed Development is consistent with the objectives of the Dublin Bay Biosphere Management Plan, respecting its ecological integrity and avoiding direct or indirect impacts on protected features. It aligns with sustainable urban planning principles and incorporates embedded design mitigations, standard construction best practices, and measures outlined in the Construction Environmental Management Plan (CEMP) and supporting ecological reports. In addition, the transition zone of the Dublin Bay Biosphere includes urban and suburban areas where sustainable development is encouraged and managed in line with the Biosphere's objectives (Dublin Bay Biosphere Partnership, 2022).

Therefore, accounting for all of the above, and based upon the UNESCO Impact Assessment Toolkit and Irish planning protocols, the Proposed Development is not considered to pose a

significant threat to the Biosphere and does not compromise its Outstanding Universal Value (UNESCO, ICCROM, ICOMOS & IUCN, 2022) and impacts on same can be ruled out.

The next closest designated Sites are Sandymount/Tolka Estuary Ramsar site (site code 832), South Dublin Bay pNHA, and Booterstown Marsh pNHA, which are all hydrologically connected to the Proposed Development Site via the Carysfort-Maretimo Stream. The Site boundary is 2.5m from the Carysfort Maretimo Stream. During a rainfall event, these pollutions may be carried via the medium of surface water into the Carysfort Maretimo Stream, which serves as a hydrological pathway of only 0.34km connecting the Site with Sandymount/ Tolka Estuary Ramsar site and South Dublin Bay pNHA. Whilst this is an identified hydrological pathway with potential to impact the pNHA and Ramsar site, these designated Sites directly overlap South Dublin Bay SAC, for which all impacts via the same hydrological pathway were mitigated against within the NIS. Therefore, the hydrological pathway identified between the Site and the South Dublin Bay pNHA and Sandymount/ Tolka Estuary Ramsar site can be deemed insignificant by proxy.

All additional designated sites within the ZOI are separated by an urban landscape or oceanic buffer which is sufficient to prevent any hydrological pathway forming from the Site of the Proposed Development. Hydrological pathways to all other designated Sites have been deemed insignificant. Therefore, the potential for significant impact via hydrological pathways between the Site and all designated sites have been ruled out at this stage.

6.4.9.2 Hydrogeological Pathways

As outlined above during the Construction Phase, works on Site have the potential to generate sources of pollution. Rather than pollution running overland and entering streams which feed directly into European sites, polluted surface water also has the potential to be absorbed into the underlying aquifer where it may then be transferred horizontally within the underlying bedrock. As described in section 6.4, the Kilcullen groundwater body on which the Site is situated on is assigned a High groundwater vulnerability status, which entails the ground is at a high risk of being vulnerable to surface water absorption, particularly with the progression of groundworks where much of the surface soil layer will be stripped in preparation for the Proposed Development.

According to the summary of initial characterisation of the Kilcullen waterbody (GSI, 2025), typical groundwater flow paths of percolated water is in the order of a couple hundred meters with discharge occurring to the closest surface water feature. Hydrogeological impacts arising on Dublin Bay Biosphere as a result of the Proposed Development are considered unlikely to occur owing to the points discussed in the previous section and the provision of suitable assessment and mitigations for hydrogeological impacts on Dublin Bay in the NIS and CEMP reports.

Similarly, although discharge from this hydrogeological pathway has potential to occur into both the Carysfort Maretimo Stream and Dublin Bay, where South Dublin Bay pNHA and Sandymount/ Tolka Estuary Ramsar site are located, this hydrogeological pathway has been investigated and mitigated against within the NIS for this Proposed Development.

All additional designated sites within the ZOI are located at a sufficient distance away, hence are out of range of the hydrogeological flows of any waters which have percolated into the ground at Site.

Therefore, the potential for significant impact via hydrogeological pathways between the Site and all designated sites have been ruled out at this stage.

6.4.9.3 Air and Land Pathways

In terms of air pathways, dust, noise, vibration and general anthropogenic impacts may be produced as a result of the Construction Phase of the Proposed Development. For terrestrial and marine mammal species, disturbance effects would not be expected to extend beyond 150m. For birds, disturbance effects would not be expected to extend beyond a distance of c. 300m, as noise levels associated with general construction activities would attenuate close to background levels

at that distance. Given that the Site directly overlaps with Dublin Bay UNESCO Heritage Site, a direct air pathway exists.

Land air impacts arising on Dublin Bay Biosphere as a result of the Development are considered unlikely to occur owing to the points discussed in the previous sections and the provision of suitable assessment and mitigations for land air impacts on Dublin Bay in the NIS and CEMP reports.

The next closest designated sites to the Site of Proposed Development are South Dublin Bay pNHA and Sandymount/ Tolka Estuary Ramsar site which are approximately 0.3km from the Site. Whilst any air pathway via vibrations is ruled out at this distance, an air pathway may be considered possible by noise. However, these designated Sites are separated from the Proposed Development by a significant urban buffer which consists of roads, residential living and a trainline. All such infrastructure within this buffer creates significant noise, as such designated species of these sites are likely to be already accustomed to such disturbances and any likely noise from the Proposed Development will be attenuated to current baseline levels at this distance. In addition to this, this urban buffer will intercept any dust from the Proposed Development, subsequently preventing it from reaching these protected sites. As such, the potential air pathway identified between the Site and the South Dublin Bay pNHA and Sandymount/ Tolka Estuary Ramsar site can be deemed insignificant.

All additional designated sites within the ZOI are located at an additional distance away, hence any potential air or land pathways from the Proposed Development to any other designated site can be ruled out.

Air and land pathways to all other designated Sites have been deemed insignificant. Therefore, the potential for significant impact via land air pathways between the Site and all designated sites have been ruled out at this stage.

6.4.9.4 Indirect Pathways

6.4.9.4.1 Foul Water Drainage

The foul drain will be connected to a combined sewer which routes to Ringsend WwTP, where, after treatment, it ultimately discharges to Dublin Bay. During events such as heavy floods, a fault at the plant or a disturbance which may prevent the WwTP from treating foul waters from the Proposed Development, foul waters from the Site could cause Likely Significant Effects (LSEs) on European sites within the ZOI of this WwTP including Dolphins, Dublin Docks pNHA, North Dublin Bay pNHA, South Dublin Bay pNHA, Sandymount Strand/ Tolka Estuary Ramsar site or North Bull Island Ramsar site. However, given that these designated sites directly overlap with North Bull Island SPA, North Dublin Bay SAC, North-west Irish Sea SPA, South Dublin Bay SAC and South Dublin Bay and River Tolka Estuary SPA, for which indirect hydrological pathways were ruled out within the AA Screening, it can be concluded that any such indirect hydrological pathway as a result of the Proposed Development can be ruled out.

6.4.9.4.2 Ex-Situ Habitat

Given the proximity of Dalkey Coastal Zone and Killiney Hill pNHA, Booterstown Marsh pNHA, Dolphins, Dublin Rocks pNHA, Sandymount Strand/ Tolka Estuary Ramsar site and North Bull Island Ramsar site, an indirect air pathway may arise as it is possible that the Site could be used as nesting and feeding ex-situ habitat for species of these designated sites. Ground clearance, demolition and construction works during the Construction Phase of the Proposed Amendments may impact this habitat as a result.

However, this indirect air pathway was assessed for species of South Dublin Bay and River Tolka Estuary SPA, Dalkey Islands SPA, North Bull Island SPA and Northwest Irish Sea SPA within the AA and subsequent NIS for these Proposed Amendments. It was concluded within the AA that there was little to no suitable foraging habitat for any bird species, including SCI species of these European sites, and that nesting habitat was limited to gull species only, of which only herring gull

(*Larus argentatus*) was observed on-site. As such, the indirect pathway was deemed insignificant for all aforementioned European sites bar Northwest Irish Sea SPA, for which mitigations to protect herring gull were subsequently implemented within the NIS.

Given that Dolphins, Dublin Rocks pNHA (000201) is assumed to overlap with South Dublin Bay and River Tolka Estuary SPA, the indirect pathway due to ex-situ habitat use on this designated site can be ruled out. In addition, Sandymount Strand/ Tolka Estuary Ramsar site and North Bull Island Ramsar site are designated for a variety of the same wintering and waterbirds as South Dublin Bay and River Tolka Estuary SPA and North Bull Island SPA, with no additional species likely to utilise the Site for nesting.

The potential for significant impact via an indirect air pathway on the species designated under Dalkey Coastal Zone and Killiney Hill pNHA and Booterstown Marsh pNHA which is located 2.8km east of the subject lands, is considered insignificant owing to the designation of same for coastal habitats, the intervening distance, and the provision of mitigations for potential air and pathways on protected habitats and bird species in the NIS (and accompanying CEMP), which are sufficient to rule out potential impacts on this pNHA arising from same. All other designated sites are located at a greater distance to the Proposed Development, and are thereby covered in the same manner, through the mitigations for protected bird species and habitats by proxy that are provided in the NIS and CEMP that accompanies this application under separate cover.

As such, the indirect air pathway via ex-situ habitat loss to Dalkey Coastal Zone and Killiney Hill pNHA and Booterstown Marsh pNHA and all other pNHAs has been ruled out at this stage and will not be discussed further in the report.

6.4.9.4.3 Collision Risk

Tall structures such as electrical pylons, wind farms and tall buildings can lead to fatal collisions with commuting bird species. This is particularly true for those species considered to be “poor” fliers, with relatively low manoeuvrability compared to other more agile bird species (see Eirgrid, 2012). Some of the most at-risk groups (classified as ‘medium’ and ‘high’ collision risk species) include wader species; waterfowl such as geese, swan and duck species, and some raptor species. Gulls such as black-headed gull, herring gull and lesser black-backed gull are classed as ‘low’ collision risk species due to their superior manoeuvrability when flying (Eirgrid, 2012).

Given that there have been amendments to the heights of the blocks and the design of the Development since the last application, collision risk to SCI bird species of South Dublin Bay and River Tolka Estuary SPA (004024), Dalkey Islands SPA (004172), North Bull Island SPA (004006) and North-West Irish Sea SPA (004236) was assessed within the AA Screening Report for this Development and ruled out as a potential pathway.

Given that this conclusion applies to all bird species and is a reflection of the embedded design principals of the Proposed Amendments, this indirect air pathway to Dalkey Coastal Zone and Killiney Hill pNHA, Booterstown Marsh pNHA, North Dublin Bay pNHA, Sandymount Strand/ Tolka Estuary Ramsar site or North Bull Island Ramsar site is deemed insignificant and can be ruled out.

6.4.10 Summary of S-P-R Assessment

In addition to the above assessment, Section 6.4.10.1 below provides a summary of assessment for each non-European designated site that was noted as screened out by proxy within the accompanying AAS and NIS reports, to ensure a robust and clear assessment has been made for each within this report. This includes an assessment of potential source, pathway, and receptors between the site and these non-European designated sites, as well as provision of any mitigation required, which has been included in later sections of this report as referenced in the table. Effects post mitigation have also been shown for clarity.

6.4.10.1 Relevant Designated Sites

The table below provides a summary of relevant non-European Designated Sites with S-P-R links to the Proposed Development and an assessment on potential for Impact to same arising from the Proposed Development (Table 6.7).

Site Name and Code	S-P-R link to Site	Mitigation Required	Effect Post Mitigation
Natural Heritage Areas/proposed Natural Heritage Areas			
South Dublin Bay pNHA (000210)	Hydrologically linked (0.3km) via surface and foul waters Receptor – Wintering birds	Yes – mitigation required for water quality impacts and pollution prevention measures – see section 6.10.1.2 (CMEP) 6.10.1.3 (surface water management and SUDS) and Section 6.10.4.1 (best practice measures).	Negligible - no deterioration in water quality or disturbance to ecological function
Boosterstown Marsh pNHA (001205)	Weak hydrological linkage (via broader coastal system)(1.9km) Receptor – Saltmarsh and wintering birds	Yes – standard mitigation required for CEMP and SUDS measures – see section 6.10.1.2 (CMEP) 6.10.1.3 (surface water management and SUDS) and Section 6.10.4.1 (best practice measures). No site-specific mitigation required.	Imperceptible to negligible - pathway weak and effects dissipated at distance
Dalkey Coastal Zone And Killiney Hill pNHA (001206)	No meaningful source or pathway identified (distance to site = 2.8km) Receptor – coastal habitats and rare plants	Not required	No effect
Fitzsimon's Wood pNHA (001753)	Surface water runoff (distance to site = 4.8km) Receptor – Birch woodland habitat	Not required	No effect
Dolphins, Dublin Docks pNHA (000201)	Surface water runoff via indirect coastal dilution pathway (distance to site = 5km) Receptor – Breeding Terns	Yes – standard mitigation required for CEMP and SUDS measures – see section 6.10.1.2 (CMEP) 6.10.1.3 (surface water management and SUDS) and Section 6.10.4.1 (best practice measures). No site-specific mitigation required.	Imperceptible - no meaningful interaction with receptor

Site Name and Code	S-P-R link to Site	Mitigation Required	Effect Mitigation	Post
North Dublin Bay pNHA (000206)	Surface water runoff via indirect coastal pathway (distant/diffuse) (distance to site = 5.4km) Receptor – wintering wetland birds	Yes – standard mitigation required for CEMP and SUDS measures – see section 6.10.1.2 (CMEP) 6.10.1.3 (surface water management and SUDS) and Section 6.10.4.1 (best practice measures). No site-specific mitigation required.	Negligible - no measurable effect at this scale	
Dingle Glen pNHA (001207)	No meaningful source or pathway identified (distance to site = 6km) Receptor – woodland habitats	Not required	No effect	
Loughlinstown Woods pNHA (001211)	No meaningful source or pathway identified (distance to site = 6.1km) Receptor – woodland habitats	Not required	No effect	
Grand Canal pNHA (002104)	No meaningful source or pathway identified (distance to site = 6.2km) Receptor – Linear aquatic habitats	Not required	No effect	
Royal Canal pNHA (002103)	No meaningful source or pathway identified (distance to site = 7km) Receptor – Linear aquatic habitats	Not required	No effect	
Ballybetagh Bog pNHA (001202)	No meaningful source or pathway identified (distance to site = 8.1km) Receptor – archaeological designation	Not required	No effect	
Howth Head pNHA (00202)	No meaningful source or pathway identified (distance to site = 9.2km) Receptor – coastal habitats and birds	Not required	No effect	
Knocksink Wood pNHA (00725)	No meaningful source or pathway identified (distance to site = 9.6km) Receptor – woodland and tufa springs	Not required	No effect	
Ballyman Glen pNHA (00713)	No meaningful source or pathway identified (distance to site = 9.8km) Receptor – fen and spring habitat	Not required	No effect	

Site Name and Code	S-P-R link to Site	Mitigation Required	Effect Mitigation	Post
Dodder Valley pNHA (00991)	No meaningful source or pathway identified (distance to site = 10km) Receptor – riparian habitat	Not required	No effect	
Baldoyle Bay pNHA (00199)	Hydrologically linked (11km) via surface water runoff along highly attenuated pathway Receptor – intertidal habitats, birds	Yes – standard mitigation required for CEMP and SUDS measures – see section 6.10.1.2 (CMEP) 6.10.1.3 (surface water management and SUDS) and Section 6.10.4.1 (best practice measures). No site-specific mitigation required.	Imperceptible	
Powerscourt Woodland pNHA (001768)	No meaningful source or pathway identified (distance to site = 11.5km) Receptor – woodland habitats	Not required	No effect	
Santry Demesne pNHA (000178)	No meaningful source or pathway identified (distance to site = 12km) Receptor – semi natural vegetation	Not required	No effect	
Dargle River Valley pNHA (001754)	No meaningful source or pathway identified (distance to site = 12km) Receptor – woodland and riparian habitats	Not required	No effect	
Bray Head pNHA (000714)	No meaningful source or pathway identified (distance to site = 12.4km) Receptor – heathland and birds	Not required	No effect	
Great Sugar Loaf pNHA (001769)	No meaningful source or pathway identified (distance to site = 13km) Receptor – mixed habitats	Not required	No effect	
Liffey Valley pNHA (000128)	No meaningful source or pathway identified (distance to site = 13.3km) Receptor – woodland and grassland	Not required	No effect	
Ireland's Eye pNHA (000203)	No meaningful source or pathway identified (distance to site = 13.5km) Receptor – seabirds	Not required	No effect	

Site Name and Code	S-P-R link to Site	Mitigation Required	Effect Mitigation	Post
Glenasmole Valley pNHA (001209)	No meaningful source or pathway identified (distance to site = 13.5km) Receptor – tufa springs and grassland	Not required	No effect	
Irish Wetland Bird Survey (I-WeBS)				
Dublin Bay I-WEBS	Hydrologically linked via surface water network to Dublin Bay – potential for surface water runoff, sediment, and pollutants Receptor – internationally important wintering bird populations	Yes – mitigation required for water quality impacts and pollution prevention measures – see section 6.10.1.2 (CMEP) 6.10.1.3 (surface water management and SUDS) and Section 6.10.4.1 (best practice measures).	Negligible	
RAMSAR Sites / Nature Reserves				
Bull Island RAMSAR site and Nature Reserve	Hydrologically linked via surface water network to Dublin Bay – potential for surface water runoff, sediment, and pollutants Receptor – Wetland habitats and internationally important wintering bird populations, Protected habitats and fauna within a statutory nature reserve	Yes – mitigation required for water quality impacts and pollution prevention measures – see section 6.10.1.2 (CMEP) 6.10.1.3 (surface water management and SUDS) and Section 6.10.4.1 (best practice measures).	Negligible	
UNESCO World Heritage Sites				
Dublin Bay Biosphere	Hydrologically linked via surface water network to Dublin Bay – potential for surface water runoff, sediment, and pollutants Receptor – Biosphere reserve including terrestrial, coastal, and marine ecosystems	Yes – standard mitigation required for CEMP and SUDS measures – see section 6.10.1.2 (CMEP) 6.10.1.3 (surface water management and SUDS) and Section 6.10.4.1 (best practice measures). Implementation of green infrastructure (Landscape Plan) and Biodiversity Measures (see Section 6.10.6)	Imperceptible to negligible	

Table 6.7 Summary of Non-European Designated Sites

6.4.11 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.

The habitats recorded on Site in the 2025 PEA survey were the same as those recorded during previous surveys by Scott Cawley in 2021, although it was noted that some demolition works of

buildings on Site were carried out, with St. Teresa's House being the only remaining building on Site. No other habitats were impacted or altered by these demolition works.

The Site consists of a number of habitats including dry meadow (GS2), broadleaved woodland (WD1), scattered trees and parkland (WD5), scrub (WS1), buildings and artificial surfaces (BL3) and small areas of amenity grassland (GA2). Treelines (WL2) and hedgerows (WL1) were also present. No rare or protected habitats, or Schedule III invasive species under the Habitats Directive were recorded on-Site throughout any visits. A total of two low-impact, invasive, non-native plant species were recorded in the middle of the cluster of buildings at the Site, namely, Spanish bluebell and three-cornered garlic. While a single, medium impact invasive species was recorded within the broadleaved woodland on Site, namely Sycamore.

Site photographs of these habitats are included (Figure 6.7 - Figure 6-13) under each habitat description and a map of the habitats is presented in Figure 6.6, below.



Figure 6.6 Habitat map showing habitats recorded on Site.

6.4.11.1 Dry Meadows and Grassy Verges (GS2)

Areas of Dry Meadow and Grassy Verges (GS2) habitat is present in the southeastern corner of the Site. The species composition is very similar to the areas of amenity grassland (GA2), but with the addition of red fescue spp. (*Festuca rubra agg*), nettle (*Urtica dioica*) and hogweed (*Heracleum sphondylium*), self-heal (*Prunella vulgaris*), oxeye daisy (*Leucanthemum vulgare*) and false oat grass (*Arrhenatherum elatius*). This area of GS2 habitat is not particularly species-rich, however, this habitat is locally infrequent, and therefore it is considered to be of **local importance (higher Lower value)** (Figure 6.7).



Figure 6.7 Dry Meadows and Grassy Verge Habitat (GS2)

6.4.11.2 Amenity Grassland (GA2)

Amenity Grassland (GA2) is present at the Site within small patches focused on St. Teresa's house and associated 'Buildings and Artificial Surfaces' Habitat. This habitat is dominated by perennial rye-grass (*Lolium perenne*) and coarse grasses such as Yorkshire fog (*Holcus lanatus*) alongside white clover (*Trifolium repens*) and creeping buttercup (*Ranunculus repens*). It is a low diversity habitat type, is associated with high-intensity human use, does not have a high degree of naturalness and does not host any rare species. Therefore, it is considered to be of **local importance (lower value)** (Figure 6.8).



Figure 6.8 Improved Amenity Grassland Habitat (GA2)

6.4.11.3 Hedgerows (WL1) and Treeline (WL2)

Both Hedgerows (WL1) and Treelines (WL2) are present within and around the Site (Figure 6.9, and Figure 6.10). Both linear habitats within the lands are dominated by non-native species that are likely to have been planted for ornamental purposes and have become overgrown and semi-

natural. Where dense vegetation forms to the base of a linear feature it has been classified as hedgerow, whereas where this does not occur, it has been classified as treeline.



Figure 6.9 Hedgerows (WL1) Habitat.



Figure 6.10 Treeline (WL2) Habitat.

The most frequently encountered species for these habitat types include English yew (*Taxus baccata*), horse chestnut (*Aesculus hippocastanum*), Leyland cypress (*Cupressus x leylandii*) and holly (*Ilex aquifolium*).

An English yew (*Taxus baccata*) hedgerow, although largely comprising ornamental species at ground and understorey levels, has a structural diversity similar to semi-natural hedgerows. Its understorey is composed of snowberry (*Symphoricarpos alba*) and Spanish bluebell (*Hyacinthoides hispanica*), both invasive species. Spanish bluebell is listed on the Third Schedule of the Birds and Habitats Regulations and is a restricted species. It is an offence under Section 49 of the Birds and Habitats Regulations to cause the spread of this species. While snowberry is not listed within any legislation in Ireland, it is considered to be an invasive species of hedgerow and woodland habitats. Other hedgerows within the lands are monospecific Leyland cypress hedgerows with a more diverse overstorey of ornamental trees.

While hedgerows and treelines within the lands do not have a high-degree of naturalness and are not particularly species-rich examples, both habitats are nonetheless considered to be of **local importance (higher value)** due to the connectivity they provide to other habitats in the surrounding landscape and their rarity at a local scale. They are afforded protection through local and county level policies and objectives.

6.4.11.4 Broadleaved Woodland (WD1)

Mixed broadleaved woodland (WD1) is present within the southwest corner of the Site. This habitat is again dominated by non-native planted tree species including sycamore (*Acer pseudoplatanus*), beech (*Fagus sylvatica*) and horse chestnut. There has been some regeneration of these species as well as the native species ash (*Fraxinus excelsior*), holly, blackthorn (*Prunus spinosa*), and hawthorn (*Crataegus monogyna*). The understorey is largely composed of ivy (*Hedera helix*), with abundant hogweed (*Heracleum sphondylium*), alexanders (*Smyrnum olusatrum*) and patches of the invasive Spanish bluebell. This habitat type is considered to be of **local importance (higher value)** as, although it is largely composed of non-native species, its understorey has a degree of naturalness, and it is rare at a local scale.

The habitat is also the subject of policies of the Blackrock Local Area Plan 2015-2021 (DLRCC, 2015), Dún Laoghaire-Rathdown Biodiversity Action Plan, and the Dún Laoghaire-Rathdown County Development Plan 2022-2028 (DLRCC, 2023) (Figure 6.11).



Figure 6.11 Broadleaved Woodland Habitat (WD1).

6.4.11.5 Scattered Trees and Parkland (WD5)

Scattered Trees and Parkland Habitat (WD5) is present within the western side of the Site, as well as in the northeastern corner. In the west, Mixed Broadleaved Woodland (WD1) transitions to Scattered Trees and Parkland habitat (WD5) where the understorey is dominated by grassland species. Tree species within this habitat are similar to elsewhere within the lands, i.e. are a mix of ornamental species including a high proportion of sycamore, horse chestnut and holly. The understorey is analogous to amenity grassland.

This habitat type is considered to be of **local importance (higher value)** due to its rarity at a local scale (Figure 6.12).



Figure 6.12 Scattered Trees and Parkland Habitat (WD5).

6.4.11.6 Scrub (WS1)

Just north of the aforementioned broadleaved woodland area, an area of scrub can be found, which is dominated hogweed, nettle, bramble (*Rubus fruticosus agg.*) and raspberry (*Rubus idaeus*), with also some other species such as bitter dock (*Rumex obtusifolius*) and Yorkshire fog. This habitat type is considered to be of **local importance (higher value)** due to its rarity at a local scale (Figure 6-13).



Figure 6-13 Scrub Habitat (WS1).

6.4.11.7 Buildings & Artificial Surfaces (BL3), Ornamental/non-native shrubs (WS3) and Flower beds and borders (BC4)

The area immediately adjacent to Craigmore House contains ornamental plantings classified as ornamental/non-native shrub (WS3) and flower beds and borders (BC4). Some of these borders contain the Third Schedule-listed invasive species, three cornered garlic (*Allium triquetrum*). The buildings and roads within the lands are classified as buildings and artificial surfaces (BL3) and contain very few plant species. The avenues leading to the buildings are lit at night. These habitats are considered to be of **local importance (lower value)** in terms of their botanical value due to their highly modified and generally species-poor nature (Figure 6.14).



Figure 6.14 Buildings and Artificial Surfaces (BL3), Ornamental/non-native Shrubs (WS3), and Flower beds and borders (BC3).

6.4.11.8 Adjacent and Linked Habitats

The area that surrounds the Site is comprised largely of BL3 habitat and managed gardens and parkland that make up the existing urban fabric of Templehill, Blackrock, Dublin. There are no adjacent or linked habitats of national or international protection.

6.4.12 Species and Species Subgroups

6.4.12.1 Flora

6.4.12.1.1 Desk Study Results

6.4.12.1.1.1 Rare and Protected Flora

The Site of the Proposed Development is located within the Ordnance Survey 10km Grid Square (O22) and 2km Grid Square (O22E). 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, an endangered plant species occurred within the 2km Grid Square (O22E) (Table 6.8). 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 with the nearest listed record of a protected bryophyte was glasswort feathermoss (*Scleropodium touretii*) occurring 5.5km to the southeast of the Proposed Development Site.

Name	Grid Square	Date of last record	Database	Designation
Nettle-leaved Bellflower (<i>Campanula trachelium</i>)	O22E	26/06/2023	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Threatened species: Endangered

Table 6.8 Rare and Protected Plant Species for the surrounding grid square (O22E) associated with the Site.

6.4.12.1.1.2 Invasive Flora

There are records for 4 species of flora considered to be invasive within the grid squares which encompass the Site of the Proposed Development. Details of these records are listed in Table 6-9.

Name	Grid Square	Date of last record	Database	Designation
Butterfly-bush (<i>Buddleja davidii</i>)	O22E	28/07/2024	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species
Japanese Knotweed (<i>Reynoutria japonica</i>)	O22E	28/04/2011	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	High Impact Invasive Species Invasive Species Regulation S.I. 477 (Ireland) Invasive Species
Sycamore (<i>Acer pseudoplatanus</i>)	O22E	29/06/2021	Vascular plants: Online Atlas of	Medium Impact Invasive Species

			Vascular Plants 2012 Onwards	
Three-cornered Garlic (<i>Allium triquetrum</i>)	O22E	18/04/2022	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species Invasive Species Regulation S.I. 477 (Ireland) Invasive Species

Table 6-9 Invasive Plant Species for the surrounding grid square (O22E) associated with the Site.

6.4.12.1.2 Field Survey Results

The following invasive plant species are present on Site (Table 6.10).

Species	Last Recorded	Designation
Sycamore (<i>Acer pseudoplatanus</i>)	2021	Medium Impact Invasive Species
Three-cornered Garlic (<i>Allium triquetrum</i>)	2021	Medium Impact Invasive Species Regulation S.I. 477 (Ireland) Invasive Species
Spanish Bluebell (<i>Hyacinthoides hispanica</i>)	2021	Medium Impact Invasive Species Regulation S.I. 477 (Ireland) Invasive Species
Snowberry (<i>Symphoricarpos alba</i>)	2021	Not designated in Ireland

Table 6.10 Invasive Plant Species present on Site.

6.4.12.2 Bats

6.4.12.2.1 Desk Study Results

The following bat species have been recorded within the 10km (O22) grid square which encompasses the Site within the last 20 years (Table 6.11).

Name	Date	Database	Designation
Brown Long-eared Bat (<i>Plecotus auritus</i>)	14/05/2023	National Database of Bat Ireland	<ul style="list-style-type: none"> EU Habitats Directive - Annex IV Wildlife Act 1976 (as amended)
Common Pipistrelle (<i>Pipistrellus pipistrellus sensu stricto</i>)	14/05/2023	National Database of Bat Ireland	<ul style="list-style-type: none"> EU Habitats Directive - Annex IV Wildlife Act 1976 (as amended)

Name	Date	Database	Designation
Daubenton's Bat (<i>Myotis daubentonii</i>)	27/04/2021	National Database of Ireland	<ul style="list-style-type: none"> • EU Habitats Directive - Annex IV • Wildlife Act 1976 (as amended)
Leisler's Bat (<i>Nyctalus leisleri</i>)	14/05/2023	National Database of Ireland	<ul style="list-style-type: none"> • EU Habitats Directive - Annex IV • Wildlife Act 1976 (as amended)
Nathusius's Pipistrelle (<i>Pipistrellus nathusii</i>)	09/05/2023	National Database of Ireland	<ul style="list-style-type: none"> • EU Habitats Directive - Annex IV • Wildlife Act 1976 (as amended)
Natterer's Bat (<i>Myotis nattereri</i>)	14/06/2018	National Database of Ireland	<ul style="list-style-type: none"> • EU Habitats Directive - Annex IV • Wildlife Act 1976 (as amended)
Pipistrelle (<i>Pipistrellus pipistrellus sensu lato</i>)	08/05/2022	National Database of Ireland	<ul style="list-style-type: none"> • EU Habitats Directive - Annex IV • Wildlife Act 1976 (as amended)
Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>)	14/05/2023	National Database of Ireland	<ul style="list-style-type: none"> • EU Habitats Directive - Annex IV • Wildlife Act 1976 (as amended)

Table 6.11 Records of bat species in the surrounding 10km grid square associated with the Site.

The Proposed Development Site (indicated in the black box in Figure 6.15) is located in an area with an overall Low-Medium (17.44) suitability for bats in general.

The suitability index for specific bat species is presented in Table 6.12. There are no species for which the landscape suitability index is high, and landscape suitability is medium-high for three species of bats; soprano pipistrelle (*Pipistrellus pygmaeus*), common pipistrelle (*Pipistrellus pipistrellus*) and the Leisler's bat (*Nyctalus leisleri*).

Bat Species	Suitability Index (2km Grid Square)
Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	30 (Medium-High)
Brown Longed-eared bat (<i>Plecotus auritus</i>)	23 (Medium)
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	32 (Medium-High)
Lesser horseshoe bat (<i>Rhinolophus hipposideros</i>)	0 (Low)
Leisler's bat (<i>Nyctalus leisleri</i>)	34 (Medium-High)
Whiskered bat (<i>Myotis mystacinus</i>)	14 (Low-Medium)
Daubenton's bat (<i>Myotis daubentonii</i>)	3 (Low)
Nathusius' pipistrelle (<i>Pipistrellus nathusii</i>)	10 (Low)
Natterer's bat (<i>Myotis nattereri</i>)	11 (Low)

Table 6.12 Landscape Suitability Index for bat species within the 2km grid square (NBDC), those recorded in the 10km grid square (O22) are highlighted in green.



Figure 6.15 Bat Landscape Model (all bats) surrounding the proposed development Site (Adapted from NBDC).

6.4.12.3 Field Survey Results

The following sections provide summary of results for bat surveys conducted to date by DNV on 6th April 2023 and 2025 surveys, and includes a summary of previous bat surveys conducted by Scott Cawley Ltd. In 2020 and 2021.

6.4.12.3.1.1 Scott Cawley (2018-2021) Survey Results

Surveys conducted at Craigmore House and surrounding lands found no evidence of roosting bats within buildings, despite their moderate suitability due to age and structure. Automated detectors recorded limited bat activity, primarily involving soprano and common pipistrelle bats, with

occasional peaks suggesting repeated movements by a small number of individuals. Manual transects confirmed low activity levels, with Leisler's and soprano pipistrelle bats observed foraging briefly along hedgerows and treelines. Subsequent surveys in 2020 and 2021 mirrored these findings, showing sparse bat activity, mostly along woodland edges and canopy gaps. While the Site supports suitable foraging and commuting habitats, particularly mature hedgerows and treelines, bat use appears limited to a small, locally important population of common species. Thirty trees were identified as having PRFs, though no roosts were confirmed (Scott Cawley, 2021).

6.4.12.3.1.2 PBRA and Habitat Suitability

Although the Site lies within an urban landscape, the southern boundary is adjacent to an area of additional grassland, treeline and hedgerow habitat which is linked via the southwest woodland and connecting treelines within the Site boundary. These habitats within the Site provide potentially 'Moderate' to 'High' suitability foraging and commuting habitats for common bat species such as Pipistrelle species and Leisler's bat. The overall habitat suitability is therefore classed as moderate for commuting and foraging bats.

During the PEA walkover on-Site on 6th April 2023, the trees containing PRFs were classified as per Collins (2016) guidance to be of 'Low' potential due to limited roosting features (i.e., cracks, crevices, heavy ivy lattice, etc). This result was reiterated during the visit to Site on 11th April 2025, where the roost entrances and habitat suitability of the trees were categorised as per Collins (2023) guidance.

The trees on-site were primarily classed as PRF-I during this 2025 visit, with a handful categorised as PRF-M along the main access road to St. Teresa's House. However, emergence surveys of the PRF-M trees could not be done due limitations described in Section 6.3.5, above.

The existing and retained building on Site was noted to have several egress/ingress points suitable for bats during the 2025 visit. Previous survey effort from Scott Cawley in 2021 indicated no evidence of bat activity within the building. Despite the lack of evidence of use in 2021, bats are a mobile species, and occupancy/use of buildings can change over time, accounting for this, and adopting the precautionary principle, this building can be therefore categorised as "Moderate" roost potential, due to mobile nature of bats, and the length of time it has been unused.

These categorisations (of the building and trees) was further supported by the PBRA completed in April 2026, whereby multiple PRFs were observed on the St. Teresa's building (and its extension) and three trees within the scattered trees and parkland habitat to the east. The PRFs recorded during this 2026 PBRA survey for the buildings are noted in the table below and shown in Figure 6.16 below also (Table 6.13).

ID	Location	PRF Type	Roost Suitability
Building Assessment			
1	Main Building	x2 broken vents and x2 small holes in wall	PRF-I Access to interior
2	Main Building	Gap in window hoarding	PRF-I
3	Main Building	Crevice around pipe	PRF-I
4	Main Building	Gap in window hoarding	PRF-I
5	Main Building Extension	Plant room structure with access points	PRF-M
6	Main Building Extension	Exposed rafter spaces and damaged crevices	PRF-M
7	Main Building Extension	Part demolished stairwell	PRF-I
8	manhole	Broken manhole cover and sewer	PRF-I/M
9	Main Building Extension	Exposed ceiling cavities	PRF-M
10	Main building	Open basement hatch	PRF-M
11	Main Building Extension	Part demolished structure with exposed ceiling structure cavities	PRF-I
Tree Assessment			

ID	Location	PRF Type	Roost Suitability
1	Horse Chestnut	Large Cavity	PRF-M (reduced to PRF-I following endoscope inspection)
2	Fallen Tree	Multiple PRFs and damage	PRF-M
3	Mature Lime Tree	A knothole cavity c. 6m above ground on north side of trunk),	PRF-M
4	Lime Tree	A broken limb stump cavity c. 8m above ground on north side of trunk)	PRF-M

Table 6.13 Results of PBRA carried out on Site during the 2026 survey period in terms of PRFs for buildings and trees.

Bat emergence surveys were subsequently completed and comprised surveys of the PRFs identified on the building (St. Teresa's House) and PRFs on any PRF-M rated trees on Site, as shown in Figure 6.16. A total of 9 no. Vantage Point Locations were selected to ensure complete coverage of the identified PRFS listed in the above table and as shown in the Figure 6.16 below.



Figure 6.16 Map showing PRF and Vantage Point Survey locations for Dusk Emergence Surveys carried out on building and trees in 2026.

Please note that per Section 6.3.5 above, for health and safety reasons (due to the presence of aggressive dogs on Site) emergence surveys were not able to be completed at the Site of the buildings or trees for the 2025 survey period as per best practice guidelines, hence the adapted survey approach at this Site, was necessary in order to gather baseline information on bat assemblage and usage of the Site, in so far, as was possible in light of the aforementioned limitations.

It should be noted that while unable to definitively confirm presence or absence of roosting bats in the house in 2025, in addition to static deployment on the 12th of August 2025, St. Teresa's House was checked for the presence of any signs of bat activity, with no physical or visual evidence of roosting bats observed during this inspection.

These findings have since been updated to include the results of the 2026 bat surveys which comprised an updated PBRA, and dusk emergence surveys of the buildings and trees, which were not completed during the 2025 survey period. The results of which are detailed in the preceding sections.

6.4.12.3.1.2.1 Endoscope Survey Results

The endoscope survey of the Horse Chestnut tree cavity PRF determined no evidence of occupation or use by bats. As a result, this tree was downgraded from a PRF-M to a PRF-I, with no further assessment required.

6.4.12.3.1.3 Bat Static Deployment Survey Results

A static bat detector was deployed at St. Teresa's House from the 12th of August to the 18th of August 2025 to assess potential bat activity associated with the building (refer to Appendix 6-5). Review of the detector summary data confirms that the unit was operational throughout the survey period, with continuous recording of environmental parameters and normal battery discharge observed. No bat recordings were triggered during deployment (i.e. zero files recorded), indicating an absence of detectable bat activity at this location. Weather conditions during the survey period were suitable for bat activity surveys, and therefore are not considered to have constrained detectability. On this basis, the results support the conclusion that St. Teresa's House does not support a bat roost and is of negligible importance for bats.

Results for the static deployment within the woodland and mature tree habitats on Site are provided below.

Static Detector SM01 (Woodland to SW):

A total of 532 bat passes were recorded on SM01 in the woodland to the southwest. Common pipistrelle (*Pipistrellus pipistrellus*) (n=276) was the most frequently recorded species, comprising 52% of bat passes. Leisler's bat (*Nyctalus leisleri*) (n=110) followed at 21%, followed by Pipistrelle species n=105) at 20%, and soprano pipistrelle (*Pipistrellus pygmaeus*) (n=39; 7%) and Nathusius' pipistrelle (*Pipistrellus nathusii*) (n=2; 0.4%) recorded less frequently. Results are shown in the below Figures (Figure 6.17 and Figure 6.18).

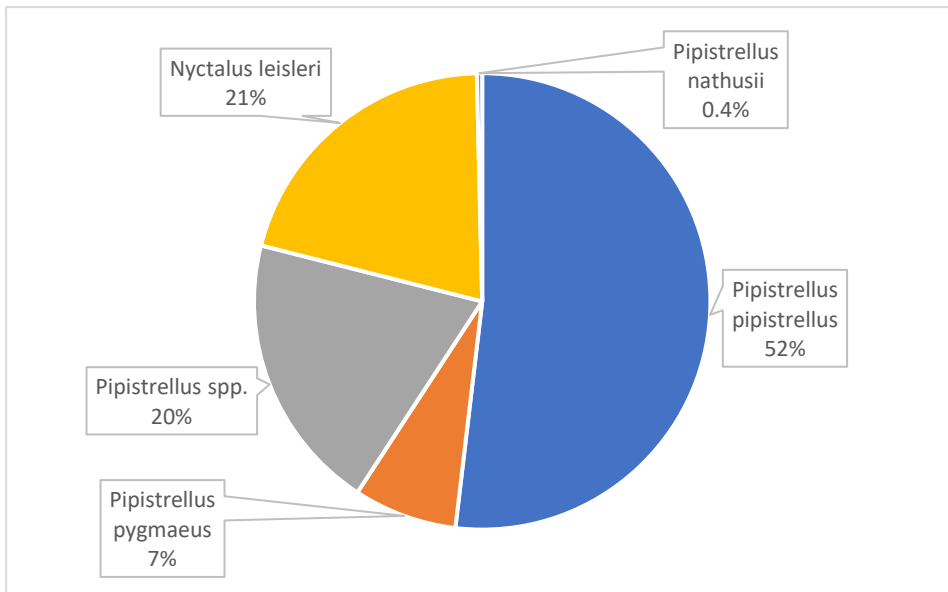


Figure 6.17 Pie Chart Results for SMO1 Static Detector Deployment in the woodland habitat on Site (2025).

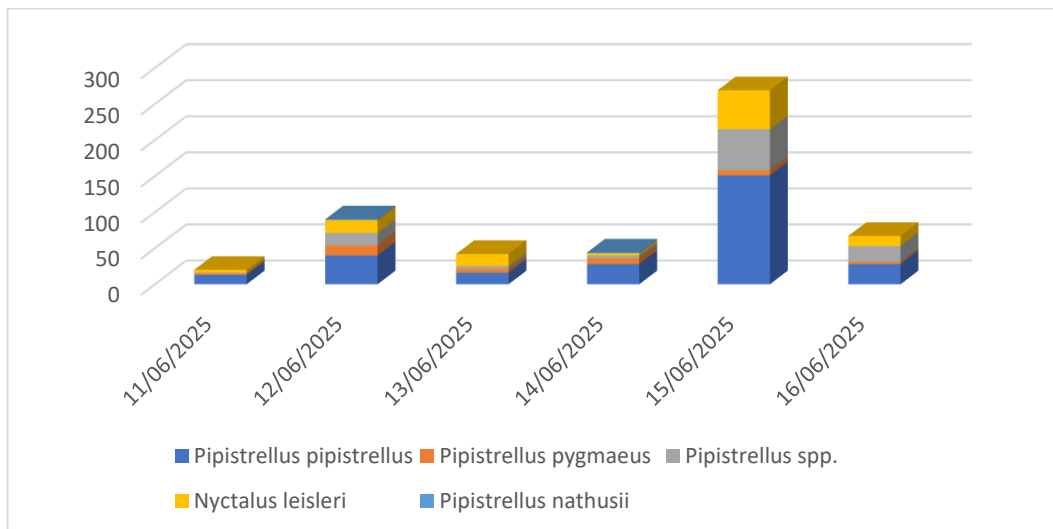


Figure 6.18 Bar Chart Results for SMO1 Static Detector Deployment in woodland habitat on Site (2025).

Static Detector SMO2 (Mature Trees to NE):

A total of 988 bat passes were recorded on SMO2 in the mature tree habitat to the northeast.

Common pipistrelle (*Pipistrellus pipistrellus*) (n=685) was the most frequently recorded species, comprising 69% of bat passes. Soprano pipistrelle (*Pipistrellus pygmaeus*) (n=208) followed at 21%, with Leisler’s bat (*Nyctalus leisleri*) (n=75; 8%), Pipistrelle species (*Pipistrelle spp.*) (n=19; 2%) and with Myotis species (*Myotis spp.*) (n=1; 0.1%) next. Results are shown in the below Figures (Figure 6.19 and Figure 6.20).

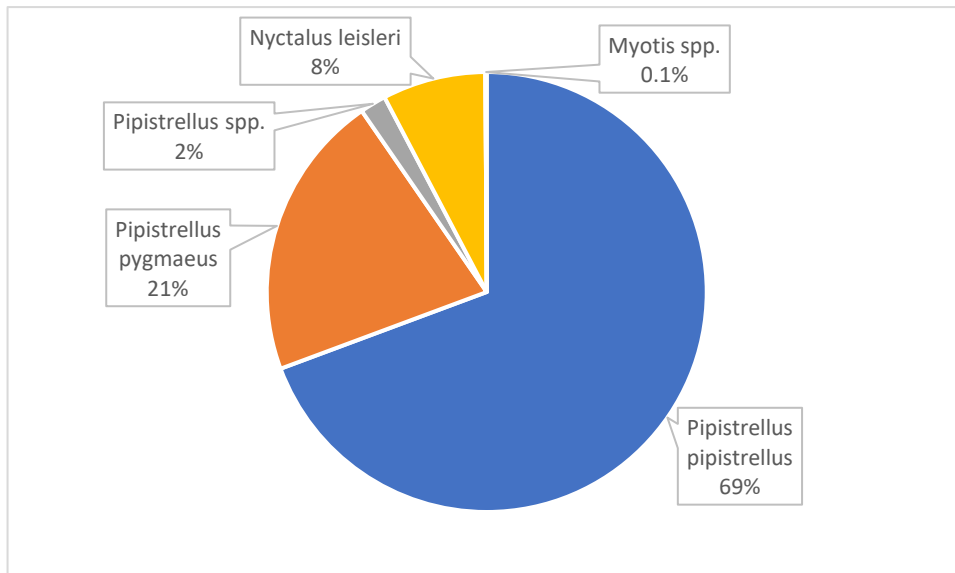


Figure 6.19 Pie Chart Results for SMO2 Static Detector Deployed in Treeline habitat on Site (2025).

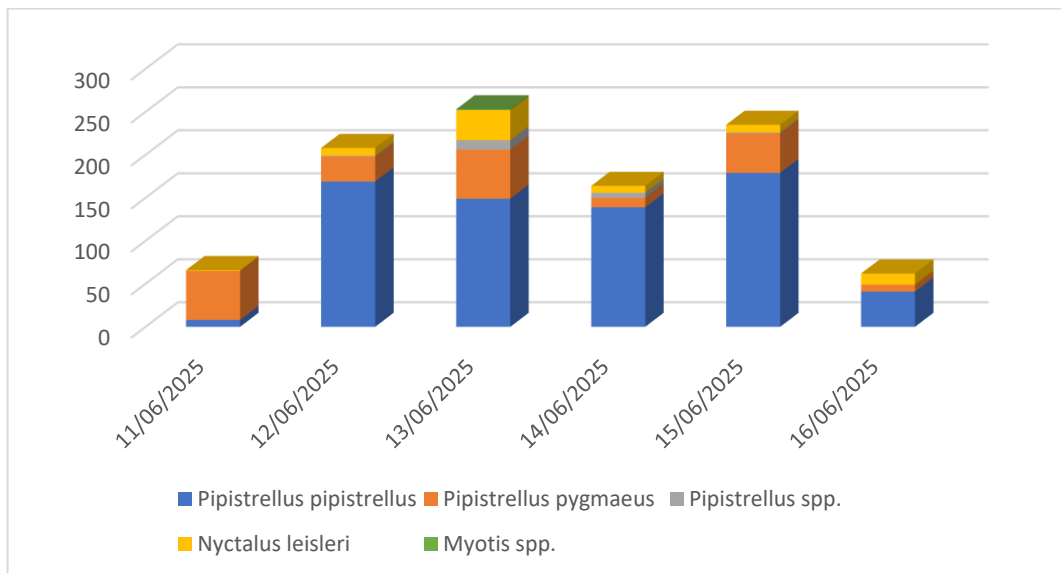


Figure 6.20 Bar Chart Results for SMO2 Static Detector Deployed in Treeline habitat on Site (2025).

6.4.12.3.1.4 Bat Activity Transect Survey Results

The 2020 and 2021 bat activity surveys recorded a distinct paucity of activity within and along the edges of woodland, scrub and through rough grassland. Activity was limited to infrequent passes of common pipistrelle and soprano pipistrelle along the edge of linear woodland bordering the field and within small openings in the canopy of trees. However, there was a slight increase in activity in the wooded area to the south and southeast of the main building (St. Teresa’s House) and old school, mostly of pipistrelle species. The mature hedgerows and treelines that cross the subject lands are considered to constitute highly suitable foraging and commuting habitat for bats. The bat species recorded during the 2020-2021 surveys are all common species and of “Least concern” (Nelson et al., 2019). (Scott Cawley, 2021).

Further bat activity surveys have not been possible due to access limitations discussed in Section 6.3.5 above. The results of the single transect survey carried out by DNV in 2025 are shown below (Figure 6.21 and Figure 6.22). In summary a total of four bat species were recorded using the Site, predominantly the mature trees and linear features that surround St. Teresa’s House to the north.

In order of abundance there were: Common Pipistrelle (*Pipistrellus pipistrellus*) (n=519, 72%), Myotis species (*Myotis spp.*) (n=103, 12%), Soprano Pipistrelle (*Pipistrellus pygmaeus*) (n=48, 13%), and Leisler's bat (*Nyctalus leisleri*) (n=20, 3%). Which is consistent with the species list recorded during static detector surveys carried out on Site to date, including previous surveys by Scott Cawley. For full survey metadata for the 2025 survey period, please refer to Appendix 6-3 below.

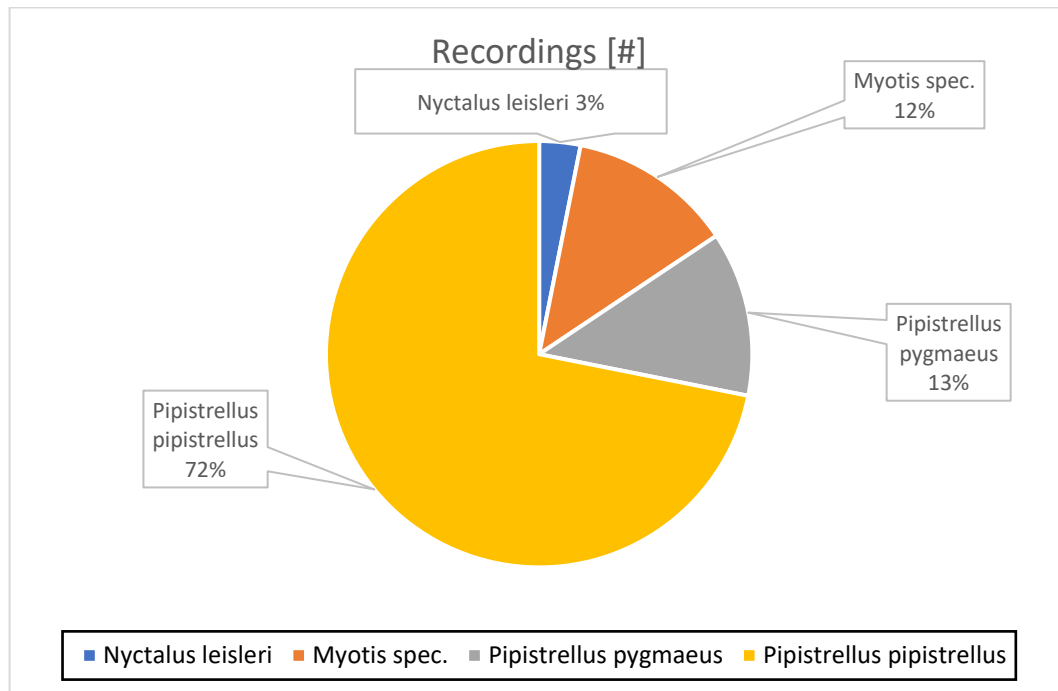


Figure 6.21 Pie Chart showing composition of species calls on Site during the 2025 transect survey.



Figure 6.22 Showing location of bat activity results for 2025 Transect Survey completed at St. Teresa's.

6.4.12.3.1.5 Bat Dusk Emergence Survey Results

Please refer to Appendix 6-3 for all bat dusk emergence survey metadata.

6.4.12.3.1.6 Bat Dusk Emergence Survey of Buildings

A total of 6 vantage point locations (VPs) were selected to completely cover all potential emergence locations/PRFs on the buildings as shown below (**Table 6.14**).

VP Location	Image of PRFs covered by Vantage Point (VP)
VP1	 A photograph showing a grey, multi-story building with several windows. The foreground is filled with dense green bushes and weeds. The building appears to be in a somewhat neglected state.
VP2	 A photograph of a grey building with a classical architectural style, featuring a portico with columns. The sky is clear and blue. In the foreground, the top of a black surveying instrument is visible.
VP3	 A photograph of a grey building with a curved facade. The foreground is dominated by tall green grass and weeds. A black surveying instrument is mounted on a tripod in the lower foreground.




VP Location	Image of PRFs covered by Vantage Point (VP)
VP4	
VP5	
VP6	

Table 6.14 Vantage Point Locations and the Potential Roost Features they cover on St. Teresas House and Extension during the 2026 dusk building emergence surveys.

No bats were recorded emerging or re-entering from the St. Teresas House and extension during any of the dusk emergence surveys completed in May 2026. Incidental bats which were commuting and foraging nearby were observed and recorded on the bat detectors, however, overall bat activity on Site was low, with the results of the commuting and foraging bat activity (bat passes) provided in the sections that follow.

A total of 342 bat passes were recorded during the building emergence survey completed on the 05th of May 2026. Of these, Common pipistrelle (*Pipistrellus pipistrellus*) (n=281) was the most frequently recorded species, comprising 82% of bat passes. While Leisler’s bat (*Nyctalus leisleri*) (n=61) followed at 18%. No other bat species were recorded. Results are shown in the below Pie chart (Figure 6.23).

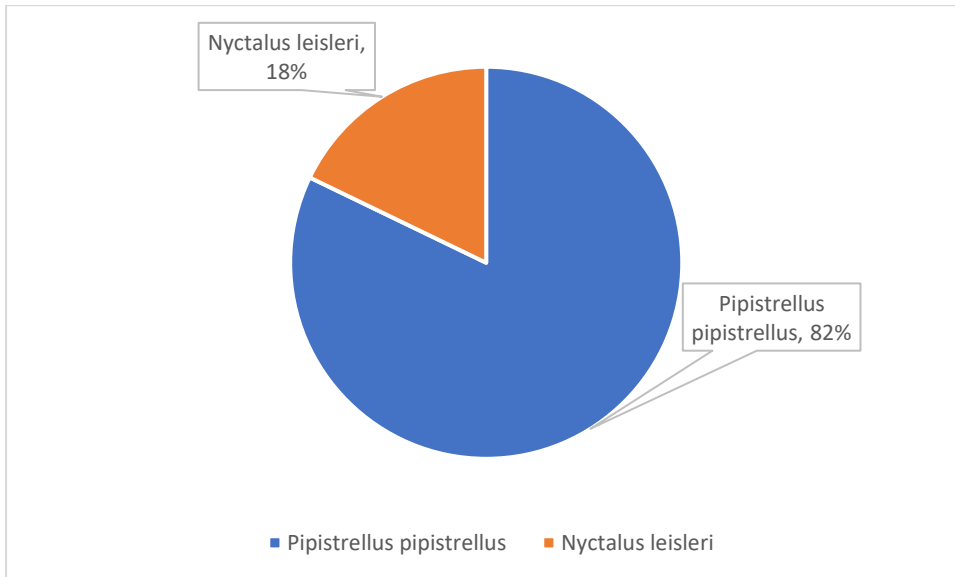


Figure 6.23 Showing number of bat passes recorded during the dusk building emergence survey on the 05.05.2026.

A total of 2,049 bat passes were recorded during the building emergence survey completed on the 26th of May 2026. Of these, Common pipistrelle (*Pipistrellus pipistrellus*) (n=1663) was the most frequently recorded species, comprising 81% of bat passes. Nathusius pipistrelle (*Pipistrellus nathusii*) (n=162) followed at 8%, then Soprano pipistrelle (*Pipistrellus pygmaeus*)(n=142) at 7%. While Leisler’s bat (*Nyctalus leisleri*) (n=82) was recorded the least at 4%. No other bat species were recorded. Results are shown in the below Pie chart (Figure 6.24).

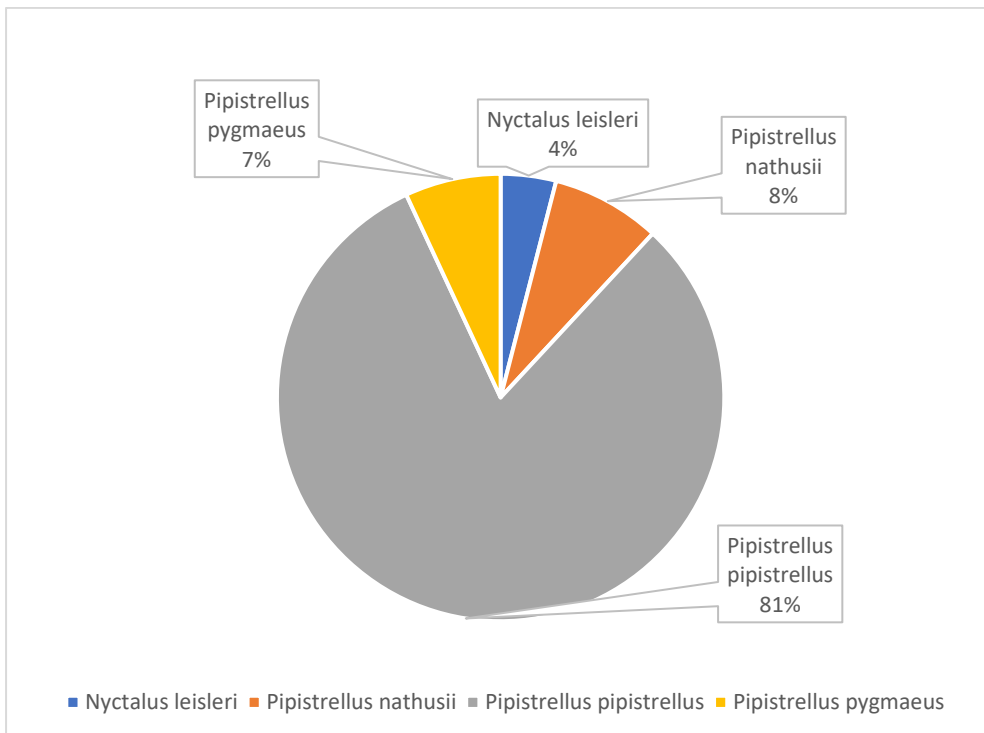


Figure 6.24 Showing number of bat passes recorded during the dusk building emergence survey on the 26.05.2026.

6.4.12.3.1.7 Bat Dusk Emergence Survey of Trees

A total of 3 vantage point locations (VPs) were selected to completely cover all potential emergence locations/PRFs on the trees. No bats were recorded emerging or re-entering from the PRF-M trees during any of the dusk emergence surveys completed in May 2026. Incidental bats which were commuting and foraging nearby were observed and recorded on the bat detectors, however,

overall bat activity on Site was low, with the results of the commuting and foraging bat activity (bat passes) provided in the sections that follow.

A total of 203 bat passes were recorded during the tree emergence survey completed on the 06th of May 2026. Of these, Common pipistrelle (*Pipistrellus pipistrellus*) (n=194) was the most frequently recorded species, comprising 96% of bat passes. While Leisler's bat (*Nyctalus leisleri*) (n=9) followed at 4%. No other bat species were recorded. Results are shown in the below Pie chart (Figure 6.25).

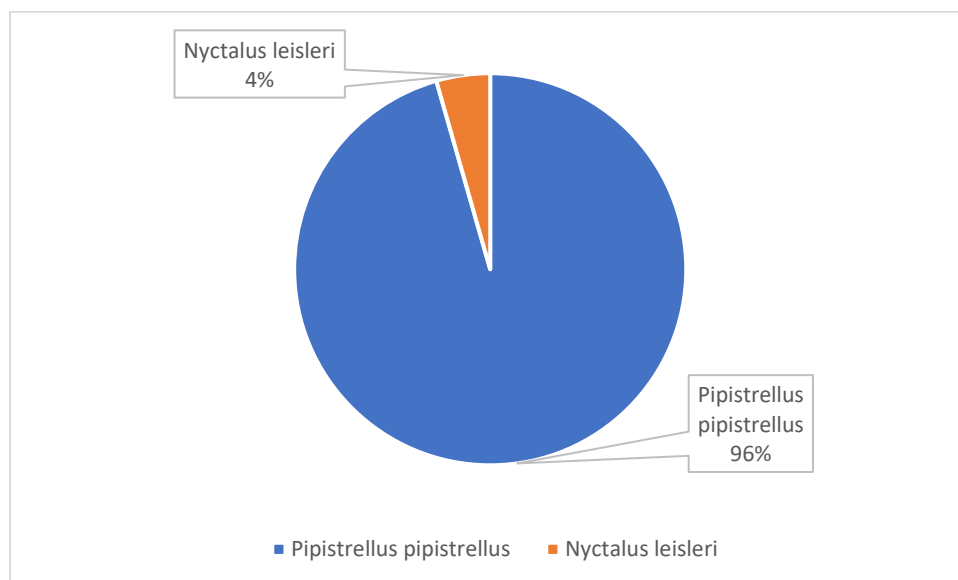


Figure 6.25 Showing number of bat passes recorded during the dusk tree emergence survey on the 06.05.2026.

A total of 380 bat passes were recorded during the tree emergence survey completed on the 28th of May 2026. Of these, Common pipistrelle (*Pipistrellus pipistrellus*) (n=377) was the most frequently recorded species, comprising 99% of bat passes. While Leisler's bat (*Nyctalus leisleri*) (n=3) followed at 1%. No other bat species were recorded. Results are shown in the below Pie chart (Figure 6.26).

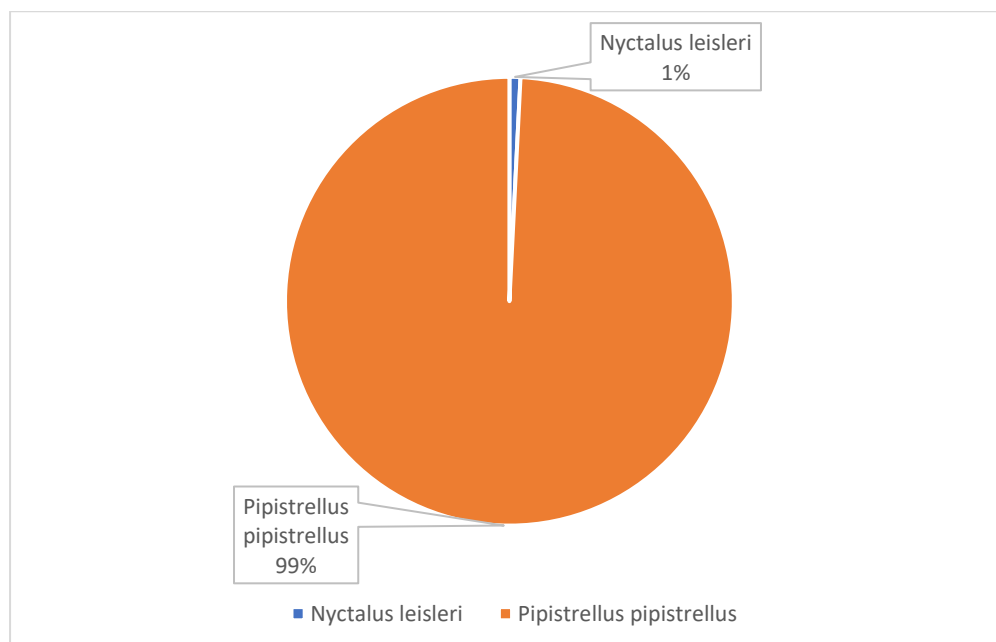


Figure 6.26 Showing number of bat passes recorded during the dusk tree emergence survey on the 28.05.2026.

6.17.2.2.4 Evaluation

Surveys confirmed low bat activity on site, with five species recorded (Common pipistrelle, Soprano pipistrelle, Myotis spp., and Nathusius and Leisler's bat) using treelines and woodland edges for commuting and foraging. No bat roosts were found in existing building or trees, nor was any presence of same observed during the internal building assessment in 2025 of St. Teresa's House or during the 2026 emergence surveys. ~~However, limitations in section 6.3.5 above are noted.~~

As such, given the "Moderate" to "High" bat habitat suitability of the mature hedgerows and treeline habitats for foraging and commuting on-site, ~~as well as the "Moderate" roost potential identified most recently within St. Teresa's Lodge, as well as the fact that updated activity and emergence surveys have not yet been possible due to limitations (Section 6.3.5);~~ the local bat populations using the Proposed Development Site and the surroundings as foraging and commuting habitat are valued as being of **local importance (higher value)**.

~~This value has been assigned using the precautionary principle, where, in the absence of emergence survey data, and static deployment data in the building, the possibility of the building being used as a bat roost, cannot be ruled out.~~

6.4.12.3 Birds

6.4.12.3.1 Desk Study Results

A total of 68 bird species have been recorded within the O22E 2km grid square. Of these, 19 are amber listed birds and 8 are red listed birds as identified on the Birds of Conservational Concern in Ireland (BoCCI) (Gilbert et al. 2021). Details of amber and red listed species are detailed in Table 6.15. The remaining species are all green listed species.

Species	Date of record	BoCCI Status
Bar-tailed Godwit (<i>Limosa lapponica</i>)	31/12/2011	Red
Black-headed Gull (<i>Chroicocephalus ridibundus</i>)	02/03/2023	Amber
Black-tailed Godwit (<i>Limosa limosa</i>)	31/12/2011	Red
Brent Goose (<i>Branta bernicla</i>)	28/04/2024	Amber
Common Gull (<i>Larus canus</i>)	31/12/2011	Amber
Common Coot (<i>Fulica atra</i>)	31/12/2011	Amber
Cormorant (<i>Phalacrocorax carbo</i>)	25/03/2023	Amber
Curlew (<i>Numenius arquata</i>)	08/01/2018	Red

Species	Date of record	BoCCI Status
Dunlin (<i>Calidris alpina</i>)	03/02/2011	Red
Gannet (<i>Morus bassanus</i>)	05/04/2016	Amber
Herring Gull (<i>Larus argentatus</i>)	08/01/2018	Amber
House Sparrow (<i>Passer domesticus</i>)	27/04/2020	Amber
Kingfisher (<i>Alcedo atthis</i>)	04/10/2018	Amber
Mallard (<i>Anas platyrhynchos</i>)	22/10/2016	Amber
Mediterranean Gull (<i>Ichthyiaetus melanocephalus</i>)	07/07/2015	Amber
Mute Swan (<i>Cygnus olor</i>)	31/12/2011	Amber
Oystercatcher (<i>Haematopus ostralegus</i>)	08/01/2018	Red
Redshank (<i>Tringa totanus</i>)	08/01/2018	Red
Ringed Plover (<i>Charadrius hiaticula</i>)	31/12/2011	Amber
Shag (<i>Gulosus aristotelis</i>)	06/04/2011	Amber
Shelduck (<i>Tadorna tadorna</i>)	31/12/2011	Amber
Shoveler (<i>Spatula clypeata</i>)	31/12/2011	Red
Starling (<i>Sturnus vulgaris</i>)	01/03/2019	Amber
Swallow (<i>Hirundo rustica</i>)	25/04/2023	Amber
Swift	17/07/2019	Red

Species	Date of record	BoCCI Status
(<i>Apus apus</i>)		
Teal (<i>Anas crecca</i>)	01/04/2013	Amber
Tufted Duck (<i>Aythya fuligula</i>)	22/10/2016	Amber

Table 6.15 Details of Amber and Red-listed bird species of Conservation Concern within the 10km grid square (O22E).

6.4.12.3.2 Field Survey Results

6.4.12.3.2.1 Bird Scoping Survey Results

The PEA walkover noted the Site to contain a diverse selection of suitable habitats for urban bird species, e.g., woodland, scrub and grassland/meadow. Potential for breeding birds to occur was considered likely, as such breeding bird surveys were carried out on Site as detailed below.

In relation to winter bird surveys; As confirmed throughout surveys for the previous application, as well as the most recent scoping bird surveys completed in 2025, it is confirmed that the Site comprises limited areas of suitable foraging habitat (e.g. open amenity grassland) for wintering bird species due to grasslands being enclosed by hedgerows and/or treelines, and due to the absence of suitable wetlands used by wintering SCI species from surrounding SPAs within the relevant foraging and breeding ranges. In addition, the majority of SCI species listed for the European Sites discussed are wetland and wader birds which would not be expected to use such habitat to breed. As a result, winter bird surveys were deemed unnecessary and were not carried out.

6.4.12.3.2.2 Breeding Bird Survey Results

Breeding Bird Surveys were carried out at the Site of the Proposed Development on three occasions between May and July 2025. The core study area included the main Development area and suitable habitat for foraging and resting bird species in the immediate vicinity of the Site.

A total of 28 species were recorded within the redline boundary, the majority of which were common and widespread species. However also amongst these were 1 red listed and 5 amber listed species as shown in Table 6.16 below.

Species	Date(s) Observed	BoCCI Status
Swift (<i>Apus apus</i>)	20/05/2025 11/07/2025	Red
Herring gull (<i>Larus argentatus</i>)	20/05/2025 10/06/2025 11/07/2025	Amber
Goldcrest (<i>Regulus regulus</i>)	20/05/2025 10/06/2025 11/07/2025	Amber
Greenfinch (<i>Chloris chloris</i>)	11/07/2025	Amber
Swallow	20/05/2025 10/06/2025	Amber

Species	Date/(s) Observed	BoCCI Status
(<i>Hirundo rustica</i>)	11/07/2025	
Starling (<i>Stirnis vulgaris</i>)	20/05/2025	Amber
Blackbird (<i>Turdus merula</i>)	20/05/2025 10/06/2025 11/07/2025	Green
Blackcap (<i>Sylvia atricapilla</i>)	20/05/2025 10/06/2025 11/07/2025	Green
Blue Tit (<i>Cyanistes caeruleus</i>)	20/05/2025 10/06/2025 11/07/2025	Green
Bullfinch (<i>Pyrrhula pyrrhula</i>)	11/07/2025	Green
Chaffinch (<i>Fringilla coelebs</i>)	20/05/2025 10/06/2025	Green
Chiffchaff (<i>Phylloscopus collybita</i>)	20/05/2025	Green
Coal Tit (<i>Periparus ater</i>)	10/06/2025	Green
Crossbill (Common) (<i>Loxia curvirostra</i>)	11/07/2025	Green
Dunnock (<i>Prunella modularis</i>)	20/05/2025	Green
Feral Pigeon (<i>Columba livia domestica</i>)	10/06/2025 11/07/2025	Green
Goldfinch (<i>Carduelis carduelis</i>)	10/06/2025 11/07/2025	Green
Great Tit (<i>Parus major</i>)	20/05/2025 10/06/2025 11/07/2025	Green
Hooded Crow (<i>Corvus cornix</i>)	20/05/2025 10/06/2025	Green
Jackdaw (<i>Corvus monedula</i>)	11/07/2025	Green
Magpie	20/05/2025 10/06/2025	Green

Species	Date/(s) Observed	BoCCI Status
(<i>Pica pica</i>)	11/07/2025	
Robin (<i>Erithacus rubecula</i>)	20/05/2025 10/06/2025 11/07/2025	Green
Siskin (<i>Spinus spinus</i>)	10/06/2025 11/07/2025	Green
Song Thrush (<i>Turdus philomelos</i>)	20/05/2025 10/06/2025	Green
Starling (<i>Sturnus vulgaris</i>)	20/05/2025	Green
Treecreeper (Eurasian) (<i>Certhia familiaris</i>)	11/07/2025	Green
Woodpigeon (<i>Columba palumbus</i>)	20/05/2025 10/06/2025 11/07/2025	Green
Wren (<i>Troglodytes troglodytes</i>)	20/05/2025 10/06/2025	Green

Table 6.16 bird species recorded at the Proposed Development Site and surrounding area during the breeding bird surveys in May, June, and July of 2025 in respect of the current application at St. Teresa's lands.

All sightings and locations of bird species of note are listed and depicted in Table 6.17 and Figure 6.27 below.

Herring gull (BoCCI Amber listed) was recorded on all survey visits during the survey period and is confirmed to have successfully hatched chicks on the main building. Three pairs were present on the chimney structures and breeding was confirmed in June and July where recently hatched young were present alongside nest structures. Three hatched young were observed in total. Herring Gull is an SCI species of the Northwest Irish Sea SPA (004236).

The relatively common and widespread goldcrest which is listed on the BoCCI Amber List (2020 2026) due to a declining population trend was frequently encountered during surveys, which is to be expected in most areas of suitable woodland areas and treelined gardens and parks in Ireland.

Of note were observations of BoCCI Red listed swift which were observed foraging over the hedgerows and treelines on Site in June and July, no breeding behaviour was observed, and swift are classed as non-breeding in the immediate vicinity of the Site, but outside of the Proposed Development Site. **Accordingly, no buildings were identified as supporting active nests of swift or swallow, and no direct impacts to nesting sites are predicted as a result of the Proposed Development.**

Starling and swallow were also recorded in flight over the Site; no breeding activity was recorded for this species.

GIS MAP CODE	Date	Species Common name	Species Latin name	Conservation Status	Breeding Status Result	No.
HG 004	05/06/2025	Herring gull	<i>Larus argentatus</i>	Amber	Confirmed breeding	4
HG 005	05/06/2025	Herring gull	<i>Larus argentatus</i>	Amber	Confirmed breeding	2
HG 006	11/07/2025	Herring gull	<i>Larus argentatus</i>	Amber	Confirmed breeding	3
HG 001	20/05/2025	Herring gull	<i>Larus argentatus</i>	Amber	Confirmed breeding	2
HG 002	20/05/2025	Herring gull	<i>Larus argentatus</i>	Amber	Confirmed breeding	2
HG 003	20/05/2025	Herring gull	<i>Larus argentatus</i>	Amber	Confirmed breeding	2
GC 001	20/05/2025	Goldcrest	<i>Regulus regulus</i>	Amber	Probable breeding	1
GC 002	20/05/2025	Goldcrest	<i>Regulus regulus</i>	Amber	Probable breeding	2
GC 003	20/05/2025	Goldcrest	<i>Regulus regulus</i>	Amber	Probable breeding	2
GC 004	20/05/2025	Goldcrest	<i>Regulus regulus</i>	Amber	Probable breeding	2
GC 009	11/07/2025	Goldcrest	<i>Regulus regulus</i>	Amber	Probable breeding	2
GC 011	11/07/2025	Goldcrest	<i>Regulus regulus</i>	Amber	Probable breeding	1
GC 005	05/06/2025	Goldcrest	<i>Regulus regulus</i>	Amber	Possible breeding	1
GC 006	05/06/2025	Goldcrest	<i>Regulus regulus</i>	Amber	Possible breeding	2
GC 007	05/06/2025	Goldcrest	<i>Regulus regulus</i>	Amber	Possible breeding	2
GC 008	05/06/2025	Goldcrest	<i>Regulus regulus</i>	Amber	Possible breeding	1
GC 010	11/07/2025	Goldcrest	<i>Regulus regulus</i>	Amber	Possible breeding	1
GR 001	11/07/2025	Greenfinch	<i>Chloris chloris</i>	Amber	Possible breeding	2

GIS MAP CODE	Date	Species Common name	Species Latin name	Conservation Status	Breeding Status Result	No.
SL 002	05/06/2025	Swallow	<i>Hirundo rustica</i>	Amber	Non-breeding	3
SI 001	05/06/2025	Swift	<i>Apus apus</i>	Red	Non-breeding	5
SI 001	11/07/2025	Swift	<i>Apus apus</i>	Red	Non-breeding	1
SL 003	11/07/2025	Swallow	<i>Hirundo rustica</i>	Amber	Non-breeding	3
SG 001	20/05/2025	Starling	<i>Sturnus vulgaris</i>	Amber	Non-breeding	5
SL 001	20/05/2025	Swallow	<i>Hirundo rustica</i>	Amber	Non-breeding	4

Table 6.17 St. Teresa's LRD breeding bird survey observations (2025 survey season).

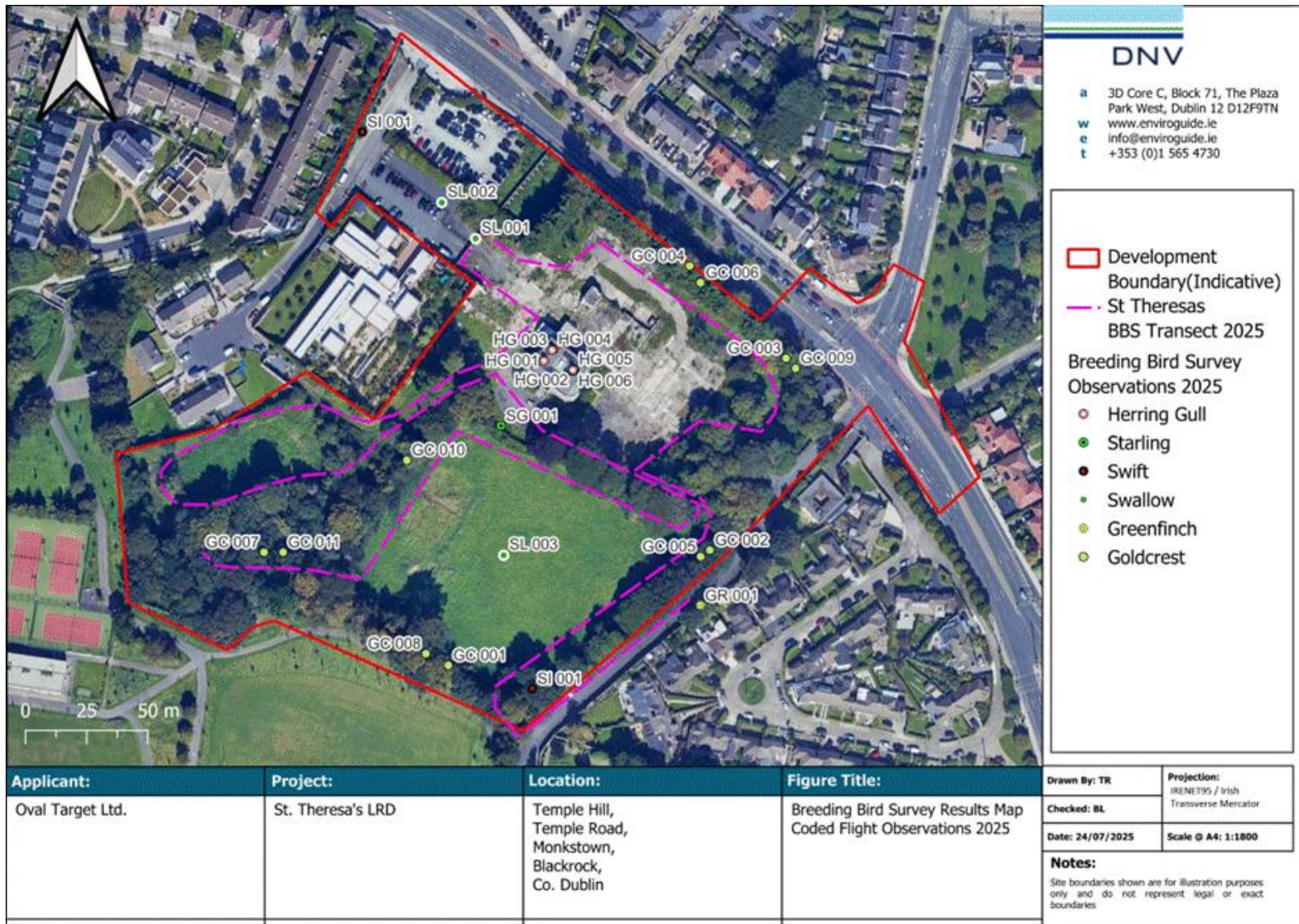


Figure 6.27 Breeding bird survey observations on St. Teresa's lands 2025.

6.4.12.3.3 Evaluation

Considering the variety of bird species recorded both in the historical records and during the various field surveys, as well as the evidence of breeding along majority of the Site, it is considered that the Site contains resident and regularly occurring, locally important populations of bird species protected under the Wildlife Act and Birds and Habitats Regulations 2011, As such the species importance was assessed as having **Local Importance – Higher Value**.

6.4.12.4 Mammals

6.4.12.4.1 Desk Study Results

Records for terrestrial mammals were obtained from the NBDC online database. Table 6.18 lists these species, their date of last record and summarises their protected status/designation. In total, 4 mammal species (three native and one non-native or invasive) were recorded within the grid squares which encompass the Proposed Development Site.

Species	Date of last record	Source	Designation
Native Species			
Hedgehog (<i>Erinaceus europaeus</i>)	25/04/2021	Hedgehogs of Ireland	Wildlife Act 1976 (as amended)
Red Fox (<i>Vulpes vulpes</i>)	09/05/2018	Mammals of Ireland 2016-2025	Not legally protected
Non-Native Species			
Grey Squirrel (<i>Sciurus carolinensis</i>)	24/10/2022	Mammals of Ireland 2016-2025	High Impact Invasive Species
Hazel Dormouse (<i>Muscardinus avellanarius</i>)	26/04/2020	Mammals of Ireland 2016-2025	Wildlife Act 1976 (as amended)

Table 6.18 Records of terrestrial mammal (native and non-native) for the surrounding 10km grid square (o22E) associated with the Site from NBDC.

6.4.12.4.2 Field Survey Results

6.4.12.4.2.1 Badger

Camera trap surveys undertaken by Scott Cawley Ltd. In 2021 recorded the presence of badgers on-Site and foraging in a compost heap along a treeline east of Craigmore House and utilising a sett within an area of mixed broadleaved woodland in the southwest of the lands. However, analysis of the footage at the time suggested that while the lands are part of an active badger territory, the setts within the boundary only occasionally occupied and have likely been disused in recent years by local badger populations (although this cannot be confirmed beyond all doubt).

During the mammal scoping survey undertaken during the PEA walkover on 11th April 2023 the following was noted; three badger sett entrances (disused in appearance) as well as two potentially active entrances which were free of ivy cover and had an unidentified strand of hair at the entrance. It should be noted that the excavated ground had already hardened suggesting that the activity has not been recent.

Snuffle holes were recorded in most compost heaps across the Site visits in 2025 and have been present during previous surveys in 2021 and 2023. Whilst it is possible these could be a result of

badger activity, it should also be noted that these could be instead the work of the two dogs that had free roam of the Site throughout the surveys.

During the deployment of camera traps on 12th of August 2025, the woodland habitat was systematically assessed for signs of badger activity. Two potential sett locations were identified. The first comprised a prominent mound with at least two visible entrances, indicative of a potentially active main sett (Figure 6.28). The second was a single-entrance burrow located at the base of a tree stump, also showing signs of possible use (Figure 6.29). Camera traps were installed adjacent to the primary entrances of both features to monitor activity.



Figure 6.28 Main entrance to potential badger main sett in south-west of Site (image taken August 2025).



Figure 6.29 The entrance to the second burrow/ potential sett located in the south-west of the Site. Lefthand image shows inside of entrance, righthand side image shows context of entrance (images taken August 2025).

The surrounding area exhibited well-defined mammal trails, numerous snuffle holes, and patches of bare, worn ground consistent with regular use. Olfactory cues, including a strong fox-like scent, were noted near the sett mound, along with possible badger prints and areas that may serve as resting or play zones. Notably, a sample of badger hair was confirmed at the rear entrance of the main sett mound, supporting evidence of recent use.

6.4.12.4.2.1.1 Camera Trap Results

The 2025 camera monitoring indicates the presence of at least two individual badgers and a fox in the vicinity of both entrances (setts) on multiple nights. One badger had a distinctive pale mark (possibly a scar) on its left eyebrow, differentiating it from the second individual (Figure 6-30).

The footage recorded grooming and regular ingress/egress of the potential main sett entrance, with behaviour such as scent marking and scratching near entrances suggesting active use or territorial interaction. Stick traps placed at entrances were displaced, and fresh digging was observed at the rear entrance of Sett 1 (Figure 6.32) further indicating disturbance or intermittent use.

The badgers were recorded using the potential main sett intermittently, with periods of days between recorded badger presence in the vicinity of the sett entrance. Badgers were recorded on 10 dates: August 12th, 13th, 15th, 18th, 20th, 21st, 22nd, 28th, and September 1st and 9th with periods of up to 8 days between badger records. It may be that the badgers are also using the second entrance to this sett, not visible to the camera, however, activity indicated occasional usage of the sett by two badgers, with the same badger (Pale Spot) and another badger recorded multiple times between the 12th August and 9th September 2025.

Badger and fox activity was also observed at the second sett's entrance with at least one badger recorded grooming at the entrance and possibly entering and emerging during the monitoring period. These are likely the same badgers as were recorded using the potential main sett entrance, given the close proximity to same and the presence of the badger with the pale mark over its left eyebrow on the trail camera footage for the second sett.

Although breeding activity cannot be confirmed without spring monitoring, these burrows are considered likely to form part of an extended badger territory, potentially linked to the adjacent Rockfield Park.



Figure 6-30 Trail camera image showing both badgers at the potential main sett main entrance. Red circle indicates badger with distinctive pale marking over left eyebrow.



Figure 6-31 Grooming recorded at the at the potential main sett main entrance.



Figure 6.32 Second entrance to potential main sett and signs of fresh digging (note movement and burial of plastic bag).
Lefthand image 12th August 2025, righthand image taken 17th September 2025.

The setts are not considered main setts; however, precautionary measures have been applied. As a result, the entire woodland is being designated as a Habitat Preservation Area, which will remain inaccessible to the public. This is achieved through the retention of the existing boundary wall,

with small gaps for safe access/egress by mammals and a boundary fence and dense shrub planting (e.g., bramble) to ensure public and dog walkers cannot access this area. This approach maintains a secure commuting and foraging corridor for badgers and other wildlife. In addition, the proposed landscape plan integrates ecological enhancements, including:

- Native understory planting to strengthen woodland structure and discourage public intrusion.
- Tree planting across the site, compensating for any vegetation loss and providing additional cover and food resources.
- Habitat features such as log piles and wildflower areas to support pollinators and small mammals.
- Sustainable drainage features (swales and attenuation areas) to improve water quality and ecological resilience.

Applying NRA guidance, indicative disturbance buffers of 10–20 meters will be mapped around these burrows to inform construction and landscape design. Works within this habitat preservation zone will be avoided where possible, and any unavoidable activity will require NPWS consultation, potential Ecological Clerk of Works (ECoW) presence and mitigation measures.

Overall, the interaction between biodiversity and landscape is considered long-term, slight, and neutral, with ecological connectivity preserved and enhanced through targeted design interventions.

6.4.12.4.2.2 Other Mammals

A red fox was observed in the western area of the Site on two occasions during the walkover survey on 6th April 2023, and multiple foxes were confirmed present via August 2025 trail camera footage in the vicinity of the burrows noted in the south-western woodland (at least one male and one female fox recorded). Fox have also been previously recorded in 2021 to be utilising the holes in a compost heap east of Craigmore house which constitute a fox den. This, coupled with the olfactory cues above, confirm fox are present within this area and could be using dens within the Site and its vicinity.

Suitable habitats were recorded for hedgehog (*Erinaceous europaeus*) and pygmy shrew (*Sorex minutus*). No direct signs (e.g., sightings, scat) were observed, however, this does not preclude their presence on site as they are a timid species.

6.4.12.4.3 Evaluation

Badgers, and their breeding and resting places, are protected under the Wildlife Acts. Due to their stable Irish populations, they are considered to be of “Least concern” in terms of conservation (Nelson et al., 2019). The subject lands are considered to be of **local importance (higher value)** for badgers, as there are known, active badger setts in the lands and furthermore, there is suitable habitat within the lands and its vicinity to support such local badger populations.

6.4.12.5 Amphibians

6.4.12.5.1 Desk Study Results

Records for amphibians were obtained from the NBDC (10km O22 and 2km O22E grid squares) online database. Table 6.19 lists these species, their date of last record and summarises their protected status/designation.

Species	Date of last record	Source	Designation
Native Species			

Species	Date of last record	Source	Designation
Common Frog (<i>Rana temporaria</i>)	08/07/2020 (O22) 15/03/2005 (O22E)	Amphibians and reptiles of Ireland	Annex V of the Habitats Directive Wildlife Acts, 1976
Smooth Newt (<i>Lissotriton vulgaris</i>)	27/09/2020 (O22)	Amphibians and reptiles of Ireland	Wildlife Acts, 1976

Table 6.19 Records of amphibians for the surrounding 10km and 2km grid square (O22 and o22E) associated with the Site from NBDC.

6.4.12.5.2 Field Survey Results

There are no suitable habitats for amphibians present on Site nor was any evidence of same recorded during any Site visits. As such, the species importance is assessed as having **negligible value** at this Site.

6.4.12.6 Other Fauna

6.4.12.6.1 Common Lizard

Although suitable habitat for common lizard (*Zootoca vivipara*) was observed on-Site during the PEA walkover on 11th April 2025, there have been no historical recordings of this species within 2km of the Site and no sightings on any of the recent or previous surveys. However, this species is known to inhabit a wide range of habitats and is widespread across Ireland. The habitats on Site could present some suitability for common lizard such as commuting and foraging habitat in the form of the open grassland, basking habitat on the areas of hardstanding, and sheltering habitat in the existing building on Site. As such the species importance is assessed as having **Local Importance – Higher Value**.

6.4.12.6.2 Fish & Other Aquatic Species

There was no suitable habitat present for fish or other aquatic species on-Site **or within the vicinity of the Site**, including otter (*Lutra lutra*). Carysfort Maretimo stream does occur in close proximity to the Site, however, it should be noted that this is a highly modified stream in an urban environment, **that is culverted for much of its channel**. Despite this, potential impacts on otter have been assessed in the Screening for Appropriate Assessment and Natura Impact Statement (NIS) reports which accompany this application under separate cover (DNV, 2025a, and 2025b).

As such ~~this species is not included further in this assessment, while it is noted, however, that~~ the species importance is assessed as having **negligible value** for fish and other aquatic species, ~~and Local importance – Lower Value~~ for otter. Otter are assessed separately below.

6.4.12.6.2.1 Otter

Otter (*Lutra lutra*) is a protected species under the Wildlife Acts (1976–2018) and the EU Habitats Directive and is known to occur across a wide range of aquatic habitats in Ireland, including urban watercourses.

No suitable habitat for otter is present within the Site boundary, and no evidence of otter activity (e.g. spraints, holts, couches or tracks) was recorded during field surveys. The nearest potential habitat is the Carysfort Maretimo Stream, which is located in proximity to the Site; however, this watercourse is highly modified within an urban environment and is culverted for much of its length, reducing its suitability for otter. Given the urbanised nature of the receiving watercourse, the likelihood of regular otter activity in the vicinity of the Site is considered low. Additionally, the Site itself is therefore not considered to support otter, and no direct impacts on otter are predicted.

Potential impacts are limited to indirect effects via hydrological pathways, namely the risk of deterioration in water quality within the receiving environment. These pathways have been

considered within this EclA and in detail within the Screening for Appropriate Assessment and Natura Impact Statement (NIS) (DNV, 2026a; 2026b).

Standard best practice mitigation measures are incorporated into the design, including implementation of a Construction Environmental Management Plan (CEMP), adherence to pollution prevention guidelines, and the use of SuDS to manage surface water runoff. These measures will ensure that there is no deterioration in water quality or disturbance to downstream habitats.

Taking account of the absence of suitable habitat within the Site, the indirect nature of potential impact pathways, and the implementation of embedded mitigation, no significant adverse effects on otter are predicted, including non-Qualifying Interest (non-QI) individuals.

Otter is therefore assigned a value of **Local Importance (Lower Value)** within the context of this assessment

6.4.12.6.3 Other Protected/Notable Considered for Likelihood to occur on 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.
 - 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*) – Not present in the Liffey, 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 west of the Site, no hydrological connection to this catchment. Liffey is not listed as a *M. margaritifera* sensitive area.
 - Natterjack Toad (*Epidalea calamita*) – Distribution restricted to few coastal sites.

6.4.13 Evaluation of Ecological Features

Habitats have been evaluated for their conservation importance, based on the NRA evaluation scheme (NRA, 2009b). Those selected as Key Ecological Receptors (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 6.6. Table 6.20 below summarises the evaluation rating assigned to each ecological feature and the rationale behind these evaluations is also provided, with identified KERs highlighted in green.

Species / Species Group	Evaluation	Rationale	Key Ecological Receptor (KER)
Designated Sites			
Dublin Bay Biosphere UNESCO Site	International Importance (Higher Value)	The Site is directly linked via hydrological, hydrogeological, air and land pathways as is located within the Site, however, impacts on same have been ruled out in	No

Species / Species Group	Evaluation	Rationale	Key Ecological Receptor (KER)
		previous sections and by proxy in AAS and NIS reports.	
North Dublin Bay pNHA (000206)	National Importance	No significant pathways were identified between this Site and the Site of the Proposed Amendments.	No
Dolphins, Dublin Docks pNHA (000201)	National Importance	No significant pathways were identified between this Site and the Site of the Proposed Amendments.	No
South Dublin Bay pNHA (000210)	National Importance	No significant pathways were identified between this Site and the Site of the Proposed Amendments.	No
Boosterstown Marsh pNHA (001205)	National Importance	No significant pathways were identified between this Site and the Site of the Proposed Amendments.	No
Dalkey Coastal Zone and Killiney Hill pNHA (001206)	National Importance	No significant pathways were identified between this Site and the Site of the Proposed Amendments.	No
North Bull Island Ramsar (406)	National Importance	No significant pathways were identified between this Site and the Site of the Proposed Amendments.	No
Sandymount Strand/ Tolka Estuary Ramsar (832)	National Importance	No significant pathways were identified between this Site and the Site of the Proposed Amendments.	No
Habitats			
Dry Meadow and Grassy Verges (GS2)	Local Importance (Lower Value)	This habitat is of a relatively low degree of biodiversity, does not have a high degree of naturalness and does not host any rare or protected species.	No
Amenity Grassland (GA2)	Local Importance (Lower Value)	This habitat is of a relatively low degree of biodiversity, does not have a high degree of naturalness and does not host any rare or protected species.	No
Hedgerows (WL1) and Treelines (WL2)	Local Importance (Higher Value)	Whilst these habitats within the Site do not have a high degree of naturalness and are not particularly species rich, they offer a high degree of connectivity to other habitats around the Site and are rare on a local scale.	Yes
Broadleaved Woodland (WD1)	Local Importance (Higher Value)	The understory of this habitat is rare at a local scale and the habitat is subject to the local area plan and the local development plan.	Yes

Species / Species Group	Evaluation	Rationale	Key Ecological Receptor (KER)
Scattered Trees & Parkland (WD5)	Local Importance (Higher Value)	This habitat is considered to be of value due to its local rarity at a local scale.	Yes
Scrub (WS1)	Local Importance (Higher Value)	This habitat is considered to be of value due to its local rarity at a local scale.	Yes
Buildings & Artificial Surfaces (BL3)	Local Importance (Lower Value)	This habitat is highly modified and species poor in nature.	No
Ornamental/ Non-native shrubs (WS3) and Flowerbeds & Borders (BC4)	Local Importance (Lower Value)	These habitats are highly modified and species poor in nature.	No
Flora			
Rare & Protected Flora	Local Importance (Lower Value)	No rare or protected flora were recorded during the most recent field surveys. Unlikely to be present in notable numbers/densities.	No
Invasive Species	Negligible value	Limited stands of a number of three-cornered garlic and Spanish bluebell (medium impact species) that provide little ecological value but are Third Schedule listed invasive species.	Yes
Native Fauna			
Bat Assemblage	Local Importance (Higher Value)	The Site contains "Moderate to High" bat habitat suitability within the mature hedgerows and treeline habitats for bat foraging and commuting on-site. St. Teresa's Lodge also has "Moderate" roost potential identified. Limited access to Site and subsequent low updated emergence and transect survey effort accounted for by considering bats as potentially higher value receptor.	Yes
Bird Assemblage	Local Importance (Higher Value)	Variety of red and amber listed species recorded at the Site both historically and in field visits. Active, suitable breeding habitat for herring gull (amber listed) also present. Assemblage evaluated as potentially locally important.	Yes
Badger	Local Importance (Higher Value)	There are known, active badger setts in the lands and furthermore, there is suitable habitat within the lands and its	Yes

Species / Species Group	Evaluation	Rationale	Key Ecological Receptor (KER)
		vicinity to support such local badger populations. Limited access to Site and subsequent low updated badger survey effort accounted for by considering badger as potentially higher value receptor.	
Other non- volent mammals	Local Importance (Higher Value)	The Site provides notable areas of suitable habitats for other protected non-volent mammals including hedgehog which, although have not been observed during field surveys, have been recorded within 2km of the Site in recent years and are likely to utilise the area.	Yes
Amphibians	Negligible	There are no suitable habitats for amphibians present on Site nor was any evidence of same recorded during any site visits. As such the species importance is assessed as having negligible value at this Site.	No
Common Lizard	Local Importance (Higher Value)	This species is known to inhabit a wide range of habitats and is widespread across Ireland. The habitats on Site could present some suitability for common lizard such as commuting and foraging habitat in the form of the open grassland, basking habitat on the areas of hardstanding, and sheltering habitat in the existing building on Site	Yes
Fish and other aquatic species	Negligible to local importance (higher value)	There are no suitable habitats for amphibians present on Site nor was any evidence of same recorded during any site visits. As such the species importance is assessed as having negligible value at this Site. While the Carysfort Maretimo stream which is a highly modified urban stream provides some, albeit limited potential for commuting/foraging otter.	No
Non-native Fauna			
Eurasian Grey Squirrel	Local Importance (Lower Value)	Despite historical records of grey Eurasian squirrel within 2km of the Site, this species is not legally protected in Ireland. No evidence of Eurasian grey squirrel or sufficient suitable habitat at the Site.	No

Table 6.20 Evaluation of designated sites, habitats, fauna, and flora recorded within the Site and the surrounding area. Those identified as Key Ecological Receptors (KER's) are highlighted in green.

6.5 Characteristics of the Proposed Development

Chapter 2 of this EIAR includes a detailed description of the Proposed Development. The proposed site layout is shown in **Figure 6-34**.

6.5.1 Site Location and Description

The application pertains to Proposed Amendments to a Permitted Strategic Housing Development (SHD) which is located at St. Teresa's, Temple Hill, Temple Road, Monkstown, Blackrock, Co. Dublin. The Site is bounded to the north by Temple Road, with mature residential development to the east (St. Vincent's Park) and the Alzheimer's Society of Ireland and existing residential development (St. Louise's Park and Barclay Court) to the west. The Site is within 0.5 kilometres (km) of Blackrock Village and has high accessibility to public transport. The extent of the overall Site (4.56 hectares (ha)) includes additional lands along Temple Hill as shown on **Figure 6-33** below. These extra lands along Temple Hill are included to provide for appropriate access proposals as permitted.



Figure 6-33 Site Location of the Proposed Development at St. Teresa's.

6.5.1.1 Previous Applications at the Site

The Parent (2019) SHD - ABP-303804-19.

This permission provided for 291 residential units and Crèche facility. A total of 14 new residential blocks were proposed ranging in height from 2-8 storeys. 272 no. car parking spaces and 666 bicycle parking spaces were proposed.

6.5.2 Proposed Amendments Description

Oval Target Limited intends to apply for permission for development of a Large-Scale Residential Development comprising amendments to previously permitted development (Strategic Housing Development ABP-303804-19) on a site of approx. 4.56 ha at 'St. Teresa's House' (A Protected Structure); 'St. Teresa's Lodge' (A Protected Structure); and associated entrance gates (A Protected Structure) at Temple Hill and Temple Road, Monkstown, Blackrock, Co. Dublin.

The proposed development will consist of amendments to a development previously permitted under Strategic Housing Development ABP-303804-19 (291 no. residential units, a crèche facility and heights of 1-8 storeys) to provide for a new residential and mixed use development (1 – 8 storeys overall) of 414 no. residential apartment units in total (a proposed uplift of 123 no. residential units) with associated crèche facility, a new café and residential amenity space. The revised overall residential mix is 8 no. studio units, 164 no. 1 bed units, 159 no. 2 bed units, and 83 no. 3 bed units.

The proposed development will consist of:

1. Amendments to previously permitted Blocks C1, C2, C3, D1, E1, E2, E3, E4 and E5 as follows:
 - A revised building design for Block C1 from previously permitted building (3 storeys overall) consisting of 7 no. apartment units (6 no. 2 bed units and 1 no. 3 bed unit) to now comprise **10 no. apartment units** (4 no. 1 bed units and 6 no. 2 bed units) – an uplift of 3 no. residential units in total. Amendments will include minor revisions to overall height of the building (remains 3 storeys overall) and revisions to elevations and building footprint.
 - A revised building design for Block C2 from previously permitted building (3 storeys overall) consisting of a crèche facility (approx. 286 sq m) at level 00 and 4 no. apartment units at level 01 and 02 (3 no. 2 bed units and 1 no. 3 bed unit) to now comprise a crèche facility of approx. 401 sq m at level 00, associated outdoor play area space of 302 sq m and **6 no. apartment units** (2 no. 1 bed units and 4 no. 2 bed units) at levels 01 and 02 – an uplift of 2 no. residential units in total and increased crèche floor area size by approx. 115 sq m. Amendments will include minor revisions to overall height of the building (remains 3 storeys overall) and revisions to elevations and building footprint.
 - A New Block C3 (1 storey over basement level) comprising residential amenity space of approx. 451 sq m.
 - The omission of previously permitted Block D1 (5 storeys overall) and basement level comprising 50 no. apartment units (15 no. 1 bed units, 23 no. 2 bed units and 12 no. 3 bed units) to now deliver new Block D1 (4 - 7 storeys over new basement level) comprising **125 no. apartment units** (19 no. 1 bed units, 68 no. 2 bed units and 38 no. 3 bed units) – an uplift of 75 no. residential units in total.
 - The omission of previously permitted Block E1 (5 storeys overall) comprising 14 no. apartment units (9 no. 2 bed units, 4 no. 3 bed units and 1 no. 3 bed duplex unit) to now deliver new Block E1 (4 - 7 storeys) comprising **61 no. apartment units** (7 no. studio units, 6 no. 1 bed units, 26 no. 2 bed units and 22 no. 3 bed units) – an uplift of 47 no. residential units in total.
 - The omission of previously permitted Block E2 (5 storeys overall) comprising 15 no. apartment units (9 no. 2 bed units, 4 no. 3 bed units and 2 no. 3 bed duplex units) to now deliver new Block E2 (6 storeys) comprising **50 no. apartment units** (1 no. studio unit, 25 no. 1 bed units, 20 no. 2 bed units and 4 no. 3 bed units) – an uplift of 35 no. apartment units in total.

- The omission of permitted Blocks E3 (5 storeys), E4 (4 storeys) and E5 (5 storeys) previously providing for 38 no. units in total (27 no. 2 beds, 8 no. 3 beds and 3 no. 3 bed duplex units).
- Each residential unit has associated private open space in the form of a terrace / balcony.

The above new proposals extend to a total of **252 residential units**. Blocks A1, B1, B2, B3, B4, Block H (St. Teresa's House) remain as originally permitted with no further amendments as part of this proposal (162 no. units in total and permitted heights of 3-8 storeys).

2. The structures for demolition across the site remain as permitted with no further amendments proposed. This includes any structures previously permitted for demolition that still remain on site and the removal of associated remnants of low / retaining walls and in-ground concrete steps.
3. An amended proposal for Block G (St. Teresa's Lodge) (1 storey) including a change of use from previously permitted 1 no. 1 bed unit to a new café of approx. 67.4 sq m. This proposal will again seek permission for the dismantling/deconstruction of the existing St. Teresa's Lodge (Gate Lodge) (approx. 38.56 sq m) and the demolition of a lean to extension (approx. 28.5 sq m) as previously permitted under Strategic Housing Development ABP-303804-19. The current amendment proposal seeks permission to relocate and reconstruct St. Teresa's Lodge in a new location (180 m southwest of its original position and located adjacent to Rockfield Park) using original roof timbers, decorative elements and rubble stonework, with original brickwork cleaned and re-used where appropriate. The non - original extension (approx. 28.5 sq m) will be again removed as previously permitted. The current proposal seeks further extension of this building (approx. 28.88 sq m) and a change of use from residential (1 no. unit) to café use to deliver a Part M compliant single storey building of approx. 67.4 sq m.
4. A revised landscape plan now provides for:
 - Public open space in the form of a central parkland, garden link, woodland park (incorporating an existing folly) and a tree belt (approx. 11,238 sqm overall).
 - Communal open space is now proposed in the form of entrance gardens, plazas, terraced gardens and roof terraces (approx. 3,620 sqm overall).
 - Provision is also now made for 2 no. new pedestrian connections to Rockfield Park on the southern site boundary (1 no. adjacent to the proposed relocated Gate Lodge and 1 no. at the hammerhead adjacent to Block E2) and all other pedestrian connections remain as permitted under SHD ABP-303804-19.
5. A revised total of 244 no. car parking spaces (a decrease of 28 no. spaces) and 962 no. bicycle spaces (an uplift of 296 no. spaces) are proposed. The no. of motorcycle spaces remains as permitted at 20 no. spaces.
6. The development also provides for revised proposals for Bin Storage areas, Bike Storage areas, life safety generator room, ESB substations and switch rooms with a combined floor area of approx. 609 sq m all at surface level.
7. Access to the development generally remains as permitted under Strategic Housing Development ABP-303804-19, which provides for works to the existing entrance to the overall site via Temple Hill and Temple Road to deliver the realignment and upgrade of the existing signalised junction and associated footpaths, with minor modifications to the junction layout to provide for improved and safer vehicular access/egress to the site and to/from St. Vincent's Park. Emergency vehicular access and pedestrian/cycle access also remains as permitted via a secondary and long-established existing access point along Temple Hill. There are no works proposed to the existing gates (Protected Structure) at this location. There are minor modifications proposed to the northeastern boundary walls and access gateway to 'Carmond' to facilitate alignment improvements for safe access/egress serving St. Vincent's Park.
8. The associated site and infrastructural works include provision for water services; foul and surface water drainage and connections; attenuation proposals; permeable paving; all landscaping works; green roofs; PV panels; boundary treatment; internal roads and footpaths.

This planning application is accompanied by a Natura Impact Statement (NIS) and Environmental Impact Assessment Report (EIAR).

See **Figure 6-34** for the Site Layout below.

The amended proposals primarily relate to revisions in layout, building massing, and increased residential density. While these changes result in a localized increase in development intensity, they are accompanied by a revised landscape strategy and enhanced ecological mitigation measures, including improved habitat retention, the designation of a habitat preservation area, and a detailed bat-sensitive lighting design.

As demonstrated in Appendix 6-4, these design refinements do not materially alter the type or significance of ecological impacts previously identified under the parent application. Updated surveys have refined the baseline understanding, confirming the continued presence of key receptors (e.g. badger and breeding birds), but do not alter their valuation or the overall assessment conclusions. Mitigation measures have been carried through and strengthened where appropriate to reflect both updated baseline data and current best practice, ensuring continuity between assessments.

6.5.2.1 Drainage and Water Supply

6.5.2.1.1 Surface Water

6.5.2.1.1.1 Existing Surface Water

Surface water from St Teresa's is currently conveyed through the combined sewer network within the Site boundary. The public surface water drainage network on Temple Hill Road conveys storm water west to discharge onto the culverted Carysfort-Maretimo stream. The Site generally drains southeast to northwest (JJC, 2025a). There is also an existing 900mmØ combined sewer running along the west boundary of the Site.

6.5.2.1.1.2 Proposed Surface Water

It is proposed to separate the storm runoff from the existing and proposed buildings and to use Sustainable Drainage Systems (SuDS) techniques, as per the Greater Dublin Strategic Drainage Study (GSDSDS), to control stormwater discharge from the Site.

A storm water carrier pipe will be provided around the Site to intercept runoff and, where located within filter drains, will be perforated pipe. Because of the sloping topography of the Site, it is proposed to make two surface water connections serving two zones each comprising approximately 50% of the Site area. A petrol interceptor will be installed to serve underground car parks. The Site's drainage system will connect to the existing public sewer on Temple Road (JJC, 2025a, JJC, 2025b) (See **Figure 6-35**).

The Site's stormwater drainage system has been designed using the modified rational method, in accordance with the following standards and guidelines:

- GSDSDS.
- Greater Dublin Regional Code of Practice for Drainage Works.
- Irish Water's Code of Practice for Wastewater Infrastructure, Connections and Developer Services.
- Construction Industry Research and Information Association (CIRIA) C753 – The SUDS Manual.
- Causeway Storm Water Analysis software was used to model and design the stormwater network.

As previously stated, the design incorporates SUDS principles and complies with local authority and Irish Water (IW) requirements to ensure sustainable and effective stormwater management. Stormwater attenuation and discharge will be per the following:

- Attenuation Volume: 1,800 m³, including a 20% climate change allowance.
- Maximum Discharge Rate: Limited to 8.17 litres/second.
- Detailed calculations are provided in Annexes D, E, and F of the main drainage planning report (JJC, 2025a).
- Additional Infrastructure.

6.5.2.1.1.2.1 SuDS Strategy

Sustainable urban drainage is a concept that incorporates long term environmental and social factors into drainage design. It takes account of both the quantity and quality of runoff as well as the amenity value of surface water in the urban environment.

All storm drainage work within the Proposed Amendments lands shall be designed as constructed in accordance with the following:

1. GSDSDS.
2. CIRIA SuDS Manual (C753).

The criteria set out in the above will help confirm the surface water strategy and SuDS management train of the development.

- A Green and Blue Roof at topmost apartment roofs, Blue Roof at stepped terraces and Green Roof on ancillary single-story buildings is proposed throughout the development, at a minimum of 70% of the flat roof surface area and will be installed as per Appendix B in Dún Laoghaire Rathdown Development Plan 2022 – 2028. See drawing C11 for calculation of areas. The Green and Blue Roofs / Blue Roofs and Green Roofs will be a Beton / ACO system, or similar, details of which are included in Appendix B of the engineering report. This system allows for the installation of photovoltaic panels above the Green and Blue roof with minimal loss of effective area of the roof. The Green and Blue will provide interception storage and will attenuate storm water at roof level which will then be connected to the new surface water system. Access to the roofs for maintenance will be via the automatic opening vents at the top of the stairwells in each building. Secondary access to the roofs will be by a cherry picker from the adjoining roads for maintenance (JJC, 2025b).
- Dry swales / infiltration trenches are a useful and natural means of surface water collection and treatment of the first 5mm of runoff. The application of swales / infiltration trenches was examined as part of the design process. Because of the mature trees, to be retained as part of the development, the widespread use of swales cannot be implemented as the necessary trenches would damage the tree root systems, but swales / infiltration trenches shall be installed where they do not damage existing mature trees (JJC, 2025b). Similar issues could potentially arise regarding traditional pipe drainage in trenches, however, the piped drainage system for the development Site has been designed to avoid heavily rooted areas, particularly along the main access avenue. It is anticipated that the road surface along the access avenue will be replaced as part of the development. As part of the surface replacement works, a cross-fall will be incorporated into the road surface so that rainwater will be directed onto landscaped areas and thereby flow overland to the drainage system. This ensures that low intensity rainfall on the avenue will not reach the drainage system as it will be infiltrated directly into the soil and that any water reaching the drainage system will have a degree of pre-treatment before entering the drainage system. Provision has been made at two key points along the avenue to collect water from the road surface in order to prevent flooding on the avenue from significant rainfall events (JJC, 2025b).
- Permeable paving will intercept the first 5mm of runoff from all impermeable areas of the Site. As 50% of the onsite soakaways passed and 50% had poor / failed infiltration, a high-level perforated overflow pipe will be provided from the permeable pavements and will connect to the new gravity storm network, some infiltration will take place in the stone below the areas with poor / failed infiltration and the overflow pipe will retain flow which will slowly infiltrate or evaporate (JJC, 2025a).

6.5.2.1.2 Potable Water

6.5.2.1.2.1 Existing Watermain Installation

The existing Site is connected to an existing IW 400mmØ watermain located on Temple Hill Road.

6.5.2.1.2.2 Proposed Watermain Installation

A new 200 mm internal diameter distribution watermain is proposed to serve the development. This new main will be connected to the existing 400 mm Irish Water watermain located on Temple Hill Road. The existing watermain supplying the adjacent St. Catherine's lands, originally laid in 1943, will be replaced along St. Teresa's Avenue due to its age and nearing the end of its service life. All watermain installation and replacement works will be carried out in accordance with the Irish Water publication (JJC, 2025a).

6.5.2.1.3 Foul Drainage

6.5.2.1.3.1 Existing Foul Drainage

Foul water from St Teresa's is currently conveyed through the combined sewer network within the Site boundary. Temple Hill Road is served by a 1200mmØ combined sewer. The combined

sewers within St Teresa's Lands discharges to the 1200mmØ combined sewer in Temple Hill Road. This trunk main is routed to the Dún Laoghaire West Pier pumping station where it is pumped to Ringsend Wastewater Treatment Plant (WwTP) (JJC, 2025a).

6.5.2.1.3.2 Proposed Foul Drainage

Domestic effluent from the Site will discharge to the existing foul drainage system located on Temple Hill Road. The connection will be made via an existing 300 mm pipe to a 1200 mm diameter combined sewer. Flow rates are based on the Irish Water Code of Practice for Wastewater. Foul water drainage calculations are detailed in Section 3.0 of the main drainage planning report. All existing drains will be surveyed prior to construction to confirm invert levels and ensure compatibility with the proposed drainage system (JJC, 2025a) (**Figure 6-35**).



Figure 6-35 Proposed Surface and Foul Water Drainage at the Proposed Development Site (JJC, 2025a).

6.5.3 Landscape Plan

The proposed landscape design, designed by Mitchell and Associates (2025) provides a high-quality, integrated green infrastructure plan for the Proposed Development. The layout prioritizes open space, biodiversity, and pedestrian connectivity while complementing the surrounding, existing built environment (**Figure 6-36**).

Key features of the Proposed Landscape Plan include:

1. Central Open Space:
 - a. A large, multifunctional green area forms the focal point of the Development.
 - b. Includes informal lawns, seating areas, and ornamental planting for community use.
2. Play and Recreation Areas:
 - a. Dedicated children's play zones are located within the central green and southern section.
 - b. Equipped with play structures and safety surfacing to encourage active play.
3. Tree Planting and Vegetation:
 - a. Extensive tree planting along roads, boundaries, and within communal spaces.
 - b. Planting strategy combines ornamental species for visual amenity and native species for ecological value.
4. Boundary and Buffer Planting:
 - a. Dense planting along site perimeters provides screening and enhances biodiversity.
 - b. Southern boundary includes a naturalistic buffer with wildflower meadow and habitat features.
5. Ecological Enhancements:
 - a. Habitat areas in the southern section include log piles, native shrubs, and meadow planting.
 - b. Supports pollinators and small mammals, contributing to ecological connectivity.
6. Establishment of habitat preservation area to the south of the Site in the existing (retained) woodland habitat.
7. Pedestrian Connectivity:
 - a. A network of footpaths links residential clusters to open spaces and external routes.
 - b. Promotes walkability and safe access throughout the site.
8. Sustainable Drainage:
 - a. Incorporates swales and attenuation areas in the southern section for stormwater management.
 - b. Enhances resilience and integrates with naturalistic planting.
9. Hard Landscape and Parking:
 - a. Parking areas are softened with planting beds and street trees.
 - b. Materials selected to complement the architectural character of the development.

6.5.4 Lighting Plan

A bat friendly lighting plan has been developed in co-ordination with O Connor Sutton Cronin (OCSC, 2025) and is shown below. In summary; the external lighting strategy for St. Teresa's has been designed to balance functionality, aesthetics, and ecological sensitivity. Artificial lighting can significantly impact nocturnal wildlife, particularly bats, by altering natural light regimes, fragmenting habitats, and creating barriers to movement. The Proposed Development incorporates a lighting strategy designed to minimize ecological impacts while meeting safety and functional requirements. This section outlines the lighting design principles and mitigation measures adopted in accordance with best practice guidance.

The lighting design adheres to the following standards and guidance documents:

- Bat Conservation Trust (BCT) Guidance Notes for Planners, Engineers, Architects and Developers (2023)
- Bat Conservation Ireland – Bats and Lighting Guidance (2010)
- Institute of Lighting Professionals (ILP) Guidance Notes for the Reduction of Obtrusive Light GN01 (2011)
- ILP/BCT Guidance: Bats and Artificial Lighting in the UK (2018)

These documents emphasize minimizing light spill, reducing UV and blue light components, and maintaining dark corridors to protect bat commuting and foraging routes. The design therefore ensures compliance with ILP guidance (2023) on bats and lighting, DAC accessibility standards, and integrates measures to minimise ecological impact while creating a safe and welcoming environment.

Key features of this plan include:

- Hierarchy of lighting (structured into primary, secondary, and tertiary lighting routes)
- Bat friendly lighting specifications, including low level / minimum lux levels, light source selection, colour temperature and control, operational control, careful consideration given to column heights and placement
- Controlled and directional lighting to control light direction and spill

The hierarchy of design has been applied as follows:

- Primary routes include main access roads and key pedestrian corridors, designed to achieve compliance with IS EN 13201 Class P4 or higher for safety.
- Secondary routes include internal streets and shared surfaces, illuminated to lower lux levels to balance visibility and ecological sensitivity.
- Tertiary routes include minor paths and landscaped areas, where lighting is minimized or omitted to maintain dark corridors for wildlife movement.

As shown, this hierarchical approach ensures that lighting is applied only where necessary, reducing light spill and supporting biodiversity objectives, in line with Bat Conservation Trust (2023) and ILP Guidance Notes (2018).

Design details that were incorporated specifically with a view to protecting nocturnal fauna, bat in particular, are included in Section 6.6.1.3

6.5.5 Description of the Construction Phase

The construction works associated with the proposed development will be undertaken in 3 phases. There will also be demolition and excavation phases associated with removing demolition material, excavating the basement, along with re-profiling spoil onsite.

Subject to the grant of permission, the construction and demolition programme is intended to commence in the 4th quarter of 2026, with a 36-month programme, to be read in conjunction with JJ Campbell and Associates Phasing Drawing C12:

Demolitions: Near complete

Construction:

Phase 1 works: 12 months

Phase 2 & 3: 24 months

Total: 36 months

The construction compound, offices, staff parking and storage areas will be located at the locations provided **in the CEMP**.

Stage/Phase 1

Preliminary and enabling works.

- Establishment - offices, canteen, welfare, etc.
- Hoarding and fencing, including fencing of St Teresa's House.
- Install temporary wheel wash and silt traps.
- New water and gas connections to Alzheimer's Society
- New water and gas connections to St Teresa's house.
- Foul drainage from Temple Road to St Teresa's, including connection to Irish Water sewer.
- Demolition of remaining structures.
- Diversion of H.V. and M.V. ESB cables.
- Dismantling of Gate Lodge.
- New junction layout at Temple Road.
- New watermain in avenue serving St. Catherine's.
- Divert 900mm diameter sewer at St. Louise's Park at the north west boundary.
- Install foul drainage system from St Teresa's to intercept the drain from St. Catherine's at S.W. boundary of site.
- Construct attenuation tank at building A1 and connect to IW sewer in Temple Road.
- Construct attenuation structure at centre of site and connection drainage to Temple Road and connect to IW sewer.
- Construct 2 no. ESB sub-stations.
- Install and connect drainage located under ESB feed cable ducts.
- Install ESB feed cables in ducts to sub-stations
- Complete S.W. and Foul drainage networks.
- Construct road sub-base and base for construction traffic.
- Repairs and essential remedial works to roof and parapet to St. Teresa's.

Stage/Phase 2

- Construct basement structure for buildings A1, B1, B2, B3 and B4
- Construct superstructure for buildings A1, B1, B2, B3, B4, C1, C2 and C3
- Utility connections, Buildings A1, B1, B2, B3, B4, C1, C2 and C3
- Fit out, Buildings A1, B1, B2, B3, B4, C1, C2 and C3
- Landscaping, area east of St Teresa's
- Install ducting and cables into roads from St. Teresa's east to Temple Road
- Internal alterations to St. Teresa's
- Fit out, St. Teresa's
- Utility connections to St. Teresa's
- Landscaping, around St Teresa's
- Final surfacing of roads East of St. Teresa's.

Stage/Phase 3

- Install ducting and cables into roads from St Teresa's west to boundary with Rockfield Park.
- Construct basement structure for buildings D1
- Construct superstructure for buildings D1, E1 and E2

- Utility connections, Buildings D1, E1 and E2
- Fit out, Buildings D1, E1 and E2
- Reconstruction of Gate lodge at new location.
- Remaining landscape works and public open spaces.
- Final surfacing of roads west of St. Teresa's.

The Demolition Contractor shall review the available drawings and information to confirm the nature of building components and construction as identified in the pre-development surveys.

The modern single story annex to the gate lodge to be demolished. The protected gate lodge structure which is constructed using stone is to be dismantled and stored on site in a waterproof container for rebuilding at a later date. Gate lodge is to be dismantled in accordance with the conservation architects report and methodology.

6.5.6 Description of the Operational Phase

The Proposed Development (and amendments) will comprise a residential amenity consistent with the neighbouring land use in the area. Operational Phase drainage and foul water details are provided above.

6.6 Potential Impact of the Proposed Development

6.6.1 Construction Phase

6.6.1.1 Impacts on Designated Sites

Section 6.4.2 identified designated sites within the zone of influence of the Site and then assessed each for potential pathways between the Proposed Development and same. All designated sites were ruled out within that section and so no impacts on same are to be expected, nor is any further assessment of impact on same required at this stage of the Report.

6.6.1.2 Impacts on Habitats and Flora

6.6.1.2.1 Hedgerows (WL1) and Treelines (WL2)

These habitats are to be predominantly retained, with some removal planned to facilitate development. In the absence of mitigation, the loss of hedgerow/treeline at the Site, in the context of the retained habitat, constitutes a negative, permanent effect of slight significance at the local level.

Furthermore, retained features may be at risk of dust deposition on leaves and root structures (via soil surface sealing, chemical contamination, ph. and nutrient alteration/imbalance, and physical root damage), affecting photosynthesis and respiration, during excavation works at the Site. Similarly, roots could be damaged by plant and machinery traversing the Site during Construction. This could constitute a negative, short-term effect of moderate significance at the local level.

6.6.1.2.2 Broadleaved Woodland (WD1)

Similarly to the hedgerow and treeline habitat, this habitat is to be predominantly retained, with removal of some trees planned to facilitate development. In the absence of mitigation, the loss of broadleaved woodland at the Site, in the context of the retained habitat, constitutes a negative, permanent effect of slight significance at the local level.

Retained woodland features may be at risk of dust deposition on leaves and root structures, affecting photosynthesis and respiration, during excavation works at the Site. Similarly, roots could be damaged by plant and machinery traversing the Site during Construction. This could constitute a negative, short-term effect of moderate significance at the local level.

6.6.1.2.3 Scattered Trees and Parkland (WD5)

Part of this habitat will be removed. In the absence of mitigation, the loss of this habitat at the Site, constitutes a negative, permanent effect of slight significance at a local level.

As with the previous hedgerow/woodland habitat, any retained features may be at risk of dust deposition on leaves and root structures (via soil surface sealing, chemical contamination, pH. and nutrient alteration/imbalance, and physical root damage), affecting photosynthesis and respiration, during excavation works at the Site. Similarly, roots could be damaged by plant and machinery traversing the Site during Construction. This could constitute a negative, short-term effect of moderate significance at the local level.

6.6.1.2.4 Scrub (WS1)

Much of this habitat will be removed. In the absence of mitigation, the loss of scrub habitat at the Site, constitutes a negative, permanent effect of slight significance at a local level.

6.6.1.2.5 Spread of Invasive Species

Two low-impact, invasive, non-native plant species were recorded in the middle of the cluster of buildings at the Site, namely, Spanish bluebell and three-cornered garlic. In the absence of mitigation, the spread of invasive species could lead to negative, long-term, significant effects within the Site and on adjacent habitats.

6.6.1.3 Impacts on Native Fauna

6.6.1.3.1 Bats

While the survey data is incomplete at this time owing to survey limitations (see section 3.6), the below assessment has been made, which has adopted a precautionary approach, in the absence of a complete data set.

While no evidence of roosting bats has been observed on Site, in the absence of further survey data (i.e., emergence surveys) the presence of roosting bats on Site cannot be ruled out. In addition, small numbers of foraging and commuting bats were recorded at the Site, primarily comprising the three most common species in Ireland which are widespread throughout the country (common pipistrelle, soprano pipistrelle, and Leisler's bat) (NPWS, 2019), in addition to infrequent numbers of Nathusius bat and records for *Myotis* spp. Potential impacts on foraging and commuting bats as a result of the Construction Phase of the Proposed Development comprise light-related disturbance and loss of foraging and commuting habitat to be removed to facilitate the Proposed Development, and potential for injury/death during any tree removal.

In the absence of mitigation, light-disturbance affecting bats could result in negative, short-term effects of moderate significance.

In the absence of mitigation, loss of foraging and commuting habitat could result in negative, permanent effects of moderate significance.

Furthermore, should any vegetation removal (e.g. tree removal) be undertaken when bats are present within trees, bats could be subject to injury or death. This would constitute a negative, short-term, significant effect on the local bat assemblage.

6.6.1.3.2 Birds

Taking a precautionary approach, in the absence of mitigation, there is potential for disturbance to lead to negative, temporary effects of slight significance on breeding birds, in the event that works are undertaken during breeding bird season (March-August inclusive).

However, in the context of herring gull, an SCI species of the Northwest Irish Sea SPA, which was found to be breeding on Site, in the absence of mitigation, there is the potential for disturbance to lead to negative, temporary effects of moderate significance on this species should works be undertaken during the breeding season.

Furthermore, should any vegetation removal (e.g. tree removal) work or works to the building be undertaken during the breeding bird season (March-August inclusive), nests could be directly lost, potentially leading to the death of adults, chicks or eggs, in contravention of national and international law. This would constitute a negative, short-term, significant effect on local breeding birds.

Loss of potential nesting habitat is also considered here; however, given the minimal tree loss at the Site, this effect is considered to be negative, permanent, and of slight significance for local breeding birds.

6.6.1.3.3 Mammals

The Proposed Development will result in the partial loss of habitats, including areas of grassland and scrub, which provide foraging and shelter opportunities for terrestrial mammals such as badger (*Meles meles*), hedgehog (*Erinaceus europaeus*), and pygmy shrew (*Sorex minutus*). These habitats are, however, common and widespread within the surrounding urban and suburban landscape, and are of limited ecological value at a local scale, particularly where they comprise semi-improved grassland and disturbed scrub. The majority of higher-value habitat within the Site, namely the woodland and associated linear features, will be retained within a designated Habitat Preservation Area, thereby maintaining a core area of suitable habitat for these species.

In addition, the Site is well connected to the wider landscape, with Rockfield Park located directly to the south, which provides a substantial area of suitable habitat for terrestrial mammals. This connectivity ensures that displaced individuals are able to utilise alternative habitats in the immediate vicinity.

The magnitude of habitat loss is therefore considered to be low, given the availability of suitable habitat locally and the retention of key ecological features on site. The resulting effect is assessed as slight, temporary, and not significant at a local level, during the construction phase.

Individual assessment for disturbance/displacement impacts on badger and other non-volant mammals are provided below.

6.6.1.3.3.1 Badger

The below assessment has been made, which has adopted a precautionary approach for badgers on site.

Potential impacts on badger relate directly to disturbance/displacement during the construction phase via increased human presence, noise, vibrations, and machinery, which could pose a negative, short-term, moderate effect at the local scale.

Construction phase activities such as vegetation clearance or entrapment within construction materials or temporary excavations could result in mortality which would result in a potential negative, permanent, significant effect on badger at the local level.

6.6.1.3.3.2 Other Non-volant Mammals

Potential impacts on small terrestrial mammals, such as hedgehog, or pygmy shrew, relate to direct mortality during vegetation clearance or entrapment within construction materials. Should removal be undertaken during hedgehog hibernation period (October-April), or during the breeding periods of the aforementioned mammals, in the absence of mitigation, this could result in negative, short-term, significant effects at the local scale.

Small mammal species 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. Should this occur, it would constitute a negative, short-term, moderate effect on local populations.

Visual and noise disturbance of species due to increased human presence, machinery and lighting 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 effects at a local scale.

6.6.1.3.4 Common Lizard

Common lizards are widely distributed throughout Ireland and inhabit a wide range of habitat types, including those found at the Site of the Proposed Development. Potential impacts of the Construction Phase of the Proposed Development comprise direct mortality in the event of vegetation removal during the hibernation period for common lizard. In the absence of mitigation, this could result in negative, short-term, moderate effects on local common lizard.

6.6.2 Operational Phase

6.6.2.1 Impacts on Habitats and Flora

6.6.2.1.1 Spread of Invasive Species

Landscaping with imported soils and flora has the potential to introduce invasive species to the Site and the newly created habitats, from whence these invasive species could spread to the surrounding landscapes. In the absence of mitigation (e.g. monitoring for reestablishment or spread of treated invasive species), the spread of invasive species could lead to negative, long-term, moderate effects on adjacent habitats.

6.6.2.2 Impacts on Native Fauna

6.6.2.2.1 Bats

There is the potential for Operational Phase lighting to cause disturbance to foraging bats, given that its use cannot be avoided at the Site. Although a low level of bat activity was recorded overall at the Site during bat activity surveys, the provision of supplementary habitat planting in the form of hedgerows, treelines and shrub will increase the Site's value for use by bats by providing improved foraging and commuting corridors through the Site.

These measures will improve habitat quality, increase foraging opportunities, and enhance ecological connectivity across the Site and the wider landscape. Elements of the Proposed Development which are considered to provide positive, local, slight effects, and ultimately positive contributions to local bat conservation include:

- **Enhanced Foraging Habitat:** The inclusion of native hedgerows, semi-mature native trees, and nectar-rich perennials will support a diverse and abundant insect population, providing a reliable food source for foraging mammals and bats.
- **Improved Habitat Connectivity:** Linear features such as hedgerows and tree lines will function as commuting corridors, facilitating safe movement between roosting, sheltering, and foraging areas while reducing exposure to predators.
- **Shelter and Roosting Potential:** Semi-mature native trees (e.g., oak) may, over time, offer natural roosting opportunities. Green walls and dense vegetation will also contribute to microhabitat diversity.
- **Low-Disturbance Green Spaces:** lawns and communal gardens with native planting will create a more naturalistic and less intensively managed environment, which is generally more conducive to promoting biodiversity and maintaining connectivity within the Site.
- **Alignment with Biodiversity Policy:** The proposed measures are consistent with national biodiversity strategies and contribute to the ecological resilience of the wider area.

However, in the absence of suitable mitigation measures, nocturnal species which may be using the area may experience the following as a result of operation phase lighting proposed as part of the Development:

- Disruption of commuting routes.
- Reduced foraging efficiency.
- Delayed emergence from bat roosts.
- Increased predation risk.

These impacts would represent a permanent, negative, moderate impact on nocturnal species using the area (in the absence of suitable mitigation).

6.6.2.2.2 Birds

The Proposed Development will be consistent with the existing urban fabric of Blackrock, Dublin, and bird species present are considered to be habituated to this urban environment. Therefore, noise and human activity disturbance impacts to bird species as a result of the operation of the Proposed Development would therefore be reduced.

However, adopting a precautionary approach, potential impacts during the Operational Phase include disturbance from increased artificial lighting which could distract or disorient breeding seabirds (such as herring gull), potentially leading to decreased foraging or nest abandonment during breeding season, in particular, 'tubenose' species, which include puffins, shearwaters, petrels and terns (Laguna et al., 2014). In the absence of appropriate mitigation measures, this could constitute negative, permanent, significant impacts on breeding seabirds in the locality.

The retention of boundary habitats alongside the proposed additional planting included as part of the landscaping for the Site will offer potential commuting, foraging, and nesting habitat for local birds. As such, the likely effect is considered positive, permanent and slight at the local level, due to the increase of available resources and habitats at the Site.

6.6.2.2.3 Badger & other non-volant mammals

The below assessment has been made, which has adopted a precautionary approach for badgers and other non-volant mammals on site.

Potential impacts on badger relate directly to disturbance/displacement during the Operational Phase via loss of foraging, commuting, sheltering/breeding habitat, increased human (and dog) presence, lighting and noise pollution, increased traffic, as well as road mortality. In the absence of mitigation, this would constitute a negative, short-term, moderate effect on local badger populations.

However, it is also noted that during the operational phase, the implementation of the landscape plan will result in the establishment of new planting, including grassland, shrub, and tree habitats. While these areas will be more managed in character than the existing habitats, they will continue to provide foraging and shelter opportunities for species such as badger, hedgehog and pygmy shrew.

The retention of badger setts on site along with the retention of woodland habitats within the Habitat Preservation Area, together with the provision of connected green infrastructure and permeability measures (e.g. hedgehog access points), will ensure continued movement of terrestrial mammals through the Site and linking to adjacent habitats, including Rockfield Park.

As the landscape matures, it is expected that habitat structure and ecological function will improve over time, providing enhanced biodiversity value relative to the baseline in certain areas. Therefore, no significant adverse operational impacts on terrestrial mammals are predicted.

6.7 Potential Cumulative Impacts

6.7.1 Existing Planning Applications

A search of planning applications located within 500m of the Site of the proposed development was conducted using online planning resources such as the National Planning Application Database (NPAD) (MyPlan.ie) and Dublin City Council's Planning Application Map. This distance was deemed appropriate based on the location of the Site of the Proposed Development and the types of other developments present in the area. However further justification for this radius has been included below:

Justification for 500m radius for in-combination impact assessment in urban areas:

The selection of a 500m radius for assessing cumulative biodiversity effects is informed by guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM), which recommends that spatial boundaries in EclA should be ecologically meaningful and proportionate to the scale and nature of the Proposed development.

Key Justifications:

- **Ecological Relevance:** The 500m buffer encompasses adjacent habitats and ecological corridors that may be functionally connected to the Proposed development site. This includes a variety of habitats that are used by mobile species such as birds, bats, and otters. These species may be sensitive to cumulative pressures such as noise, light, and habitat fragmentation.
- **Urban Context and Development Density:** In urban and peri-urban settings, a 500m radius is commonly used to capture developments that may contribute to shared pressures on biodiversity. This distance is sufficient to include projects with overlapping construction or operational phases that could interact with the Proposed development in terms of disturbance, pollution, or habitat loss.
- **Best Practice and Proportionality:** CIEEM guidance emphasizes that the spatial scope of cumulative assessments should be proportionate to the likely zone of influence of the project. A 500m radius strikes a balance between ecological thoroughness and practical feasibility, ensuring that relevant developments are considered without diluting the analysis with distant projects of negligible relevance.
- **Planning Precedent:** The 500m buffer aligns with precedent in Irish planning practice, where cumulative assessments for urban development's often adopt this scale to evaluate interactions with nearby infrastructure and land-use changes.

As part of the cumulative assessment, any planning applications listed as granted or decision pending from within the last five years were assessed for their potential to act in-combination with the proposed development and cause likely significant effects on the relevant European sites. In the interest of robustness, Long-term developments granted/submitted outside of this time period (and within 6km of the Site) were also considered where applicable. The search determined there were numerous small scale planning applications in the area for modifications to existing premises including extensions and development of new windows. The larger, more recent applications are detailed in Table 6.21 below.

It is noted that the below listed planning applications were all accompanied by the relevant environmental assessments or conditions that detail the potential impacts and the mitigation measures required to ensure the developments do not have a significant effect on European sites, alone or in-combination with other developments. In addition, DCC granted permission for much of the below planning applications following evaluations of the potential ecological and environmental impacts of each application.

On examination of the below, it is considered that there is no potential for the Proposed Development to act in-combination with other developments in the vicinity that could cause likely

significant adverse effects on the identified KERs relevant to the Site of the Proposed Development.

Planning Reference	Planning Authority	Status	Location
D25A/0073/WEB	Dun Laoghaire-Rathdown County Council	Grant permission (21/03/2025)	Frascati Centre, Frascati Road, Blackrock, Co.Dublin
<p>Development Description</p> <p>Subdivision and associated part change of use of Anchor Retail Unit 1 (located over ground and first floor levels) and back of house at second floor level to provide 2 no. units, comprising Unit D2 for Retail use at ground floor level with an overall GFA of 546 sq.m, and Unit D3.</p> <p>Potential for In-combination effects</p> <p>As this application refers to a change of use, no construction/alterations are proposed, and therefore potential for in-combination impacts are not foreseen.</p>			
ABP-318088-24 REF8923	Dun Laoghaire-Rathdown County Council, and ABP	Grant permission (19/11/2024) exempted development	Temple Road/Newtown Avenue to junction of Sandycove Avenue
<p>Development Description</p> <p>Living Streets: Coastal Mobility Route (Blackrock to Sandycove).</p> <p>Potential for In-combination effects</p> <p>Exempted development; no in-combination effects anticipated.</p>			
ABP-321765-25 D24A/0484/WEB	Dun Laoghaire-Rathdown County Council, and ABP	Grant permission (16/07/2025)	Old Dun Leary Road, Cumberland Street, Longford Place and Dun Leary Hill, Dun Laoghaire, Co. Dublin, A96 N208
<p>Development Description</p> <p>Construction of a five to eight storey development in 2 blocks and the change of use and refurbishment of existing three-storey 'Dun Leary House' (a protected structure) to provide for 88 residential units, a retail unit and all associated site works.</p> <p>Potential for In-combination effects</p> <p>Potential for cumulative impacts during construction (noise, dust, traffic) when considered alongside other large-scale residential projects in Blackrock/Dún Laoghaire. However, with standard mitigation (dust suppression, noise control, traffic management), significant effects are unlikely.</p>			
D20A/0567	Dun Laoghaire-Rathdown County Council	Grant permission (18/06/2023)	13-15, Rock Hill, Blackrock, Co. Dublin, A94V2NO
<p>Development Description</p> <p>Demolition of the existing two-storey building and the construction of a 3-7 storey mixed use building (8 no. 2-</p>			

bedroom apartments and 1 no. commercial unit) Potential for In-combination effects Similar to above; potential short-term cumulative impacts during construction phase, but not significant, and ruled out with mitigation.			
ABP-313509-24	Dun Laoghaire-Rathdown Council, and ABP	Grant permission (27/03/2024)	Lands across Dublin
Development Description BusConnects Belfield/Blackrock to City Centre Core Bus Corridor Scheme. Potential for In-combination effects Could overlap with construction traffic and access constraints for other developments. However, coordination of traffic management plan (CEMP and Traffic report) provided for the proposed development, ensures significant cumulative effects are avoided.			
ABP-318247-24 LRD22A/0930	Dun Laoghaire-Rathdown County Council, ABP	Grant permission (09/04/2024)	Dalguise House, Monkstown Road, Monkstown, County Dublin, A94 D7D1
Development Description Large Scale Residential Development (LRD) - permission for 491 no. residential units, a childcare facility, restaurant/café and all associated site development works. Dalguise House is a protected structure - RPS no. 870. A Natura Impact and an EIAR accompanies application. Potential for In-combination effects Large-scale project with potential for cumulative habitat disturbance and traffic impacts when combined with other residential schemes. Natura Impact Statement has been prepared for both with no significant effects predicted with mitigation that is being provided.			
PLo6D.308900 D19A/0908	Dun Laoghaire-Rathdown County Council	Grant permission (05/07/2023)	Merrion Road/Rock Road (R118), Booterstown, Blackrock
Development Description 1 no. vehicular access to Merrion Road/Rock Road to serve a new recreational and interpretive centre, open landscaped space, biodiversity proposals, associated site and infrastructural works Potential for In-combination effects Positive biodiversity measures reduce risk of negative cumulative effects. No significant in-combination impacts are expected.			
ABP-314429-23 D21A/0996	Dun Laoghaire-Rathdown County Council, ABP	Grant permission (30/05/2023)	Frascati Centre, Frascati Road, Blackrock, Co. Dubin
Development Description A Phase 3 residential development of 98 no. apartments and all associated site works.			

<p>Potential for In-combination effects</p> <p>Potential cumulative effects with other Frascati projects and Blackrock residential schemes during construction. Mitigation measures (dust, noise, traffic) will prevent significant impacts.</p>			
<p>ABP-314653-22 D22A/0469</p>	<p>Dun Laoghaire-Rathdown County Council, ABP</p>	<p>Grant permission (24/08/2022)</p>	<p>Blackrock House (a protected structure RPS No. 234), 28 Newtown Avenue, Blackrock, Co. Dublin (and also Maretimo Gardens East)</p>
<p>Development Description</p> <p>The modification, refurbishment and reconfiguration of Blackrock House to provide for a total of 21 no. apartments within Blackrock House, the construction of 2 no. new residential blocks on site to provide for a total of 42 no. units in the overall subject site, landscaped open space, widened footpath on Maretimo Gardens East and all associated services.</p> <p>Potential for In-combination effects</p> <p>Owing to the small scale and nature of the works; Appropriate Assessment screening concluded no significant effects alone or in combination. No further mitigation required beyond standard measures. However, mitigation measures provided by the proposed development at St. Teresa's will further ensure no potential for in-combination effects.</p>			
<p>ABP-313569-22 D21A/0958</p>	<p>Dun Laoghaire-Rathdown County Council, ABP</p>	<p>Grant permission (20/04/2022)</p>	<p>c.o.49 ha site on the former Europa Garage Site, Newtown Avenue</p>
<p>Development Description</p> <p>The development will consist of the construction of a residential development providing 91 residential units (GFA c.10,829 sq.m including</p> <p>Potential for In-combination effects</p> <p>Similar to the above, Appropriate Assessment screening concluded no significant effects alone or in combination. No further mitigation required beyond standard measures. However, mitigation measures provided by the proposed development at St. Teresa's will further ensure no potential for in-combination effects.</p>			
<p>D21A/0413</p>	<p>Dun Laoghaire-Rathdown County Council</p>	<p>Grant permission 29/07/2021</p>	<p>Carraig Tennis Club, Rockfield Park, Blackrock, Co. Dublin</p>
<p>Development Description</p> <p>The installation of 4 no. new 10 metre steel columns and LED floodlights, the replacement of 2 no. existing 8 metre columns with existing floodlights and all associated site works and laying of column foundations and electrical cabling.</p> <p>Potential for In-combination effects</p> <p>Very minor works; as such there is negligible potential for in-combination effects.</p>			

ABP-308946-21	Dun Laoghaire-Rathdown County Council, ABP	Grant permission (15/04/2021)	Newtownpark Avenue, Blackrock, Co. Dublin
<p>Development Description</p> <p>Demolition of a single storey shed, construction of 140 no. apartments and all associated site works.</p> <p>Potential for In-combination effects</p> <p>Similar to the above, Appropriate Assessment screening concluded no significant effects alone or in combination. No further mitigation required beyond standard measures. However, mitigation measures provided by the proposed development at St. Teresa's will further ensure no potential for in-combination effects.</p>			
D20A/0557	Dun Laoghaire-Rathdown County Council	Grant permission (24/02/2021)	Site at Zurich House, Frascati Road, Blackrock, Co. Dublin
<p>Development Description</p> <p>The development will consist of an increase in floor area of the existing office building by providing lateral (to the north-east and south-west) and vertical extensions comprising: the lateral extension (from lower ground floor to fourth floor level) by 1,765 sq m and the vertical extension (provision of a new set back, part fifth floor level) by 620 sq m; replacement of the north-east facade fronting George's Place and partial replacement of all other facades; and internal modifications and reconfigurations. The proposed development will result in an increase in office floor area from 3,790 sq m to 6,175 sq m. The development also includes: the reconfiguration and extension of the existing car park resulting in the provision of 27 No. car parking spaces.</p> <p>Potential for In-combination effects</p> <p>Urban setting; cumulative traffic impacts possible but will be mitigated for in the form of standard mitigation. A such, potential for in-combination effects are not foreseen.</p>			
ABP-308046-20	Dun Laoghaire-Rathdown County Council, ABP	Grant and refuse permission (16/12/2020)	/Frascati Shopping Centre, Frascati Road, Blackrock, Co. Dublin/
<p>Development Description</p> <p>The proposed development also includes the provision of 57 no. additional apartments, as an extension of the Phase 1 permission, located above the existing / permitted podium car park to the north west of the centre, as a Phase 2 residential development. The subject application therefore relates to a total of 102 no. residential units.</p> <p>Potential for In-combination effects</p> <p>Potential overlap with other Frascati works; cumulative effects mitigated through coordinated best practice construction management.</p>			
D20A/0086	Dun Laoghaire-Rathdown County Council	Grant permission (30/06/2020)	Former Irish Crystal Site fronting onto, Brookfield Terrace, Carysfort Avenue, Blackrock, Co. Dublin
<p>Development Description</p>			

Permission for development. The proposed development will consist of the following: (i) The demolition of the existing warehouse building and outbuilding on the Site.; (ii) The construction of a single storey pre delivery inspection workshop with associated wash bay for vehicles (both structures will have green roofs); (iii) The provision of 66 no. car parking storage spaces; (iv) Alterations/upgrades to the existing entrance onto Brookfield Terrace; (v) The proposed development will also include a stormtech attenuation tank located at the centre of the Site underground; (vi) All ancillary and associated Site development works. A Natura Impact Statement has been prepared in respect of the proposed development and has been submitted with the planning application.

Potential for In-combination effects

The proposed development Site is within a mixed-use area containing both commercial and residential uses. Following the implementation of the mitigation measures outlined, the construction and presence of this development would not be deemed to have a significant impact. No significant impacts are likely on the natural 2000 Sites alone in combination with other plans and projects based on the implementation of standard construction phase mitigation measures.

D22A/0469	Dun Laoghaire-Rathdown County Council	Grant permission & Refuse permission (24/08/2022)	Blackrock House (a protected structure RPS No. 234), 28 Newtown Avenue, Blackrock, Co. Dublin and also Maretimo Gardens East
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Development Description

Permission for development, comprising the refurbishment of the existing structure and the construction of 2 no. apartments buildings. The application Site includes the protected structures of 'Blackrock house' and the 'Entrance Gates', both Protected Structures under RPS Ref: No. 234. The proposed development will consist of: A) The modification, refurbishment and reconfiguration of Blackrock House, a protected structure, to provide for a total of 21 apartments within Blackrock House, including the proposed repair and restoration works to the existing Blackrock House to provide for an additional 4 apartment providing 21 in total (an increase from 17 no. existing) to comprise 3 no. three bedroom, 9 no. two bedroom and 9 no. one bedroom units. B) The construction of 2 no. new residential blocks on Site; comprising (Block A) a three-storey over lower ground floor block to the west of Blackrock House (consisting of 8 no. two bedroom apartment units), and a two storey block (Block B) located to the north of Blackrock House, (consisting of 12 no. one bedroom apartment units and 1 no. 2 bedroom unit and accessed from Maretimo gardens East, with associated car parking (13 no. spaces), to provide for a total of 42 no. units in the overall subject Site. c) The works to Blackrock House include an improved layout with the insertion of a new door on the western elevation at ground floor, reinstatement of traditional windows, removal of 1980's concrete bridge connecting to the front of the facade, replacement of utility services and fire upgrade works (to include removal of internal walls (modern and historic) to facilitate new internal apartment arrangement. The proposed development includes landscaped open space, widened footpath on Maretimo Gardens East, all associated services, including connection to existing drainage, green roofs to Blocks A and B, 54 cycle parking spaces, reconfiguration of the parking area for 13 car parking spaces accessed from Newtown Avenue, 1 car sharing space which is accessed from Maretimo Gardens east and bin storage.

Potential for In-combination effects

Appropriate Assessment Screening The proposed development has been screened for AA (report on file), and it has been determined that the development proposed would not significantly impact upon a Natura 2000 Site.

D21A/0958	Dun Laoghaire-Rathdown County Council	Grant permission (16/11/2023)	c.0.49 ha Site on the former Europa Garage Site, Newtown Avenue, Blackrock, Co Dublin
<p>Development Description</p> <p>Permission for development. The development will consist of the construction of a residential development providing 91 residential units (GFA c.10,829 sq.m including basement) of 1-4 storeys together with residential accommodation in attic floor over (2 units) in two Pavilion style buildings. The apartment units will consist of 49 no. 1-bed units (c.49-61 sq.m), 38 no. 2-bed units (c.66-94 sq.m) and 4 no. 3-bed units (c.96-108 sq.m) all with associated private balconies/terraces to the north/south/east/west elevations. Block A (1-4 storeys) shall provide for 47 no. apartment units (total GFA c.3,627 sq.m); Block B (2-4 storeys plus attic floor) shall comprise of 44 no. apartments (total GFA c3,998 sq.m). Basement level (c.3,204 sqm) shall provide for 73 no. car parking spaces (including visitor, GO-Car and mobility impaired); 194 no. bicycle spaces; plant areas; switch room; bin storage area; and surface water attenuation tank. The development proposal shall also provide for c.1,162 sq.m of communal open space and 302 sq.m of public open space; basement ramp adjacent to north-western boundary; new pedestrian access off Newtown Avenue to north; 50 no. bicycle parking spaces at grade; bin holding area; ESB substation; structural works to existing western boundary wall; amendments to a portion of existing southern boundary wall reinstating it to a height of +21.380m OD between the front building line of number 7 Craigmores Gardens and the rear boundary of the property; all other ancillary Site development works, and Site services required to facilitate the proposed development.</p> <p>Potential for In-combination effects</p> <p>This project has been screened for AA under the appropriate methodology. It has found that significant effects are not likely to arise, either alone or in combination with other plans or projects to any SAC or SPA. This screening is based upon best available scientific knowledge. There is no reasonable scientific doubt with regard to this finding.</p>			
ABP30894620	Dun Laoghaire-Rathdown County Council	Grant permission (15/04/2021)	1.46ha on lands within the curtilage of 'Cluain Mhuire', (a protected structure RPS. ref. no. 776), Newtownpark Avenue, Blackrock, Co. Dublin
<p>Development Description</p> <p>The development will consist of the demolition of the existing c. 26sqm single storey shed on Site and construction of a residential development comprising; 140 no. apartment and duplex units (total gross floor area 14,383sqm) across 5 no. 2-5 storey buildings (Blocks C&D over basement) comprising 1 no. studio apartment, 59 no. 1 bedroom apartments, 71 no. 2 bedroom apartments and 9 no. 3 bedroom apartments (along with a 'linked' single storey amenity building) as follows: Block A (4 storeys) comprises 32 no. apartments [balconies on all elevations] consisting of 17 no. 1 bedroom, and 15 no. 2 bedroom apartments; Block B (5 storeys) comprises 40 no. apartments [balconies on all elevations] consisting of 21 no. 1 bedroom and 19 no. 2 bedroom apartments; Block C (4 - 5 storeys over basement) comprises 31 no. apartments [balconies on all elevations] consisting of 1 no. studio apartment, 8 no. 1 bedroom, 17 no. 2 bedroom and 5 no. 3 bedroom apartments; Block D (4 storeys over basement) comprises 28 no. apartments [balconies on all elevations] consisting of 9 no. 1 bedroom, 15 no. 2 bedroom and 4 no. 3 bedroom apartments; Block E (2 - 3 storeys) comprises 9 no. duplex units [balconies on north and south elevations] consisting of 4 no. 1 bedroom units and 5 no. 2 bedroom units; Communal Amenity Space (889sqm) and public open</p>			

space (1680 sqm) totalling 2,569sqm is provided throughout the Site including internal amenity space/concierge area totalling 175sqm within a single story 'linked' building between Blocks A and B; Vehicular access to the development will be from the upgraded existing access from Newtownpark Avenue (including demolition of c.10m of the existing boundary wall to facilitate the widening of the Site entrance) and will extend throughout the Site linking to the basement car parking level (as well as provision of future potential links to [the boundary with] the lands to the west and to Cluain Mhuire);

- Provision of 97 no. car parking spaces (29 no. surface car parking and 68 no. basement car parking);
- 226 no. cycle parking spaces (56 no. surface cycle parking space and 170 no. basement car parking)
- and 6 no. motorcycle spaces;
- Provision of a single storey ESB substation, hard and soft landscaped areas, public lighting, attenuation, service connections, bin stores, and a new pedestrian crossing on Newtownpark Avenue and all ancillary Site development works.

Potential for In-combination effects

In conclusion, upon the examination, analysis and evaluation of the relevant information including, in particular, the nature of the Proposed Development and the likelihood of significant effects on any Natura 2000 Site, in addition to considering possible in-combination effects, and applying the precautionary principles, it is concluded by the authors of this report that, on the basis of objective information; the possibility may be excluded that the Proposed Development will have a significant effect on any of the Natura 2000 Sites listed below: • South Dublin Bay SAC [000210] • North Dublin Bay SAC [000206] • Rockabill to Dalkey Island SAC [003000] • Wicklow Mountains SAC [002122] • Howth Head SAC [000202] • Knocksink Wood SAC [000725] • Glenasmole Valley SAC [001209] • Baldoyle Bay SAC [000199] • Ballyman Glen SAC [000713] • Ireland’s Eye SAC [002193] • Bray Head SAC [000714] • South Dublin Bay and River Tolka Estuary SPA [004024] • North Bull Island SPA [004006] • Dalkey Islands SPA [004172] • Wicklow Mountains SPA [004040] • Baldoyle Bay SPA [004016] • Howth Head Coast SPA [004113] • Ireland’s Eye SPA [004117] Therefore, it is concluded that the possibility of any significant effects on any European Sites arising from the Proposed Development, whether considered on its own or in combination with the effects of other plans or projects, can be excluded beyond a reasonable scientific doubt.

PC/IC/01/23	Dun Laoghaire-Rathdown Council	Approve	Blackrock Village, Co. Dublin
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Development Description

Living Streets Blackrock Village is a public realm improvement project which aims to enhance the attractiveness, liveability, connectivity and economic vibrancy of Blackrock Village. Building on the temporary measures implemented during the COVID restrictions of summer 2020 on Blackrock Main Street, the plan will move the village from a temporary layout to a high-quality permanent design. The scheme is informed by consultation with local representative businesses and resident groups and independent evaluation of the temporary measures by TU Dublin. It is also consistent with the Blackrock Local Area Plan (LAP) developed in 2015, which was informed by extensive public consultation.

Potential for In-combination effects

It can be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European Sites, that the proposed works, individually or in combination with other plans and projects, would not be likely to have a significant effect on any European Sites designated under the Habitats Directive and Birds Directive. As a result, an Appropriate Assessment is not required, and a Natura Impact Statement shall not be prepared in respect of the proposed works.

Table 6.21 Assessment of Potential Cumulative impacts arising from the Proposed Development and other Developments pending or granted planning approval in the last 5 years.

6.7.2 Relevant Policies and Plans

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

- Dún Laoghaire Rathdown Development Plan 2022 – 2028
- Dún Laoghaire-Rathdown Biodiversity Action Plan 2021 – 2025

Policies and objectives of the Dún Laoghaire-Rathdown County Development Plan 2022 – 2028 that are of relevance to this Report are outlined below:

- GIB11: Coastal Area Feasibility Study. It is a Policy Objective to explore undertaking a comprehensive feasibility study on the recreational potential along the coastal area of the County, which comprehensively addresses recreational impact - including visitor numbers, mapping and surveying of sensitive habitats and species and identification of significant threats on European sites - and which would allow an assessment of any future proposals, alone or in combination, to assess impact on the coastal and marine zone within and adjacent to the County boundary. The Council will explore the possibility of carrying out this study with adjoining and/or coastal Local Authorities and/or other agencies.
- GIB18: Protection of Natural Heritage and the Environment. It is a Policy Objective to protect and conserve the environment including, in particular, the natural heritage of the County and to conserve and manage Nationally and Internationally important and EU designated sites - such as Special Protection Areas (SPAs), Special Areas of Conservations (SACs), proposed Natural Heritage Areas (pNHAs) and Ramsar sites (wetlands) - as well as non-designated areas of high nature conservation value known as locally important areas which also serve as 'Stepping Stones' for the purposes of Article 10 of the Habitats Directive.
- GIB19: It is a Policy Objective to ensure the protection of natural heritage and biodiversity, including European Sites that form part of the Natura 2000 network, in accordance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines.
- GIB21: It is a Policy Objective to protect and preserve areas designated as proposed Natural Heritage Areas, Special Areas of Conservation, and Special Protection Areas. It is Council policy to promote the maintenance and as appropriate, delivery of 'favourable' conservation status of habitats and species within these areas.
- GIB22: It is a Policy Objective to protect and promote the conservation of biodiversity in areas of natural heritage importance outside Designated Areas and to ensure that notable sites, habitats and features of biodiversity importance - including species protected under the Wildlife Acts 1976 and 2000, the Birds Directive 1979, the Habitats Directive 1992, Birds and Habitats Regulations 2011, Flora (Protection) Order, 2015, Annex I habitats, local important areas, wildlife corridors and rare species - are adequately protected. Ecological assessments will be carried out for all developments in areas that support, or have potential to support, features of biodiversity importance or rare and protected species and appropriate mitigation/ avoidance measures will be implemented. In implementing this policy, regard shall be had to the Ecological Network, including the forthcoming DLR Wildlife Corridor Plan, and the recommendations and objectives of the Green City Guidelines (2008) and 'Ecological Guidance Notes for Local Authorities and Developers' (Dún Laoghaire-Rathdown Version 2014).
- GIB23: It is a Policy Objective to protect the Ecological Network which will be integrated into the updated Green Infrastructure Strategy and will align with the DLR County Biodiversity Action Plan. Creating this network throughout the County will also improve the ecological coherence of the Natura 2000 network in accordance with Article 10 of the Habitats Directive. The network will also include non-designated sites.
- GIB25: It is a Policy Objective to retain and protect hedgerows in the County from development, which would impact adversely upon them. In addition, the Council will promote the protection of existing site boundary hedgerows and where feasible require the retention of these when considering a grant of planning permission for all

developments. The Council will promote the County's hedgerows by increasing coverage, where possible, using locally native species and to develop an appropriate code of practice for road hedgerow maintenance. The Council will promote the protection of existing hedgerows when considering a grant of planning permission for all developments.

- GIB28: It is a Policy Objective to prepare an 'Invasive Alien Species Action Plan' for the County which will include actions in relation to Invasive Alien Species (IAS) surveys, management and treatment and to also ensure that proposals for development do not lead to the spread or introduction of invasive species. If developments are proposed on sites where invasive species are or were previously present, the applicants will be required to submit a control and management program for the particular invasive species as part of the planning process and to comply with the provisions of the European Communities Birds and Habitats Regulations 2011 (S.I. 477/2011).

Dún Laoghaire-Rathdown Biodiversity Action Plan 2021 – 2025

The Dún Laoghaire-Rathdown Biodiversity Action Plan (BAP) is set out to protect and improve biodiversity, following five main themes:

1. Biodiversity research including climate change adaption and mitigation;
2. Building for Biodiversity;
3. Delivery of the Ecological Network across the Dún Laoghaire-Rathdown;
4. Raising awareness among the public, local communities, and council staff; and,
5. Increased collaboration with stakeholders.

These relevant plans and policies were reviewed and considered for possible in-combination effects with the Proposed Development. It is not expected that these plans and policies would result in any likely significant in-combination effects with the Proposed Development. Each of these plans has also undergone AA, and where potential for likely significant effects has been identified (e.g., in the case of the Dún Laoghaire Rathdown Development Plan 2022 – 2028), an NIS has been prepared which identifies appropriate mitigation.

Dún Laoghaire Rathdown Development Plan 2022 – 2028 has directly addressed the protection of European sites through specific policies. The Biodiversity Action Plan for Dún Laoghaire-Rathdown 2021-2025 is set out to protect and improve biodiversity, and as such will not result in adverse in-combination effects with the proposed development.

On examination of the above, it is considered that there are no means for the proposed development to act in-combination with any policies or plans that would cause any likely significant effects on any European sites.

6.7.3 Operation of Ringsend Wastewater Treatment Plant (WWTP)

This section addresses in more detail the general issue of potential in-combination effects with Ringsend WwTP arising from the Operational Phase of the Proposed Development and other Developments, including future developments.

In summary, the impact of the Proposed Development and any future development has already been appropriately considered and assessed as part of the application process for the existing planning permissions pertaining to Ringsend WwTP.

The 2012 Ringsend WwTP application for planning permission (Ref. PL.29N.YA0010) was for a PE of 2.4 million and was predicated on the findings of the 2005 GSDS. The GSDS set out the drainage requirements for the Greater Dublin Area (GDA) up to 2031. The GSDS relied on the Regional Planning Guidelines (RPGs) and the National Spatial Strategy (NSS) in order to estimate the future projected population increases for the GDA. The studies indicated a predicted growth in population from 1.2 million in 2002 to just over 2 million in 2031 for the GDA region.

In June 2018 Uisce Éireann (then Irish Water) applied for and subsequently received planning permission in 2019 for upgrade works to the Ringsend WwTP facility. The first phase of upgrade

works to Ringsend WWTP was completed in December 2021, which increased the capacity of the plant by 400,000 P.E. Uisce Éireann completed construction of the infrastructure to treat the wastewater for a population equivalent of 2.1 million at the end of 2025. Following a period of testing and commissioning the upgraded assets are operational. These works, together with the continued future works permitted will ultimately increase the capacity of the facility from 1.6 million P.E. to 2.4 million PE by the end of 2025 (Irish Water website: <https://www.water.ie/projects/local-projects/ringsend/>). This plant upgrade will result in an overall reduction in the final effluent discharge of several parameters from the facility including biochemical oxygen demand (BOD), suspended solids, ammonia, dissolved inorganic nitrogen (DIN) and molybdate reactive phosphate (MRP).

Therefore, both the initially permitted 2012 upgrade and the permitted 2019 revised upgrade (Ref. ABP-301798-18) for Ringsend WwTP take account of population growth up to 2.4 million PE. Both applications were subject to EIA, and therefore an EIAR, and accompanied by an AA screening report and NIS. The EIAR contains sections relating to Marine Biodiversity and Terrestrial Biodiversity, and each contains a section on the 'do-nothing scenario'. These review the effects of the WwTP on biodiversity in Dublin Bay in the absence of the upgrade works and so are relevant to this Report.

The EIAR acknowledges that under the do-nothing scenario:

“the areas in the Tolka Estuary and North Bull Island channel will continue to be affected by the cumulative nutrient loads from the river Liffey and Tolka and the effluent from the Ringsend WWTP”, which could result in a decline in biodiversity and the deterioration of the biological status of Dublin Bay (Irish Water, 2018). Nevertheless, these adverse impacts of nutrient over-enrichment are considered “unlikely” (Irish Water, 2018). This is because historical data suggests that pollution in Dublin Bay has had little or no effect on the composition and richness of the benthic macroinvertebrate fauna. The EIAR notes that “although a localised decline could occur, it is not envisaged to be to a scale that could pose a threat to the shellfish, fish, bird or marine mammal populations that occur in the area.” Furthermore, the EIAR notes that significant impacts on waterbird populations foraging on invertebrates in Dublin Bay due to nutrient over-enrichment are “unlikely” to occur (Irish Water, 2018). What is important in the context of this AA Screening Report is that the do-nothing scenario predicts that nutrient and suspended solid loads from the WwTP will “continue at the same levels and the impact of these loadings should maintain the same level of effects on marine biodiversity” and that “if the status quo is maintained there will be little or no change in the majority of the intertidal faunal assemblages found in Dublin Bay which would likely continue to be relatively diverse and rich across the bay.”

Therefore, it can be concluded that likely significant effects on marine biodiversity and the European sites within Dublin Bay from the current operation of Ringsend WwTP are unlikely.

Importantly, this conclusion is not dependent upon any future works to be undertaken at Ringsend. Thus, in the absence of any upgrading works, significant in-combination effects on European sites in this regard are not deemed likely to arise, and therefore likely significant effects involving foul waters produced by the proposed development also do not have the potential to occur, including impacts on the following pNHAs which are located in the vicinity of the outfall point for the WWTP; Grand Canal pNHA, and Dolphins, Dublin Docks pNHA.

6.8 Do Nothing Scenario

If the proposed works were not to go ahead, the Site would likely continue on in its current use, which provides, some, albeit limited, local ecological value. The invasive species present on Site could have some potential to spread, while some plants considered to be 'weed' species could also appear in cracks in the existing hard standing areas, and areas that receive less footfall, but this would be minimal. While successional scrub species would likely invade the open grassland

habitats, the overall character of this area would not be expected to undergo significant change, in the short term, should the Proposed Development not go ahead.

6.9 Interactions

The full assessment of interactions is provided in Chapter 19 of the EIAR, outlined below are interactions relevant to Biodiversity. Interactions between Biodiversity and other environmental factors of the EIAR have been identified with the following sections: Landscape; Air Quality; and Population and Human Health.

6.9.1 Landscape

The proposed landscape plan demonstrates a strong integration with ecological considerations by incorporating native planting, habitat creation, and sustainable drainage features. Open spaces will provide amenity areas for residents and the public, including play zones, fitness areas, and seating. To facilitate these features, some vegetation removal, is required.

Mitigation measures have been embedded within the design to offset these impacts. Native shrubs will be planted in the woodland understory to enhance structural diversity and maintain ecological function. This approach ensures that perimeter areas remain largely inaccessible to the public, preserving a commuting and foraging corridor for wildlife and maintaining a habitat protection zone. Tree loss will be compensated through the planting of both native and selected non-native species across the site, improving canopy cover and providing nesting and feeding opportunities for birds. While lawn and wildflower meadows are incorporated into the design to offset any loss of grassland habitat.

Boundary zones and southern green areas are designed as biodiversity buffers, supporting pollinators and small mammals through wildflower meadows, native shrubs, and log piles. Tree retention and protection (for the majority of trees on Site) and proposed tree planting throughout the Site enhances ecological connectivity (The Tree File, 2025), while swales, tree pits and attenuation areas provide natural stormwater management, accounting for the quality and quantity of runoff, as well as the amenity value of surface water in the urban environment. These measures collectively promote habitat diversity and strengthen the site's ecological resilience within an urban context.

Overall, the interaction between biodiversity and landscape is considered long-term, slight, and neutral, with ecological connectivity maintained and enhanced through targeted planting strategies.

6.9.2 Land, Soils, Geology, and Air Quality

During the demolition phase, interactions with biodiversity are considered neutral, imperceptible, and short-term, as works are confined to surface-level activities with no excavation. During construction, despite the implementation of standard mitigation measures, there remains a residual potential for silt-laden runoff and dust deposition to affect local ecological receptors and downstream European sites. This interaction is assessed as negative, imperceptible, and short-term. In the operational phase, the proposed development is not anticipated to result in any significant effects on designated sites or their conservation objectives; therefore, the interaction is deemed neutral, imperceptible, and long-term.

6.9.3 Hydrology

Demolition activities are limited to surface-level works and pose negligible risk to biodiversity, resulting in a neutral, imperceptible, short-term interaction. During construction, the application of dust suppression and water management measures will ensure that potential impacts on ecological receptors are minimized, and the interaction is assessed as neutral, imperceptible, and short-term. In the operational phase, the incorporation of a Sustainable Urban Drainage System

(SuDS) and robust surface water management strategy, designed for a 1-in-100-year storm event with climate change allowance, will effectively mitigate adverse hydrological impacts. Consequently, the interaction between hydrology and biodiversity is considered neutral, imperceptible, and long-term.

6.9.4 Waste

Potential impacts on biodiversity associated with waste generation during the construction and operational phases arise primarily from the improper management of waste, which could lead to littering, pollution, or the attraction of vermin within affected areas. During operation, waste will be managed at the point of generation through appropriate segregation and stored in covered facilities to prevent litter dispersion and pest attraction. Adherence to the mitigation measures set out in this chapter, and in the Waste Chapter will ensure the associated effect is long-term, imperceptible and neutral.

6.10 Avoidance, Enhancement, Best Practice, and Mitigation Measures

6.10.1 Avoidance by Design

Embedded measures have been integrated into the design of the proposed development to prevent significant ecological impacts on the Site and its surroundings, including designated protected areas. These measures are outlined below.

They include the implementation of standard international best practice measures, as detailed in the accompanying Construction Environmental Management Plan (CEMP), and the incorporation of Sustainable Drainage Systems (SUDS) within the operational design. In addition, the operational phase will feature a Lighting Plan and a comprehensive Landscape Plan, both of which embed site-specific ecological considerations into the overall design of the proposal.

6.10.1.1 Collision Risk

Collision risk has been assessed as part of the overall Ecological Impact Assessment, with reference to the accompanying AA Screening Report (DNV, 2026), and has been addressed through a combination of baseline survey findings and embedded design measures.

Breeding Bird Survey results (refer Section 6.5.4.3.2) indicate that the site supports a bird assemblage comprised predominantly of common breeding woodland and garden species. Observations confirmed limited flyover activity and no evidence of regular flight corridors, migratory pathways, or significant use of the site by species groups typically associated with elevated collision risk (e.g. waterfowl, wading birds, or large flocking species). As such, no specific flight path dependencies were identified within the Site or its immediate surroundings.

In this context, the assessment of collision risk has been undertaken using a proportionate, design-led approach, recognising the absence of high-sensitivity receptors or defined flight lines. The following embedded design measures further reduce the potential for bird strike:

- Buildings are limited in height (up to 7 storeys), remaining below typical commuting altitudes of higher-risk bird groups;
- External materials are specified to be non-reflective and visually distinct, improving detectability and reducing the likelihood of collision;
- Architectural articulation and façade variation break up building massing, providing clear visual cues to birds; and
- Lighting design minimises light spill and avoids excessive illumination that could attract or disorientate birds.

~~Collision risk has been assessed in detail in the accompanying AA Screening Report (DNV, 2026). The below section summarises the key findings and embedded design features:~~

- ~~Building Height: Maximum height of 7 storeys, below typical flight altitudes of commuting waterbirds.~~
- ~~Material Selection: Use of visible, non-reflective materials and varied façades ensures structures are easily detectable, reducing collision likelihood.~~
- ~~Architectural Heterogeneity: Broken-up façades and opaque materials provide strong visual cues for birds, further minimizing risk.~~

Furthermore, bird surveys carried out on Site confirmed minimal flyover activity and limited habitat for SCI species. SCI species such as gulls, geese, ducks, and waders exhibit high avoidance rates (up to 99.5% for gulls), making collisions with static, clearly visible buildings extremely rare. As a result, collision risk to SPA-designated species is negligible and will not result in significant effects on conservation objectives.

Despite the negligible risk of collision risk and flight-path obstruction, these risks have been addressed through the above embedded design measures. Taking account of the recorded bird assemblage, the absence of significant flight pathways, and the incorporation of these embedded design measures, the potential for collision risk affecting both breeding and wintering bird species is considered to be low. This conclusion is consistent with the findings of the Appropriate Assessment (DNV, 2026), which determined that there is no pathway for significant effects on bird species associated with nearby European sites.

Overall, the proposed development is not expected to give rise to significant effects in relation to collision risk, and no additional mitigation is required beyond the embedded design measures described above.

6.10.1.2 CEMP

The Construction Environmental Management Plan (CEMP) has been developed by JJC (2025), in collaboration with ecologists at DNV and the wider design team to ensure a comprehensive, multi-disciplinary approach to minimising ecological and environmental impacts during the construction phase. This process embeds ecological considerations directly into the construction methodology and design of the proposal.

Further details are provided in the CEMP, which is available for review under separate cover (JJC, 2025). With regards to mitigation measures for the protection of the Carysfort-Maretimo stream, the following measures embedded into the project design, specifically the CEMP, is noted: The CEMP establishes a comprehensive framework of best practice mitigation measures, which will be implemented throughout the construction phase. These include:

- Sediment and surface water management:
 - Installation of silt fences, settlement lagoons, geotextile-lined settling basins and sediment traps to intercept and treat runoff prior to discharge;
 - Implementation of temporary drainage systems in advance of earthworks, ensuring that all surface water runoff is managed and controlled;
 - Requirement that all runoff from disturbed areas passes through sediment control measures prior to discharge;
 - Regular inspection and maintenance of sediment control infrastructure to ensure effectiveness.
- Pollution prevention measures:
 - No direct discharge of untreated or contaminated water to the surface water drainage network;
 - Strict control of concrete works, including the prohibition of discharge of cementitious wash water to drains or watercourses;
 - Management of stockpiled materials to prevent entrainment of fine sediments into runoff, including location away from drainage pathways and protection during adverse weather.

- Fuel and chemical management:
 - Storage of fuels and chemicals in bunded, secure areas to prevent leakage;
 - Use of drip trays, spill kits and designated refuelling areas, located away from surface water receptors;
 - Provision of spill response procedures and trained personnel to address accidental releases.
- Dust control measures:
 - Use of water suppression (browsers) during dry conditions to prevent dust generation;
 - Covering of materials during transport and provision of wheel wash and road sweeping facilities;
 - Implementation of speed restrictions within the Site to reduce dust mobilisation.
- Monitoring and environmental management:
 - Regular inspection of drainage infrastructure and pollution control measures;
 - Maintenance of a pollution incident register and emergency response procedures;
 - Ongoing environmental monitoring to ensure compliance with best practice and rapid response to any potential issues.

These measures ensure that sediment, hydrocarbons, concrete washings and other pollutants are contained and treated at source, thereby preventing entry to the drainage network and downstream water environment, including the Carysfort–Maretimo Stream.

6.10.1.3 Surface Water Management

Surface water discharge rates from the proposed surface water drainage network will be controlled by the below proposed embedded measures (construction phase embedded measures are covered in the aforementioned CEMP), which have the capacity to provide attenuation on the surface water run-off rates from the Site, thereby reducing run-off rates from surface water on Site during its Operational phase, and further mitigating the risk of surface water overflow during excessive rainfall/flooding events:

- SuDs measures.
- Petrol interceptors.
- Attenuation.

It should also be noted that Surface water at the proposed development will discharge into the existing public stormwater network.

6.10.1.3.1 SuDS Measures

Sustainable urban drainage is a concept that incorporates long term environmental and social factors into drainage design. It takes account of both the quantity and quality of runoff as well as the amenity and biodiversity value of surface water in the urban environment.

The proposed development integrates a suite of green infrastructure and SuDS measures within its design to deliver ecological enhancement alongside sustainable urban drainage and climate resilience. ~~These features are not standalone mitigation but are embedded into the project's architecture and landscape strategy, ensuring long-term functionality and biodiversity benefits.~~ These features form part of an embedded mitigation strategy, rather than standalone measures, and are integrated into the architecture and landscape design to ensure long-term functionality and biodiversity benefits.

All storm drainage work within the Proposed Amendments lands shall be designed as constructed in accordance with the following:

1. GSDS.
2. CIRIA SuDS Manual (C753).

~~The criteria set out in the above will help confirm the surface water strategy and SuDS management train of the development.~~ These standards inform the development of a SuDS management train, ensuring that runoff is subject to sequential interception, treatment, attenuation and controlled discharge prior to leaving the Site.

- A Green and Blue Roof at topmost apartment roofs, Blue Roof at stepped terraces and Green Roof on ancillary single-story buildings is proposed throughout the development, at a minimum of 70% of the flat roof surface area and will be installed as per Appendix B in Dun Laoghaire Rathdown Development Plan 2022 – 2028. See drawing C11 for calculation of areas. The Green and Blue Roofs / Blue Roofs and Green Roofs will be a Beton / ACO system, or similar, details of which are included in Appendix B to this report. This system allows for the installation of photovoltaic panels above the Green and Blue roof with minimal loss of effective area of the roof. The Green and Blue will provide interception storage and will attenuate storm water at roof level which will then be connected to the new surface water system. Access to the roofs for maintenance will be via the automatic opening vents at the top of the stairwells in each building. Secondary access to the roofs will be by a cherry picker from the adjoining roads for maintenance (JJC, 2025b).
- Dry swales / infiltration trenches are a useful and natural means of surface water collection and treatment of the first 5mm of runoff. The application of swales / infiltration trenches was examined as part of the design process. Because of the mature trees, to be retained as part of the development, the widespread use of swales cannot be implemented as the necessary trenches would damage the tree root systems, but swales / infiltration trenches shall be installed where they do not damage existing mature trees (JJC, 2025b).
- Similar issues could potentially arise regarding traditional pipe drainage in trenches, however, the piped drainage system for the development Site has been designed to avoid heavily rooted areas, particularly along the main access avenue. It is anticipated that the road surface along the access avenue will be replaced as part of the development. As part of the surface replacement works, a cross-fall will be incorporated into the road surface so that rainwater will be directed onto landscaped areas and thereby flow overland to the drainage system. This ensures that low intensity rainfall on the avenue will not reach the drainage system as it will be infiltrated directly into the soil and that any water reaching the drainage system will have a degree of pre-treatment before entering the drainage system. Provision has been made at two key points along the avenue to collect water from the road surface in order to prevent flooding on the avenue from significant rainfall events (JJC, 2025b).
- Permeable paving will intercept the first 5mm of runoff from all impermeable areas of the Site. 50% of the onsite soakaways passed and 50% had poor / failed infiltration, a high-level perforated overflow pipe will be provided from the permeable pavements and will connect to the new gravity storm network, some infiltration will take place in the stone below the areas with poor / failed infiltration and the overflow pipe will retain flow which will slowly infiltrate or evaporate (JJC, 2025a).

The SuDS design is based on a treatment train approach, whereby runoff is progressively treated through multiple stages before discharge. This ensures:

- Removal of suspended solids and associated pollutants;
- Reduction in hydrocarbon and contaminant load;
- Attenuation of peak flows and reduction in downstream hydraulic impact.

Surface water runoff from the Site will be:

- Intercepted at source,
- Treated through SuDS features, and
- Attenuated and discharged at controlled greenfield runoff rates.

Through the implementation of this integrated SuDS strategy:

- Surface water runoff will be treated, attenuated and controlled prior to discharge;
- The potential for sediment, nutrient or pollutant transport to the receiving drainage network will be significantly reduced;
- There will be no deterioration in surface water quality downstream, including within the Carysfort–Maretimo Stream.

In addition to water quality protection, the SuDS features provide biodiversity and ecological benefits, including habitat creation, enhanced planting structure, and support for urban green infrastructure, thereby contributing positively to the overall ecological value of the Site.

6.10.1.4 Lighting Plan

The lighting strategy for the Proposed Development has been proactively designed by OCSC (2025) and informed by the results of targeted surveys undertaken on-site, with particular emphasis on nocturnal species of mammals including bats. Rather than applying lighting mitigation retrospectively, ecological considerations have been integrated into the design from the outset, ensuring compliance with best practice guidance (e.g., Bat Conservation Trust Guidelines) and delivering measurable biodiversity benefits (**Figure 6-37**).

The use of modern LED luminaires provides precise directional control, significantly reducing unnecessary light spill and preserving corridors essential for safe bat foraging and commuting. Lower column heights ensure light remains close to ground level, avoiding illumination of tree canopies and aerial flight paths frequently used by bats.

Warm lighting (<2700K) has been specified to minimize blue light emissions, which are known to disrupt circadian rhythms and disorient nocturnal mammals and birds. For migratory bird species, this is particularly critical, as artificial lighting can interfere with navigation, increase collision risk, and cause fatal disorientation. By adopting a warm spectrum, the design reduces these risks and supports natural behavioural patterns.

By embedding these measures into the project design, the lighting strategy minimizes ecological disturbance, supports biodiversity, and aligns with international best practice for environmentally responsible outdoor lighting. The approach demonstrates good project design by balancing safety and functionality with ecological protection, ensuring that lighting does not create a significant pathway for adverse effects on bats, birds, or other nocturnal wildlife.

6.10.2 Pre-Construction Phase Mitigation Measures

6.10.2.1 Mitigation 1: Pre-Construction Herring Gull Surveys

Herring gull was recorded on Site and is classed as a probable breeder within the confines of the Site. As such, it is recommended that should any vegetation removal or building demolition works occur at this Site, the works should not commence during the breeding bird nesting season (1st March – 31st August, inclusive).

If this cannot be done, then a suitably qualified ecologist will be required to survey the vegetation and/or buildings up to 48 hours before removal to confirm that there are no bird nests/chicks present. Should nesting birds be found to be present, the clearance works will be delayed until after the bird nesting season (which runs from 1st March to 31st August) or until young have fledged.

A project ecologist will be appointed and consulted in relation to all onsite works; All demolition works (where relevant) will have prior approval of a project ecologist. A pre-construction inspection will be carried out for nesting herring gull if demolition works are proposed during bird nesting season (1st March – 31st August, inclusive).

6.10.3 Mitigation 2: Badger Protection Measures

The following is recommended (Smal, C. & NATURA Environmental Consultants, 2006), using a precautionary approach, to protect badgers that may be present on Site:

- Pre-Construction Surveys
 - Conduct detailed badger surveys within 50m of the Site boundary (extend to 150m if piling or blasting is planned).
 - Surveys should be completed no more than 10–12 months before construction and repeated immediately prior to Site clearance.
 - Optimal survey period: November to April, with peak territorial activity from mid-January to March.
- Seasonal Restrictions
 - No interference with active setts during the breeding season: December to June inclusive.
 - Any sett closure or disturbance must be preceded by monitoring to confirm inactivity.
- Construction Phase Buffer Zones
 - No construction works should occur within 50m of an active sett during the breeding season (December to June inclusive).
 - Outside the breeding season (July to November), a 30m non-interference zone is recommended around active setts.
 - For high impact activities such as blasting or pile driving, a buffer of 150m from any active sett is required at all times, especially during the breeding season. These activities may only proceed with approval and supervision by a qualified badger specialist.
- Licensing and Legal Compliance
 - Licensing from NPWS is required for any works affecting badger setts.
 - The project ecologist will apply for a Wildlife Act licence from NPWS at least three weeks in advance of works taking place.
 - Ecological survey data and proposed mitigation is to be included in the application.
- Physical Mitigation Measures
 - Badger-resistant temporary fencing to prevent access to hazardous areas (e.g. roads, construction zones) and prevent accidental encroachment.
 - Works within 50m of a sett should be carried out during daylight hours only, to avoid disturbing foraging badgers.
 - If a main or annexe sett is to be destroyed, badgers must be excluded per standard best practice, and an artificial sett must be constructed within the same social group territory. This is a licensing condition under Irish wildlife legislation and is standard practice in TII road schemes.

- Artificial setts may also be required if subsidiary or outlier setts play a key role in the badger social structure.

6.10.3.1 Mitigation 3: Pre-tree Felling and Building Demolition Surveys

A pre-felling survey will be conducted by a suitably qualified ecologist of the building and all trees previously identified as PRF-1 or PRF-M to be felled at the Site prior to works taking place on the building and prior to any tree felling taking place on Site. This may entail an endoscope check from ground level or an articulated hoist or using climbing equipment such as harnesses depending on the height of the tree and provided the ecologist is suitably qualified.

With regards to the building; A pre-commencement bat survey will be undertaken prior to any building works to assess the potential presence of roosting bats. The survey will be carried out by a licensed ecologist and will include a thorough daytime inspection of the building, focusing on features suitable for bat roosting such as roof voids, soffits, gaps behind cladding, and other crevices. Signs of bat activity, including droppings, staining, feeding remains, or direct sightings, will be recorded. Where necessary, dusk and/or dawn emergence and re-entry surveys will be conducted to confirm bat use. All survey work will be undertaken in accordance with best practice guidance set out by the Bat Conservation Trust (BCT), ensuring compliance with relevant wildlife legislation and informing any required mitigation or licensing measures.

Trees will be felled during the start or end of the hibernation period (so either in September/October or February) following a thorough check for bats and nesting birds. The felling of trees during this period will ensure that bats are likely to have entered hibernation or will soon be coming out of it and will reduce the likelihood of them either not having enough energy or a food source if they happen to be disturbed and take flight. It is also outside of the breeding bird season and so unlikely to come across active nests. Felling in this period will further reduce the likelihood of bats having transitioned between roosts overnight, should felling not be carried out immediately following the bat survey.

Felling must be carried out no later than 24 hours after the bat survey is complete and once the surveyor can confirm no roosting bats are present.

Should a roosting bat be found within trees or the houses at the Site, no felling of the tree in question or works on the building in question will take place and a derogation licence will be obtained from the NPWS to proceed. The area around the roost will be protected with an appropriate buffer to prevent disturbance of the bat(s).

Should a nesting bird be found at the Site, no felling of the tree in question or works on the building in question will take place and the nest will be protected until the young birds have fledged, as confirmed by a suitable qualified ecologist. The area around the nest will be protected with an appropriate buffer to prevent disturbance of the bird(s).

It is important to note that permission for the Proposed Development can be granted without any reliance on the potential grant of a derogation licence, and that any references to the potential need to obtain a licence for bats are purely precautionary, as detailed above, and therefore not integral to the decision on whether to grant permission.

6.10.4 Construction Phase Mitigation Measures

6.10.4.1 Mitigation 4: Best Practice Measures during the Construction Phase

The following measures, designed to protect surface water quality, will serve to prevent any adverse effects occurring as a result of construction phase groundwater discharges from the Site. These 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 to ground during the construction phase).

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. 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 including but not limited to:

- CIRIA, (2001), Control of Water Pollution from Construction sites, Guidance for Consultants and Contractors;
- Construction Industry Research and Information Association (CIRIA) Environmental Good Practice on Site (C650), 2005;
- BPGCS005, Oil Storage Guidelines;
- UK Pollution Prevention Guidelines (PPG) UK Environment Agency, 2004;
- Construction Industry Research and Information Association CIRIA C648: Control of water pollution from linear construction projects: Technical guidance (Murnane et al. 2006);
- CIRIA C648: Control of water pollution from linear construction projects: Site guide (Murnane et al. 2006); and
- Inland Fisheries Ireland (2016). Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters.

6.10.4.2 Mitigation 5: Reduction of Noise Related Impacts

Bird species are sensitive to disturbance from increased noise as a result of the Construction Phase of the Proposed Development.

Mitigation to reduce the effects of noise during the Construction Phase (including human presence, plant, machinery and vehicles) is required to avoid significant adverse effects on the birds and other noise sensitive species (such as badger) which may be present on the Site, as follows:

- High noise disturbance works (such as demolition and heavy drilling) should be undertaken outside of the breeding bird season (March – August).
- Minimise working time outside of the designated area within the Proposed Development Site.
- Acoustic barriers should be installed along the entire length of the southwestern boundary of the Site to prevent disturbance to badger which may be using the area (subject to survey results and approach to maintain/remove sett as required).
- Selection of plant machinery 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.

Acoustic barriers are readily available online and have the benefit of reducing noise levels by up to 43dB. Where works are occurring outside of the breeding bird sensitive season, noise monitoring is not required, however this could change depending on the results of the remaining ecology surveys which are ongoing at the Site at the time of writing this report. This report will be updated following completion of said surveys, with all necessary mitigations provided therein, including noise monitoring, should it be required. Acoustic barriers should remain in place for the duration of the construction works, once erected (if required).

These measures will ensure that any noise disturbance to nesting birds or any other fauna species in the vicinity of the Site of the proposed development will be reduced to a minimum.

6.10.4.3 Mitigation 6: Air Quality Control (Dust suppression and prevention)

The following general dust control measures will be followed for the duration of the Construction of the Site and will ensure no significant dust related effects occur to nearby sensitive receptors.

- 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.
- Bowers 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 bowser will operate to ensure moisture content is high enough to increase the stability of the soil thereby reducing the amount of dust.
- 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 any required 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.

6.10.4.4 Mitigation 7: Root Protection Zones

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 will 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.

The project Arborist will be instructed prior to commencement on Site; to ensure that appropriate tree protection measures are in place. These measures will entail robust fencing around the root protection zones of all trees and hedgerows being retained on Site. An adequate level of signage will also be provided to highlight 'no work zones' and ensure that Site creep and damage to retained habitats does not occur. The northern and southern boundary hedgerows must be sufficiently protected for the duration of the Construction Phase to maximise their ecological value in the final landscape plan.

The project Arborist, the project Ecologist and the Site Manager will work together to ensure these sections of hedgerow/woodland are protected for the duration of the works.

Additionally, the installation of protective fencing for retained hedgerows and treelines, as outlined above, will not prevent the movement of fauna, including hedgehogs, between habitats within and adjacent to the Site. Tree protection fencing will be installed in accordance with BS5837:2012, however, it will be implemented in a manner that maintains ecological permeability. In particular:

- Fencing will be raised slightly above ground level (typically 100–150 mm clearance) where practicable, to allow the free movement of small mammals such as hedgehogs beneath the fence line;
- Alternatively, intermittent ground-level gaps will be incorporated where continuous clearance is not feasible, ensuring connectivity is maintained;
- The fencing design will avoid continuous sealed barriers at ground level within ecological corridors and along retained habitat edges.

In addition, the overall site layout and landscape design already incorporate mammal-friendly permeability measures, including:

- Hedgehog access points (min. 130 mm × 130 mm openings) within boundary walls and fencing;
- Retention of continuous vegetated corridors through hedgerows, treelines, and woodland areas; and
- A Habitat Preservation Area, ensuring connectivity between retained habitats on-site and adjoining green spaces.

These combined measures ensure that tree protection fencing functions solely as a temporary construction safeguard, without creating a barrier to wildlife movement.

6.10.4.5 Mitigation 8: Invasive Species Removal

It is recommended that non-native/invasive flora species recorded at the Site, Spanish bluebell and three-cornered garlic, are controlled/removed as per the appropriate best-practice guidelines. Removal and disposal should be carried out in accordance with appropriate guidelines such as TII (formerly NRA) The Management of Invasive Alien Plant Species on National Roads (2020), with consideration given to the prevention of spread of these plants.

An invasive species pre-commencement survey will be conducted in which all Third Schedule invasive species on-Site will be resurveyed and marked on the ground by the ECoW prior to the commencement of construction works within the lands. This will be undertaken in late spring, when the plants are in their flowering and vegetative phase and clearly identifiable above ground; The areas of Spanish bluebell and three-cornered garlic will be removed from all habitats within the lands. The material will be removed from Site by an appropriately qualified and licensed professional with experience in treatment of invasive species.

Both invasive species recorded on Site can be controlled by chemical or physical means, or a combination of both, which is the preferred method of control as per the TII guidance document for invasive species treatment (TII, 2020).

6.10.4.6 Mitigation 9: Biosecurity

The following best practice Site hygiene and biosecurity measures will be in place as a precautionary measure to avoid the potential introduction of new invasive floral species at the Site and / or transfer 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).

6.10.4.7 Mitigation 10: Timing of Vegetation Clearance

Any vegetation clearance at the Site will need to be cognisant of any potentially present fauna, and as such this mitigation is included as precautionary guidance, even though hedgerows are to be retained. Table 6.22 below provides guidance for when vegetation clearance is permissible in relation to hibernating and breeding fauna. Information sources include British Hedgehog Preservation Society's Hedgehogs and Development and The Wildlife (Amendment) Act, 2000 and the Herpetofauna Groups of Britain and Ireland (1998).

Vegetation removal will not occur within the period of March-August inclusive, and the hedgerow sections marked for removal will be conducted outside of this period. 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 and common lizard hibernation; vegetation clearance at the Site should be supervised by an ecologist.

During any works at the Site, should a breeding bird and/or an active nest be found, the nest will be protected through the demarcation of a 5m buffer zone (or appropriate area) around the nest, and no further works will take place in the vicinity of the nest until the young have fledged. Where continuance of works is critical during the nesting season, an ecologist will be instructed to survey the vegetation in question and make recommendations on how best to proceed. The area containing the nest would need to be protected with a suitable buffer to minimise disturbance until the ecologist has confirmed the young have fledged.

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				
Small terrestrial mammals (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.			
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			

Table 6.22 Seasonal Restrictions on Vegetation Removal. Red boxes indicated where clearance/works are NOT advised.

6.10.4.8 Mitigation 11: Waste Management

As best-practice all construction-related rubbish on Site e.g., plastic sheeting, netting etc. will be kept in a designated area and kept off ground level so as to prevent small mammals such as hedgehogs from entrapment and death.

Trenches/pits must be either covered at the end of each working day or include a means of escape for any animal falling in e.g., a plank or objects placed in the corner of an excavation (Species such as badgers will continue to use established paths across a site even when construction work has started).

Any temporarily exposed open pipe system will be capped in such a way as to prevent animals gaining access as may happen when contractors are off Site.

6.10.4.9 Mitigation 12: Construction Phase Lighting

To minimise ecological disturbance during the Construction Phase, lighting will be managed with a strong emphasis on environmental sensitivity. Where possible, all construction lighting will be switched off during non-working hours to reduce unnecessary illumination of the surrounding environment.

When lighting is required, directional lighting will be the preferred method. This approach significantly reduces light spill beyond the immediate work area, thereby limiting potential disruption to nearby habitats. This is particularly important for nocturnal mammals, bats, and other light sensitive species that may be using the site or adjacent areas for commuting, foraging, or other essential behaviours. These species are often highly sensitive to artificial lighting, which can interfere with their natural activity patterns and ecological functions.

To further mitigate impacts, it is recommended that LED luminaires with a warm white spectrum (2700K–3000K) be utilised. This spectrum reduces the blue light component, which is known to be more disruptive to wildlife. LED lighting is also advantageous due to its sharp cut-off angles, lower intensity, and dimming capabilities, all of which contribute to minimising light pollution and ecological disturbance.

These measures are intended to support the protection and conservation of local biodiversity, ensuring that construction activities are carried out in a manner that is both responsible and environmentally conscious.

6.10.5 Operation Phase Mitigation Measures

6.10.5.1 Mitigation 13: Invasive 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.

Despite the measures identified in the accompanying CEMP (JJC, 2025c) for the importation of only clean materials, there is the potential for the inadvertent import of invasive species to the Site. If established, there is a risk of further spread both within and out of the Site.

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.

6.10.5.2 Mitigation 14: Operational Phase Lighting

6.10.5.2.1 Bat Friendly Lighting

Artificial lighting within the Proposed Development will be designed and installed to minimise the effect on local wildlife and in accordance with the Bat Conservation Trust guidelines on artificial lighting and bats (ILP, 2023):

- There will be no light spill to the boundary habitats.

- All luminaires used will lack UV/IR elements to reduce effect.
- LED luminaires will be used because they are highly directional, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (<2700 Kelvins will be used to reduce the blue light component of the LED spectrum).
- Luminaires will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Column heights should be carefully considered to minimise light spill. The shortest column height allowed should be used where possible.
- Only luminaires with an upward light ratio of 0% and with good optical control will be used.
- Luminaires will be mounted on the horizontal, i.e. no upward tilt.
- Any external security lighting will be set on motion-sensors and short (1min) timers.
- As a last resort, accessories such as baffles, hoods or louvres will be used to reduce light spill and direct it only to where it is needed.

6.10.5.2.2 Bird Friendly Lighting

Artificial lighting at the Site should be designed so as to minimise any potential for significant effects on SCI birds in flight, or nesting on Site, throughout the Operational lifetime of the Site. Consideration should be given to the following common issues that arise as a result of light pollution: glare, light trespass, over-illumination and sky glow (Crymble, n/d). The following measures will ensure the protection of seabirds and other birds in flight throughout the lifetime of the Operational Phase of the Proposed Development:

- LED luminaires possessing a warm white spectrum (<2700k) will be used so as to reduce the blue light component. LED lights are also ideal due to their sharp cut-off, lower intensity, and dimming capabilities.
- External lighting will be set on motion-sensors and short (1min) timers.
- Balcony lighting should be switched off as default, with the option to turn lights on given to the room's occupants using a timer switch.
- Column heights should be carefully considered to minimise light spill. The shortest column height allowed should be used where possible.
- Fixtures should be downward facing with limited light spill. As a last resort, accessories such as baffles, hoods or louvres will be used to reduce light spill and direct it only to where it is needed.
- There will be no light spill onto boundary habitats (treelines, hedgerows, woodland).

6.10.5.3 Mitigation 15: Alternative Suitable Habitat for Breeding Herring Gull

To support the conservation of the herring gull, a Special Conservation Interest (SCI) species of the North-western Irish Sea SPA, the proposed LRD Site in Blackrock, Dublin will incorporate alternative suitable breeding habitat tailored to the species' ecological requirements. This could include the installation of elevated nesting platforms or flat, gravel-covered roof spaces that mimic natural cliff or island nesting sites, ensuring minimal human disturbance and predator access. These features should be positioned with adequate spacing to reduce territorial conflict and oriented to provide shelter from prevailing winds.

Additionally, the provision of nearby foraging opportunities, such as green roofs with invertebrate-rich substrates, would enhance habitat suitability. Monitoring and adaptive management should be embedded into the design to ensure long-term viability and alignment with the SPA conservation objectives. The establishment and monitoring of this alternative habitat will be undertaken by a suitably qualified ecologist.

6.10.5.4 Mitigation 16: Protection of Terrestrial Mammals

In addition to the above mitigation measures which act cumulatively the protection of terrestrial mammals such as mitigations provided for badger protection, timing of vegetation removal, and lighting etc., the following standard mitigation measures are proposed to reduce potential impacts on terrestrial mammals during the operational phase, and include:

- Retention and protection of woodland habitats within the Habitat Preservation Area;
- Maintenance of habitat connectivity, including links to adjacent green spaces such as Rockfield Park;
- Implementation of pre-clearance checks and staged vegetation removal to minimise displacement and mortality risk;
- Inclusion of mammal-friendly design measures, such as permeable boundaries (e.g. hedgehog gaps); and
- Adoption of a sensitive landscape management regime, promoting habitat structure and diversity post-construction.

6.10.5.5 Mitigation 17: Woodland Management Plan

A Woodland Management Plan (WMP) has been prepared in support of the application and forms a key mitigation measure for the Proposed Development. The WMP provides a comprehensive framework for the protection, management and long-term maintenance of retained woodland habitats, ensuring their ecological integrity is safeguarded throughout both the construction and operational phases. This includes measures to prevent damage during construction and to maintain and enhance the ecological function of the woodland over the lifetime of the development.

Tree and vegetation losses associated with the Proposed Development are detailed in the Arboricultural Report (The Tree File Ltd., 2026) and comprise the removal of 86 individual trees, approximately 296 m of treelines/hedgerows, and c. 2,117 m² of woodland/tree groups, equating to an overall vegetated area loss of approximately 4,591 m².

In response, the development incorporates a comprehensive landscape and ecological strategy, including the planting of approximately 254 new trees, the retention of c. 3,911 m² of existing canopy, the provision of a Habitat Preservation Area (c. 1,000 m²), and additional native woodland planting (c. 215 m²), alongside extensive understorey and biodiversity-focused planting.

While full quantitative replacement of canopy cover is not feasible within the constraints of the Site, the proposed planting and management strategy prioritises qualitative ecological enhancement, delivering increased habitat diversity, improved structural complexity, and enhanced ecological connectivity. The WMP provides the mechanism to implement and maintain these measures over time, ensuring that the retained and newly established woodland habitats are actively managed to maximise their ecological value. Accordingly, the combined approach of targeted mitigation, replacement planting, and long-term woodland management is expected to result in a robust, resilient and progressively enhanced woodland resource within the Site, contributing positively to local biodiversity in the medium to long term.

On this basis, the residual effect on woodland habitat is assessed as slight to moderate at a local level, with the potential to become neutral to slight positive in the medium to long term as planting establishes and management measures detailed in the woodland management plan take effect.

Please refer to Appendix 6-6 for details.

6.10.6 Biodiversity Enhancement Measures

6.10.6.1 Biodiversity Enhancement by Design

The Landscape Plan incorporates native planting throughout the open green spaces of the Proposed Development. This will take the form of trees, hedgerow, shrubs, grasses and wildflower meadow. The planting schedule can be found in full in the Landscape Report, along with specifications for plant material, the requirements of the Landscape Contractor and proposals for monitoring establishment of green spaces. The landscaping will offset habitat loss at the Site to an extent, producing an imperceptible net effect on habitats.

6.10.6.2 Enhancement 1: Native Hedgerow, Wildflower Meadow, and Tree Planting

The proposed planting scheme places a strong emphasis on the use of native hedgerows and trees, which are essential for enhancing local biodiversity, improving ecological connectivity, and contributing to the overall environmental resilience of the Site.

Native Hedgerows

The integration of native hedgerows, established using multi-purpose topsoil and bark mulch, will create valuable linear habitats that support a wide range of wildlife. These include nesting birds, small mammals, and pollinating insects such as bees and butterflies. Hedgerows act as ecological corridors, enabling species to move safely across the landscape, which is particularly important in fragmented urban or semi-urban environments.

Native hedgerows also provide natural screening, offering visual privacy and reducing noise pollution from surrounding areas. Their seasonal variation adds aesthetic value and supports year-round ecological functions, including food provision (berries, seeds, nectar) and shelter.

Wildflower Meadows

The Landscape Plan includes the introduction of wildflower meadows across the Site. All wildflower seeds will be Irish Provenance Certified Seed, from a reputable source such as Design by Nature (Wildflowers.ie). To maximise the biodiversity value of the landscaping at the Site, consideration has been made to the All-Ireland Pollinator Plan planting code (NBDC, 2022).

Native Tree Planting

The tree planting strategy includes a mix of clear-stemmed and multi-stemmed semi-mature native trees, carefully selected for their adaptability to local soil and climatic conditions. Key species include:

- Downy Birch: A pioneer species that enhances soil quality and provides habitat for insects and birds.
- Sessile Oak: A keystone species in Irish woodlands, supporting hundreds of insect species and providing acorns for birds and mammals.
- Hawthorn: A dense, thorny shrub ideal for nesting birds, with spring blossoms for pollinators and autumn berries for wildlife.

These trees can contribute significantly to urban greening, offering benefits such as carbon sequestration, urban cooling, and stormwater management. Their presence also helps to visually soften the built environment, creating a more natural and welcoming landscape for both people and wildlife.

In addition to their ecological value, the selected species will enhance the Site's resilience to climate change, improve air quality, and support the long-term sustainability of the Development. The planting design also ensures that these features are integrated into the wider green infrastructure network, maintaining connectivity with adjacent habitats and contributing to a cohesive ecological framework across the wider landscape.

6.10.6.3 Enhancement 2: Hedgerow Management

The planted hedgerows at the Site and any retained hedgerows will be managed using a low-intervention approach i.e., in a way that maximises the ecological value they provide, with habitat connectivity maintained along the western, northern and eastern margins of the site; connecting it with the wider area.

This connectivity is vital for wildlife such as birds, bats, mammals and insect pollinators in a human landscape such as that which will be provided by the Proposed Development.

Additionally, by managing hedgerows and woodland in a more natural way, they will provide more in terms of biodiversity; through increased plant diversity, increased provision of food resources and higher quality shelter to wildlife inhabiting and commuting through the area.

A low-intervention management approach may not be appropriate for internal ornamental hedgerows planted within the main residential area of the Proposed Development, due to aesthetics or logistics, however, it is suited to the remaining native hedgerows within the Site. The following measures will be adopted by the Management Company tasked with maintaining the Site's landscaping into the future:

- The hedgerow areas located along the outer boundaries of the Site will, as much as is practicable, be allowed to link up with each other. The provision of an almost continuous vegetative margin around the Site; through planted native hedgerows and trees, will maintain habitat connectivity with the surrounding environment.
- Hedgerows will be maintained with a minimum natural meadow strip of 1-2m at their base wherever possible. Hedges with plenty of naturally occurring flowers and grasses at the base support will provide higher quality habitat for local wildlife using the hedges.
- The 1-2m strip at the base of the hedgerow will be cut on a reduced mowing regime to encourage wildflower growth and maximise the value of the hedgerow for pollinators. A two-cut management approach is ideal for suppressing coarse grasses and encouraging wildflowers. Cut the hedgerow basal strip once during February and March (this is before most verge plants flower and it will not disturb ground-nesting birds). Cut the verge once again during September and October (this slightly later cutting date allows plants that were cut earlier in the year time to grow and set seed).
- N.B. Raising the cutter bar on the back cut will lower the risk to small mammals.
- Where hedgerow, scrub or woodland understorey trimming needs to occur, delay trimming as late as possible – until January and February as the surviving berry crop will provide valuable food for wildlife. The earlier this is cut; the less food will be available to help birds and other wildlife survive through the winter. Any hedgerow/scrub/woodland trimming will be done outside of the nesting season and due consideration of the Wildlife Act 1976 (as amended) must be taken.
- Where possible, cut these outer boundary hedgerows on a minimum 3-year cycle (cutting annually stops the hedgerow flowering and fruiting), and cut in rotation rather than all at once - this will ensure some areas of hedgerow will always flower (blackthorn in March, hawthorn in May etc.).
- Where they occur naturally, bramble and ivy should be allowed to grow in hedgerows as they provide key nectar and pollen sources in summer and autumn.

Hedgerow Management Methods to Avoid

Hedgerows and woodland understorey will not be over-managed. Tightly cut hedges and vegetation mean there are fewer flowers and berries, thus reducing available habitats, feeding sources and suitable nesting sites.

Hedgerows will not be cut between March 1st and August 31st inclusive. It is both prohibited (except under certain exemptions) and very damaging for birds as this is the period they will have vulnerable nests containing eggs and young birds.

DO NOT use pesticide/ herbicide sprays or fertilisers at all as they can have an extremely negative effect on the variety of plants and animals they support.

6.10.6.4 Enhancement 3: Habitat Management Plan

The development of a habitat management plan for the Site is recommended to ensure longevity and proper maintenance of the proposed enhancement features for the Site. This plan should include, but not be limited to the following:

- **Native Planting Maintenance:** Regular care of native hedgerows, trees, wildflower meadows, and green roofs to ensure healthy growth and prevent invasive species.
- **Seasonal Pruning:** Conduct pruning outside of bird nesting season (March–August) and use less intensive measures where possible (e.g., hand tools) to avoid disturbance.

- Deadwood Retention: Leave some deadwood in situ (where safe) to support invertebrates and fungi as trees/hedgerows are pruned.
- Regular Maintenance of SuDS Features: Ensure swales, rain gardens, and attenuation ponds are functioning properly and not overgrown or polluted.
- Biodiversity-Friendly Design: Maintain vegetation around SuDS to attract and support amphibians, insects, and birds.

6.10.6.5 Enhancement 4: Reptile Hibernacula

It is recommended to enhance the Site for reptile use by providing suitable refuge and hibernacula to replace stone walls and boulder clusters removed from the Site. It is recommended that two areas of hibernacula are provided at the Site in the areas of open space.

Hibernacula for reptiles is relatively easy to create from rubble, wood and soil, all of which can likely be sourced from the Site during works. Rubble and 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 6-38** below for examples of finished hibernacula.



Figure 6-38 Examples of suitable amphibian and reptile hibernacula and refugia.

6.10.6.6 Enhancement 5: Hedgehog Highways

By fencing the boundaries of a Site, the land becomes fragmented and largely inaccessible to species such as hedgehog, which like to roam each night in search of food (garden pests e.g., slugs). This can easily be fixed by ensuring that the boundaries and barriers within and surrounding the Site are permeable for hedgehogs. This will allow hedgehogs to move freely between the Site and adjacent sites.

This can be achieved by:

- Providing 13 x 13 cm holes at ground level at various locations along the external mesh fencing (Hedgehog holes).
- Leaving a sufficient gap beneath gates.
- Leaving brick spaces at the base of brick walls.

Examples of hedgehog 'highways' are provided below in **Figure 6-39**.



Figure 6-39 Examples of Hedgehog Highways that could be incorporated into the Development.

The inclusion of hedgehog highways will be considered as part of the landscape design of the Site, specifically the external mesh fencing proposed. A variety of fence suppliers stock specific hedgehog-friendly fencing options, which can be easily incorporated at little or no additional cost. The 13 x 13cm holes can also be cut into mesh fencing on Site quite easily. These simple measures will provide habitat connectivity at the Site for hedgehogs and reduce the effect of the land-use change on this species.

6.10.6.7 Enhancement 6: Swift Boxes

It is proposed to include a minimum of 4 no. swift bricks as part of the Proposed Development. The bricks should be located in groups, as swifts are a social nesting species. As per best practice, swift bricks will be installed at least 5 metres above the ground, in safe areas where they will not be disturbed, with a clear unobstructed run up to the boxes/bricks. As the bricks tend not to overheat, they can be placed facing in any direction. Care will be taken to ensure no obstacles or plate glass windows are located below the bricks. Please see **Figure 6-40** below for proposed location.

Guidelines for the bird box scheme follow the 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, however placement should be cognizant of any non-natural surfaces beneath that may accumulate bird waste or present a health and safety hazard (e.g., placement above outdoor eating areas or paved footpaths).

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 possible and advised. An ecologist will be instructed to set up the Swift calling system once the construction of the Proposed Development is complete.



Figure 6-40 Showing proposed placement of Swift Boxes on Block D1 of St. Teresa's LRD.

6.10.6.8 Enhancement 7: Bat Boxes

A minimum of four summer bat boxes (e.g., Woodcrete 1FF Schwegler design) will be erected on suitably sized trees along boundary habitats of the Site, the placement of which will be determined by a bat ecologist. The boxes will be installed as part of the landscaping works, so as to not delay their deployment and potential positive effects.

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 height of 4-5 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.

6.10.6.9 Enhancement 8: Woodland Management Plan

In addition to providing mitigation measures for protection of the woodland habitat, the Woodland Management Plan incorporates a range of enhancement measures, including native planting, structural diversification, and low-intervention management, which will improve biodiversity value over time. Please refer to Appendix 6-6 for details.

6.11 Residual Impacts

Residual impacts are impacts that remain once mitigation has been implemented or impacts that cannot be mitigated. Table 6.23 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.

Key Ecological Resource	Evaluation	Potential Effect	Effect Without Mitigation				Proposed Mitigation / Mitigating Factors	Proposed Enhancements	Residual Impact
			Quality	Magnitude / Extent	Duration	Significance			
DESIGNATED SITES									
No effects to any nationally designated sites will occur as a result of the Proposed Development and therefore no mitigation measures are recommended. Mitigation measures for the protection of European sites are included within the Natura Impact Statement and CEMP reports, accompanying this submission under a separate cover.									
HABITATS									
Treelines (WL2) / Hedgerow (WL1)	Local Importance (Higher Value)	Construction Phase: Removal of treelines	Negative	Local	Permanent	Slight	Best practice guidance as per CEMP Mitigation 5: Dust Suppression Measures Mitigation 6: Root Protection Zones	Landscape Plan (planting plan) Enhancement 2: Hedgerow Management Enhancement 3: Habitat Management Plan	Imperceptible
		Risk of damage to roots and overground growth.	Negative	Local	Short-term	Moderate			
		Operational Phase: Habitat retention & supplementary planting	Positive	Local	Permanent	Slight			
Broadleaved Woodland (WD1)	Local Importance (Higher Value)	Construction Phase: Removal of treelines	Negative	Local	Permanent	Slight	Best practice guidance as per CEMP Mitigation 5: Dust Suppression Measures Mitigation 6: Root Protection Zones	Landscape Plan (planting plan) Enhancement 2: Hedgerow Management Enhancement 3: Habitat Management Plan	Imperceptible
		Risk of damage to roots and overground growth.	Negative	Local	Short-term	Moderate			
		Operational Phase: Habitat retention & supplementary planting	Positive	Local	Permanent	Slight			

Key Ecological Resource	Evaluation	Potential Effect	Effect Without Mitigation				Proposed Mitigation / Mitigating Factors	Proposed Enhancements	Residual Impact
			Quality	Magnitude / Extent	Duration	Significance			
Scattered Trees & Parkland (WD5)	Local Importance (Higher Value)	Construction Phase: Removal of trees	Negative	Local	Permanent	Slight	Best practice guidance as per CEMP Mitigation 5: Dust Suppression Measures Mitigation 6: Root Protection Zones	Landscape Plan (planting plan) Enhancement 3: Habitat Management Plan	Imperceptible
		Operational Phase: Habitat retention & supplementary planting	Positive	Local	Permanent	Slight			
Scrub (WS1)	Local Importance (Higher Value)	Construction Phase: Removal of scrub	Negative	Local	Permanent	Slight	Best practice guidance as per CEMP	Landscape Plan (planting plan) Enhancement 3: Habitat Management Plan	Imperceptible
		Operational Phase: Habitat retention & supplementary planting	Positive	Local	Permanent	Slight			
All habitats	Local Importance (Higher Value)	Construction Phase: Spread of Invasive Flora	Negative	Local	Long-term	Significant	Mitigation 7: Invasive Species Removal Mitigation 8: Biosecurity	None	Imperceptible
		Operational Phase: Spread of Invasive Flora	Negative	Local	Long-term	Moderate			

Key Ecological Resource	Evaluation	Potential Effect	Effect Without Mitigation				Proposed Mitigation / Mitigating Factors	Proposed Enhancements	Residual Impact
			Quality	Magnitude / Extent	Duration	Significance			
							Mitigation 13: Invasive Species Management		
FAUNA									
Bat Assemblage	Local Importance (Higher Value)	<p>Construction Phase: Habitat loss Light-related disturbance Mortality/injury during vegetation clearance</p> <p>Operational Phase: Light-related disturbance</p> <p>Habitat retention & supplementary planting</p>	<p>Negative</p> <p>Negative</p> <p>Negative</p> <p>Negative</p> <p>Positive</p>	<p>Local</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>Permanent</p>	<p>Moderate</p> <p>Moderate</p> <p>Significant</p> <p>Moderate</p> <p>Slight</p>	<p>Mitigation 9: Timing of Vegetation Removal</p> <p>Mitigation 11: Construction Phase Lighting</p> <p>Mitigation 14: Operational Phase Lighting</p>	<p>Landscape Plan (Supplementary planting of hedgerow and tree habitats)</p> <p>Enhancement 7: Bat Boxes</p>	Imperceptible
Breeding Bird Assemblage	Local Importance (Higher Value)	<p>Construction Phase: Habitat loss</p> <p>Risk of injury during vegetation clearance or works to facilitate development, including removal of Herring Gull nesting habitat (including nest abandonment by breeding Herring Gull on Site)</p>	<p>Negative</p> <p>Negative</p> <p>Negative</p> <p>Positive</p>	<p>Local</p> <p>Local</p> <p>Local</p> <p>Local</p>	<p>Permanent</p> <p>Permanent</p> <p>Temporary</p> <p>Temporary</p>	<p>Slight</p> <p>Significant</p> <p>Moderate</p> <p>Slight</p>	<p>Mitigation 9: Timing of Vegetation Removal</p> <p>Mitigation 10: Waste Management</p> <p>Mitigation 15: Alternative Suitable Nesting habitat for Herring Gull</p>	<p>Landscape Plan (replacement hedgerow and treeline planting)</p> <p>Enhancement 6: Swift Boxes</p>	<p>Negative, Local, Short-term, Slight</p> <p>(Imperceptible long-term)</p>

Key Ecological Resource	Evaluation	Potential Effect	Effect Without Mitigation				Proposed Mitigation / Mitigating Factors	Proposed Enhancements	Residual Impact
			Quality	Magnitude / Extent	Duration	Significance			
		Disturbance from noise, dust and/or lighting. Operational Phase: Habitat retention & supplementary planting					Best practice guidance as per CEMP		
Badger	Local Importance (Higher Value)	<p>Construction Phase: Risk of injury during vegetation clearance and / or entrapment in construction-related rubbish.</p> <p>Risk of mortality during vegetation clearance and / or entrapment in construction-related rubbish.</p> <p>Disturbance/displacement from noise, dust and/or lighting.</p> <p>Operational Phase: Habitat retention & supplementary planting</p>	<p>Negative</p> <p>Negative</p> <p>Positive</p> <p>Negative</p>	<p>Local</p> <p>Local</p> <p>Local</p> <p>Local</p>	<p>Short-term</p> <p>Short-term</p> <p>Permanent</p> <p>Permanent</p>	<p>Significant</p> <p>Moderate</p> <p>Slight</p> <p>Moderate</p>	<p>Mitigation 2: Badger protection Measures</p> <p>Mitigation 9: Timing of Vegetation Removal</p> <p>Mitigation 10: Waste Management</p> <p>Mitigation 12: Noise Reduction</p> <p>Best practice guidance as per CEMP</p>	Landscape Plan	Imperceptible

Key Ecological Resource	Evaluation	Potential Effect	Effect Without Mitigation				Proposed Mitigation / Mitigating Factors	Proposed Enhancements	Residual Impact
			Quality	Magnitude / Extent	Duration	Significance			
		Increased human presence leading to increased disturbance.							
Small Mammals (Hedgehog, Pygmy Shrew)	Local Importance (Higher value)	Construction Phase: Risk of injury or death during vegetation clearance.	Negative	Local	Short-term	Significant	Mitigation 9: Timing of Vegetation Removal Mitigation 10: Waste Management Best practice guidance as per CEMP	Landscape Plan Enhancement 5: Hedgehog Highways	Imperceptible
		Risk of injury or death via entrapment in construction-related rubbish.	Negative	Local	Short-term	Moderate			
		Disturbance from noise, dust and/or lighting.	Negative	Local	Short-term	Slight			
		Operational Phase: Habitat retention & supplementary planting	Positive	Local	Permanent	Slight			
		Increased human presence leading to increased disturbance.	Negative	Local	Permanent	Slight			
Common Lizard	Local Importance (Higher Value)	Construction Phase: Risk of injury or death during vegetation clearance and / or entrapment in construction-related rubbish.	Negative	Local	Short-term	Moderate	Mitigation 9: Timing of Vegetation Removal Mitigation 10: Waste Management	Landscape Plan Enhancement 4: Reptile Hibernacula	Imperceptible

Key Ecological Resource	Evaluation	Potential Effect	Effect Without Mitigation				Proposed Mitigation / Mitigating Factors	Proposed Enhancements	Residual Impact
			Quality	Magnitude / Extent	Duration	Significance			
		Operational Phase: Habitat retention & supplementary planting	Positive	Local	Permanent	Slight			

Table 6.23 Summary of Potential Impacts on KERs, Mitigation Proposed and Residual Impacts.

6.12 Monitoring

6.12.1 Operation Phase Monitoring

6.12.1.1 Measure 1: Post-Construction Lighting Assessment by a Bat Ecologist

Following the completion of the Development, a post-construction lighting assessment will be undertaken by a suitably qualified bat ecologist. This assessment is a critical component of the Site's biodiversity mitigation strategy, ensuring that the installed night-time lighting does not adversely affect local nocturnal species, including local bat populations, particularly in areas that may be important for commuting and foraging activities.

The bat ecologist will conduct a site-wide evaluation of all lighting, including streetlights, building-mounted luminaires, bollard lighting, and any landscape or architectural lighting features. The assessment will be carried out during the active bat season (typically between April and October) and under suitable weather conditions to ensure accurate observations of bat activity in relation to lighting.

Key elements of the assessment will include:

- Measurement of light levels (lux) at ground level and at canopy height in key sensitive areas, particularly along linear features, and treeline/hedgerow edges.
- Identification of light spill or glare into sensitive habitats.
- Behavioural observations of bat activity in relation to illuminated areas, using bat detectors and visual surveys, where required, to assess whether lighting is deterring or displacing bat movement.
- Comparison with pre-construction ecological data, including this report, to determine whether lighting has altered bat usage patterns across the Site in any way (positive or negative).

Based on the findings, the ecologist will provide recommendations for remedial action, if necessary. These may include:

- Retrofitting or re-aiming luminaires to reduce light spill into sensitive areas.
- Installing shields, baffles, or louvres on existing lights to direct illumination away from sensitive habitats.
- Adjusting lighting schedules to reduce illumination during peak nocturnal species activity hours (typically dusk to dawn).
- Replacing high-intensity or cool-spectrum lights with warm-white LEDs ($\leq 2700\text{K}$) to minimise ecological disruption.

The implementation of these recommendations will ensure that the Development remains compliant with wildlife protection legislation and continues to support the long-term conservation of local nocturnal species, including migratory bird and local bat populations.

In addition, a follow-up report documenting the assessment findings and any corrective actions taken will be submitted to the relevant planning authority or ecological oversight body as part of the site's post-construction compliance obligations.

6.12.1.2 Measure 2: Post-construction bird box assessment by Ecologist.

Bird box placement and installation will be undertaken and overseen by an ecologist to ensure they are carried out per specifications. Bird boxes will be monitored by the existing maintenance team and any defects or faults reported to an ecologist who can supervise the installation of new boxes during the appropriate season (before February).

The bird boxes will require emptying from October onwards, which will help prevent the spread of any parasites or disease between nesting birds and encourage birds to nest in the future breeding season. This task will be done once annually by the existing maintenance team.

6.12.1.3 Measure 3: Post-construction bat box assessment by Ecologist.

As with the bird boxes, bat box placement and installation will be undertaken and overseen by an ecologist to ensure they are carried out per specifications.

Bat boxes installed on development sites should be subject to regular monitoring and maintenance to ensure their continued suitability and to promote long-term use by bats. As such, annual inspections are recommended, ideally to be carried out during autumn or winter when bats are less likely to be present, to check for structural integrity, signs of damage, and secure mounting. While bat boxes typically do not require cleaning, any accumulation of droppings or debris that could obstruct entry or reduce internal space should be carefully inspected and removed.

Inspections should also include checks for pest activity, such as wasp or bird nests, which may deter bat use. Vegetation around the box should be managed to maintain clear flight paths (entry/egress), and artificial lighting in the vicinity should be avoided to preserve a dark environment conducive to bat activity. Lighting will be monitored per Measure 1 above.

6.12.2 Monitoring Summary

Table 6.24 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 effects.

Measure	Monitoring
PRE-CONSTRUCTION PHASE	
Mitigation 1: Pre-Construction Herring Gull Surveys	To be undertaken by qualified ecologist.
Mitigation 2: Badger Protection Measures	To be undertaken by qualified ecologist.
Mitigation 3: Pre-Tree Felling Surveys	To be undertaken by qualified ecologist.
CONSTRUCTION PHASE	
Mitigation 4: Ecological Clerk of Works	To be undertaken by qualified ecologist.
Mitigation 5: Dust Suppression and Prevention Measures	Ongoing monitoring by Contractor, if required
Mitigation 6: Root Protection Zones	Demarcated by Arborist. Ongoing monitoring by Contractor.
Mitigation 7: Invasive Species Removal	Ongoing monitoring by Contractor.
Mitigation 8: Biosecurity	Ongoing monitoring by Contractor
Mitigation 9: Timing of Vegetation Removal	Any Site vegetation clearance within scrub, hedgerows, treeline or grassland habitats subject to supervision by an Ecologist and a phased approach.
Mitigation 10: Waste Management	Ongoing monitoring by Contractor
Mitigation 11: Construction Phase Lighting	Ongoing monitoring by Contractor.
Mitigation 12: Noise & Visual Stimuli	Ongoing monitoring by Contractor.
OPERATION PHASE	
Mitigation 13: Invasive Species Management	Ongoing monitoring by Contractor.
Mitigation 14: Operation Phase Lighting	Post-construction monitoring by qualified bat ecologist
Mitigation 15: Alternative Suitable Habitat for Herring Gull	Installation and monitoring by suitably qualified ecologist
ENHANCEMENT MEASURES	

Measure	Monitoring
Enhancement 1: Native Hedgerow and Tree Planting	Installation by certified Landscape Architect. Ongoing monitoring by Contractor.
Enhancement 2: Hedgerow Management	Ongoing by contractor/management company
Enhancement 3: Habitat Management Plan	Ongoing by contractor/management company
Enhancement 4: Reptile Hibernacula	The placement and construction of these structures should be carried out under supervision of an Ecologist to ensure they are fit for purpose.
Enhancement 5: Hedgehog Highways	No monitoring required.
Enhancement 6: Swift Boxes	The placement of swift boxes and setup of swift-calling system should be carried out under supervision of an Ecologist to ensure they are fit for purpose.
Enhancement 7: Bat Boxes	The placement of bat boxes should be carried out under supervision of an Ecologist to ensure they are fit for purpose.
OPERATIONAL PHASE MONITORING	
Measure 1: Post Construction Lighting Assessment	To be undertaken by qualified ecologist.
Measure 2: Post Construction Bat Box Assessment	To be undertaken by qualified ecologist.
Measure 3: Post Construction Bat Vox Assessment	To be undertaken by qualified ecologist.

Table 6.24 Summary of mitigation measures and person(s) responsible for monitoring during the construction and operational phases (those requiring ecological input are shaded in amber).

6.13 Difficulties Encountered

There were no difficulties encountered in compiling the information for Chapter 8 Biodiversity, however, some limitations were encountered which are presented in section 6.3.5 and discussed throughout relevant sections of this Chapter.

6.14 Conclusion

This biodiversity chapter has been completed based on the Proposed Development information supplied by the applicant regarding the particulars of the Proposed Development during both Construction and Operational Phases. The assessment incorporates data from both desk-based studies and field surveys and considers all relevant aspects of the Proposed Development during both the Construction and Operational phases. This includes the Site layout, drainage design, landscaping proposals, and lighting strategy, all of which have been evaluated in terms of their potential impact on local habitats and species.

Provided that the mitigation measures outlined in this report are implemented in full, including dust control, lighting management, noise reduction, and habitat protection, it is considered that the Proposed Development will not result in any significant adverse effects on valued habitats, designated sites, or individual or group species, including those associated with Dublin Bay and European sites within the zone of influence.

In addition to mitigation, a suite of biodiversity enhancement measures has been proposed in tandem with the landscape plan. These include:

- Extensive planting and sowing of native species, including trees, hedgerows, and wildflower meadows, to improve habitat diversity and ecological connectivity.
- Installation of wildlife-supporting features such as Swift boxes, bat boxes, suitable alternative habitat for Herring Gull, and invertebrate habitat, which will provide nesting and foraging opportunities for a range of urban-adapted and protected species.
- Integration of green infrastructure elements such as biodiverse green and blue roofs, and pollinator-friendly planting to support ecosystem services.

These enhancements are designed not only to offset any residual impacts but to deliver a net gain in biodiversity across the site. The landscaping plan proposes a substantial increase in the coverage of trees, hedgerows, grassland, and wildflower meadows at what is currently a predominantly unmanaged Site, with several invasive flora species present.

In conclusion, the Proposed Development is therefore considered to result in an overall slight positive effect on the biodiversity of the Site via the landscaping plan, which proposes the retention and incorporation of the majority of existing woodland and trees at the Site and a net increase in overall tree, scrub and wildflower meadow planting throughout, contributing to the ecological resilience of the Site and wider surrounding area.

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