8.0 BIODIVERSITY

8.1 Introduction

DNV was commissioned by Sandford Living Limited to prepare this Biodiversity Chapter in relation to an Environmental Impact Assessment Report (EIAR) prepared for a Large-Scale Residential led Mixed-use Development (LRD) (hereafter referred to as the 'proposed development'), at Milltown Park, Sandford Road, Dublin 6 (hereafter collectively referred to as the 'Site', where appropriate).

8.2 Quality Assurance and Competence

All surveying and reporting have been carried out by qualified and experienced ecologists and environmental consultants.

Ciara Barry-Hannon (CBH) co-authored this chapter and is a Senior Ecologist with DNV. CBH has 7 years of ecological consultancy experience, with a BSc. (Hons) in Wildlife Biology from Munster Technological University (formerly ITT) and a wealth of experience in desktop research, literature review and reporting, as well as practical field and laboratory experience. CBH has prepared numerous Stage I and Stage II AA Reports. Additionally, CBH has prepared several Biodiversity Chapters for EIAR. CBH is also a Qualifying member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

Liam Gaffney (LG) co-authored this chapter and conducted the habitat, flora and mammal surveys pertaining to this report. LG also led the team conducting the suite of bat surveys conducted on Site during the 2024 & 2025 survey seasons. LG is a Senior Ecologist with DNV and has over 6 years of ecological consultancy experience, as well as an M.Sc. Hons. (Wildlife Conservation and Management) from University College Dublin, and a wealth of experience in desktop research, literature scoping-review, and report writing; as well as practical field experience (Habitat surveys, winter bird surveys, large mammals, fresh water macro-invertebrates identification etc.). LG has completed best practise guidance courses on bat survey and mitigation techniques such as: 'Bat Ecology & Survey' and 'Bat Impacts and Mitigation' both held by the Chartered Institute of Ecology and Environmental Management (CIEEM). LG is also a Qualifying member of CIEEM with full membership application pending.

Shane Connolly (SC), DNV ecologist conducted bat data analysis and potential bat roost assessments at the Site. SC holds a B.Sc. (Hons) in Botany from the University of Galway and has over 3 years' experience working in the environmental consultancy sector. SC has both project-managed and delivered ecological services for a wide range of developments spanning wind farms, commercial units, and large residential schemes. SC has extensive field expertise surveying bats, birds, mammals, plants, habitats, reptiles, amphibians, and invasive species. SC is proficient in preparing a wide range of ecological reports, including Appropriate Assessment (AA) Screenings, Natura Impact Statements (NIS), Ecological Impact Assessments (EcIA), Bat Reports, Invasive Species Management Plans (ISMP), and constraint reports

Brian McCloskey (BMcC) carried out the Swift and breeding bird surveys that informed this chapter and is a Project Ecologist and experienced Ornithologist with 13 years of birding 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. Brian is highly experienced with all survey methodologies and with surveying all species groups of Irish birds and migrants.

All bat-related surveys, data analysis and reporting were prepared/carried out by CBH, LG, Caoimhin Rohu (CR), Caitlin Markey (CM), Abbie Doyle (AD), Kelly Macken (KM), Torchia McQuaid (TM), Katie Connolly (KC) and Charith Rakesh Kumar (CRK).

CR was a 2025 Intern Ecologist with DNV and a final year B.Sc. undergraduate in Sustainability and Environmental Science at University College Dublin, gaining skills in report writing, desktop research and literature review, alongside extensive laboratory and environmental and biological data analysis experience. Under the supervision of senior ecologists, CR has contributed to the preparation of Ecological Impact Assessments (EcIAs) and AA Screening Reports, supporting the delivery of high-quality ecological reporting.

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.

AD was a 2025 Intern Ecologist with DNV with a B.Sc. (Hons) in Geoscience from Trinity College Dublin, and a MSc in Applied Environmental Science from University College Dublin. AD's experience includes both geological and ecological field and laboratory work, molecular biomarker analysis, GIS and ecological report preparation. AD is also a student member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

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.

TM was a 2024 Intern Ecologist with DNV, with a B.Sc. (Hons) in Zoology and MSc in Applied Environmental Science from University College Dublin. TM has experience in ecological research, biodiversity assessment and environmental impact analysis. TMcQ has experience in conducting field surveys, data analysis and completing AA Screening Reports and input into various other ecological reports.

KC was a 2024 Intern Ecologist with DNV has a B.Sc. in Zoology and an M.Sc. in Applied Environmental Science from University College Dublin. KC's experience includes desktop research, report writing, animal behaviour surveys, invasive species surveys, vegetation surveys, bat emergence surveys, genetic/haplotype mapping and Appropriate Assessments. KC has experience in assessing terrestrial, freshwater, coastal and tropical environments and has contributed to the preparation of AA Screenings, Preliminary Ecological Appraisals (PEAs) and bat surveys

CRK is a DNV Ecologist with an M.Sc. in Biodiversity and Conservation from Trinity College Dublin. CRK's experience as an ecologist is broad both variety of ecological reports and literature, and field surveys conducted. CRK has experience in surveying habitats, birds,

plants, bats, mammals and invasive species, with some experience in assessing welfare conditions of animals using behavioural repertoires as indicators. CRK's experience in ecological report writing extends from research associated reporting to AA screening reports and Natura Impact Statements (NIS).

Previous ecology surveys were conducted on Site by JBA, while habitat surveys conducted on site by DNV staff included a record of all invasive alien plant species (IAPS) encountered, targeted IAPS surveys were conducted by IAPS specialists at Invasive Plant Solutions on a total of five dates between 2020 and 2025 to inform the IAPS impact assessment and management plan for this project.

These professionals thus fulfil the EU's Environmental Impact Assessment (EIA) Directive (2011/92/EU) (As amended) personnel requirements of 'competent persons'.

8.3 Relevant Legislation

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). When an Ecological impact assessment is undertaken as part of an EIA process it is subject to the EIA Regulations (under the Planning and Development Regulations 2001-2025). An EcIA is not a statutory requirement, however it is a best practice evaluation process. This EcIA is provided to assist the Competent Authority with its decision making in respect of the proposed development.

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

- Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora; hereafter the 'Habitats Directive'.
- Directive 2009/147/EEC, hereafter the 'Birds Directive'.
- Directive 2011/92/EU, as amended by Directive 2014/52/EU, hereafter the 'EIA Directive'.
- EU Regulation 1143/2014, on Invasive Alien Species.
- Convention on the Conservation of European Wildlife and Natural Habitats 1982, hereafter the 'Bern Convention'.
- The Convention on the Conservation of Migratory Species of Wild Animals 1983, hereafter the 'Bonn Convention'.
- Ramsar Convention on Wetlands 1971, hereafter referred to as 'Ramsar'.
- Water Framework Directive 2000/60/EC, hereafter the 'WFD'.

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

- Wildlife Act 1976, as amended in 2000.
- EC (Birds and Natural Habitats) Regulations 2011.
- S.I. No. 374/2024 - European Union (Invasive Alien Species) Regulations 2024.
- Flora (Protection) Order 2022.
- The Planning and Development Act 2000 as amended.

Additionally, Natural Heritage Areas (NHAs) are designations under the Wildlife Acts to protect habitats, species, or geology of national importance. The boundaries of many of the

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

Further details on legislation and policy relevant to the proposed development are detailed in Appendix 8-1, of this EIAR.

8.3.1 Relevant Policies and Plans

The following policies and plans were referred to in completing this report:

- National Biodiversity Action Plan 2023-2027 (final).
- Dublin City Biodiversity Action Plan 2021-2025 (Current).
- Dublin City Development Plan 2022-2028[1].

8.3.2 Relevant Guidance

The guidance documents that have been taken into account in conducting this assessment include the following:

- OPR Practice Note PN01 Appropriate Assessment Screening for Development Management, March 2021 (OPR, 2021a).
- OPR Practice Note PN02 Environmental Impact Assessment Screening, June 2021 (OPR, 2021b).
- Guidelines for planning authorities and An Bórd Pleanála on carrying out an environmental impact assessment (DHPLG, 2018).
- Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, version 1.3, September 2024, (CIEEM, 2024).
- Guidelines on the information to be contained in Environmental Impact Assessment Reports Environmental Protection Agency, May 2022 (EPA, 2022).
- Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009a).
- Environmental Impact Assessment of National Road Schemes – A Practical Guide (NRA, 2008b).
- Best Practice Guidance for Habitat Survey and Mapping. The Heritage Council. (Smith et al., 2011).
- Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition) (Collins, 2023).
- Bat Mitigation Guidelines for Ireland (Kelleher and Marnell, 2022).
- Bat Conservation Trust and Institution of Lighting Professionals (2023) Guidance Note 08/23: Bats and artificial lighting in the UK. ILP, Rugby.
- Guidelines on The Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads (Now Transport Infrastructure Ireland - TII) (NRA, 2010)
- The Management of Invasive Alien Plant Species on National Roads – Technical Guidance, GE-ENV-01105, Dec 2020, (TII, 2020).

[1] Including variations (1-9) and two-year progress report (2024) (www.Dublincity.ie)

8.4 Project Summary

8.4.1 Site Location

The proposed development comprises a 4.26 ha site located at Milltown Park, Sandford Road, Dublin 6 (D06 V9K7). The Site currently consists of a mix of buildings and green space, with an overall developable area of approximately 4.26 ha. Additional works are proposed along Milltown Road and Sandford Road to facilitate site access, including improvements to pedestrian facilities within an area of c. 0.16 ha. Surface water drainage works will extend through the Milltown Road/Sandford Road junction and along a section of Eglinton Road (R824), approximately 200 m from its junction with Sandford Road, covering an area of c. 0.32 ha.

In total, the proposed development, associated road works, and drainage works will encompass an application site area of approximately 4.74 ha. The Site is accessed from the north via the R117 and is bounded to the north and west by residential lands; to the north-east by Sandford Road (R117); to the south-east by Milltown Road (R117); with the Eglinton Road (R824) junction on the eastern edge. The southern boundary adjoins lands owned by the Jesuit order, zoned Z15 under the Dublin City Development Plan 2022–2028. The nearest European sites are South Dublin Bay SAC and South Dublin Bay and River Tolka Estuary SPA, located approximately 2.2 km east of the Site.

The Site is bounded to the north and west by existing residential development, reflecting the urban character of the surrounding area. Milltown Road (R117) forms the south-eastern boundary, while Sandford Road (R117) defines the north-eastern boundary, meeting Eglinton Road (R824) at a junction along the eastern edge of the Site. The River Dodder lies approximately 500 m to the southeast. The location of the Site is presented in **Figure 8.1** below.

Currently, the Site comprises open grassland, treelines, and woodland habitats, along with buildings formerly associated with the Jesuit College. The existing buildings on Site include Milltown Park House & Milltown Park House Extensions, Tabor House, the Chapel, the Finlay Wing, and the Archive (**Figure 8.2**). A detailed project description is included in Section 8.10 below.

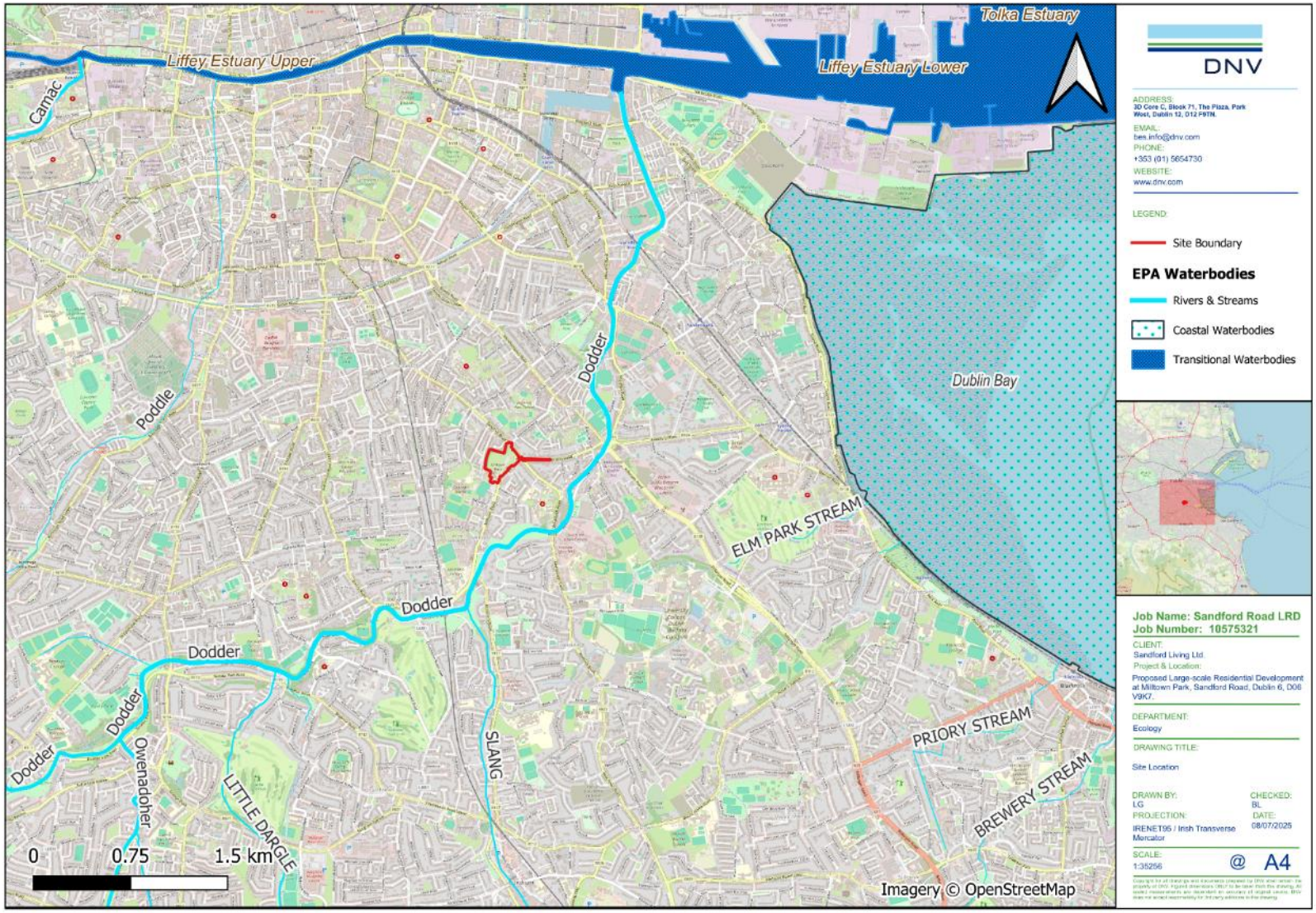

Figure 8.1: Site Location (Source: QGIS/DN

8.5 Assessment 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.

8.5.1 Scope of the Assessment

The aims of the Biodiversity Chapter are to:

- To establish baseline ecological conditions and determine the ecological value of ecological features identified;
- To identify potentially important ecological features within the zone of influence of the project;
- To assess the significance of potential impacts, direct or indirect, on ecological features owing to the project;
- To identify avoidance, mitigation, or compensatory measures;
- To identify residual impacts, if any, after implementation of avoidance measures, and the significance of their effects; and
- Where possible, to identify opportunities for ecological enhancement and achieve an overall biodiversity net gain at the Site.

8.5.2 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 desktop study relied on the following sources:

- Information on species records and distributions, obtained from the National Biodiversity Data Centre (NBDC) at *www.maps.biodiversityireland.ie* ;
- Information on waterbodies, catchment areas and hydrological connections obtained from the Environmental Protection Agency (EPA) at *www.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 of designated conservation sites, 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 extent, nature, and location of the proposed development, provided by the applicant and/or their design team;
- The current conservation status of birds in Ireland taken from Gilbert et al. (2021).
- Information on planning applications within the vicinity of the proposed development Site available from the Dublin City Council and the National Planning Application Database.

A comprehensive list of all the specific documents and information sources consulted in the completion of this document is provided in Section 0, *References*.

8.5.2.1 Bats

As part of this desk study the Bat Conservation Ireland Landscape Suitability Model (Lundy et al., 2011) was considered. This resource 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:

- 0.0000000 - 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 Sustenance 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.

8.5.2.2 Zone of Influence (ZOI)

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).*"

To determine the ZOI of the proposed development for designated sites, reference was made to the aforementioned OPR Practice (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

Biodiversity Chapters such as this; to identify all relevant designated sites potentially linked to the proposed development.

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

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

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

8.5.3 Field Studies

A suite of ecological field surveys have been conducted at the Site by DNV over several years (2022-2025) to determine the baseline ecological conditions at the Site and to monitor any potential changes in same. ***Table 8.1*** below details the types of surveys carried out, and the dates they were completed.

Table 8.1: Schedule of all Ecological Surveys conducted at the proposed development Site by DNV (2022-2025).

Survey Type	Date
Multidisciplinary Ecological Walkover	25/04/2023 29/08/2024 24/09/2025
Habitat and Flora Surveys	03/03/2023 29/08/2024
Non-Volant Mammal Surveys	03/03/2023 29/08/2024 24/09/2025
Invasive Alien Plant Species (IAS) Surveys (Specialist IAS surveys completed by Invasive Plant Solutions in 2025)	03/03/2023 09/10/2025
Winter Bird Surveys	23/11/2022 23/01/2023 31/01/2023 28/02/2023 29/03/2023
Early/seasonal Bird Survey	03/03/2023
Breeding Bird Survey including building inspections for Swallow, Swift and House Martins. The survey on the 25th of June also included a dusk component specifically focused on detecting potential Swift nesting activity.	25/06/2024 25/07/2024 24/08/2024 ---------- 18/06/2025 22/07/2025 12/08/2025
Bat Building Emergence Surveys	17/07/2024 30/07/2024 29/08/2024 ---------- 30/06/2025 31/07/2025 27/08/2025
Bat potential tree (PRF-M) (Tree No. 267) Emergence Surveys	26/06/2025 29/07/2025 04/09/2025
Bat potential tree (PRF-M) (Tree No. 290) Emergence Surveys	26/06/2025 29/07/2025 04/09/2025
Daytime Bat Habitat Assessment Survey & Potential Bat Roost Assessment (PBRA) of trees to be felled	09/03/2023 10/03/2023

Survey Type	Date
	24/04/2024 29/08/2024 24/09/2025
Internal Bat Roost Assessment of Buildings	25/04/2023 08/05/2024 05/09/2024 19/06/2025
Dusk Bat Transect Surveys	24/06/2024 25/07/2024 30/08/2024 ---------- 11/06/2025 15/07/2025 21/08/2025
Bat Static detector deployment within attic of Tabor House	08/05/2024 – 20/05/2024 25/06/2024 – 02/07/2024 25/07/2024 – 30/07/2024 29/08/2024 – 08/09/2024 27/09/2024 – 04/10/2024 ---------- 19/06/2025 – 24/06/2025 11/07/2025 – 15/07/2025 27/08/2025 – 01/09/2025 24/09/2025 – 29/09/2025 15/10/2025 – 20/10/2025

All surveys were undertaken in accordance with best practice guidelines and relevant guidance documents published by statutory and professional bodies, including Transport Infrastructure Ireland (TII).

The following sections outline the methodologies applied by DNV during the suite of surveys conducted between 2022 and 2025, inclusive. The most recent 2025 surveys served both as a ground-truthing exercise and as an update to baseline ecological conditions at the site, and furthermore enabling comparison with previous data collected by DNV as part of the previous SHD/LRD applications at the Site.

8.5.3.1 Habitat and Flora Surveys

Ecological walkovers of the Site including habitat surveys were conducted on 3rd of March 2023 and 25th of April 2023 by DNV. An updated ground truthing survey was conducted on the 29th of August 2024 and again on the 24th of September 2025. Where possible species compositions and abundance are described using the DAFOR (Dominant, Abundant, Frequent, Occasional or Rare) scale, a simple method of assigning abundance categories to species.

Habitats were categorised to level 3, according to the Heritage Council's 'A Guide to Habitats in Ireland' (Fossitt, 2000). The habitat mapping exercise had regard to the 'Best Practice Guidance for Habitat Survey and Mapping' (Smith et al., 2011) published by the Heritage Council, and the National Roads Association (now known as Transport Infrastructure Ireland (TII)) guidance on 'Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes' (NRA, 2009b). Habitats within the surrounding area of the proposed development were classified based on views from the Site and satellite imagery where necessary (Google Earth, Digital Globe and OSI). The habitat and flora surveys cover the period considered suitable for such surveys as per the abovementioned guidance (April-October).

8.5.3.2 Invasive Alien Plant Species (IAPS) Surveys

Invasive alien plant species (IAPS) surveys were integrated into ecological walkovers conducted between 2023 and 2025, as outlined in Section 8.5.3.1. During the walkover surveys, the Site was searched for invasive flora with a particular focus on those listed on the Third Schedule of SI No. 477/2011 and First Schedule of S.I. No. 374/2024. The presence and extent of invasive species were recorded using field maps and GPS, with areas of occurrence mapped accurately. As previously mentioned, the invasive species surveys focused primarily on high-impact invasive plant species such as Japanese Knotweed (*Reynoutria japonica*). Incidental observations of other potentially invasive species, including Butterfly-bush (*Buddleja davidii*), were also documented, where they were found to occur.

Additionally, Invasive Plant Solutions (IPS) conducted focused IAPS surveys in March and April of 2023, and more recently in October 2025. Subsequently, an independent invasive species assessment and management plan was prepared by Invasive Plant Solutions for the Milltown Park development Site (October 2025). However, the most recent survey in October 2025 could not confirm plant presence due to seasonal die-back, but viable plants are assumed to remain. A further survey is scheduled for the Site for completion in early spring 2026 with Invasive Plant Solutions. The results of same will inform any changes required to the invasive species management plan for the Site.

8.5.3.3 Non-Volant Mammal Surveys

Mammal surveys of the Site were carried out in conjunction with the ecological walkovers completed between 2023 and 2025.

The mammal surveys conducted as part of this assessment have regard for the survey guidelines contained in 'Guidelines for the Assessment of Ecological Impacts of National Road schemes' (NRA, 2009a) and associated guidance 'Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes' (NRA, 2009b). The Site was searched for signs of mammals within the area, such as tracks, scat, prints, hair, and

burrows as per best practice guidelines (Harris, Cresswell and Jefferies, 1989). The habitat types recorded throughout the survey area were used to assist in identifying the fauna considered likely to utilise the area. These surveys were carried out at suitable times for mammal surveys and no difficulties were encountered in this regard.

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

8.5.3.4 Bat Surveys

Overview
Preliminary bat habitat assessment surveys were carried out at the Site in 2023, 2024 and again in 2025 to determine the potential of the Site to support bats (e.g., roosting, commuting, foraging), with emphasis on determining any changes in suitability or potential for use since previous surveys were conducted at the Site.

Features of the Site were assessed for potential roosting habitat (e.g., natural hollows in trees, cracks in stems or branches, human-made cavities in woody vegetation). A suite of bat surveys was then conducted to determine the bat usage and assemblage of the Site, and to ground-truth previous bat survey results. The targeted surveys comprised of three dusk activity surveys of the Site, three dusk emergence surveys of targeted buildings that were identified as having roost potential, and five monthly periods of static detector monitoring was conducted in the attic space of Tabor House. All surveys carried out in 2024 were completed in line with best practice guidelines (Collins, 2016, Collins, 2023 and Marnell et al., 2022). This survey effort was then replicated during the 2025 survey season, with the addition of three dusk emergence surveys of two trees with bat roost potential.

The methodology employed to conduct these bat surveys are detailed in the following sections. The results of all surveys are presented in the results section, providing an overview of bat activity/usage at the proposed development Site.

8.5.3.4.1 Preliminary Bat Roost Assessment (PBRA)

8.5.3.4.1.1 Preliminary Buildings and Structures Roost Assessment

Daytime inspections of the Site were undertaken by DNV Ecologist SC and DNV Senior Ecologist LG in 2023, 2024 and again in 2025. The buildings were walked internally to inform the bat survey approach. A potential bat roost assessment (PBRA) consisting of detailed internal building inspections which can be undertaken during any time of the year, was carried out on the 8th of May 2024, and again on the 5th of September 2024, with the buildings examined externally and internally for signs of bat roosting activity and/or access to the building envelopes. This was repeated again in June 2025; during which the surveyor also maintained a watching brief for any evidence of bat roosting activity within the buildings when visiting to deploy and collect static bat detectors and carry out the emergence surveys as discussed in the following sections of this Biodiversity Chapter.

Particular focus of internal assessments was given to the two buildings considered to support the most bat roost (moderate) potential; the Chapel and Tabor House. Both of which, it is noted, are to be retained and renovated as part of the proposed works on Site. Access to the loft space of Tabor House was limited due to the poor condition of the attic floor as the

building was somewhat derelict in places. While access to the uppermost ceiling crawlspace of the Chapel was not possible for health and safety reasons, given the significant height involved, and so the vents leading into this space were surveyed as part of the emergence survey effort. It is noted, however, that both buildings were accessed and assessed for evidence of bat use/presence, albeit access was limited per the above constraints. The aim of the inspections was to search for an indication of the presence of roosting bats. 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/attic that might support roosting bats.

Collins (2023) recommends that structures and trees are assessed for their ability to support roosting bats under separate categorizations using professional judgement. A structure with roosting potential can be further divided into one of five sub-categories as presented in Table 4.1 of said guidance document, and detailed below (Collins, 2023);

- None – No habitat features on site likely to be used by any roosting bats at any time of the year.
- Negligible – No obvious 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.

Buildings present on Site are shown in **Figure 8.2**.

Figure 8.2: Location of the existing buildings within the Site (Source: QGIS/DNV

8.5.3.4.1.2 Preliminary Bat Roost Assessment of Trees

A comprehensive preliminary bat roost assessment (PBRA) survey was undertaken in 2023, 2024 and again in 2025. During these surveys all trees to be felled as part of the proposed development were individually assessed, and reassessed, in full for bat roost potential, in accordance with current best practice guidelines (Collins, 2023), to ensure that up-to-date and standalone survey data would inform any future planning application.

During the PBRA of the trees present at the Site, the trees in question were searched for Potential Roosting Features (PRFs) such as hollow trunks, knot holes, peeling bark, splits, cracks, and crevices (Andrews, 2018). During this assessment, trees were assessed from ground level as per best practice guidelines (Collins, 2023). Marnell et al. (2022) notes that aerial surveys are only necessary when there is a high probability of bats, and a low number of trees, neither of which are the case on this Site. Despite the woodland component present, the Site historically had very low potential for roosting features in trees, as confirmed by JBA's surveys in 2020 as detailed in the EIAR Biodiversity Chapter submitted as part of a previous application at the Site (TOC, 2021) and DNV's surveys (then Enviroguide) in 2023, and so a ground level assessment was deemed appropriate.

The ground level assessment was conducted according to Collins (2023) which recommends conducting the survey when no foliage is present to allow unobstructed views into the upper canopy of any trees. The surveyor was also equipped with binoculars, a powerful L.E.D. hand-torch, head-torch and endoscope. The endoscope includes a narrow, extendable camera/torch attachment for inspection of tight spaces that bats might utilise to roost.

Trees were methodically assessed as per the list of trees taken from the Arborist Tree Impact Plan (CMK Arboricultural Assessment and Impact Report, 2025) prepared as part of the previous LRD application submission (DCC planning ref: LRD6026/23-S3) and the updated assessment of the results also had regard to the latest Arboricultural Assessment Report (CMK, 2025). Each tree was inspected from the ground for signs of bat roosting activity and/or bat roosting potential e.g., PRFs, or lack thereof. As per Table 4.2 of Collins (2023), trees are categorized separately to buildings and other structures.

The classifications for trees are as follows:

- 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.

Collins (2023) does not recommend further surveys for PRF-I's, unless the context deems that the tree is highly likely to be used by a bat considering its surroundings (for example a single tree with PRF-I features located along a strong foraging route or connected to the wider landscape).

Alternatively, PRF-M trees are subject to three visits between May and September, with at least two in the period May to August. These can be inspections with an endoscope if possible, or emergence surveys with night vision aids if the PRF-Ms are inaccessible from ground level or not easily surveyed aerially.

8.5.3.4.1.3 Bat Habitat Suitability Assessments

A Bat Habitat Suitability Assessment of the Site was carried out in conjunction with the roost assessment in 2024 and in 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 None to High as per Collins (2023) and can be undertaken at any time of year:

- None - No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats)
- Negligible – No obvious habitat features on site likely to be used as flightpaths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
- Low – Habitat that could be used by small numbers of bats as flightpaths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
- Moderate – Continuous habitat connected to the wider landscape that could be used by bats for flightpaths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland, or water.
- High – Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flightpaths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses, and grazed parkland. Site is close to and connected to known roosts.

8.5.3.4.2 Bat Activity Surveys

A suite of bat activity surveys have been carried to date by suitably qualified ecologists per **Table 8.1** above, with the most recent surveys completed in 2025.

8.5.3.4.2.1 Bat Dusk Walkabout Activity Surveys

The aim of the dusk walkabout activity surveys, also referred to as 'dusk transect' surveys, was to determine if bats were present on Site and to record areas of relative activity, and in doing so collecting a representative sample of the bats using the Site. During each bat walkabout activity survey; The surveyor was equipped with a full spectrum Elekon Bat Logger M2 bat detector, along with a powerful L.E.D. hand-torch and head torch. Bats were observed when encountered during the survey to record behaviour such as feeding, commuting, or potential roosting, in order to provide detailed information on bat use of the Site.

As per the best practice guidelines (Collins, 2023), the surveyor was on Site before sunset on each survey date, positioned in the centre-east of the Site, near to its northern wooded boundary i.e., near potential flight lines, and observing for commuting/foraging bats prior to commencing the walkabout survey from this point. The dusk surveys commenced at or just before sunset on each night and were sustained for ca. 2.5 hours (Collins, 2023). Weather was suitable for bat surveys according to Marnell et al. (2022).

Each survey comprised of a walked transect with particular attention being given to linear or edge features along which bats tend to forage and commute. A pre-determined transect (1.2km) of the Site was walked, with 14 No. pre-determined vantage point stops of uniform length (7.5 minutes) factored in, to sample bat activity at different locations. This allows for comparisons to be made between various habitat types/ features and their relative importance to bats at the Site based on the levels of bat activity recorded at each vantage point and allows for activity hotspots to be identified where present.

Echolocations were recorded and saved by the Elekon Batlogger for more detailed species analysis at a later date using BatExplorer analytical software.

The weather conditions for each survey are described in full along with the total survey effort in **Table 8.2**, while the activity survey route is shown in **Figure 8.3** below.

Table 8.2: Bat Transect Survey Dates and Weather Conditions (2024/2025).

Date	Survey Type	Sunset	Start Time	Finish Time	Weather at Start	Weather at Finish	Surveyors
24/06/2024	Transect	21:59	21:59	00:42	Wind 2m/s Precipitation dry Cloud cover 60% Temp 21oC	Wind 2m/s Precipitation dry Cloud cover 100% Temp 17oC	LG
25/07/2024	Transect	21:31	21:38	00:02	Wind 3m/s Precipitation dry Cloud cover 10% Temp 17oC	Wind 5m/s Precipitation dry Cloud cover 0% Temp 16oC	LG
30/08/2024	Transect	20:18	20:18	22:42	Wind 2m/s Precipitation dry Cloud cover 10% Temp 14oC	Wind 2m/s Precipitation dry Cloud cover 0% Temp 12oC	LG
11/06/2025	Transect	21:53	51:53	23:39	Wind 5m/s Precipitation dry Cloud cover ¾ Temp 17oC	Wind 6m/s Precipitation dry Cloud cover 4/4 Temp 16oC	LG & BT
15/07/2025	Transect	21:45	21:43	23:38	Light Breeze Precipitation dry Cloud cover ¾ Temp 16oC Good visibility	Light Breeze Precipitation dry Cloud cover ¾ Temp 15oC Good visibility	LG, CR, CM
21/08/2025	Transect	20:42	20:32	22:06	Wind 1m/s Precipitation dry Cloud cover 4/4 Temp 17oC Visibility 4/4	Wind 2m/s Precipitation dry Cloud cover 4/4 Temp 16oC Visibility 4/4	CM & KM

Figure 8.3: Dusk Activity Transect Survey Design (Source: QGIS, DNV).

8.5.3.4.2.2 Bat Static Detector Surveys

Based on the results of the preliminary inspections, the deployment of a static bat detector was carried out to confirm the absence or presence of roosting bats in the attic of Tabor House in 2024. This was repeated in 2025, to determine if there has been any change from the baseline since then.

Static detectors allow surveyors to capture activity over a longer period of time and helps determine how much bats may use particular feature(s) and can depict the species composition more accurately at the Site. This information can give an approximation of how important a feature is and whether it is used for commuting, foraging, or in this case roosting.

Static detector monitoring was carried out of the attic of Tabor House using a Wildlife Acoustics Song Meter SM4 full spectrum (FS) static bat detector. A SM4 unit with an ultrasonic microphone was deployed within the same location in the attic of Tabor House for periods of a minimum of 5 nights on five separate occasions each across the 2024 and 2025 bat active season i.e., May, June, July, August and September 2024 as shown in **Table 8.3**. The SM4 was deployed by the south-eastern chimney stack with the microphone facing the open space of the attic.

Please note that the May 2025 static detector deployment was completed in October 2025 due to the project commencing after May 2025. This adjustment is acceptable under the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2023), which state that static monitoring should occur during the bat active season, typically April to October in Ireland. While May is ideal for capturing early-season activity, October still falls within the recommended survey window and provides valuable late-season data on foraging and commuting behaviour. Furthermore, earlier deployments in June, July, and August captured peak activity periods, ensuring that the overall dataset remains robust and representative. Recording conditions and timing in the methodology ensures transparency and compliance with BCT best practice.

Please note that, given the aim of the static detector deployment was to confirm presence or absence of rooting activity within the attic of Tabor House, the weather conditions for each static deployment period were not required to be recorded. The static detector was deployed consistently at a single location within the enclosed attic of Tabor House, sheltered from the outdoors.

Table 8.3: Static Detector Monitoring Schedule 2024/2025

Survey Period	Static Detector Location	2024	2025
Static Monitoring 1	Tabor House Attic	8th May – 20th May 2024	19th May – 24th June 2025
Static Monitoring 2	Tabor House Attic	25th June – 2nd July 2024	11th July – 15th July 2025
Static Monitoring 3	Tabor House Attic	25th July – 30th July 2024	27th August – 01st September 2025
Static Monitoring 4	Tabor House Attic	29th August – 5th September 2024	24th September – 29th September 2025
Static Monitoring 5	Tabor House Attic	27th September 2024 – 4th October 2024	15th October – 20th October 2025

8.5.3.4.3 Dusk Emergence Surveys

Dusk emergence surveys were carried out at the Site in 2024 and 2025. 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).

8.5.3.4.3.1 Dusk Emergence Surveys of Trees

Two trees located in the eastern woodland on Site were identified as having 'PRF-M' features in 2024 likely due to storm damage removing ivy and exposing new opportunities for bats. 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 three survey visits between May and September, with at least two 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 2025 survey period and the results of same are included in the results section 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 8.4** below. The tree locations and surveyor vantage points are shown in **Figure 8.4**.

Figure 8.4: Vantage point locations for emergence surveys of PRF-M trees on Site (Source: QGIS, DNV).

Table 8.4: Bat Tree Emergence Survey Dates and Weather Conditions (Tree No. 267 and tree No. 290)

Date	Survey Type	Sunset	Start Time	Finish Time	Weather at Start	Weather at Finish	Surveyor /(s)
26/06/2025	Tree Emergence Tree No. 267	21:57	21:30	23:30	Light drizzle, overcast, visibility 2/4, wind 14km/h SW (gentle at VP), temp 16oC	Dry, overcast, visibility 4/4, wind 17km/h, SW (light breeze at VP), temp 15oC	CRK
26/06/2025	Tree Emergence Tree No. 290	21:58	21:37	23:30	Raining with a light breeze, visibility poor in the woodland habitat, temp 16oC	Recently rained, visibility poor in the woodland habitat, 15oC	LG
29/07/2025	Tree Emergence No. 267	21:25	21:10	23:00	Mild, dry, 8mpH wind, temp 20C	Mild, dry, 7mpH wind, temp 20C	CR
29/07/2025	Tree Emergence No. 290	21:25	21:10	23:00	Dry, calm, visibility good, cloud cover not visible under treeline, temp 21oC	Dry, calm, visibility poor due to tree canopy, cloud cover not visible under treeline, temp 19oC	LG
04/09/2025	Tree Emergence No. 267	20:07	19:50	21:50	Dry, cloud cover 50%, visibility 4/4, wind 15km/h WNW, calm at VP, temp 16oC	Dry, cloud cover 75-100%, visibility ¼, wind 14km/h W light to fair at VP, temp 15oC	CRK
04/09/2025	Tree Emergence No. 290	20:07	19:50	21:50	Bright, clear, dry, good visibility, calm, temp 16oC	Dry, calm, cloud cover 75-100%, temp 14oC	LG

N.B. Visibility can be dictated by light-levels resulting from weather conditions such as mist/fog, rainfall, cloud cover or presence of a tree canopy. Visibility does not limit these emergence surveys as infrared night vision aids (NVA) were used, as per best practice (Collins, 2023).

8.5.3.4.3.2 Dusk Emergence Surveys of Buildings

A total of five buildings are present on Site (shown in **Figure 8.2**); The Chapel and Tabor House were assessed as having Moderate roost potential, while Milltown Park and House Extensions were assessed as having Low potential (as shown in **Table 8.12**). The remaining Finlay Wing and Archive Building were assessed as having Negligible potential for roosting bats. The three buildings that were assessed as having potential suitability for roosting bats, therefore required further surveys in the form of three emergence surveys each to be carried out; in 2024 and again in 2025.

A total of 4 vantage point locations (VPs) were selected to completely cover all potential emergence locations/PRFs on the buildings and are shown in the below images (**Figure 8.*5*** - **Figure 8.*8***). The weather conditions for the three surveys (which were conducted on each building by a team of four surveyors at the same time) are described in full along with the total survey effort in **Table 8.2**, while the location of the VPs for surveys are shown in **Figure 8.9** below.

Figure 8.5: View from VP1 facing east face of Chapel (Source: DNV).

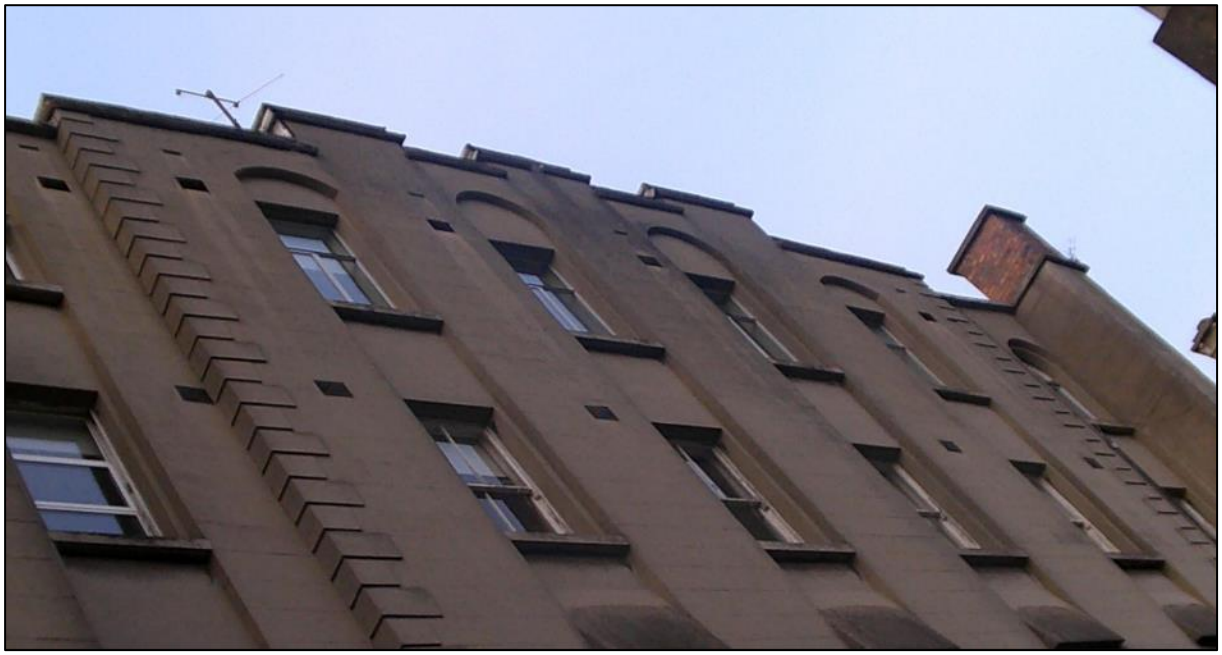

Figure 8.6: View from VP2 facing southern side of Milltown Park House Rear Extension (Source: DNV).

Figure 8.7: View from VP3 facing southern side of the Chapel (Source: DNV).

Figure 8.8: View from VP4 on Tabor House roof facing northern side of the Chapel roof (Source: DNV).

Table 8.5: Building Emergence Survey Dates and Weather Conditions (The Chapel, Tabor House, and Milltown Park House and Extension)

Date	VP Location	Sunset	Start Time	Finish Time	Weather[2] at Start	Weather at Finish	Surveyor/(s)
17/07/2024	VP1	21:47	21:30	23:06	Temp 17oC , Calm, cloudy, light drizzle at start, dry throughout.	Temp 16oC, Calm, cloudy, light drizzle at end.	KM
	VP2		21:30	23:05	Temp 17oC, Dry, light breeze, cloudy	Dry, light breeze, cloudy	TM
	VP3		21:30	23:04	Temp 17oC, Warm, calm, slightly overcast	Temp 16oC, Light drizzle at end, calm, overcast	LG
	VP4		21:30	23:05	Temp 18oC, Cool, Dry, cloudy, slight wind	Cool, Dry, cloudy, slight wind	KC
30/07/2024	VP1	21:27	21:00	22:45	Temp 18oC , Cloudy, dry, calm.	Temp 16oC, Cloudy (100%) dry, calm.	KM
	VP2		21:00	22:45	Temp 17oC, Minimal wind, dry, clear	Temp 16oC, Minimal wind, dry, clear	TM
	VP3		21:00	22:45	Temp 21oC , Calm, dry cloud cover 70%	Temp 18oC, Calm, dry	LG
	VP4		21:20	22:55	Temp 18oC, Dry, Cloudy	Dry, Cloudy	KC
29/08/2024	VP1	20:23	20:15	22:00	Temp 14oC, Overcast, dry, light breeze	Temp 14oC, Overcast, dry, light breeze	KM
	VP2		20:15	22:00	Temp 14oC, Overcast, dry, light breeze	Temp 14oC, Overcast, dry, light breeze	CRK
	VP3		20:15	22:00	Temp 14oC, Overcast, dry, light breeze	Temp 14oC, Overcast, dry, light breeze	LG
	VP4		20:15	22:00	Temp 14oC, Overcast, dry, light breeze	Temp 14oC, Overcast, dry, light breeze	KC
30/06/2025	VP1	21:58	21:45	23:28	Dry, cloud cover 4/4, F2 wind, visibility 4/4, temp 18oC	Dry, cloud cover 4/4, F2 wind, visibility 4/4, temp 17oC	BMcC
	VP2		21:43	23:30	Light drizzle at start, cloud cover 4/4, overcast, wind 11km/h, WSW, visibility 2/4, gentle breeze, temp 19oC	Rain at the end, dry with occasional drizzle, cloud cover 4/4, overcast, wind 11km/h, W, visibility 1/4, gentle breeze, temp 19oC	CRK
	VP3		21:45	23:28	Overcast, wind F2, dry, temp 18oC	Overcast, wind F2, dry, temp 17oC	LG
	VP4	Note: VP4 (Tabor House roof) was not covered in June due to presence of a nesting Herring Gull chick (to avoid disturbance)					

[2] Please note variations in weather conditions are a result of different scales used by surveyors, and locations (some would be more or less sheltered than others)

Date	VP Location	Sunset	Start Time	Finish Time	Weather[2] at Start	Weather at Finish	Surveyor/(s)
31/07/2025	VP1	21:24	20:59	23:00	Dry, cloud cover 4/4, wind 12km/h WNW, temp 17oC	Dry, cloud cover 3-4/4, wind 13km/h WNW, temp 15oC	CM
	VP2		21:00	23:00	Dry, mild, wind 7mpH, temp 17oC	Dry, mild, wind 7mpH, temp 15oC	CR
	VP3		21:00	23:00	Calm, clear, dry, good visibility, light breeze, temp 17oC	Light breeze, overcast, dry, temp 15oC	LG
	VP4		21:00	23:00	Dry, 65% cloud cover, light NNW breeze of 12km/h, 100% visibility, temp 17oC	Dry, 65% cloud cover, light NNW breeze of 13km/h, 25% visibility, temp 15oC	AD
27/08/2025	VP1	20:30	20:15	22:30	Dry, calm, 100% cloud cover, temp 15oC	Dry, calm, 15% cloud cover, temp 13oC	KM
	VP2		20:15	22:30	Dry, mild, cloud cover 2/4, wind 10mpH, visibility good, temp 16oC	Dry, mild, cloud cover 2/4, wind 10mpH, visibility good, temp 15oC	CR
	VP3		20:15	22:30	Calm, dry, 100% cloud cover, good visibility, temp 15oC	Light breeze, dry, 50% cloud cover, temp 13oC	LG
	VP4		20:17	22:30	Dry, light breeze, wind SW 16km/h, cloud cover 2/3, visibility 4/4, temp 16oC	Dry, windy, SW wind 16km/h, visibility ¼, temp 15oC	AD

N.B. Visibility can be dictated by light-levels resulting from weather conditions such as mist/fog, rainfall, cloud cover or presence of a tree canopy. Visibility does not limit these emergence surveys as infrared night vision aids (NVA) were used, as per best practice (Collins, 2023).

Figure 8.9: Dusk Building Emergence Survey Design & Vantage Point Locations (Source: QGIS, DNV).

8.5.3.4.4 Analysis

All species are identified from any Batlogger equipment using Elekon's BatExplorer software (Version 2.2.6.0). Wildlife acoustics static detector data (where recorded) is analysed using Kaleidoscope Pro software (Version 5.6.6) 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 and indicates the level of bat activity for each species recorded. It is important to note that bat passes are representative of activity levels and do not necessarily denote individual bats. For example, some bats such as pipistrelle species may continuously circle a treeline or hedgerow, and multiple calls may represent one individual circling an area. Alternatively, Leisler's bats recorded early in a survey are likely to be commuting high overhead, and each call may represent a singular bat. Therefore, a bat pass is a measure of activity and is not representative of the number of bats present.

8.5.3.5 Bird Surveys

A comprehensive suite of breeding and non-breeding bird surveys has been conducted at the Site between 2023 and 2025, as shown in **Table 8.1** and described in the following sections.

A general bird survey of the Site was also carried out during the ecological walkovers completed in 2024 and 2025, with a precautionary approach taken when assessing the likelihood of species recorded at the Site and likelihood to breed therein. The Site was walked with details of all bird species encountered recorded to assess their behaviour and numbers.

The bird survey methodology used in DNV's surveys follows both the breeding and non-breeding bird survey guidance published by the Bird Survey & Assessment Steering Group (2023) 'Bird Survey Guidelines for assessing ecological impacts'. 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.

The flight-line surveys focus on those Species of Conservation Interest (SCI) species that are characterised as "poor" fliers and considered to be more at risk of collision (see Eirgrid, 2012, 2016 & 2020). 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 Herring Gull are classed as 'low' collision risk species due to their superior manoeuvrability when flying (see Eirgrid, 2012, 2016 & 2020), and therefore, are not classified as 'at-risk' species in terms of in-flight collisions with structures.

The objective of these surveys were:

- To determine the composition, numbers, frequency, and heights of species in flight over the Site of the proposed development, where relevant, in order to inform decisions on potential disturbance to flight-lines of birds commuting to/from roost or nest sites and/or between feeding sites as a result of the construction of the proposed buildings.
- To determine the usage of the Site and structures therein by breeding birds e.g., Swift.

All surveys were undertaken using:

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

8.5.3.5.1 Breeding Bird Surveys

A suite of breeding bird surveys were conducted in Summer 2024 by DNV (then Enviroguide) with three surveys conducted on the mornings of the 25th of June, 25th of July, and 24th of August 2024. The first survey on the 25th of June included a dusk component specifically focused on detecting potential Swift nesting activity. These surveys were repeated in summer 2025; on the 18th of June, 22nd of July and the 12th of August 2025, to determine if there was any change in the baseline. The 2025 breeding bird surveys again included surveys for Swift usage of buildings and the Site in general.

The aim of the surveys is to determine bird usage and assemblage on the Site, with a focus on breeding birds.

8.5.3.5.2 Winter Waterbird Surveys

Winter waterbird surveys were conducted at the Site by DNV for the duration of the 2022/23 winter survey season. It is noted that, as no suitable habitat or wintering waterbirds were recorded during 2022/23 or subsequent surveys in 2024, no further wintering waterbird surveys were deemed necessary at the Site.

The Site was again scoped for wintering waterbird suitability during the ecological walkover conducted by DNV in 2025 which confirmed no change in the baseline lack of suitability observed during previous years i.e., rank grassland, woodland and scrub habitats dominating. As such, wintering bird surveys were not conducted in 2025.

The objective of the winter waterbird surveys was:

- To assess the potential usage of the Site by waterbirds during the winter months as an *ex-situ* foraging/ roosting site; and
- To determine the composition, numbers, frequency, and heights of species in flight over the Site of the proposed development, if any, in order to inform decisions on potential disturbance to flight-lines of birds commuting to/from roost sites and/or between feeding sites as a result of the construction of the proposed buildings.

8.5.3.6 Amphibians & Reptiles

During the ecological walkovers carried out up to and including 2025, the Site was assessed for suitable amphibian and reptile habitat, with a particular focus on the more widespread species; Common Frog (*Rana temporaria*), Smooth Newt (*Lissotriton vulgaris*) and Common Lizard (*Zootoca vivipara)*. Natterjack Toad *(Bufo calamita)* is more restricted in its distribution (Counties Kerry and Wexford) and is unlikely to be present in the vicinity of the Site of the Proposed development. The Site was surveyed for potential amphibian breeding habitat (i.e., areas of pooling, wet ditches), and signs of breeding activity (amphibian adults, spawn and juveniles). Survey methodology takes consideration of the National Roads Authority (NRA,

2009b), now Transport Infrastructure Ireland (TII) 'Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes', The Irish Wildlife Trust 'National Smooth Newt Survey 2013 Report' (Meehan, 2013) and the 'National Frog Survey of Ireland 2010/11' (Reid et al. 2013).

8.5.3.7 Other Fauna

During the course of all surveys at the Site of the proposed development, cognisance was taken of other species of fauna that might use the Site. These are included in this assessment where applicable.

8.5.4 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, 2009a), 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 value of the ecological resources, i.e., the habitats and species present or potentially present, was therefore determined using the ecological evaluation guidance given in the National Roads Authority's Ecological Assessment Guidelines (NRA, 2009a). 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. 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. As per the NRA guidelines, impact assessment is only undertaken for 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 Guidelines (EPA, 2022). These guidelines set out several parameters such as quality, magnitude, extent, and duration that should be considered when determining which elements of the proposed development could constitute impact or sources of impacts.

The impact assessment methodology is discussed further in Section 8.8.

8.6 Constraints of this Study

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.

No significant limitations of the surveys and desk-based work completed to date were encountered which would prevent robust conclusions from being drawn as to the potential impacts of the proposed development.

The impact assessment and design of mitigation measures will consider all the above limitations.

8.7 Stakeholder Consultations

Scoping letters were sent to Prescribed Authorities as part of this EIAR. Of relevance to this Biodiversity Chapter is the response received by Irish Water in September 2025 in response to a pre-connection query. In their response, Irish Water has advised that the provision of a foul drainage connection is *"Feasible without infrastructure upgrade by Irish Water" (Ref: CDS25004073 COF Standard).*

Irish water also advises that *"Approximately 30m of 200mm ID diameter connection main, including a meter equipped with online telemetry to connect the existing Uisce Éireann network in Belmont DMA to the site boundary".*

Proposed Drainage & Water Supply for the development is detailed in **Section 0** below.

8.8 Ecological Impact Assessment Criteria

8.8.1 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, 2009a), presented in Appendix 8-2 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, 2024), it is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and that will remain viable and sustainable. The EcIA therefore assesses ecological features deemed to be important and potentially affected by the project. As per the NRA guidance (2009a) any features considered to be less than of 'local value' are therefore not assessed as part of the EcIA detailed within this Chapter.

8.8.2 Impact Assessment

As per the NRA guidelines (NRA, 2009a) and CIEEM EcIA guidelines (CIEEM, 2024), impact assessment is only undertaken of important ecological features, also referred to as '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 8-2 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.

8.8.3 Assessment of Cumulative Impacts

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 cumulatively with impacts of other proposed or permitted plans and projects, can result in significant effects.

Relevant plans and policies (see section 8.3.1) 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.

8.8.4 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.

8.9 The Existing and Receiving Environment (Baseline Ecological Conditions)

8.9.1 Existing Environment

8.9.1.1 Surface Water

The Site of the proposed development is located within the Liffey and Dublin Bay catchment and Dodder_SC_010 sub-catchment. There are no surface waterbodies present within the Site. The closest waterbody to the Site is the River Dodder (EPA Code:09D01) approximately 250m to the south-east of the sewer works associated with the proposed development, along Eglinton Road, and ca.470m to the east of the main Site area. The Dodder flows in a north easterly direction and joins the River Liffey at Grand Canal Dock before flowing into Dublin Bay. The River Dodder has been assigned 'Moderate' water quality status (WFD, 2019-2024) and is classified as 'At Risk' of failing to achieve their Water Framework Directive status objectives by 2027. Similarly, the Lower Liffey Estuary which receives waters from the Dodder has been assigned 'Moderate' water quality status and is classified as 'At Risk' of failing to achieve their Water Framework Directive status objectives (WFD, 2019-2024) (EPA, 2025).

8.9.1.2 Geology and Hydrology

The Site of the proposed development is situated on the Dublin groundwater body (IE_EA_G_008), which is classified as having 'Good' status (WFD Status 2019-2024). The aquifer type in the area is a 'Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones'. The bedrock units underlying the Site are classified as 'Dark limestone & shale (calp)' (GSI, 2025) while the quaternary sediments classified as 'Till derived from limestones' (GSI, 2025).

The level of vulnerability to groundwater contamination from human activities at the Site is classed as 'Low' (EPA, 2025). The subsoil beneath the Site is 'Man-made' and the SIS National Soils database classified the soil beneath the Site as 'Urban' (EPA, 2025).

8.9.1.3 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) accompanying this submission under separate cover (and included in Appendix 8-3 of this EIAR). A summary of the AA conclusions is given below in section 8.9.1.3.1.

Other nationally or internationally designated sites potentially linked to the proposed development site are identified in sections 8.9.1.3.2 to 8.9.1.3.6.

Table 8.6 below presents details of the key ecological features of the European sites and nationally designated sites within a 15km radius of the proposed development, respectively. It is noted that the 15km radius is used only as a precautionary ZOI 'starting point' to identify sites that may have a S-P-R link to the Proposed Development. This set of sites is then reduced down to those that are connected by a S-P-R link to the Proposed Development, which are assessed in detail as per the OPR guidance (2021). The distances to each site listed are taken from the nearest possible point of the proposed development Site boundary to the nearest possible point of each Natura 2000 site or pNHA (**Figure 8.10 & Figure 8.11**).

Table 8.6: Designated European Sites within the ZOI.

Site code	Site name	Reasons for Designation (* = priority habitats)	Distance from site (km)
Special Areas of Conservation (SAC)			
000210 https://www.npws.ie/protected-sites/sac/000210	South Dublin Bay SAC	**Annex I Habitats:** [1140] Tidal Mudflats and Sandflats [1210] Annual vegetation of drift lines [1310] Salicornia and other annuals colonising mud and sand [2110] Embryonic shifting dunes	2.20km east
000206 https://www.npws.ie/protected-sites/sac/000206	North Dublin Bay SAC	**Annex I Habitats:** [1140] Tidal Mudflats and Sandflats [1210] Annual Vegetation of Drift Lines [1310] Salicornia Mud [1330] Atlantic Salt Meadows [1410] Mediterranean Salt Meadows [2110] Embryonic Shifting Dunes [2120] Marram Dunes (White Dunes) [2130] Fixed Dunes (Grey Dunes) * [2190] Humid Dune Slacks **Annex II Species:** [1395] *Petalwort Petalophyllum ralfsii*	6km north-east
002122 https://www.npws.ie/protected-sites/sac/002122	Wicklow Mountains SAC	**Annex I Habitats:** [3110] Oligotrophic Waters containing very few minerals [3160] Dystrophic Lakes [4010] Wet Heath [4030] Dry Heath [4060] Alpine and Subalpine Heaths [6130] Calaminarian Grassland [6230] Species-rich Nardus Grassland* [7130] Blanket Bogs (Active)* [8110] Siliceous Scree [8210] Calcareous Rocky Slopes [8220] Siliceous Rocky Slopes [91A0] Old Oak Woodlands **Annex II Species:** [1355] Otter *Lutra lutra*	9.1km south
003000	Rockabill to Dalkey Island SAC	**Annex I Habitats:** [1170] Reefs	9.9km east

Site code	Site name	Reasons for Designation (* = priority habitats)	Distance from site (km)
https://www.npws.ie/protected-sites/sac/003000		**Annex II Species:** [1351] Harbour Porpoise *Phocoena phocoena*	
001209 https://www.npws.ie/protected-sites/sac/001209	Glenasmole Valley SAC	**Annex I Habitats:** [6210] Orchid-rich Calcareous Grassland [6410] Molinia Meadows [7220] Petrifying Springs	10.4km southwest
000202 https://www.npws.ie/protected-sites/sac/000202	Howth Head SAC	**Annex I Habitats:** [1230] Vegetated Sea Cliffs [4030] Dry Heath	11km northeast
000199 https://www.npws.ie/protected-sites/sac/000199	Baldoyle Bay SAC	**Annex I Habitats:** [1140] Tidal Mudflats and Sandflats [1310] Salicornia Mud [1330] Atlantic Salt Meadows [1410] Mediterranean Salt Meadows	11.5km northeast
000725 https://www.npws.ie/protected-sites/sac/000725	Knocksink Wood SAC	**Annex I Habitats:** [7220] Petrifying springs with tufa formation (*Cratoneurion)* [91A0] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91E0] Alluvial forests with *Alnus glutinosa and Fraxinus excelsior Alno-Padion, Alnion incanae, Salicion albae*	11.8km south
000713 https://www.npws.ie/protected-sites/sac/000713	Ballyman Glen SAC	**Annex I Habitats:** [7220] Petrifying springs with tufa formation (*Cratoneurion*) [7230] Alkaline fens	13.2km southeast
002193 https://www.npws.ie/protected-sites/sac/002193	Ireland's Eye SAC	**Annex I Habitats:** [1220] Perennial vegetation of stony banks [1230] Vegetated sea cliffs of the Atlantic and Baltic coasts.	14.8km northeast
000205 https://www.npws.ie/protected-sites/sac/000205	Malahide Estuary SAC	**Annex I Habitats:** [1140] Mudflats and sandflats not covered by seawater at low tide [1310] Salicornia and other annuals colonising mud and sand [1330] Atlantic salt meadows *Glauco-Puccinellietalia maritimae* [2120] Shifting dunes along the shoreline with white dunes *Ammophila arenaria* [2130] Fixed coastal dunes with herbaceous vegetation grey dunes	14.9km north
Special Protection Area (SPA)			
004024 https://www.npws.ie/protected-sites/spa/004024	South Dublin Bay and River Tolka Estuary SPA	**Special Conservation Interest Species:** [A046] Light-bellied Brent Goose *Branta bernicla hrota* [wintering] [A130] Oystercatcher *Haematopus ostralegus* [wintering]	2.2km east

Site code	Site name	Reasons for Designation (* = priority habitats)	Distance from site (km)
		[A137] Ringed Plover *Charadrius hiaticula* [wintering] [A141] Grey Plover *Pluvialis squatarola* [wintering] [A143] Knot *Calidris canutus* [wintering] [A144] Sanderling *Calidris alba* [wintering] [A149] Dunlin *Calidris alpina* [wintering] [A157] Bar-tailed Godwit *Limosa lapponica* [wintering] [A162] Redshank *Tringa tetanus* [wintering] [A179] Black-headed Gull *Chroicocephalus ridibundus* [wintering] [A192] Roseate Tern *Sterna dougallii* [passage] [A193] Common Tern *Sterna hirundo* [breeding] [passage] [A194] Arctic Tern *Sterna paradisaea* [breeding] [passage] [A999] Wetlands	
004006 https://www.npws.ie/protected-sites/spa/004006	North Bull Island SPA	**Special Conservation Interest Species:** [A046] Light-bellied Brent Goose *Branta bernicla hrota* [wintering] [A048] Shelduck *Tadorna tadorna* [wintering] [A052] Teal *Anas crecca* [wintering] [A054] Pintail *Anas acuta* [wintering] [A056] Shoveler *Anas clypeata* [wintering] [A130] Oystercatcher *Haematopus ostralegus* [wintering] [A140] Golden Plover *Pluvialis apricaria* [wintering] [A141] Grey Plover *Pluvialis squatarola* [wintering] [A143] Knot *Calidris canutus* [wintering] [A144] Sanderling *Calidris alba* [wintering] [A149] Dunlin *Calidris alpina alpina* [wintering] [A156] Black-tailed Godwit *Limosa limosa* [wintering] [A157] Bar-tailed Godwit *Limosa lapponica* [wintering] [A160] Curlew *Numenius arquata* [wintering] [A162] Redshank *Tringa totanus* [wintering] [A169] Turnstone *Arenaria interpres* [wintering] [A179] Black-headed Gull *Chroicocephalus ridibundus* [wintering] [A999] Wetlands	6km northeast

Site code	Site name	Reasons for Designation (* = priority habitats)	Distance from site (km)
004040 https://www.npws.ie/protected-sites/spa/004040	Wicklow Mountains SPA	**Special Conservation Interest Species:** [A098] Merlin *Falco columbarius* [breeding] [A103] Peregrine *Falco peregrinus* [breeding]	9.4km south
004172 https://www.npws.ie/protected-sites/spa/004172	Dalkey Islands SPA	**Special Conservation Interest Species:** [A192] Roseate Tern *Sterna dougallii* [breeding] [A193] Common Tern *Sterna hirundo* [breeding] [passage] [A194] Arctic Tern *Sterna paradisaea* [breeding] [passage]	10.5km southeast
004016 https://www.npws.ie/protected-sites/spa/004016	Baldoyle Bay SPA	**Special Conservation Interest Species:** [A046] Light-bellied Brent Goose *Branta bernicla hrota* [wintering] [A048] Shelduck *Tadorna tadorna* [wintering] [A137] Ringed Plover *Charadrius hiaticula* [wintering] [A140] Golden Plover *Pluvialis apricaria* [wintering] [A141] Grey Plover *Pluvialis squatarola* [wintering] [A157] Bar-tailed Godwit *Limosa lapponica* [wintering] [A999] Wetlands	11.5km northeast
004113 https://www.npws.ie/protected-sites/spa/004113	Howth Head Coast SPA	**Special Conservation Interest Species:** [A188] Kittiwake *Rissa tridactyla* [breeding]	13.3km northeast
004117 https://www.npws.ie/protected-sites/spa/004117	Ireland's Eye SPA	**Special Conservation Interest Species:** [A017] Cormorant *Phalacrocorax carbo* [breeding] [wintering] [A184] Herring Gull *Larus argentatus* [breeding] [wintering] [A188] Kittiwake *Rissa tridactyla* [breeding] [A199] Guillemot *Uria aalge* [breeding] [wintering] [A200] Razorbill *Alca torda* [breeding]	14.6km northeast
Proposed Natural Heritage Areas			
002104	Grand Canal	There are no formal qualifying interests listed for proposed Natural Heritage Areas. A general site synopsis is available for most sites on the NPWS website: https://www.npws.ie/sites/default/files/general/pNHA_Site_Synopsis_Portfolio.pdf	1.49km
000210	South Dublin Bay		2.19km
001205	Booterstown Marsh		2.63km
002103	Royal Canal		3.12km
000201	Dolphins, Dublin Docks		3.83km
000206	North Dublin Bay		4.27km

Site code	Site name	Reasons for Designation (* = priority habitats)	Distance from site (km)
001753	Fitzsimon's Wood		5.30km
000991	Dodder Valley		6.46km
001206	Dalkey Coastal Zone And Killiney Hill		7.83km
000128	Liffey Valley		7.99km
000178	Santry Demesne		8.68km
001207	Dingle Glen		9.34km
001209	Glenasmole Valley		10.40km
001202	Ballybetagh Bog		10.49km
001211	Loughlinstown woods		10.61km
000202	Howth Head		10.98km
000199	Baldoyle Bay		11.46km
000725	Knocksink Wood		11.83km
001212	Lugmore Glen		11.88km
001763	Sluice River Marsh		12.89km
001208	Feltrim hill		13.07km
000713	Ballyman Glen		13.21km
001755	Glencree Valley		14.35km
001768	Powerscourt Woodland		14.39km
000211	Slade of Saggart and Crooksling Glen		14.48km
000203	Ireland's Eye		14.80km
000205	Malahide Estuary		14.95km

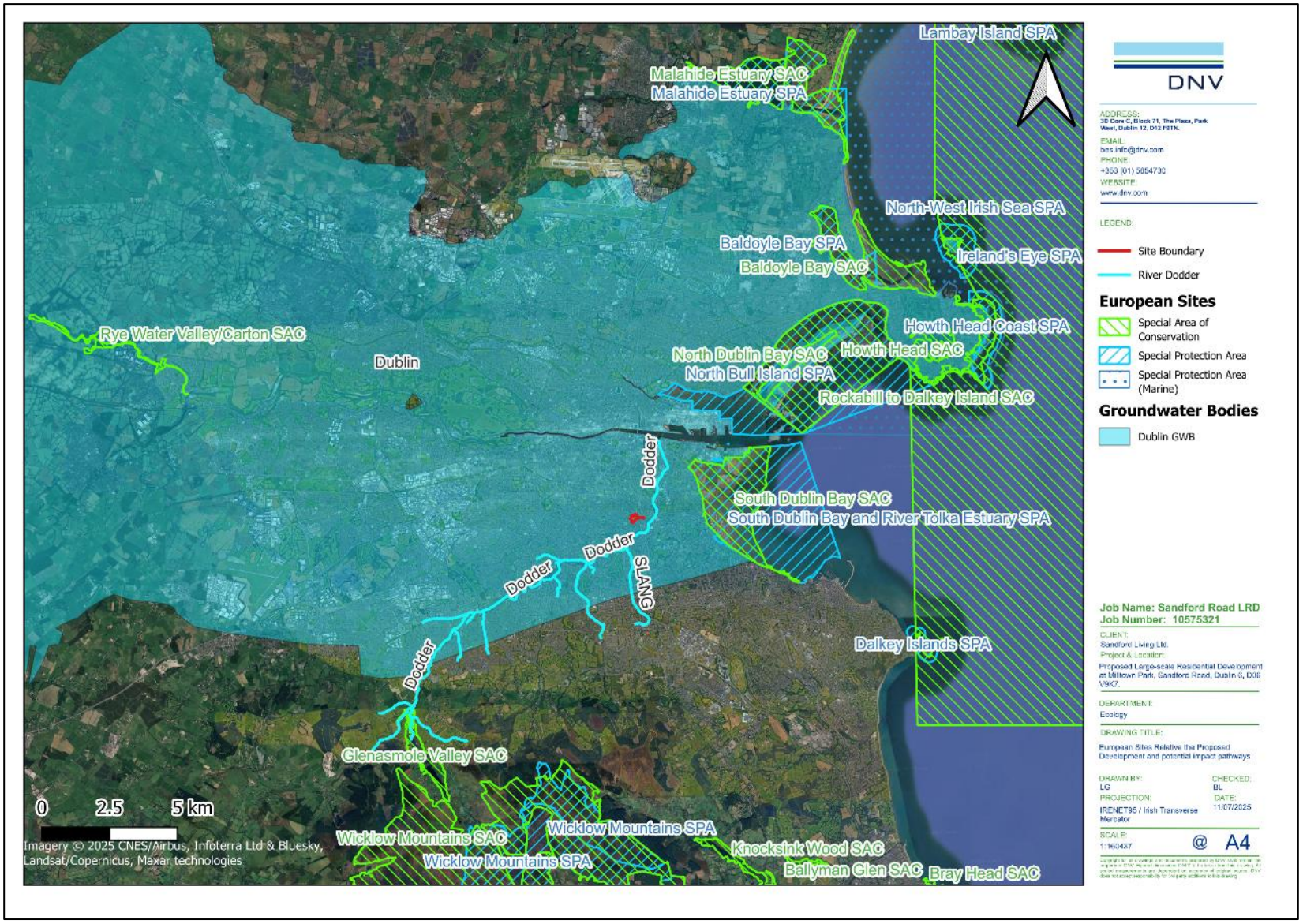

Figure 8.10: European Designated Sites relative to the Proposed Development and potential impact pathways (Source: DNV/QGIS).

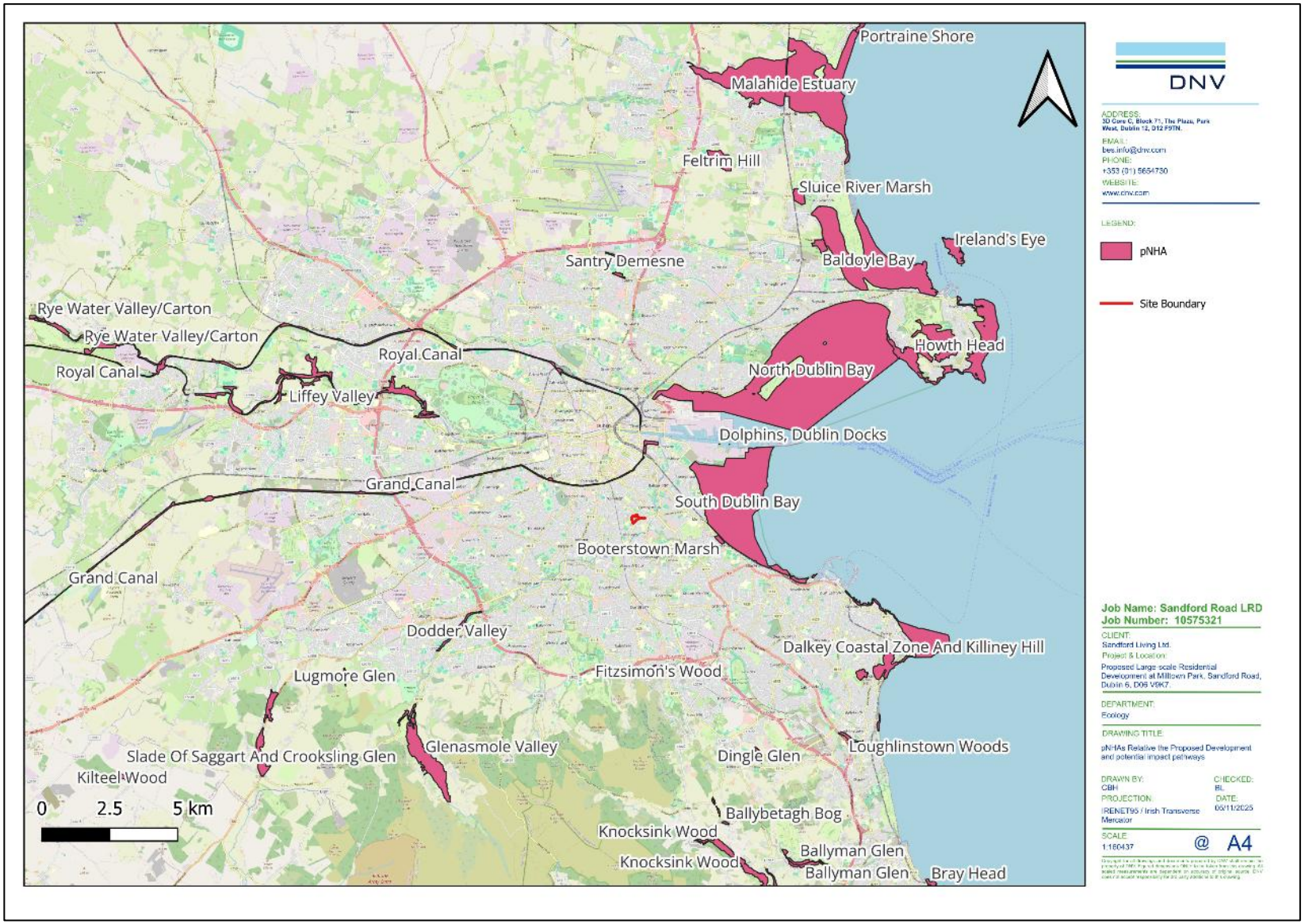

Figure 8.11: Proposed Natural Heritage Areas (pNHA) relative to the proposed development (Source: DNV/QGIS)

8.9.1.3.1 AA Screening Conclusion

The following is an excerpt of the concluding statement from the Appropriate Assessment (AA) Screening Report produced for the application under separate cover:

"The Proposed Development at Lands at Milltown Park, Sandford Road, Dublin 6, D06 V9K7 has been assessed taking into account:

- *The nature, size and location of the Proposed Development and possible impacts arising from the Construction and/or Operational Phase.*
- *The qualifying interests and conservation objectives of the European sites.*
- *The potential for in-combination effects arising from other plans and projects.*

In conclusion, upon the examination, analysis and evaluation of the relevant information, and applying the precautionary principle, it is concluded by the authors of this Report that, on the basis of objective information, the possibility may be excluded that the Proposed Development will have a likely significant effect on any of the European sites identified in this AA Screening as maintaining a S-P-R pathway with the Proposed Development. These Sites are listed below:

- *South Dublin Bay SAC (000210).*
- *North Dublin Bay SAC (000206).*
- *Rockabill to Dalkey Island SAC (003000).*
- *South Dublin Bay and River Tolka Estuary SPA (004024).*
- *North Bull Island SPA (004006)*
- *Wicklow Mountains SAC (002122).*

In carrying out this AA screening, specific targeted mitigation measures included for the primary reason of protecting a European site have not been taken into account.

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

(DNV, 2025a).

8.9.1.3.2 Natural Heritage Areas/proposed Natural Heritage Area (NHA/pNHA)

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. There are several pNHAs located within 15km of the proposed development Site, as shown in **Table 8.6** above. However, many of these have no S-P-R links to the Site or share overlapping boundaries with nearby European designated sites.

Potential impact pathways (S-P-R links) to all designated sites, including relevant NHA/pNHAs are discussed in Section 8.9.2 below.

8.9.1.3.3 Irish Wetland Bird Survey Sites (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.

There are no I-WeBS sites located within or near the proposed development. There are several associated with Dublin Bay and coast, however, the nearest I-WeBS site is located at Dublin Bay (site code: Ou404) located more than 4km from the Site.

8.9.1.3.4 Ramsar Sites

There are also no Ramsar sites located within or near the proposed development. There are several associated with Dublin Bay and coast, however, the nearest Ramsar site is once again at Dublin Bay, this is the Sandymount Strand/Tolka Estuary Ramsar site (site code: 832) located more than 4km from the Site.

This site is listed as a Wetland of International Importance under the Ramsar Convention on 7 June 1996. Comprised an area of approximately 643 hectares which contains extensive intertidal mudflats and sandflats (up to 3 km wide), saltmarsh, biogenic reef, and the largest stand of *Zostera noltii* (dwarf eelgrass) on Ireland's east coast. The site supports internationally important populations of wintering waterbirds, including light-bellied brent goose, black-tailed godwit, and bar-tailed godwit, and provides critical feeding and roosting habitat for migratory waders and wildfowl.

Sandymount Strand/Tolka Estuary Ramsar site is managed as part of the Dublin Bay UNESCO Biosphere Reserve, with objectives for conservation, education, and sustainable use. Activities include bird monitoring (Irish Wetland Bird Survey – I-WeBS), habitat management, and public awareness programs. Recreational activities such as walking and birdwatching occur, but are regulated to minimize disturbance to sensitive habitats and species.

8.9.1.3.5 Important Bird Areas (IBAs)

An Important Bird Area (IBA) is a site recognized internationally for its significance to the conservation of bird populations. The IBA program, developed by BirdLife International, identifies and protects critical habitats that support globally threatened species, species with restricted ranges, or large congregations of birds. IBAs are selected using standardized scientific criteria, ensuring consistency worldwide. These sites often overlap with other conservation designations such as Special Protection Areas (SPAs), Ramsar wetlands, or UNESCO Biosphere Reserves.

The primary objectives of IBAs are to: IBAs serve to safeguard habitats essential for breeding, feeding, and migration of bird species, provide a framework for monitoring bird populations

and habitat health, and to support national and international conservation planning and policy.

IBAs are not legal designations themselves but serve as a conservation tool, guiding governments, NGOs, and communities in prioritizing areas for protection and sustainable management.

Similar to the above, there no IBA sites within or near the proposed development. There are several associated with Dublin Bay and coast, however, the nearest IBA site is Dublin Bay (Site code: IE109) which is located more than 4km from the Site.

8.9.1.3.6 Other Designated Sites

It is also worth noting that North Dublin Bay SAC (000206) is also a designated national nature reserve; 'North Bull Island'. North Bull Island is also a Ramsar Wetland site (Site code: 406).

In addition, Dublin Bay, including green space in the city, is designated as a UNESCO Biosphere Reserve (expanded in 2015) and managed by Dublin City Council and partners (Dublin City Council, 2025). The Dublin Bay Biosphere covers approximately 305 km² and contains three zones, each managed differently:

- Core Zone: About 50 km² of areas with the highest natural value. Key sites include the Tolka and Baldoyle Estuaries, Booterstown Marsh, Howth Head, North Bull Island, Dalkey Island, and Ireland's Eye.
- Buffer Zone: Around 82 km² of public and private green spaces such as parks, greenbelts, and golf courses that surround and adjoin the core areas.
- Transition Zone: Approximately 173 km² forming the outer part of the Biosphere, including residential areas, harbours, ports, and industrial and commercial zones.

The Dublin Bay Biosphere is unique as the only UNESCO Biosphere Reserve in the world that includes a national capital within its boundaries, supporting over 300,000 residents while conserving internationally important habitats and species.

8.9.2 S-P-R Links to Designated Sites

Potential impact pathways are discussed in the following sections in the context of the proposed development as described in section 8.10.

8.9.2.1 Hydrological Pathways

There are no surface waterbodies located within or directly adjacent to the Site of the proposed development. The closest waterbody to the Site is the River Dodder (EPA Code:09D01) approximately 250m to the south-east of the sewer works associated with the proposed development, along Eglinton Road, and ca.470m to the east of the main Site area.

Stormwater generated at the Site during the Construction and Operational Phases of the proposed development will discharge to the existing surface water system which in turn discharges to the River Dodder, and eventually Dublin B ay via the Liffey. Additionally, during the Operational Phase, the proposed development will be served by Ringsend Wastewater Treatment Plant (WwTP). It is noted that there is a weak indirect hydrological pathway

between the Site and European sites in Dublin Bay via this sewerage network, which will eventually be processed and discharge to Dublin Bay and the corresponding European sites of South Dublin Bay SAC (000210), North Dublin Bay SAC (000206), Rockabill to Dalkey Island SAC (003000), South Dublin Bay and River Tolka Estuary SPA (004024), North Bull Island SPA (004006), and North-west Irish Sea Marine SPA (004232).

As a result, a weak hydrological pathway therefore exists between the Site and designated sites via the River Dodder. These include South Dublin Bay SAC (000210), North Dublin Bay SAC (000206), Rockabill to Dalkey Island SAC (003000), South Dublin Bay and River Tolka Estuary SPA (004024), North Bull Island SPA (004006), the North-west Irish Sea SPA (004236), North Bull Island Nature Reserve and Ramsar Site, Dublin Bay IBA, I-WeBS, and Ramsar sites, including the Sandymount Strand/Tolka Estuary Ramsar site.

Additionally, the following designated sites are hydrologically linked via this pathway: Dublin Bay I-WeBS, Ramsar and IBA Sites, Dublin Bay Biosphere UNESCO Site, South Dublin Bay pNHA, North Dublin Bay pNHA, Dalkey Coastal Zone & Killiney Hill pNHA, and Howth Head pNHA. All other pNHAs are not hydrologically connected to the Site or are located at a significant remove from the Site, which, accounting for the dilution and buffering capacity of the waters that intervene, would not have the potential for impact to arise, owing to the proposed development.

Potential surface water emissions during both the Construction and Operational Phases of the proposed development could enter the River Dodder, albeit via the receiving drainage network, subsequently reaching these designated sites.

However, all European designated sites were screened out in the AA Screening report produced by DNV(2025) under separate cover (also included in Appendix 8-3 of this EIAR). As such, the potential for hydrological impact on same, arising from the development, can be ruled out, and is not assessed further in this Chapter.

Similarly, the boundary of the aforementioned pNHA sites overlap with four European sites: Howth Head Coast SPA, North Bull Island SPA, South Dublin and River Tolka Estuary SPA, and Dalkey Islands SPA, all of which have been assessed in the AAS report which is available under separate cover. As such, these pNHAs can also be screened out by proxy as per the screening decisions and mitigation measures outlined in the accompanying AA Screening report (DNV, 2025a).

Owing to the increased distance and the potential buffering and dilution capacity of the receiving waters, no other designated sites are considered as having hydrological pathways with the proposed development.

8.9.2.2 Hydrogeological Pathways

During groundworks and other construction activities at the Site, the ground will be exposed, and any potential accidental discharges could potentially migrate vertically downward to the underlying bedrock aquifer. The closest Sites located within the same groundwater body as the proposed development are Dublin Bay sites, and Rye Water Valley/Carton SAC (001398), although this SAC is upstream of the River Liffey.

Given the topography of the groundwater body and the WFD catchments, which generally discharge towards the east coast and are intercepted by a series of rivers, any such discharges

from the Site are likely to flow eastwards towards the Dodder River rather than migrating laterally to the west. A weak hydrogeological pathway therefore exists between the Site and designated sites via the River Dodder. These include South Dublin Bay SAC (000210), North Dublin Bay SAC (000206), Rockabill to Dalkey Island SAC (003000), South Dublin Bay and River Tolka Estuary SPA (004024), North Bull Island SPA (004006), the North-west Irish Sea SPA (004236),North Bull Island Nature Reserve and Ramsar Site, Dublin Bay IBA, I-WeBS, and Ramsar sites, including the Sandymount Strand/Tolka Estuary Ramsar site.

As with the previous section; all European designated sites were screened out with regards hydrogeological pathways in the AA Screening report produced by DNV (2025), under separate cover (also included in appendix 8-3 of this EIAR). As such, the potential for hydrogeological impact on same, arising from the development, can be ruled out, and is not assessed further in this report.

Similarly, the boundary of the previously identified Dublin Bay Biosphere UNESCO site, pNHA, and the Dublin Bay I-WeBS, Ramsar, and IBA sites, overlap with four European sites: Howth Head Coast SPA, North Bull Island SPA, South Dublin and River Tolka Estuary SPA, and Dalkey Islands SPA, all of which have been assessed in the AAS report which is available under separate cover.

As such, these pNHAs can also be screened out by proxy as per the screening exercise outlined in the accompanying AA Screening report (DNV, 2025).

8.9.2.3 Land/Air Pathways

The Construction Phase of the proposed development could introduce dust and noise disturbance impacts transferable via air and land pathways, as well as increased lighting and human activity at the Site and in the vicinity of the Site during the Construction and Operational Phases. According to the AA Screening Report:

"The likely ZOI via air and land pathways is considered to be limited to surrounding areas within a maximum of approx. 400m from the Site boundary for any noise and dust sources, depending on prevailing weather conditions. There are no European sites located within the noise and dust ZOI of the proposed development and the Site is not used for ex-situ foraging/ roosting habitat by QIs and/or SCIs of Dublin Bay SPAs and SACs. It has therefore been concluded that there is no significant air/ land pathway linking the proposed development to any designated sites."

Per the previous sections, designated sites with overlapping boundaries to European sites have been ruled out by proxy based on the screening exercise detailed within the AA Screening Report (DNV, 2025).

Similarly, the potential for collision risk of SCI species was assessed and ruled out in the accompanying AA Screening Report and has therefore been excluded from further assessment in this Biodiversity Chapter.

8.9.2.4 Summary of S-P-R Assessment

A weak hydrological and hydrogeological pathway exists between the proposed development and designated sites in Dublin Bay via the River Dodder and the existing sewer network, which ultimately discharges to Dublin Bay following treatment at Ringsend Wastewater Treatment Plant. These pathways link the site indirectly to European sites

including South Dublin Bay SAC (000210), North Dublin Bay SAC (000206), Rockabill to Dalkey Island SAC (003000), South Dublin Bay and River Tolka Estuary SPA (004024), North Bull Island SPA (004006), and the North-west Irish Sea SPA (004232), as well as pNHA sites, Ramsar sites (e.g., Sandymount Strand/Tolka Estuary), Dublin Bay IBA, I-WeBS, and Dublin Bay Biosphere UNESCO site.

Potential surface water emissions during construction or operation could enter the River Dodder and eventually reach these sites; however, the distance involved, combined with dilution and treatment processes, significantly reduces the likelihood of adverse effects. Hydrogeological pathways are considered weak due to low aquifer vulnerability and the eastward flow direction toward the Dodder.

Additionally, effects on European sites from these hydrological and hydrogeological pathways were assessed in full and ruled out in the accompanying AA Screening report, with any designated sites with overlapping boundaries also being screened out by proxy.

Land and air pathways, including dust, noise, and light spill, are limited to a zone of influence of approximately 400 m from the Site boundary, with no European sites located within this range, while potential for collision risk was assessed and ruled out in full in the accompanying AAS report, owing to a detailed assessment of the development proposed, and SCI/QI species of nearby designated sites.

Consequently, significant effects on designated sites via any pathway are not anticipated.

8.9.3 Habitats

Summary of Habitats

The Site comprises a variety of habitats reflecting its historic parkland character within a predominantly urban setting. Key habitats include stone walls (BL1), which provide limited shelter and minor connectivity; buildings and artificial surfaces (BL3), where the Chapel and Tabor House offer potential bat roosting opportunities; and dry meadows and grassy verges (GS2), formerly improved amenity grassland, now supporting a tall, rank sward of grasses and forbs, with succession to scrub (WS1) habitat occurring around the margins and in areas of previously disturbed ground in the centre of the Site. Two areas of mixed broadleaf/conifer woodland (WD2) in the northwest and northeast support mature trees and understorey vegetation, contributing to ecological connectivity and assigned Regional/County Importance given their urban context.

Additional habitats include scattered trees and parkland (WD5) in the northern section; hedgerows (WL1), which are few, species-poor, and in poor condition; and several treelines (WL2), including mature Beech and Yew, which function as wildlife corridors. Scrub (WS1) occurs along the western and north-western boundaries, dominated by Bramble and providing food and cover for birds and insects. Ornamental and non-native shrub habitats (WS3) and WS3/GS2 mosaics occur around buildings and are considered of Less than Local Importance.

The wider area surrounding the site is predominantly urban, comprising BL3 Built Land interspersed with amenity green spaces, treelines, and hedgerows. Adjacent lands include residential gardens, sports pitches, and landscaped areas typical of suburban Dublin. Connectivity to semi-natural habitats is limited, although the River Dodder lies approximately 500 m to the southeast, providing a riparian corridor of ecological value.

Overall, the surrounding landscape is dominated by managed amenity grassland and ornamental planting, with occasional semi-natural features contributing modestly to local biodiversity within an otherwise heavily urbanised setting.

The value of each habitat identified within the Site is based on a combination of both field and desktop studies unless stated otherwise. Habitats within and around the Site boundary were recorded and are shown in **Figure 8.12**. The following sections provide a more detailed description of each habitat type present on Site, while **Table 8.7** below shows a summary of the habitat types recorded at the Site.

Table 8.7: Habitats recorded during the Site visit.

Habitat	Fossitt Code
Stone walls & other stonework	BL1
Buildings and artificial surfaces	BL3
Dry Meadows and Grassy Verges	GS2
Mixed broadleaved/conifer woodland	WD2
Scattered trees and parkland	WD5
Hedgerows	WL1
Treelines	WL2
Scrub	WS1
Ornamental/non-native shrub	WS3
Non-native shrub and Dry meadows mosaic	WS3/GS2

Figure 8.12: Habitat at the proposed Site including key features and invasive species found on Site (Source: QGIS/DNV)

8.9.3.1 Stonewalls and other stonework (BL1)

This habitat consists of stone walls (**Figure 8.13**) that bound the eastern section of the Site and the existing public footpath along Milltown Road to the south, continuing around to Sandford Road to the east/northeast. Old stone walls can provide ecological value in urban and suburban landscapes by offering cracks, crevices, and fissures that serve as potential roosting or shelter sites for species such as bats and common lizard. These features can also support invertebrates and mosses, contributing to microhabitat diversity. However, the wall at this location appears largely well-sealed and rendered, reducing its suitability for these species in significant numbers.

During the site survey, visibility of the entire wall was limited due to dense growth of ivy (*Hedera hibernica*) along the interior face. Nonetheless, some cracks and fissures were observed. Ivy itself can provide foraging opportunities for invertebrates and seasonal food resources (berries) for birds, while the cracks and fissures observed may offer some, albeit limited, shelter opportunities for individual animals such as common lizard or solitary bats In addition to shelter, old stone walls function as linear landscape features, acting as ecological corridors that facilitate movement and foraging for species such as bats and birds. These corridors can help maintain connectivity between fragmented habitats in urban areas, supporting local biodiversity and ecological processes.

Accounting for the above, the habitat has been assigned a value of **Local Importance – Lower Value.** This reflects its limited potential to support small numbers of common species and its minor role as a connective feature in the local landscape, rather than providing habitat for species of conservation concern or supporting significant ecological processes.

It is noted that the wall will largely be retained as part of the proposed development, with minor modifications proposed to reduce its height and install a railing on top. These changes will allow adjacent flora to be viewed from Milltown Road and the public footpath while maintaining the wall's function as a linear feature. Retention of the ivy and avoidance of unnecessary disturbance to cracks and crevices will help preserve its limited ecological value.

Figure 8.13: Stonewalls and other stonework (BL1) (Source: DNV).

8.9.3.2 Buildings and artificial surfaces (BL3)

This habitat comprises existing buildings and associated artificial surfaces, including hard-standing areas such as car parking spaces, pathways, and the access road leading to the main buildings. The principal structures on Site include the Chapel, the Archive building, Milltown Park House and Extensions, and Tabor House (**Figure 8.14**).

While artificial surfaces such as tarmacadam generally offer negligible ecological value, the buildings themselves can provide important opportunities for wildlife, particularly bats. Older structures often contain features such as gaps under roof tiles, cracks in masonry, and access points to roof spaces that can serve as roosting sites. Such roosts are critical for bats, which are protected under Irish and EU legislation, as they rely on such sites for shelter, breeding, and hibernation.

Both the Chapel and Tabor House have been assessed as having moderate potential to support roosting bats, given the presence of potential access points to roof spaces and the age and structure of these buildings. These buildings are being retained under the proposed development, although renovation works are planned. Renovation activities can pose a risk to bats if undertaken without appropriate mitigation, as disturbance or loss of roost sites can have significant ecological consequences.

Milltown Park House, which has low bat roost potential, is proposed for demolition. While its contribution to bat ecology is limited, demolition should still be preceded by appropriate checks to ensure compliance with wildlife legislation.

In addition to bats, ivy and other vegetation on building façades can provide foraging opportunities for invertebrates and seasonal food resources for birds. Buildings can also act

as stepping stones within the urban landscape, supporting connectivity for mobile species such as bats and birds between larger habitat patches.

Considering these factors, this habitat, specifically the Chapel and Tabor House, has been assigned a value of **Local Importance – Higher Value**. This reflects their potential to support protected species and their role in maintaining ecological connectivity. The tarmacadam surfaces and other buildings marked for demolition do not contribute significantly to ecological value.

Retention of the Chapel and Tabor House, combined with sensitive renovation practices (e.g., pre-works bat surveys, timing works outside maternity season, and provision of bat boxes), will help safeguard their ecological function within the Site. The potential impact on bat species is discussed in detail in Section 8.11 below.

Figure 8.14: Buildings and artificial surfaces (BL3) viewed from the north (Source: DNV).

8.9.3.3 Dry Meadows and grassy verges (GS2)

This habitat is the dominant type at the Site, occupying much of the central area. What was once likely improved amenity grassland (GA2) has transitioned to GS2 over time due to an infrequent mowing regime and lack of management. This has resulted in a tall sward of tussocky meadow grassland with succession to scrub (WS1) habitat present in the central/east section of the Site and along its margins (**Figure 8.15**).

Within the main body of this habitat i.e., the tussocky field in the centre of the Site, grass species dominate with grasses such as Cock's-foot (*Dactylis glomerata*), Creeping Bent-grass (*Agrostis stolonifera*) and Perennial Rye-grass (*Lolium perenne*) present. Forb species recorded include frequent Meadow buttercup (*Ranunculus acris*), occasional Cleavers (*Gallium aparine*), occasional Dandelion (*Taraxacum officinale*), occasional Creeping Buttercup

(*Ranunculus repens*), occasional Ribwort Plantain (*Plantago lanceolatea),* with rare occurrences of Common Sorrel (*Rumex acetosa*), and Hogweed (*Heracleum sphondylium).*

In the west of the Site, where GS2 margin habitat meets the *Prunus sp*. Treeline and the scrub habitat beyond, the species composition comprises lager forbs including dominant Winter Heliotrope (*Petasites pyrenaicus*), abundant Cow Parsley (*Anthriscus sylvestris*), frequent Blue Anenome (*Anemonoides apennina*), frequent Cleavers, frequent Meadow buttercup, frequent Hogweed, occasional Broad-leaved Dock (*Rumex obtusifolius*), occasional Daffodil (*Narcissus sp*.), occasional Bramble (*Rubus fruticosus*), occasional Dandelion and occasional Creeping Buttercup.

In the north-east of the Site, GS2 habitat is taller and scrubbier in nature and comprises species such as abundant Creeping thistle (*Cirsium arvense*), rare Spear thistle (*Cirsium vulgare),* abundant Dock, occasional Ragwort (*Senecio jacobaea*), and frequent Meadow buttercup, Creeping Buttercup, Ribwort Plantain and Dandelion.

Although GS2 is generally considered a low-value habitat in terms of rarity, its structural diversity and floral composition provide important resources for invertebrates, including pollinators such as bees, hoverflies, and butterflies. These, in turn, support higher trophic levels, including birds and bats that forage on insects. The tussocky grass and scrubby margins can also offer cover for small mammals and potential basking sites for reptiles such as common lizard, particularly where sunny patches occur.

The habitat's connectivity to adjacent scrub and treelines enhances its ecological function, creating a mosaic of semi-natural habitats that can facilitate species movement across the Site. Seasonal flowering of forbs like buttercups and cow parsley provides nectar sources, contributing to local pollinator networks.

This habitat has been assigned a value of **Local Importance – Lower Value**, reflecting its ability to support common species and contribute to local biodiversity, rather than hosting species of conservation concern or providing high-value ecological processes. Where retention is not possible, reinstatement as well as sensitive management such as maintaining a varied sward height and avoiding excessive mowing during peak flowering periods, would help sustain its ecological role within the Site.

Figure 8.15: Dry meadows and grassy verges (GS2) habitat viewed from Tabor House 1st floor facing north
(Source: DNV).

8.9.3.4 Mixed broadleaf/conifer woodland (WD2)

There are two distinct woodland areas located within the Site which comprise Mixed Broadleaf/Conifer Woodland (WD2) habitat. These are located to the northwest and northeast/east of the Site as shown in the habitat map (**Figure 8.12**). These woodland areas contain a mixture of native and non-native species of varying age profiles (immature and mature trees present). The structural complexity provided by this mix of species and age classes enhances the ecological value of these areas.

These woodland areas comprise the following tree species: Ash (*Fraxinus excelsior*), Beech (*Fagus sylvatica*), Sycamore (*Acer pseudoplatanus*), Yew (*Taxus baccata*), dense Holly *(Ilex aquifolium),* Poplar (*Populus spp*.), Bay Laurel (*Laurus nobilis*), Elder (*Sambucus nigra*), Leyland cypress (*Cupressus x leylandii*), Scots Pine (*Pinus sylvestris*), and Elm (*Ulmus spp*.). The north-eastern/eastern woodland understorey is dominated by Ivy, Winter Heliotrope; with abundant Bramble, Common Nettle and Cleavers; frequent Hogweed, Wood Avens (*Geum urbanum*), Lords and Ladies (*Arum maculatum*); and occasional Lesser Celandine (*Ficaria verna*). (**Figure 8.16** and **Figure 8.17**).

The north-eastern woodland contains some very mature Beech trees, along with an understorey comprised of the same species as above, with the addition of more grassland/edge species such as occasional Meadow buttercup, Dock species, and Dandelion, as well as invasive understorey specialists Cherry Laurel (*Prunus laurocerasus*) and Snowberry (*Symphoricarpos albus).*

These woodlands provide high structural diversity, supporting a wide range of ecological niches. Mature trees offer potential roosting sites for bats, while dense understorey

vegetation provides nesting habitat for birds and cover for small mammals. The presence of ivy and flowering plants contributes nectar and pollen resources for pollinators, while fallen leaves and deadwood support detritivores and fungi, forming the basis of woodland food webs.

Woodlands also function as key wildlife corridors, facilitating movement of species across the urban landscape. The Dublin City Biodiversity Action Plan (2021–2025) highlights the importance of trees and hedgerows as part of the city's green infrastructure network, and these woodlands contribute significantly to maintaining ecological connectivity between green spaces in Dublin.

Historic mapping (OSI 6-inch map, 1837–1842) confirms that these woodlands have been present for nearly two centuries, indicating their role as long-established habitats that support stable ecological communities. Such continuity enhances their biodiversity value compared to recently planted areas. Accounting for the above, this habitat has been assigned a value of **Regional/County Importance.** This reflects its ability to support a wide range of species, including those of conservation concern, and its role in sustaining ecological processes at a landscape scale.

Invasive species were also recorded within this habitat type, forming a dense understorey in some sections, however these are discussed in a separate section below (Section 8.9.4.1.3.2).

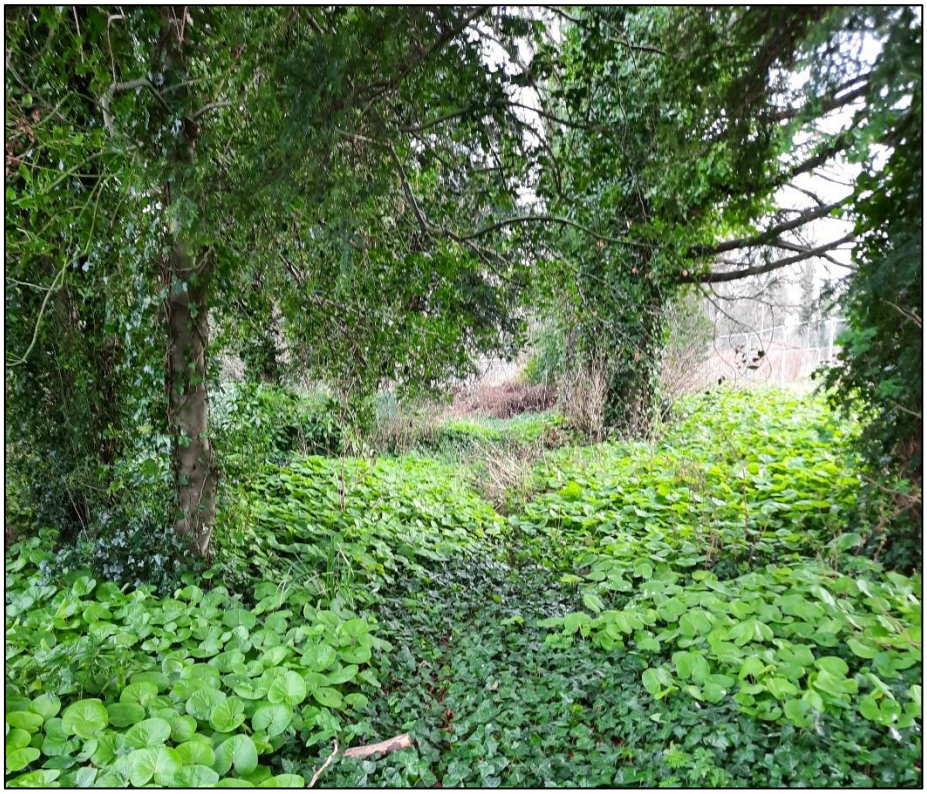

Figure 8.16: Image of from within the northern woodland area (WD2). Understorey is dominated largely by ivy and winter heliotrope *(Source: DNV)*.

Figure 8.17: View of the eastern mixed woodland with holly in the left foreground, looking towards the buildings located within the Site boundary *(Source: DNV)*.

8.9.3.5 Scattered trees and parkland (WD5)

This habitat type is located in the northern section of the Site, next to the gate at Sandford Road, and the adjoining entrance road to the carpark. Where the grassland meets the road, along the verge, opportunistic species have grown (**Figure 8.18**). Scattered on the grassland itself are mature tree species such as Hazel (*Corylus avelana*), Lime (*Tilia sp.),* and Sycamore. The understorey is comprised of generic GS2 Dry meadows species as described previously in this chapter. A Beech hedgerow separates this area from the GS2 Dry Meadows and Grassy Verges habitat at the main entrance.

Although relatively small in extent, this habitat contributes to structural diversity and connectivity within the Site. Mature trees offer potential nesting sites for birds, foraging opportunities for bats, and microhabitats for invertebrates such as beetles and pollinators. The grassland verge supports common wildflower species, providing nectar and pollen resources for insects, which in turn sustain higher trophic levels. The hedgerow acts as a linear feature, facilitating movement of small mammals and birds between adjacent habitats and enhancing the Site's ecological network.

The combination of scattered trees, hedgerow, and grassland creates a transitional edge habitat, which is often rich in biodiversity due to the overlap of woodland and grassland species. Such ecotones can support species like robin, blackbird, and wren, as well as pollinators such as bumblebees and hoverflies. In urban contexts, these features are particularly valuable for maintaining green infrastructure connectivity, as highlighted in the Dublin City Biodiversity Action Plan (2021–2025).

This habitat has been assigned a value of **Local Importance – Lower Value**, reflecting its modest size and species composition, while acknowledging its role in supporting common wildlife and contributing to habitat connectivity. Retention, or reinstatement, where

retention is not possible, of mature trees and the hedgerow, combined with sensitive verge management (e.g., reduced mowing during flowering periods), would help maintain and potentially enhance its ecological function.

Figure 8.18: Parkland with scattered trees adjacent to the main entrance in the north *(Source: DNV)*.

8.9.3.6 Hedgerows (WL1)

There are few examples of this habitat present on Site. A planted Beech hedgerow is located at the western side of the Sites main entrance gate. Directly south of the Scattered Trees and Parkland (WD5) habitat lies a low and broken hedgerow comprised of Beech and Blackthorn (*Prunus spinosa*), which separates the WD5 woodland from the GS2 grassland habitat. Due to its poor structural condition and limited species diversity, this latter hedgerow could be described as low linear scrub (See **Figure 8.19** below).

Hedgerows are widely recognized as important wildlife corridors, providing shelter, nesting sites, and food resources for birds, small mammals, and invertebrates. They also function as commuting routes for bats, linking feeding areas and roost sites across fragmented landscapes. The Dublin City Biodiversity Action Plan (2021–2025) highlights the role of species-rich hedgerows in maintaining green infrastructure connectivity within the city.

However, the hedgerows present on Site are not species-rich, consisting primarily of Beech and Blackthorn, and lack structural complexity (e.g., varied height, dense base, and diverse shrub layers). The broken hedgerow offers limited cover and food resources, reducing its

value for nesting birds and small mammals. Similarly, its function as a commuting corridor for wildlife is minimal compared to well-developed hedgerows.

Despite these limitations, even low-quality hedgerows can provide some ecological benefits, such as perching sites for birds, seasonal berries from Blackthorn, and nectar for early pollinators. They also contribute to landscape connectivity, albeit at a reduced level, and can serve as a foundation for future biodiversity enhancement.

As such, this habitat is considered to be of **Local Importance – Lower Value.** This reflects its restricted species diversity and poor condition, while acknowledging its potential role as a linear feature within the Site's ecological network. Enhancement measures, such as gapping up with native species (e.g., Hawthorn, Hazel, Holly), allowing natural regeneration, and reducing cutting frequency, would significantly improve its ecological function.

Figure 8.19: Poor quality hedgerow in the north of the Site *(Source: DNV)*.

8.9.3.7 Treelines (WL2)

Several treelines are present within the Site, contributing to its structural diversity and ecological connectivity:

- Western Boundary: A treeline comprising Cherry (*Prunus avium*) runs along the western Site boundary.
- Central Area: Two treelines run north–south adjacent to existing buildings, dominated by Holly (*Ilex aquifolium*) (**Figure 8.20**).

- Eastern Carpark Edge: A treeline along the eastern extent of the carpark, bounding the WD2 woodland, includes Holly, Lawson Cypress (*Chamaecyparis lawsoniana*), Monterey Cypress (*Cupressus macrocarpa*), and Atlantic Blue Cedar (*Cedrus atlantica*) (**Figure 8.21**).
- Southeast Entrance: A mixed-species treeline at the proposed Site entrance comprises Yew (*Taxus baccata*) and a very mature Beech (*Fagus sylvatica*).

Treelines are important linear habitats that function as wildlife corridors, facilitating movement of birds, bats, and small mammals across fragmented landscapes. Mature trees within these treelines provide nesting and roosting opportunities, while foliage and bark support invertebrates, forming a food resource for higher trophic levels. Flowering and fruiting species such as Cherry and Holly offer seasonal nectar and berries for pollinators and birds.

In urban contexts, treelines play a key role in green infrastructure, linking larger habitat patches such as woodlands and grasslands. The Dublin City Biodiversity Action Plan (2021–2025) emphasizes the importance of trees and hedgerows in maintaining ecological connectivity, and these treelines contribute significantly to that network.

The presence of mature Beech and Yew at the southeast entrance adds particular value, as older trees often support specialist species, including cavity-nesting birds and roosting bats. Removal of the central treeline to facilitate works will reduce connectivity and habitat availability, underscoring the need for mitigation measures such as compensatory planting and retention of key mature trees where possible.

This habitat has been assigned a value of **Regional/County Importance**, reflecting its role in supporting common and protected species, its contribution to connectivity, and the presence of mature trees that enhance structural and ecological complexity.

Figure 8.20: Holly treeline which extends north to south throughout the Site *(Source: DNV)*.

Figure 8.21: Treeline located within the eastern central part of the Site *(Source: DNV)*.

8.9.3.8 Scrub (WS1)

Scrub (**Figure 8.22** & **Figure *8.23***) occurs within the central eastern portion of the Site, having developed on meadow and hardstanding areas in recent years. Scrub is also present along the western and north-western boundaries of the Site, with smaller patches located behind the Chapel building. The scrub habitat along the margins of the Site is bramble-dominated, with abundant Winter Heliotrope (*Petasites pyrenaicus*), Common Nettle (*Urtica dioica*), and Hogweed (*Heracleum sphondylium*), frequent Cleavers (*Galium aparine*), and occasional Meadow Buttercup (*Ranunculus acris*). Invasive species were recorded within scrub areas along the western and north-western boundaries; these are addressed separately in section 8.9.4.1.3 below. The central/eastern sections of scrub habitat are dominated by tall herbaceous species such as dock (*Rumex sp*.), Creeping thistle, Spear thistle, Ragwort, Buddleia (seedlings and small stands developing), as well as Cherry seedlings.

Scrub habitats are ecologically valuable as transitional zones between grassland and woodland, offering a mosaic of niches for wildlife. Dense bramble provides nesting and shelter for birds such as wren, robin, and blackbird, while its flowers and berries supply nectar and fruit for pollinators and frugivorous species. Herbaceous plants like hogweed and nettle support a variety of invertebrates, including butterflies and moths, which in turn provide food for birds and bats.

Scrub also offers cover for small mammals and can act as a commuting corridor for species moving between habitats. Its structural complexity, combining thorny shrubs, herbaceous plants, and ground cover, creates microhabitats that sustain biodiversity throughout the year. In urban landscapes, scrub is particularly important for maintaining green infrastructure connectivity.

Although invasive species reduce the overall ecological quality, the scrub still functions as a key resource for insects and garden birds in this context, contributing to local food webs and seasonal foraging opportunities.

This habitat has been assigned a value of **Local Importance – Higher Value**, reflecting its role in supporting common wildlife and providing essential food and shelter resources, despite the presence of invasive species. Retention and enhancement, such as invasive species control, selective thinning, and planting of native shrubs (e.g., hawthorn, blackthorn) would further improve its ecological function.

Figure 8.22: Scrub with bramble (dominant) in the western part of the Site *(Source: DNV)*.

Figure 8.23: Scrub (WS1) habitat developing in the central/east section of the Site (Image facing north) (Source: DNV).

8.9.3.9 Ornamental/non-native shrub (WS3)

The overgrown flowerbeds around the buildings are planted with ornamental and non-native tree and shrub species e.g., palm species and some occasional Silver Birch (*Betula pendula*). These areas were originally designed for aesthetic purposes rather than biodiversity and now exhibit limited structural diversity and ecological function.

Ornamental plantings typically provide minimal value for native wildlife, as many non-native species do not offer suitable nectar, pollen, or fruit resources for Irish pollinators and birds. Additionally, the absence of native shrubs and ground flora reduces opportunities for nesting, shelter, and foraging. While occasional Silver Birch can support some invertebrates and provide perching sites for birds, the overall contribution of these flowerbeds to local biodiversity is negligible compared to semi-natural habitats such as scrub, hedgerows, or woodland.

In their current overgrown state, these flowerbeds may offer limited cover for small mammals or invertebrates, but they do not function as ecological corridors or significant food sources. Their role in maintaining connectivity within the Site's green infrastructure network is therefore minimal.

This habitat has been assigned a value of **Less than Local Importance,** reflecting its ornamental origin, dominance of non-native species, and lack of ecological processes or species of conservation concern. Enhancement measures, such as replacing non-native

ornamentals with native shrubs and wildflowers, could substantially improve biodiversity value and align with the objectives of the Dublin City Biodiversity Action Plan.

8.9.3.10 Non-native shrub and dry meadows mosaic (WS3/GS2)

This habitat occurs in small pockets around the Tabor House building, where ornamental and non-native shrub species meet areas of GS2 Dry Meadows and Grassy Verges. The dominant ornamental species include New Zealand Broadleaf (*Griselinia littoralis*) and Butterfly Bush/ Buddleja with an understorey primarily composed of grasses and common meadow species. Recorded ground flora includes frequent Ivy (*Hedera hibernica*), Dandelion (*Taraxacum officinale*), Germander Speedwell (*Veronica chamaedrys*), Bramble (*Rubus fruticosus*), Creeping Buttercup (*Ranunculus repens*), and Ribwort Plantain (*Plantago lanceolata*), with occasional Cleavers, Daisy (*Bellis perennis*), Dock species, and rare Meadow Buttercup (*Ranunculus acris*).

Although dominated by ornamental shrubs, this habitat provides some ecological value due to its interface with semi-natural grassland. The presence of Butterfly Bush is notable, as although invasive, it offers nectar resources for pollinators such as butterflies and bees during summer months. Ground flora species like dandelion and speedwell also contribute to early-season nectar availability, supporting pollinator networks.

The structural diversity created by shrubs and meadow species offers cover for small mammals and nesting opportunities for birds, while bramble provides seasonal berries for frugivorous species. However, the dominance of non-native shrubs limits overall biodiversity potential compared to native hedgerows or scrub habitats.

This habitat has been assigned a value of **Local Importance – Lower Value**, reflecting its limited extent and reliance on non-native species, while acknowledging its role in providing nectar sources and structural diversity within the Site. Enhancement measures, such as gradual replacement of non-native ornamentals with native shrubs (e.g., hawthorn, holly, guelder rose) and wildflower planting, would significantly improve its ecological function.

8.9.3.11 Adjacent habitats

The wider area surrounding the proposed development at Milltown Park, Sandford Road, Dublin 6 is predominantly urban in character, comprising a mosaic of BL3 Built Land interspersed with amenity green spaces, treelines, and hedgerows. The adjacent lands include residential gardens, sports pitches, and landscaped areas typical of suburban Dublin.

Connectivity to semi-natural habitats is limited, though the River Dodder lies approximately 500 m to the southeast, providing a riparian corridor of ecological value. Overall, habitats in the wider area are dominated by managed amenity grassland and ornamental planting, with occasional semi-natural features contributing to local biodiversity within an otherwise heavily urbanised setting.

8.9.4 Species and Species Sub-groups

The Site of the proposed development is located within the Ordnance Survey Ireland National Grid 2km square 013Q and 1km square O1731 to the east, and O1631 to the west. Species records from the National Biodiversity Data Centre (NBDC) online database for these

grid squares were studied for the presence of rare or protected flora and fauna. In addition, data from various sources (e.g., Inland Fisheries Ireland) were used to determine the presence of species in the vicinity of the proposed development. The following sections outline the results of this assessment. Followed by the results of the field surveys that were undertaken at the Site.

This combined approach, desktop review and field survey, ensures compliance with legal requirements and best practice guidance, while informing mitigation measures to avoid impacts on protected species.

8.9.4.1.1 Flora

8.9.4.1.2 Rare and Protected Flora

Species records from the NBDC online database were studied for the presence of rare or protected flora species. No records of rare or protected flora species were found in the 2km and 1km grid squares. No rare or protected flora were recorded on Site.

8.9.4.1.3 Invasive Alien Plant Species (IAPS)

8.9.4.1.3.1 Desk Study Results

The NBDC have records (dated within the last 20 years) of 15 IAPS within the 2km grid square associated with the Site. Seven of these are considered 'high impact', whereas eight are considered to be 'medium impact'. Japanese knotweed (*Fallopia japonica)* is the only IAPS that was recorded in all grid squares (2km and 1km) related to the Site. Of the invasive plant species recorded by the NBDC only one could be considered aquatic/semi-aquatic: Least Duckweed (*Lemna minuta*) (13Q), however, the record for this was greater than 20 years old (recorded in 1993) and so was excluded from the below table. The results for all grid squares that encompass the Site are shown in **Table 8.8** below.

No invasive plant species were recorded within the 100m grid squares that encompass the Site (O169310, O169311, O169312, O170311, and O170312) (NBDC, 2025).

Table 8.8: List of all species recorded in the 10km, 2km, and 1km grid squares that encompass the proposed development Site.

Name	Grid Square/Impact	Date of Last Record	Database	Legal Status/Designation
Japanese Knotweed (*Fallopia japonica)*	O13Q, O1631, O1731	09/05/2025	National Invasive Species Database	High Impact Species Reg SI. 477
Indian Balsam (*Impatiens glandulifera)*	O13Q, O1731	16/08/2022	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	High Impact Species Reg SI. 477
Cherry Laurel (*Prunus laurocerasus)*	O13Q	28/08/2020	Community Foundation for Ireland Records	High Impact Species

Name	Grid Square/Impact	Date of Last Record	Database	Legal Status/Designation
Fallopia japonica x sachalinensis = F. x bohemica	O13Q	21/05/2010	National Invasive Species Database	High Impact Species Reg SI. 477
Giant Hogweed (*Heracleum mantegazzianum)*	O13Q	03/09/2012	National Invasive Species Database	High Impact Species Reg SI. 477
Giant-rhubarb (*Gunnera tinctoria)*	O13Q	24/05/2020	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	High Impact Species Reg SI. 477
Three-cornered Leek *(Allium triquetrum)*	O13Q, O1631	13/05/2023	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Species Reg SI. 477
Himalayan Balsam (*Impatiens glandulifera*)	O13Q	09/05/2025	National Invasive Species Database	High Impact Species Reg SI. 477
Sycamore (*Acer pseudoplatanus)*	O13Q, O1731	28/08/2020	Community Foundation for Ireland Records	Medium Impact Species
Butterfly-bush (*Buddleja davidii)*	O13Q	13/08/2024	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Species
Canadian Fleabane (*Conyza canadensis)*	O13Q	28/08/2020	Community Foundation for Ireland Records	Medium Impact Species
Evergreen (Oak *Quercus ilex)*	O13Q	28/08/2020	Community Foundation for Ireland Records	Medium Impact Species
Himalayan Honeysuckle (*Leycesteria formosa)*	O13Q	10/07/2021	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Species
Spanish Bluebell (*Hyacinthoides hispanica)*	O13Q	30/03/2021	National Invasive Species Database	Medium Impact Species
Traveller's-joy (*Clematis vitalba)*	O13Q	10/08/2021	Community Foundation for Ireland Records	Medium Impact Species

8.9.4.1.3.2 Field Study Results

Several IAPSs were recorded on Site, these include:

- Butterfly Bush
- Cherry Laurel (*Prunus laurocerasus*)
- Himalayan Honeysuckle (*Leycesteria formosa*)
- Snowberry (*Symphoricarpos albus*)
- Spanish Bluebell (*Hyacinthoides hispanica*)*
- Three-cornered Leek (*Allium triquetrum*)*
- Traveller's Joy (*Clematis vitalba*)
- Winter Heliotrope (*Petasites pyrenaicus*)

Of this list, only two species (those with an *) are high-impact species listed on the Third Schedule of European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011). The Medium impact invasive species recorded on Site include Butterfly Bush, Traveller's Joy, and Himalayan Honeysuckle.

In addition, Ragwort (*Jacobaea vulgaris*) which is not an invasive plant species but is considered a noxious weed under the Noxious Weeds Act, 1936 (and amended), was also recorded along the grassy verges contiguous to the carpark. The habitat map (**Figure 8.12**) shows the precise location of the invasive species where they occur across the Site. For the most part, invasive species were restricted to the perimeter of the Site and no invasive plant species were found to occur in the centre of the Site which is comprised of GS2 grassland habitat.

Invasive species were recorded on-site during ecological surveys conducted previously by JBA in 2019/20, and Invasive Plant Solutions. On foot of these observations, the client approved the immediate deployment of bio-security measures and the commencement of an active herbicide treatment regime, spanning April, May and June 2021. The purpose of these initial measures was to protect the plant stands from disturbance, through the erection of fencing and signage, and to mitigate the risk of seed dispersal and plant reproduction by the spot application of approved herbicide. Subsequent IAPS surveys have been conducted at the Site in December 2020, April and September 2021, April 2022, and March, April 2023, and finally October 2025 (with a 2026 survey pending) to determine the extent of IAPS on Site. The results of which have informed an update to the management plan, as necessary, by Invasive Plant Solutions (2025).

8.9.4.2 Non-Volant Mammals

8.9.4.2.1 Desk Study Results

Records for terrestrial mammals were retrieved from the NBDC online database. Three native terrestrial mammals were recorded within the 2km grid square associated with the Site. Of these, only Otter (*Lutra lutra)* is afforded legal protection in Europe (EU Habitats Directive), while Badger (*Meles meles)* are afforded legal protection in Ireland under the Wildlife Acts 1976, as amended. (**Table 8.9**). Three non-native terrestrial mammals were recorded within the 2km grid square, and all three are considered 'High Impact'.

Table 8.9: Recorded Mammal species within the grid squares that encompass the proposed development Site.

Name	Date of Last Record	Database	Legal Status/Designation
Native Species			
Badger *(Meles meles)*	04/09/2018	Mammals of Ireland 2016-2025	Protected Species: Wildlife Acts
Otter (*Lutra lutra)*	28/09/2017	Mammals of Ireland 2016-2025	EU Habitats Directive: Annex II and IV Protected Species: Wildlife Acts
Red Fox *(Vulpes vulpes)*	25/10/2018	Mammals of Ireland 2016-2025	Not currently designated for protection in Ireland
Non-native Species			
American Mink *(Mustela vison)*	26/10/2011	Atlas of Mammals in Ireland 2010-2015	High-Impact Invasive Species Reg S.I. 477 (Ireland)
Brown Rat *(Rattus norvegicus)*	15/09/2015	Atlas of Mammals in Ireland 2010-2015	High-Impact Invasive Species Reg S.I. 477 (Ireland)
Eastern Grey Squirrel (*Sciurus carolinensis)*	15/12/2022	Mammals of Ireland 2016-2025	High-Impact Invasive Species Reg S.I. 477 (Ireland)

There are no watercourses draining the Site, however, the River Dodder is located 500m to the southeast. According to the Dublin City Otter Survey (Macklin et al., 2019), Otters do utilise the River Dodder.

A total of 47 No. Otter signs were recorded along the River Dodder during the Dublin City Otter Survey (2018-2019), the highest result for any watercourse surveyed as part of this study. The results were well distributed along the length of this river channel (**Figure 8.24**), and this river alone accounted for 24% of all Otter signs recorded in this study (Macklin et al., 2019). The results for the 2023-2024 National Otter Survey are pending completion and release later in 2025. While results for a small section of the River Dodder at Smurfit Paper Mills, along the R825 Regional Road, southeast of the Site, are available (Triturus Environmental, Ltd., 2025). A summary of same is provided below;

An otter survey was undertaken on the 9th of April 2025 along a 600 m section of the River Dodder at Smurfit Paper Mills, Clonskeagh, to inform a Section 54 derogation application for the proposed development. The survey, commissioned by DNV and carried out by Triturus Environmental Ltd., followed best practice using a Total Corridor Otter Survey (TCOS) method under suitable weather conditions. Both riverbanks and in-stream areas were assessed by foot and kayak, with GPS mapping of signs including spraints, latrines, holts, couches, and slides.

A total of thirteen signs were recorded (21.6 signs/km), comprising five spraint sites, three latrines, three holts (including one newly excavated since 2024), one couch, and one slide. Two holts were located upstream and one downstream of Clonskeagh Bridge, with one holt adjacent to the Site boundary within retained woodland. Despite urban pressures, the corridor supports established otter activity, including breeding/resting sites.

In addition, unsurprisingly the 2018-2019 Dublin City Otter Survey report found that less developed areas saw increased otter activity.

However, while accounting for the above, it is not anticipated that Otter would utilise the proposed development Site itself due to the lack of suitable habitat therein and the urban buffer that exists between the Site and this waterbody, as shown in **Figure 8.25,** which shows the distribution of Otter within the 2km square grid O13Q that contains the Site (Red Line).

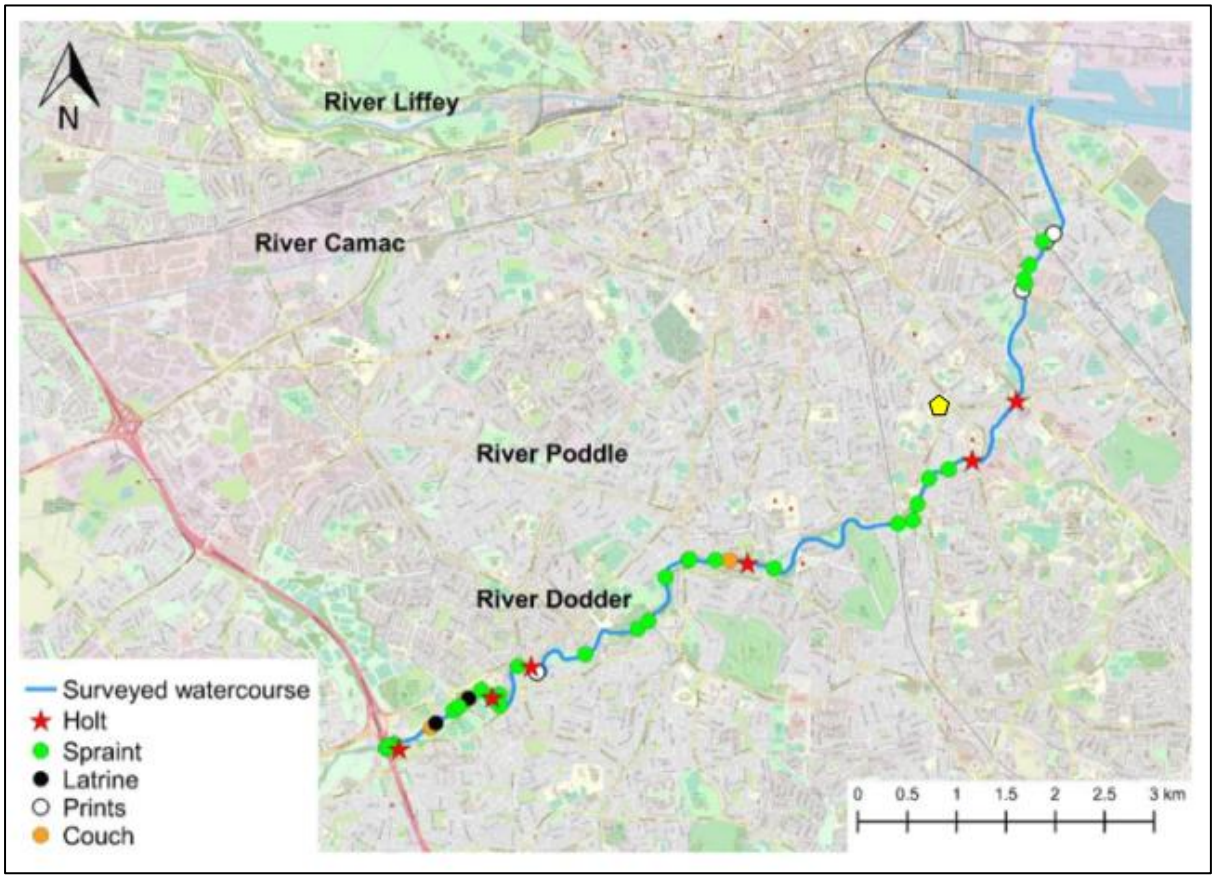

Figure 8.24: Otter sign distribution on the surveyed reaches of the River Dodder, Co. Dublin as surveyed April 2018 – April 2019 during the Dublin City Otter Survey (Site of the Proposed development shown as yellow pentagon).
(Source: Macklin. R. et al, 2019)

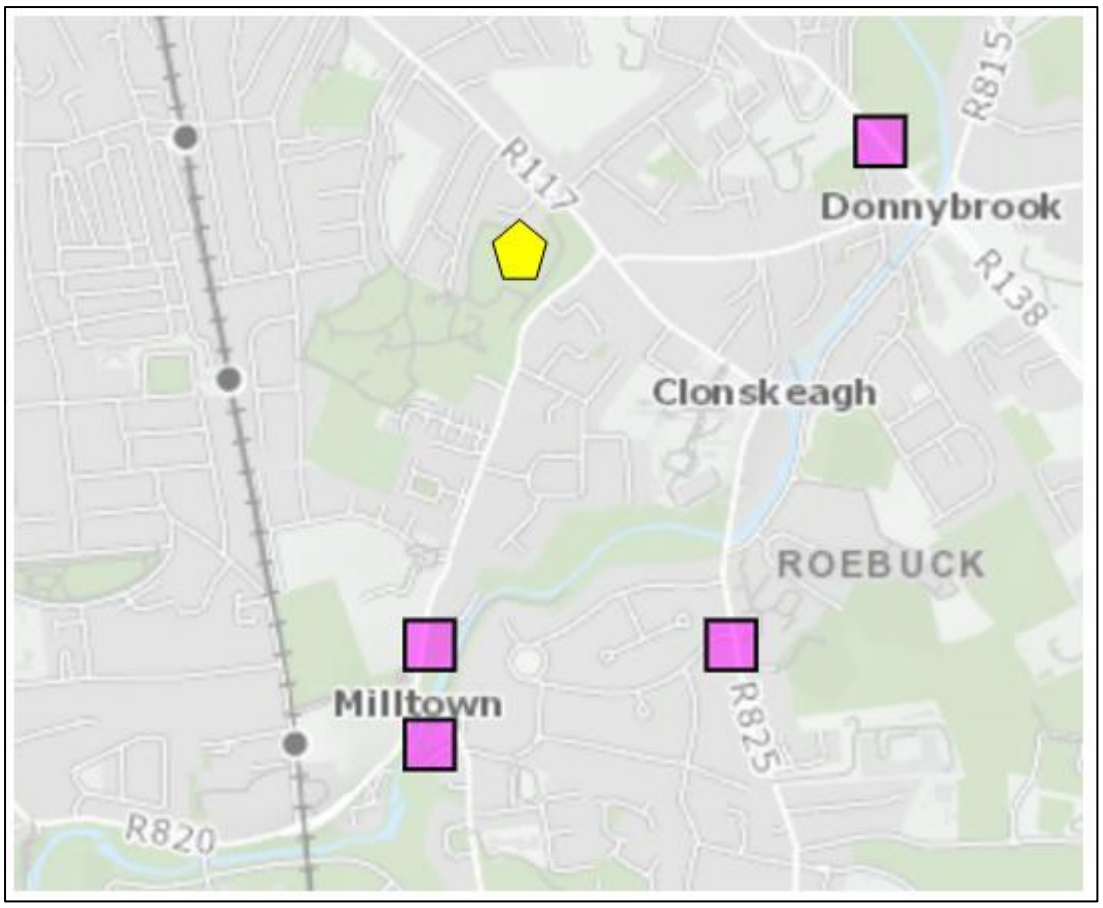

Figure 8.25: The distribution records for Otter within the 2km square grid O13Q in relation to the location of the proposed development Site (yellow pentagon).
(Source: NBDC, 2023)

8.9.4.2.2 Field Study Results

In addition to the desktop review above, a review was undertaken for records held by the NBDC for terrestrial mammal species protected under the Wildlife Act, 1976 and Wildlife (Amendment) Act, 2000 within 10km grid square O13 of the proposed Site (NBDC, 2025). This review is a critical step in ecological assessment as it identifies species of conservation concern that may occur locally, informing the scope of field surveys and mitigation requirements.

The NBDC data review returned the following results:

- Eurasian Badger (*Meles meles).*
- Eurasian Red Squirrel (*Sciurus vulgaris).*
- Eurasian Pygmy Shrew (*Sorex minutus).*
- European Otter (*Lutra lutra).*
- European Rabbit (*Oryctolagus cuniculus).*
- Fallow Deer (*Dama dama).*
- Greater White-toothed Shrew (*Crocidura russula).*
- Pine Marten (*Martes martes).*
- West European Hedgehog (*Erinaceus europaeus).*

These records indicate the potential presence of both common and protected mammal species within the wider landscape. While the NBDC data does not confirm presence on the Site itself, it highlights the need for field verification and consideration of habitat suitability for these species during the assessment process.

The Site visits were conducted with particular attention given to the mammal species previously identified in the grid squares that encompass the Site.

Site visits were conducted with particular attention to habitats that could support these mammals, including woodland, scrub, hedgerows, and grassland areas. Surveys focused on identifying field signs such as tracks, droppings, feeding remains, burrows, and setts. The results of these searches are summarised in ***Table 8.10*** and shown in **Figure 8.28**.

Table 8.10: Mammal survey results from the Site visits

Species	Survey record
Eurasian Badger (*Meles meles)*	There was no confirmed sign of Badger foraging, commuting (tracks), latrines, Setts, or any other form of habitation recorded during the surveys of the Site and its surrounds. Two abandoned mammal burrows were recorded within the eastern woodland at the Site (entrances filled with/covered in dense leaf litter). These may represent previous badger sett/fox dens, however they have been abandoned for some time (See **Figure 8.27**). Another burrow previously recorded within the central grassland at the Site in 2023, has since become completely overgrown and is no longer visible at the Site (See **Figure 8.26**). This was likely to be a fox den based on appearance and regular presence of fox as recently as autumn 2025.
Eurasian Red Squirrel (*Sciurus vulgaris)*	There was no sign of Red Squirrel foraging remains, dreys, commuting (tracks), scat or any other form of habitation recorded during the surveys of the Site and its surrounds.
Eurasian Pygmy Shrew (*Sorex minutus)*	There was no sightings of Pygmy Shrew recorded during the surveys of the Site and its surrounds.
European Otter (*Lutra lutra)*	There was no sign of Otter habitation recorded during the surveys of the Site and its surrounds.
European Rabbit (*Oryctolagus cuniculus)*	There was no sign of European Rabbit habitation recorded during the surveys of the Site and its surrounds.
Fallow Deer (*Dama dama)*	There was no sign of Fallow Deer habitation recorded during the surveys of the Site and its surrounds.
Greater White-toothed Shrew (*Crocidura russula)*	There was no sign of Greater White-toothed Shrew recorded during the surveys of the Site and its surrounds.
Pine Marten (*Martes martes)*	The surveys recorded no Pine Marten-related habitation signs such as scats, tracks or any other form of habitation on Site or in the surrounding area.
West European Hedgehog (*Erinaceus europaeus)*	No field signs including scat or tracks of Hedgehog were recorded on Site or in the surrounding area during the surveys.

The mammals listed above are all categorised as of 'least concern' in Ireland in the latest Ireland Red List (Marnell *et al.,* 2019). The Otter is an Annex II species protected under the European Habitats Directive.

No evidence of the above-listed terrestrial mammals was recorded during the Site visits conducted by DNV in 2023, 2024, and 2025.

Habitat Suitability:

- Otter: The Site is unsuitable due to the absence of watercourses or aquatic habitats within or adjacent to the development footprint.
- Pine Marten and Red Squirrel: Both species are woodland specialists and highly sensitive to disturbance. While the Site contains areas of woodland, these are isolated within an urban matrix and unlikely to support viable populations, particularly given the dominance of Grey Squirrel (*Sciurus carolinensis*) in urban areas and this species recorded presence at the Site.
- Fallow Deer: Access impossible given known distributions for these species and presence of boundary walls and surrounding residential development.
- Shrews: Both Greater White-toothed Shrew and Pygmy Shrew occur in a range of habitats. However, where the former is established, the latter is typically absent (NBDC, 2023). The Site's woodland and scrub habitats could support shrews, although none were recorded during surveys.
- Badger and Hedgehog: No setts or definitive signs were observed, but suitable habitat exists within woodland and scrub margins. NBDC records confirm these species occur in the wider landscape.

In terms of mammal activity; Mammal paths were noted throughout the Site during each of the site surveys carried out by DNV to date. Trails observed were primarily along linear features such as woodland edges, hedgerows, and scrub. Disused burrows and evidence of predation (bird remains recorded in 2023) suggest Red Fox (*Vulpes vulpes*) activity. Red Fox was confirmed during historical surveys on Site through visual sightings, paw prints, and burrows, and remains the most frequently recorded species, with repeated observations by DNV as recently as autumn 2025. Red Fox is a common, adaptable species afforded only basic protection under the Wildlife Act (1976 and amendments).

No evidence of badger setts or other protected mammals was detected. Mammal activity is consistent with an urban fringe environment, dominated by generalist species and providing foraging opportunities within scrub and woodland margins. No increase in invasive mammal presence was noted since previous surveys, with Grey Squirrel continuing to use the Site.

The absence of Annex IV or other strictly protected terrestrial mammals indicates that the proposed development is unlikely to result in significant direct impacts on these species. However, the Site does provide potential habitat for Badger, Hedgehog, and Pygmy Shrew, which have been identified as Key Ecological Receptors (KERs) in this assessment.

Accounting for habitat suitability and species records, the Site is valued as **Local Importance – Higher Value** for terrestrial mammals, specifically Badger, Hedgehog, and Pygmy Shrew. As a result, mitigations to safeguard mammal species during the construction phase are recommended.

Figure 8.26: The mammal burrow previously recorded in the central grassland at the Site in 2023, and now completely overgrown/undiscoverable at the Site (Source: DNV).

Figure 8.27: The two abandoned mammal burrows recorded in the eastern woodland at the Site (Source: DNV).

Figure 8.28: Evidence of mammal activity recorded at the Site to date (Source: DNV)

8.9.4.3 Bats

8.9.4.3.1 Desk Study Results

The NBDC map viewer contains a field layer entitled 'Bat Landscapes' which is based on the results of research by Lundy *et al.* (2011) that assessed the relative importance of landscape/habitat features present across the Irish landscape for bats. Based on this assessment, the Bat Habitat Suitability Index was established (BHSI). The index ranges from 0 to 100, with 0 being the least favourable and 100 being the most favourable for bats. The index is available for all species combined in addition to individual species indices. A review of this layer determined the BHSI ratings for all bat species at the Site, which are shown in **Figure 8.29** and listed in the below table (**Table 8.11**), along with the main roost types associated with each bat species (Teagasc, 2023).

Table 8.11: BHSI ratings for bat species within the vicinity of the Site as well as their main roost types.

Bat Species	Index Rating	Main Roost/(s)
Soprano Pipistrelle *(Pipistrellus pygmaeus)*	33	Buildings and trees
Brown Long-eared Bat *(Plecotus auritus)*	23	Buildings and trees
Common Pipistrelle *(Pipistrellus pipistrellus)*	31	Buildings and trees
Lesser Horseshoe Bat *(Rhinolophus hipposideros)*	0	Buildings, caves, and tunnels
Leisler's Bat *(Nyctalus leisleri)*	37	Tree holes and buildings
Whiskered Bat *(Myotis mystacinus)*	13	Buildings and underground places
Daubenton's Bat *(Myotis daubentonii)*	11	Bridges, trees, buildings, and underground
Nathusius's Pipistrelle *(Pipistrellus nathusii)*	10	Tree holes and crevices
Natterer's Bat *(Myotis nattereri)*	7	Buildings, trees, and underground places
All Bats	18.33	

The overall BHSI rating for all species is 18.33, a *Low* rating for bat species. Common Pipistrelle (*Pipistrellus pipistrellus*) contained the highest BHSI rating with a BHSI rating of 33. The species with the lowest BHSI rating was Lesser Horseshoe (*Rhinolophus hipposideros*) with a rating of zero. The Article 17 reports on the status of species protected in Ireland under the Habitats Directive describes the range of this protected species. Lesser Horseshoe bats are currently confined to the west of the country; mainly counties Mayo, Galway, Clare, Limerick, Kerry, and Cork (NPWS, 2019). A rating of zero can be expected as the Site is in Co. Dublin to the east of its known range.

The relevant NBDC grid squares were also checked for records of bat species. The search showed that records of Leisler's bat, Daubenton's (*Myotis daubentonii*), Common pipistrelle (*Pipistrellus pipistrellus*), and Soprano pipistrelle (*Pipistrellus pygmaeus*) exist within the 2km

(O13Q) grid square, with all of these species present within the 1km (O1731) grid square that contains the Site (NBDC, 2025).

Figure 8.29: Bat Habitat Suitability Index for the Site (within red box) (Source: NBDC, 2025)

8.9.4.3.2 Field Study Results

8.9.4.3.2.1 Preliminary Bat Roost Assessment Surveys

8.9.4.3.2.1.1 Preliminary Buildings and Structures Roost Assessment

A total of five buildings are present on Site (Milltown Park House & Extensions are considered as one building in this assessment), of which three were assessed as requiring further surveys for roosting bats. **Table 8.12** describes each building and its bat roost potential according to Collins (2023).

Table 8.12: Summary of bat roost suitability for buildings on Site.

Building Description	Potential Roost Features	Collins 2023 Rating	Further Surveys Required	Building being Retained/Demolished
Tabor House	Presence of an attic	Moderate	Yes	Retained and renovated
Chapel	Roof vents & eastern gable vents	Moderate	Yes	Retained and renovated
Milltown Park House	Wall vents along southern facade	Low	Yes	Demolish

& Extensions[3]				
Finlay Wing	None	Negligible	No	Demolish
Archive Building	None	Negligible	No	Demolish

8.9.4.3.2.1.2 Tabor House

No signs of bat roosting activity were observed within the various rooms and floors of Tabor House during the internal inspections. No droppings were observed along suitable areas such as windowsills or below cavities in the ceiling. Extensive usage of some areas by Feral Pigeon (*Columba livia domestica*) was noted (guano, eggs, feathers and live and dead birds).

The attic of Tabor House is a low roofed space, with areas of darkness broken by bright light-spill as a result of skylights within the attic roof (**Figure 8.32**). On internal inspection it was noted that sections of the attic floorboards were missing, and water damage had occurred in some areas causing breaches in the ceiling of the rooms on the level below (**Figure 8.31**). Access to the roof of Tabor House (**Figure 8.*30***) by the surveyor was possible via a doorway in the attic and on inspection no missing tiles or damage was observed, with the roof envelope appearing to be well sealed as were the rooflights.

Despite the lack of potential entry points to the attic for bats from the outside and light pollution from two skylights reducing its suitability for roosting, Tabor House was assessed as having **Moderate** roosting suitability as a precaution. As such, the deployment of a static detector was considered appropriate to determine if bats were roosting in the attic considering the height of the attic and lack of external vantage points.

[3] Please note that while these are technically two buildings that are connected together, they have been assessed as a single unit in this chapter.

Figure 8.30: Tabor House (Source: DNV).

Figure 8.31: Images showing the level of disrepair of the ceilings and attic floor in Tabor House. Daylight can be seen through a skylight in the roof in the left-hand image (Source: DNV).

Figure 8.32: Image of the attic of Tabor House with light-spill from skylight evident (Source: DNV).

8.9.4.3.2.1.3 The Chapel

The Chapel supports external roof vents presumable leading into a roof crawlspace which provides access/egress points into the roof, along with a missing tile in the roof along the eastern side of the corridor connecting the Chapel to Milltown Park House. An internal inspection of the Chapel noted that it is in relatively good condition with well-sealed ceilings bar one piece of damage. No signs of bat roosting activity were observed within the various rooms and internal spaces of the Chapel during the internal inspections. Access to the uppermost ceiling crawlspace was not possible for health and safety reasons, given the significant height involved, and so the vents leading into this space were surveyed as part of the emergence survey effort. As such, the Chapel was assessed as having **Moderate** roosting suitability (See **Figure 8.33**, **Figure 8.34** & **Figure 8.35**).

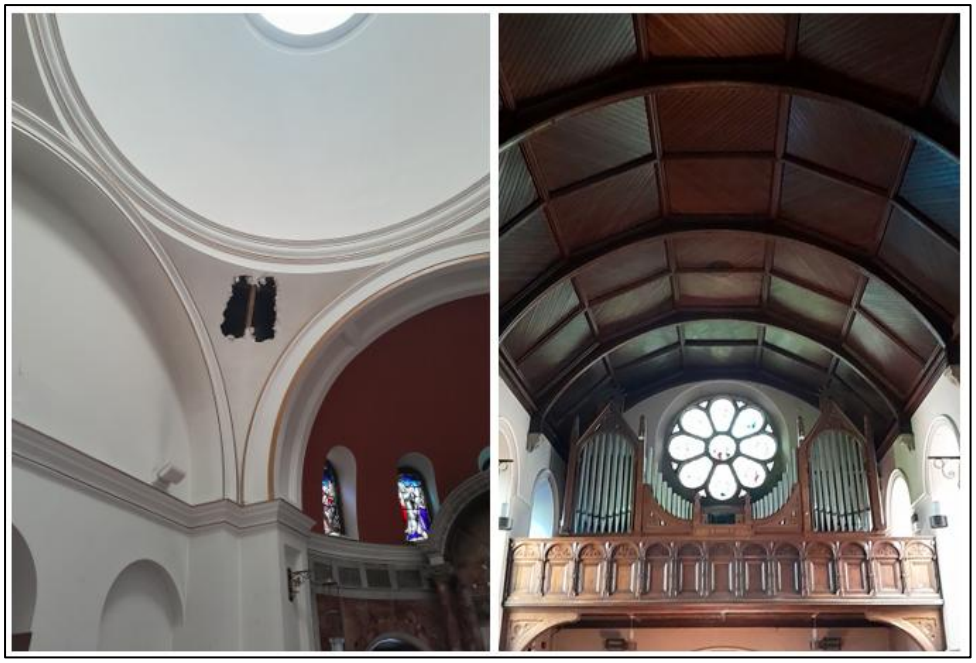

Figure 8.33: Images of the Chapel ceiling showing intact internal structure other than one piece of damage (Source: DNV).

Figure 8.34: Examples of PRFs (vents) on The Chapel's eastern gable end and roof (Source: DNV).

Figure 8.35: PRF (broken Tile) on the east face of the Chapel (Source: DNV).

8.9.4.3.2.1.4 Milltown Park House and Rear Extension

Milltown Park House comprised a well-sealed envelope, with no cracks/crevices observed which could be used for access by bat species. The southern face of the Milltown Park House Rear Extension contained a set of vents along the wall which could provide access to bats and as such, these vents were included in the emergence surveys. No signs of bat roosting activity were observed within the various rooms and floors of these buildings during the internal inspections. Milltown Park House and its rear extension were therefore assessed as having **Low** roosting suitability (**Figure 8.36**).

Figure 8.36: Milltown Park House (Source: DNV).

8.9.4.3.2.1.5 Other Buildings

Two other buildings, the Archive Building and the Finlay Wing were assessed as having **Negligible** roosting suitability due to both structures exhibiting a well-sealed envelope and a lack of potential access/egress points e.g., cracks or crevices. No signs of bat roosting activity were observed within the various rooms and floors of these buildings during the internal inspections (**Figure 8.37**).

Figure 8.37: Views of the roofs of the Finlay Wing (left image) and the Archive (right image) from Milltown Park House (Source: DNV).

8.9.4.3.2.1.6 Preliminary Bat Roost Assessment of Trees

A preliminary bat roost assessment (PBRA) of trees was completed on Site in 2024 and 2025.

The trees proposed for felling at the Site were largely considered to be of negligible roosting suitability and described as 'NONE' i.e., "Either no PRFs in the tree or highly unlikely to be any" in Table 4.2 of Collins, (2023). Twenty trees were considered to be of low roosting suitability i.e., containing 'PRF-I' features, described in Table 6.2 of Collins, (2023) as "PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats" (Collins, 2023) (see **Table 8.13**). According to Collins (2023), PRF-I category trees do not require further emergence surveys, however best practice such as pre-felling inspections and leaving the trees on the ground for 24 hours will be recommended to further ensure no bats are harmed.

Two trees on Site were identified as having 'PRF-M' features in 2024 (**Figure 8.38**). A PRF-M feature 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). These were Tree 290; an Elm tree (*Ulmus procera*) with bark sloughing off its trunk that could support multiple roosting bats, and Tree 267; a Norway Maple (*Acer platanoides*) with a knot hole of undetermined depth ca.3m above ground that could lead to a hollow trunk if present. Both trees are located within the woodland along the eastern Site boundary.

Table 8.13: Trees marked for felling that were assessed as having more than negligible roost potential at the Site.

Tree Number	Species	Roost Suitability	PRFs
267	Norway Maple (*Acer platanoides)*	PRF-M	Knot hole, depth not determined
290	Elm (*Ulmus procera*)	PRF-M	Sloughing bark
22	Beech (*Fagus sylvatica*)	PRF-I	Mature tree
36	Cherry (*Prunus avium*)	PRF-I	Dense ivy and some ivy lattice
38	Cherry (*Prunus avium*)	PRF-I	Dense ivy and some ivy lattice
39	Cherry (*Prunus avium*)	PRF-I	Dense ivy, rotten in parts
62	Cherry Cultivar (*Prunus cv*)	PRF-I	Hollow section of bark (checked with endoscope, no signs of bats)
69	Cherry Cultivar (*Prunus cv*)	PRF-I	Lifting bark (checked with endoscope, no signs of bats)
106	Lawson cypress (*Chamaecyparis lawsoniana*)	PRF-I	Some lifting bark

Tree Number	Species	Roost Suitability	PRFs
108	Hawthorn (*Crataegus monogyna*)	PRF-I	Some lifting bark
109	Monterrey cypress	PRF-I	Mature tree
245	Elm (*Ulmus procera*)	PRF-I	Dead, lifting bark
291	Yew (*Taxus baccata*)	PRF-I	Lifting bark
361	Sycamore (*Acer pseudoplatanus*)	PRF-I	Large, dense ivy
366	Sycamore (*Acer pseudoplatanus*)	PRF-I	Large, dense ivy
373	Sycamore (*Acer pseudoplatanus*)	PRF-I	Large, dense ivy
381	Common Lime (*Tilia x europaea*)	PRF-I	Damage, lifting bark

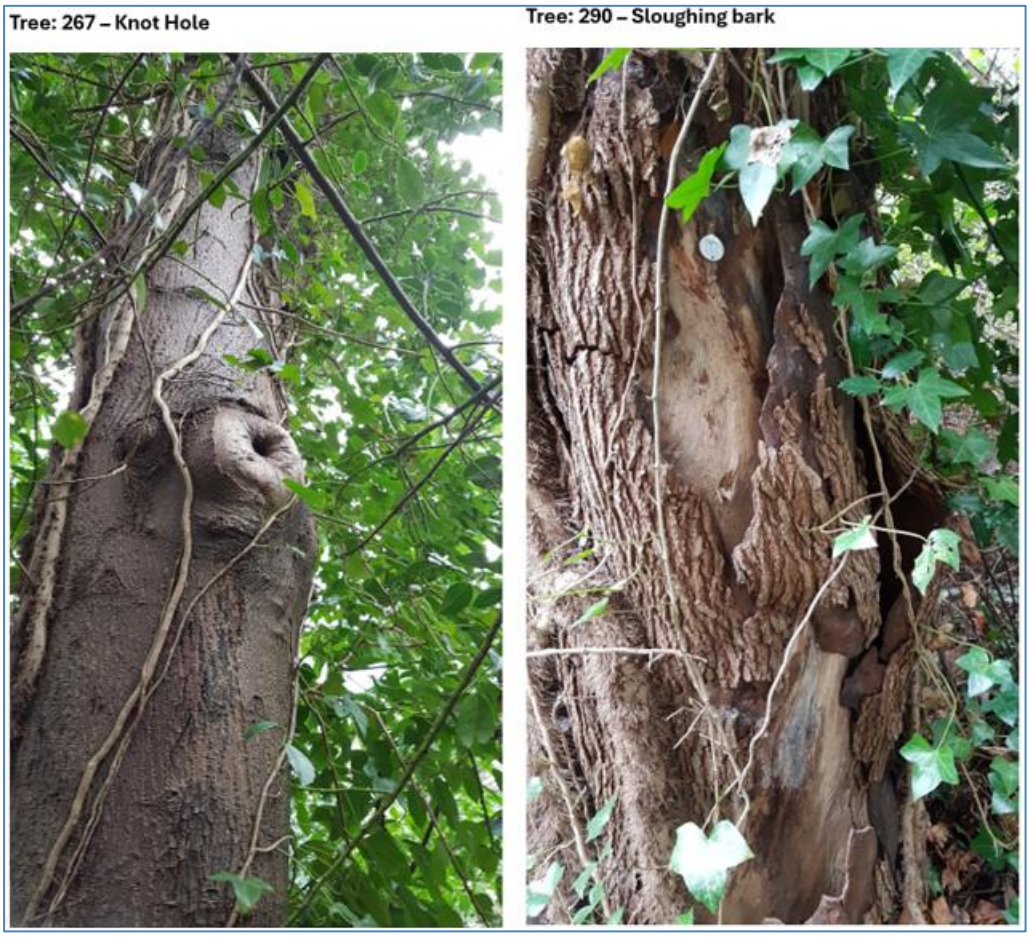

Figure 8.38: The PRF-M trees surveyed as part of the 2025 survey effort (Source: DNV).

8.9.4.3.2.2 Bat Habitat Suitability Assessment

Habitats on Site were assessed for their ability to support foraging and commuting bats, as well as the Site's connectivity to the wider landscape. A range of factors are considered in making this assessment according to Collins (2023), such as the connectivity of the Site to the wider landscape by means of treelines, hedgerows, and river corridors, the size, quality and species composition of treelines and hedgerows on Site, and the presence of any barriers to commuting for bat species. It is determined that the Site provides **Moderate** suitability for foraging and commuting bats as per Collins (2023), due to the presence of connected habitat features e.g., woodland, grassland and nearby back gardens, but also reflecting the Site's urban location surrounded by residential estates and other developed land.

8.9.4.3.2.3 Bat Activity Surveys

8.9.4.3.2.3.1 Bat Dusk Walkabout Surveys

8.9.4.3.2.3.1.1 2024 Surveys

Walked transects were carried out at dusk on the 24th of June, 25th July and 30th of August, by an ecologist with a handheld full-spectrum Elekon M2 bat detector. The walked routes followed the transect route shown in **Figure 8.3**. Details of each survey are provided in the following sections. Full transect survey metadata is provided in Appendix 8-4.

Transect Survey 1 – 24th of June 2024

Bat activity during this survey was observed in the east and north of the Site at the beginning of the survey, with little bat activity recorded after 23:21. The weather had had been hot and dry earlier in the day and the surveyor noted insects in the air during the survey, indicating suitable survey conditions and available foraging sources for bats. During the survey individual Leisler's bats were noted commuting and foraging over the Site. A peak count of two bats at one time was observed, with bats interacting over stopping point 4 in the east of the Site (woodland edge habitat). Individual Pipistrelle bats was recorded foraging back and forth along the north of Tabor House and around scrub to the east of the Chapel (stopping point 6).

Bat passes and species composition for this survey are shown in **Table 8.14** and **Figure 8.39**. A map of recorded bat activity is displayed in **Figure 8.42**

Table 8.14: Summary of bat activity recorded on Site – 24th of June 2024

Species	Common Name	Bat Passes
Pipistrellus pipistrellus	Common Pipistrelle	47
Nyctalus leisleri	Leisler's Bat	34
Pipistrellus pygmaeus	Soprano Pipistrelle	2

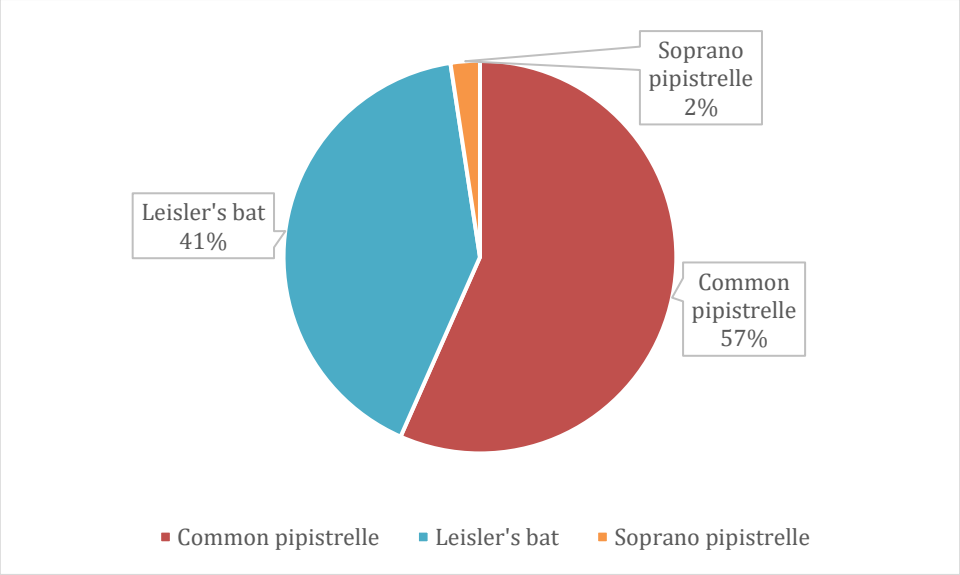

Figure 8.39: Species composition on the 24th of June 2024.

Transect Survey 2 – 25th of July 2024

Insects were recorded in the air during the survey with conditions noted to be optimal for bat activity by the surveyor i.e., warm, dry and calm, with occasional gusts at the beginning and end of the survey. The surveyor noted that very little bat activity was present during the survey despite suitable conditions and insects being present, with a lone Leisler's bat observed travelling due south-east at height over the Site at the beginning of the survey.

Bat passes and species composition for this survey are shown in **Table 8.15** and **Figure 8.40,** respectively. A map of recorded bat activity and the transect route is displayed in **Figure 8.43**.

Table 8.15: Summary of bat activity recorded on Site – 25th July 2024

Species	Common Name	Bat Passes
Nyctalus leisleri	Leisler's Bat	10
Pipistrellus pygmaeus	Soprano Pipistrelle	1

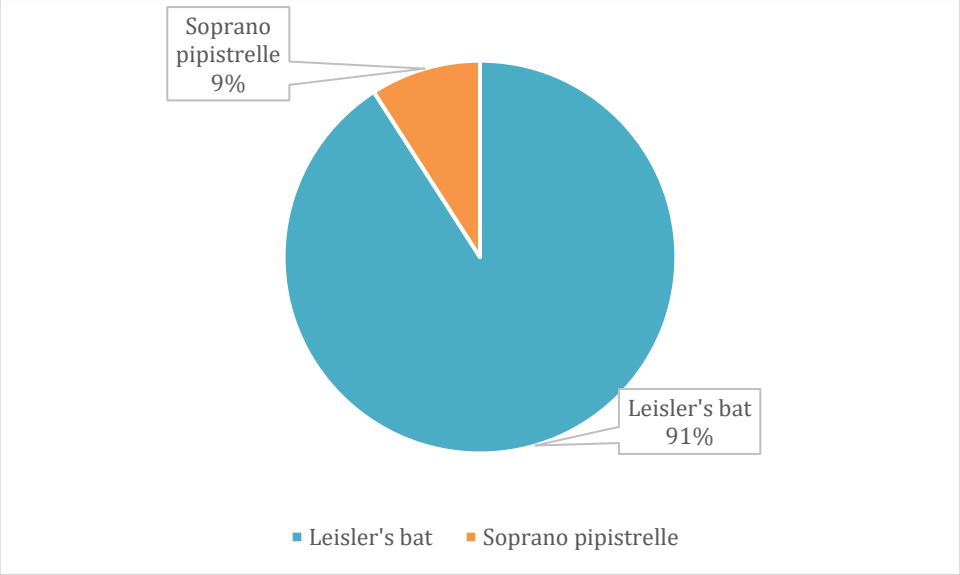

Figure 8.40: Species composition on the 25th of July 2024.

Transect Survey 3 – 30th of August 2024

The surveyor worked backwards during this survey, starting at point 14 and finishing at point 1. An individual Leisler's bat was observed foraging over Point 14 at the beginning of the survey, making multiple passes. Bat activity was recorded across the Site, although overall activity was not high. Pipistrelle activity was recorded around point 6 where shelter provided by the adjacent buildings and scrubby vegetation appears to support insect prey for the bats.

Bat passes and species composition for this survey are shown in **Table 8.16** and **Figure 8.41** respectively. A map of recorded bat activity and the transect route is displayed in **Figure 8.44**.

Table 8.16: Summary of bat activity recorded on Site – 30th of August 2024

Species	Common Name	Bat Passes
Pipistrellus pipistrellus	Common Pipistrelle	16
Nyctalus leisleri	Leisler's Bat	21
Pipistrellus pygmaeus	Soprano Pipistrelle	4

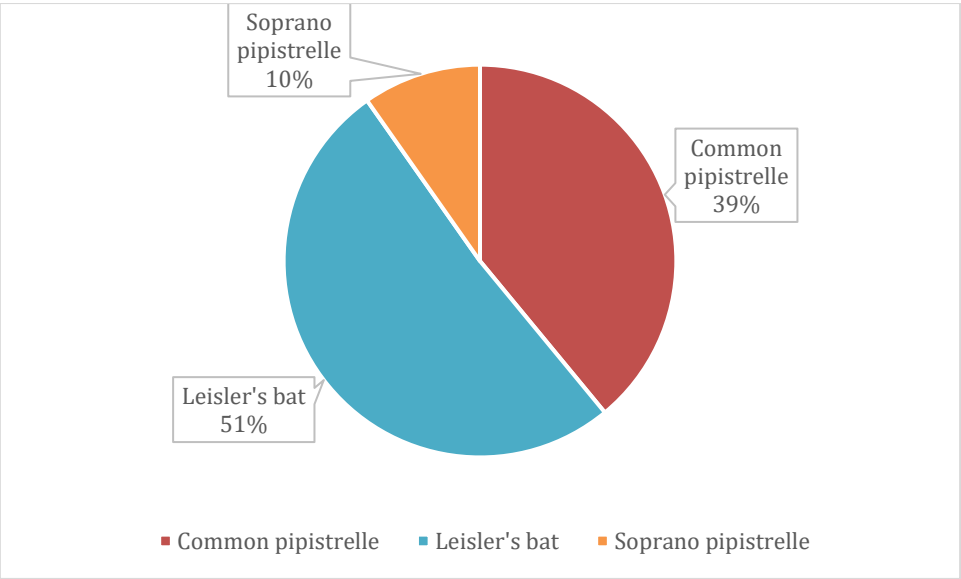

Figure 8.41: Species composition on the 30th of August 2024.

Figure 8.42: Bat Species Detections on the 24th of June 2024 (Source: QGIS/DNV).

Figure 8.43: Bat Species Detections on the 25th of July 2024 (Source: QGIS/DNV).

Figure 8.44: Bat Species Detections on the 30th of August 2024 (Source: QGIS/DNV).

8.9.4.3.2.3.1.2 2025 Surveys

Walked transects were carried out at dusk on the 11th of June, 15th of July, and 21st of August, by two ecologists with a handheld full-spectrum Elekon M2 bat detector. Bat activity during these surveys was largely concentrated along linear features such as woodland edge habitat, treelines and hedgerows, however, Leisler's bats in particular were observed foraging and commuting high overhead across the central portions of the Site also. As with the 2024 surveys, evidence of foraging activity i.e., feeding buzzes were recorded on occasion during the walked transects indicating the habitats on Site are used for foraging as well as commuting.

The walked routes followed the transect route shown in **Figure 8.3**. Details of each survey are provided in the following sections. Full transect survey metadata is provided in Appendix 8-4.

Transect 1 - 11th of June

Relatively low bat activity was recorded during the June transect survey, with 23 bat passes detected in total. On this occasion the surveyors started at point 8 in the north-centre of the Site and proceeded in an anticlockwise direction. The first bat recorded was a Leisler's bat observed overhead in the west of the Site 30mins after sunset. The bat activity recorded on the night was predominantly attributed to Leisler's bats recorded over more open habitats in the centre of the Site an hour into the survey. Two Common pipistrelles were detected, one observed commuting along the north side of the Chapel midway through the survey, and another along a central treeline. Some Soprano pipistrelle activity was noted along the edge of the eastern woodland where a section of meadow habitat exists, however, most stopping points recorded no activity despite optimal weather conditions and insects visible in the air.

Bat passes and species composition for this survey are shown in **Table 8.17** and **Figure 8.45**. A map of recorded bat activity is displayed in **Figure 8.48**.

Table 8.17: Summary of bat activity recorded on Site – 11th of June 2025

Species	Common Name	Bat Passes
Pipistrellus pipistrellus	Common Pipistrelle	2
Nyctalus leisleri	Leisler's Bat	17
Pipistrellus pygmaeus	Soprano Pipistrelle	4

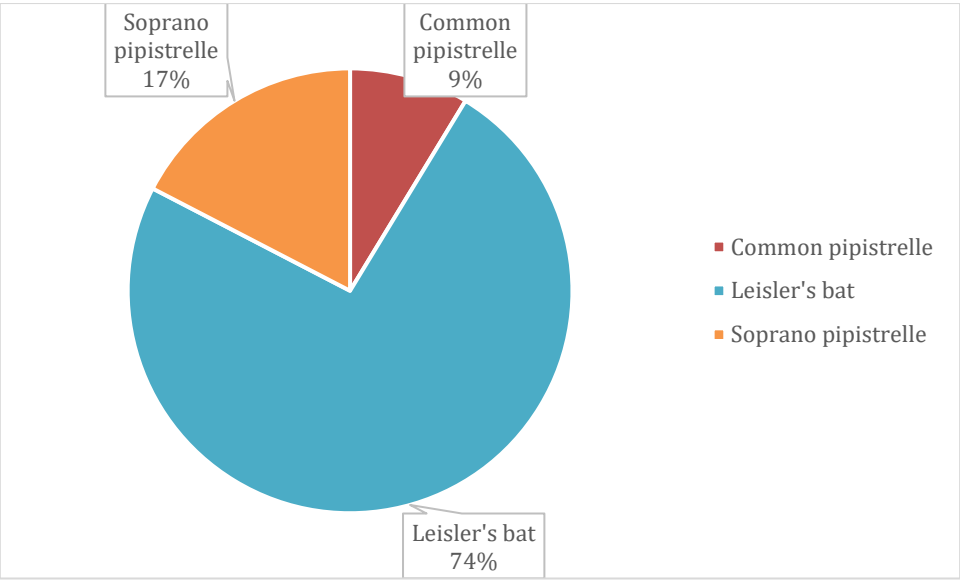

Figure 8.45: Species composition – 11th June 2025

Transect 2 - 15th of July

Very little bat activity was recorded across the Site during the July survey, despite condition being optimal on the night. Although 29 bat passes were recorded, these were predominantly the result of Leisler's bat activity at point 4 along the edge of the eastern woodland; where at least two bats were recorded simultaneously foraging and interracting in this area (social calls evident during the analysis of the survey data). Some Soprano pipistrelle activity in the centre of the Site at point 7 along the central Holly treeline made up the rest of the activity, with scatterred Leisler's bat passes recorded at various locations across the Site commuting overhead.

Bat passes and species composition for this survey are shown in **Table 8.18** and **Figure 8.46**. A map of recorded bat activity is displayed in **Figure 8.49**.

Table 8.18: Summary of bat activity recorded on Site – 15th July 2025

Species	Common Name	Bat Passes
Nyctalus leisleri	Leisler's Bat	26
Pipistrellus pygmaeus	Soprano Pipistrelle	3

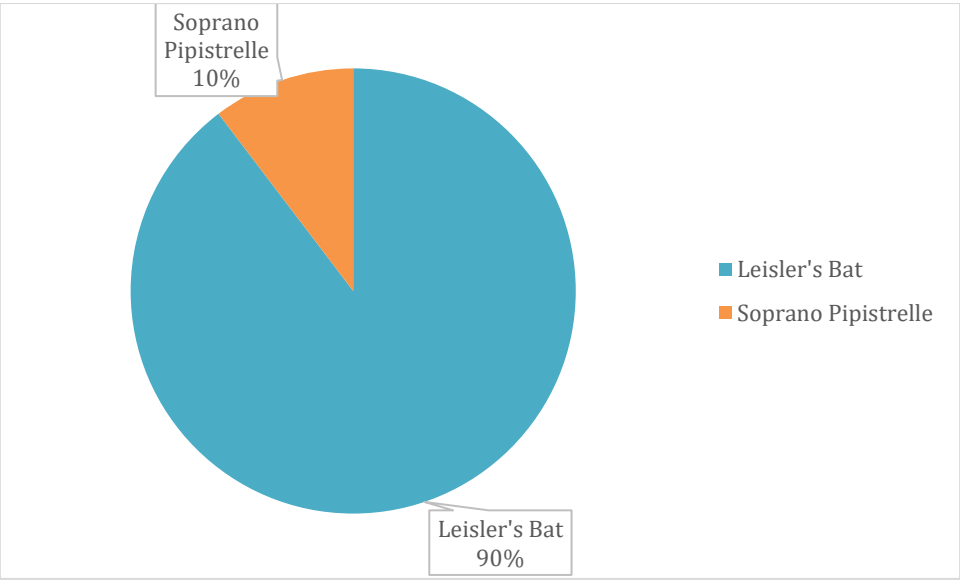

Figure 8.46: Species composition – 15th July 2025

Transect 3 - 21st of August

A higher level of bat activity was recorded during the August survey relative to the two previous months. A total of 71 bat passes were recorded and weather conditions on the night were optimal. As with the previous 2025 surveys, Leisler's bat was the most frequently recorded species, with the first bat recorded shortly after the survey commenced and recorded commuting due north-west along the northern boundary mature treeline by point 1. An individual Leisler's bat was again recorded foraging along the woodland edge habitat at point 4, with possibly the same bat subsequently recorded foraging further south at point 5 by the surveyors. Leisler activity dropped off as the surveyors progressed westward in the latter half of the survey. Common pipistrelle was recorded at point 10 in the west of the Site, observed foraging along the Cherry treeline that runs along the Site's western boundary in this location, and along the central Holly treeline at point 7. Towards the end of the survey, two pases of Soprano pipistrelle were recorded in the centre/north of the Site.

Bat passes and species composition for this survey are shown in **Table 8.19** and **Figure 8.47**. A map of recorded bat activity is displayed in **Figure 8.50**.

Table 8.19: Summary of bat activity recorded on Site – 21st of August 2025

Species	Common Name	Bat Passes
Pipistrellus pipistrellus	Common Pipistrelle	11
Nyctalus leisleri	Leisler's Bat	58
Pipistrellus pygmaeus	Soprano Pipistrelle	2

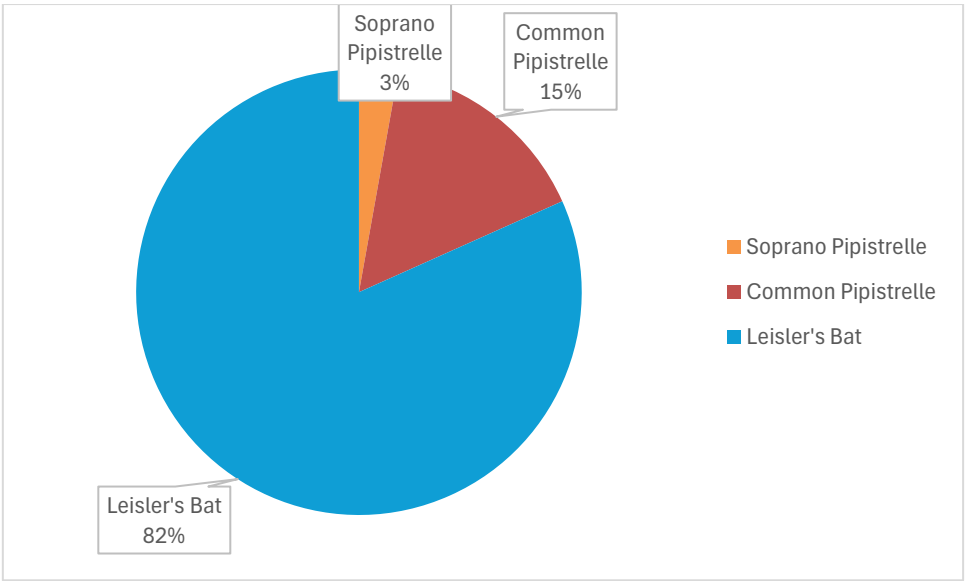

Figure 8.47: Species composition – 21st August 2025

Figure 8.48: Bat Species Detections on the 11th of June 2025 (Source: QGIS/DNV).

Figure 8.49: Bat Species Detections on the 15th of July 2025 (Source: QGIS/DNV).

Figure 8.50: Bat Species Detections on the 21st of August 2025 (Source: QGIS/DNV).

8.9.4.3.2.3.2 Bat Static Detector Surveys

Static detectors deployed within the attic space of Tabor House over the course of the 2024 and 2025 seasons recorded no bat calls that would indicate roosting activity within the attic space. The surveyor confirmed that the detector was operating correctly both on deployment and collection during each survey i.e., SD Card unlocked and working, batteries charged, mic connected and operational, and recording schedule correct and operational.

The SM4 detector unit was deployed for 5 monthly periods in each year, covering May-September 2024 and June-October 2025, i.e., throughout the period in which bats would utilise a structure for roosting as a maternity roost during the active period.

The lack of any bat calls during this 2-year monitoring period confirm that no bats were roosting in the attic of Tabor House during this time. The presence of skylights and what appears to be a sealed building envelope would indicate that roost suitability for this structure is low.

8.9.4.3.2.4 Dusk Emergence Surveys

No bat roost emergences were observed, i.e., bats emerging from or entering any of the surveyed tree or building Potential Roost Features (PRFs), during the emergence surveys carried out at the Site across the 2024 and 2025 seasons, despite the comprehensive survey effort conducted. The surveys are described in the following sections, with full emergence survey metadata provided in Appendix 8-5.

8.9.4.3.2.4.1 Dusk Emergence Surveys of Trees

Two trees within the woodland along the eastern Site boundary were identified. PRF-M features, as defined in Table 6.2 of Collins (2023), are suitable for multiple bats and may therefore support a maternity colony. These included:

- Tree 290: An Elm (*Ulmus procera*) exhibiting bark sloughing along its trunk, creating crevices that could accommodate multiple roosting bats.
- Tree 267: A Norway Maple (*Acer platanoides*) with a knot hole of undetermined depth approximately 3 m above ground level, potentially leading to a hollow trunk if present.

Both trees were subject to three emergence surveys each between May and September 2025, with at least two surveys conducted during the key maternity period (May–August), in accordance with best practice guidance (Collins, 2023). No bats were observed emerging from or re-entering either Tree 290 or Tree 267, and no evidence of roosting was present at either tree.

It was noted by the surveyor that Tree 290 is located adjacent to the wall running along the Site's eastern boundary and the road to the east. Tree 290 was noted to be subject to light spill from the streetlights along this road on each survey date, likely reducing the bat roost potential of this tree despite the presence of PRFs.

A relatively low level of incidental bat activity was recorded during the emergence surveys of these two trees, which are both located within the eastern woodland at the Site. The woodland was observed to support a dense undergrowth layer and close canopy for the most part. This may reduce foraging opportunities for some of the more common bat species that prefer open or edge habitats e.g., pipistrelle species and Leisler's bat, with this habitat suiting species associated with cluttered woodland habitats and/or those that hunt by gleaning prey of leaf surfaces e.g., Brown Long-eared bat, rather than aerial hawking species. Nevertheless, no records of Brown Long-eared bat or other woodland species were recorded during the surveys.

Based on the absence of observed emergences and re-entries during the recommended survey effort, combined with incidental activity limited to foraging and commuting, the likelihood of these PRF-M features supporting a maternity roost or other significant roost type is considered low at this time.

8.9.4.3.2.4.2 Dusk Emergence Surveys of Buildings

No bat roost emergences were observed, i.e., bats emerging from or entering any of the surveyed building PRFs, during the 2024 and 2025 emergence surveys conducted of the buildings on Site. All building PRFs were subject to three emergence surveys each between May and September 2025, with at least two surveys conducted during the key maternity period (May–August), in accordance with best practice guidance (Collins, 2023).

Bat activity was recorded incidentally during the surveys, with bats observed utilizing the Site for foraging and commuting around the various vantage points, however, no bats were observed emerging or re-entering any buildings on Site.

Two seasons of emergence surveys have therefore recorded no bat roost emergences from these buildings. Based on the absence of observed emergences or re-entries from any surveyed building PRFs during the recommended emergence survey effort, there is no evidence to suggest the presence of roosting bats within the buildings on Site. While incidental bat activity was recorded, this was limited to foraging and commuting behaviour and does not indicate roost occupancy. Therefore, the likelihood of buildings supporting a bat roost is considered low at this time.

8.9.4.3.2.5 Bat Survey Conclusion

DNV bat surveys conducted during the 2024 and 2025 seasons detected a total of five bat species/ species group using the Site; Leisler's bat, Common Pipistrelle, and Soprano Pipistrelle were the most abundant and most frequently recorded species across the surveys in both 2024 & 2025, with the addition of several unidentified *Myotis* bat passes and a single Nathusius' Pipistrelle recorded during the emergence surveys (August 2025). No roosting bats were identified within the proposed development Site during the external and internal tree and building inspections conducted by DNV, nor the subsequent emergence surveys conducted of each identified PRF. The static detector deployment within the attic of Tabor House over the course of 2024/2025 also confirmed no roosting activity. The Site does provide some roosting opportunities in the form of mature trees with suitable PRFs, and buildings with Moderate suitability for roosting.

Bat activity was generally low throughout the Site during the dusk transect surveys, despite suitable weather conditions. Leisler's bat was the most frequently recorded species on Site

across both 2024 and 2025 seasons. With Common Pipistrelle and Soprano pipistrelle the other species recorded during these surveys. Overall bats were observed utilising the woodland edge and linear vegetative features on Site for foraging and commuting during the surveys. Leisler's bats in particular were observed also foraging and commuting high overhead. Being a larger bat species, Leisler's bats characteristically often forage and commute across open spaces and are not as reliant on linear landscape features for prey, protection from predators, shelter from the elements, as smaller bat species are. Numbers of individual bats present simultaneously were limited to a peak of 2-3 bats at one time based on the analysed bat data and the surveyors' observations during the surveys, with some social calls also detected indicating occasional interaction between multiple bats when present. Based on the survey results it can be surmised that the Site provides foraging and commuting habitat for small numbers of commonly recorded bat species and provides some limited roosting opportunities for same on Site. These bats likely use the Site as part of a wider foraging resource in the area, given the presence of institutional and school grounds and mature gardens located within the surrounding landscape of Ranelagh and Milltown to the south of the Site.

Accounting for the above, the habitats on Site overall are considered to be of **Local Importance – Higher Value** for bats.

This Chapter provides a full and comprehensive assessment of the potential for impact on bat populations within the Site. The surveys and assessments provided in this report are in accordance with best practice guidance.

8.9.4.4 Birds

8.9.4.4.1 Desk Study Results

There are records for 68 bird species within the 2km (O13Q) grid square associated with the Site. Of these, 49 No. are Green-listed, 17 No. are Amber-listed and 2 No. are Red-listed according to Birds of Conservation Concern in Ireland 2020-2026 (Gilbert et al., 2021) (**Table 8.20**).

Table 8.20: List of all species recorded in the 2km (O13Q) grid square (NBDC, 2023).

Species Name	Date of Last Record	Title of Dataset	BoCCI
Barn Swallow (*Hirundo rustica)*	25/04/2016	Birds of Ireland	Amber
Black-billed Magpie (*Pica pica)*	30/01/2018	Birds of Ireland	Green
Blackcap (*Sylvia atricapilla)*	07/06/2016	Birds of Ireland	Green
Black-headed Gull (*Larus ridibundus)*	02/02/2016	Birds of Ireland	Amber
Blue Tit (*Cyanistes caeruleus)*	28/08/2020	Community Foundation for Ireland Records	Green
Bohemian Waxwing (*Bombycilla garrulus)*	31/12/2011	Bird Atlas 2007 - 2011	Green
Brambling (*Fringilla montifringilla)*	31/12/2011	Bird Atlas 2007 - 2011	Green
Brent Goose (*Branta bernicla)*	31/12/2011	Bird Atlas 2007 - 2011	Amber
Chaffinch (*Fringilla coelebs)*	07/06/2016	Birds of Ireland	Green

Species Name	Date of Last Record	Title of Dataset	BoCCI
Coal Tit (*Periparus ater)*	28/08/2020	Community Foundation for Ireland Records	Green
Common Blackbird (*Turdus merula)*	30/01/2018	Birds of Ireland	Green
Common Bullfinch (*Pyrrhula pyrrhula)*	28/08/2020	Community Foundation for Ireland Records	Green
Common Buzzard (*Buteo buteo)*	21/03/2016	Birds of Ireland	Green
Common Chiffchaff (*Phylloscopus collybita)*	26/05/2016	Birds of Ireland	Green
Common Kestrel (*Falco tinnunculus)*	31/12/2011	Bird Atlas 2007 - 2011	Red
Common Kingfisher (*Alcedo atthis)*	15/08/2017	Birds of Ireland	Amber
Common Linnet (*Carduelis cannabina)*	30/09/2016	Ireland's BioBlitz	Amber
Common Moorhen (*Gallinula chloropus)*	16/05/2016	Birds of Ireland	Green
Common Raven (*Corvus corax)*	07/07/2015	Birds of Ireland	Green
Common Snipe (*Gallinago gallinago)*	31/12/2011	Bird Atlas 2007 - 2011	Red
Common Starling (*Sturnus vulgaris)*	30/09/2016	Ireland's BioBlitz	Amber
Common Swift (*Apus apus)*	02/06/2021	Swifts of Ireland	Red
Common Whitethroat (*Sylvia communis)*	26/05/2016	Birds of Ireland	Green
Common Woodpigeon (*Columba palumbus)*	07/06/2016	Birds of Ireland	Green
Eurasian Curlew (*Numenius arquata)*	04/01/2019	Birds of Ireland	Red
Eurasian Jackdaw (*Corvus monedula)*	07/06/2016	Birds of Ireland	Green
Eurasian Oystercatcher (*Haematopus ostralegus)*	11/01/2016	Birds of Ireland	Red
Eurasian Siskin (*Carduelis spinus)*	12/01/2016	Birds of Ireland	Green
Eurasian Sparrowhawk (*Accipiter nisus)*	27/04/2016	Birds of Ireland	Green
Eurasian Teal (*Anas crecca)*	31/12/2011	Bird Atlas 2007 - 2011	Amber
Eurasian Treecreeper (*Certhia familiaris)*	31/12/2011	Bird Atlas 2007 - 2011	Green
European Goldfinch (*Carduelis carduelis)*	06/11/2017	Birds of Ireland	Green
European Greenfinch (*Carduelis chloris)*	07/06/2016	Birds of Ireland	Green
European Robin (*Erithacus rubecula)*	28/12/2022	Birds of Ireland	Green
Fieldfare (*Turdus pilaris)*	31/12/2011	Bird Atlas 2007 - 2011	Green

Species Name	Date of Last Record	Title of Dataset	BoCCI
Goldcrest (*Regulus regulus)*	14/06/2017	Birds of Ireland	Amber
Great Black-backed Gull (*Larus marinus)*	12/03/2016	Birds of Ireland	Green
Great Cormorant (*Phalacrocorax carbo)*	03/12/2017	Birds of Ireland	Amber
Great Tito (*Parus major)*	07/06/2016	Birds of Ireland	Green
Grey Heron (*Ardea cinerea)*	09/08/2016	Birds of Ireland	Green
Grey Wagtail (*Motacilla cinerea)*	17/11/2017	Birds of Ireland	Green
Hedge Accentor (*Prunella modularis)*	26/05/2016	Birds of Ireland	Green
Herring Gull (*Larus argentatus)*	26/05/2016	Birds of Ireland	Amber
Hooded Crow (*Corvus cornix)*	07/06/2016	Birds of Ireland	Green
House Martin (*Delichon urbicum)*	25/04/2016	Birds of Ireland	Amber
House Sparrow (*Passer domesticus)*	23/07/2016	Birds of Ireland	Amber
Lesser Black-backed Gull (*Larus fuscus)*	10/05/2016	Birds of Ireland	Amber
Little Egret (*Egretta garzetta)*	03/12/2017	Birds of Ireland	Green
Little Grebe (*Tachybaptus ruficollis)*	31/12/2011	Bird Atlas 2007 - 2011	Green
Long-tailed Tit (*Aegithalos caudatus)*	28/08/2020	Community Foundation for Ireland Records	Green
Mallard (*Anas platyrhynchos)*	07/06/2016	Birds of Ireland	Green
Mandarin Duck (*Aix galericulata)*	03/08/2016	Birds of Ireland	Green
Mew Gull (*Larus canus)*	31/12/2011	Bird Atlas 2007 - 2011	Green
Mistle Thrush (*Turdus viscivorus)*	30/09/2016	Ireland's BioBlitz	Green
Mute Swan (*Cygnus olor)*	31/12/2011	Bird Atlas 2007 - 2011	Amber
Pied Wagtail (*Motacilla alba subsp. Yarrellii)*	17/06/2015	Birds of Ireland	Green
Redwing (*Turdus iliacus)*	31/12/2011	Bird Atlas 2007 - 2011	Green
Reed Bunting (*Emberiza schoeniclus)*	31/12/2011	Bird Atlas 2007 - 2011	Green
Rock Pigeon (*Columba livia)*	30/09/2016	Ireland's BioBlitz	Green
Rook (*Corvus frugilegus)*	26/05/2016	Birds of Ireland	Green
Sand Martin (*Riparia riparia)*	03/08/2016	Birds of Ireland	Amber
Song Thrush (*Turdus philomelos)*	07/06/2016	Birds of Ireland	Green
Water Rail (*Rallus aquaticus)*	31/12/2011	Bird Atlas 2007 - 2011	Green
White Wagtail (*Motacilla alba)*	31/12/2011	Bird Atlas 2007 - 2011	Green
White-throated Dipper (*Cinclus cinclus)*	10/10/2017	Birds of Ireland	Green
Willow Warbler (*Phylloscopus trochilus)*	27/04/2016	Birds of Ireland	Green

Species Name	Date of Last Record	Title of Dataset	BoCCI
Winter Wren (*Troglodytes troglodytes)*	30/09/2016	Ireland's BioBlitz	Green
Woodchat Shrike (*Lanius senator)*	18/05/1988	Rare birds of Ireland	Green

Wintering waterfowl such as Light-bellied Brent Geese (*Branta bernicla hrota*) and Curlew (*Numenius arquata*) are known to utilise *ex-situ* inner-city grassland feeding grounds during the winter months (i.e., areas outside of an SPA that may provide important foraging or roosting habitat for SCI species). To determine whether any known *ex-situ* foraging habitat for SCI species is located within the vicinity of the proposed development, reference was made to Enviroguide (2022) and Benson (2009). These documents provide information on the network of known *ex-situ* inland feeding sites utilized by wintering waterbirds birds in Dublin. According to the aforementioned documents, there are no known *ex-situ* feeding sites in close proximity to the proposed development. Those closest to the Site include Sandyford/Naomh Olaf GAA Pitches (located c. 4km to the south), and Blackrock/Blackrock Park (located c.3.6km southeast). Wintering bird surveys have been conducted at the Site itself also, the results of which are presented in the field results section below.

8.9.4.4.2 Field Study Results

8.9.4.4.2.1 Breeding Bird Survey Results

Breeding bird surveys were conducted at the proposed development site near Sandyford, Co. Dublin on the mornings of 18th June, 22nd July, and 12th August 2025. Across the three surveys, a total of 22 bird species were recorded (see **Table 8.21**). The surveys were undertaken by Brian McCloskey (BMcC), an experienced ecologist and ornithologist with over 13 years of bird survey expertise. Brian is an active member of BirdWatch Ireland and has extensive experience in a range of ornithological survey methodologies, including vantage point surveys for gulls, terns, raptors, waders, and wildfowl, as well as hinterland and riverine surveys. His proficiency encompasses all Irish bird species and migrants.

Of the species recorded, Swift (*Apus apus*) was the only BoCCI Red-listed species observed; however, no evidence of breeding was noted. Swifts were regularly seen feeding over the site and surrounding areas but were not directly associated with nesting on-site. Eight BoCCI Amber-listed species were recorded, including Swallow, Herring Gull, and Goldcrest, while all remaining species were Green-listed (Gilbert et al., 2021). BoCCI categorization reflects conservation status: Red-listed species are globally threatened and have undergone severe declines; Amber-listed species have an unfavourable status in Europe and moderate declines; Green-listed species are stable or increasing. All bird species recorded are protected under the Wildlife Acts 1976 (as amended), which prohibit interference with breeding or resting places without statutory licence.

Confirmed breeding on-site included Blue Tit (*Cyanistes caeruleus*), Coal Tit (*Periparus ater*), Goldcrest (*Regulus regulus*), Robin (*Erithacus rubecula*), Wren (*Troglodytes troglodytes*), and Herring Gull (*Larus argentatus*), with fledged young observed nesting on the chimney of Tabor House. Probable breeding was noted for Woodpigeon (*Columba palumbus*), Jackdaw (*Corvus monedula*) (Jackdaw were confirmed breeding previously), and Goldfinch (*Carduelis carduelis),* while species such as Blackbird (*Turdus merula*), Blackcap (*Sylvia atricapilla*), Bullfinch

(*Pyrrhula pyrrhula*), and Chiffchaff (*Phylloscopus collybita*) were considered possible breeders based on habitat suitability and seasonal presence. Non-breeding flyovers included Grey Wagtail (*Motacilla cinerea*) and Sparrowhawk (*Accipiter nisus*). Overall, the site supports a diverse assemblage of common garden and woodland birds, with occasional use by species of higher conservation concern for foraging.

The bird species recorded during the breeding bird surveys conducted on Site in 2024 and 2025 are shown in the table below.

Table 8.21: Results of Breeding Bird Surveys carried out on Site in 2025 and 2024 by DNV

Species Common Name	Scientific Name	BoCCI Status	Dates Recorded	Breeding Activity
2025 Breeding Results				
Blackbird	*Turdus merula*	Green	18th June 2025 22nd July 2025	Possible breeder. Species observed in breeding season in suitable nesting habitat
Blackcap	*Sylvia atricapilla*	Green	18th June 2025 22nd July 2025	Possible breeder. Species observed in breeding season in suitable nesting habitat
Blue Tit	*Cyanistes caeruleus*	Green	18th June 2025 22nd July 2025 12th Aug 2025	Confirmed. Recently fledged young.
Bullfinch	*Pyrrhula pyrrhula*	Green	18th June 2025 22nd July 2025	Possible breeder. Species observed in breeding season in suitable nesting habitat
Chaffinch	*Fringilla coelebs*	Green	22nd July 2025 12th Aug 2025	Possible breeder. Species observed in breeding season in suitable nesting habitat
Chiffchaff	*Phylloscopus collybita*	Green	22nd July 2025 12th Aug 2025	Possible breeder. Species observed in breeding season in suitable nesting habitat
Coal Tit	*Periparus ater*	Green	18th June 2025 12th Aug 2025	Confirmed. Recently fledged young.
Feral Pigeon	*Columba livia domestica*	Unclassified	18th June 2025 12th Aug 2025	Non-breeder. Flyovers.
Goldcrest	*Regulus regulus*	Amber	18th June 2025 22nd July 2025 12th Aug 2025	Confirmed. Recently fledged young.

Species Common Name	Scientific Name	BoCCI Status	Dates Recorded	Breeding Activity
Goldfinch	*Carduelis carduelis*	Green	22nd July 2025 12th Aug 2025	Probable breeding. Pair observed in suitable nesting habitat in breeding season
Grey Wagtail	*Motacilla cinerea*	Red	12th Aug 2025	Non-breeding. Flyover only.
Herring Gull	*Larus argentatus*	Amber	18th June 2025 22nd July 2025 12th Aug 2025	Confirmed. Recently fledged young on the roof.
Hooded Crow	*Corvus cornix*	Green	22nd July 2025 12th Aug 2025	Possible breeder. Species observed in breeding season in suitable nesting habitat
Jackdaw	*Corvus monedula*	Green	18th June 2025 12th Aug 2025	Probable breeding. Pair observed in suitable nesting habitat in breeding season
Long-tailed Tit	*Aegithalos caudatus*	Green	18th June 2025 12th Aug 2025	Possible breeder. Species observed in breeding season in suitable nesting habitat
Magpie	*Pica pica*	Green	18th June 2025 22nd July 2025 12th Aug 2025	Possible breeder. Species observed in breeding season in suitable nesting habitat
Robin	*Erithacus rubecula*	Green	18th June 2025 22nd July 2025 12th Aug 2025	Confirmed. Recently fledged young.
Sparrowhawk	*Accipiter nisus*	Green	18th June 2025 12th Aug 2025	Non-breeding. Flyovers only.
Swallow	*Hirundo rustica*	Amber	18th June 2025 12th Aug 2025	Non-breeding, flying, and feeding over the Site.
Swift	*Apus apus*	Red	18th June 2025 22nd July 2025 12th Aug 2025	Swifts were seen over the Site on all dates, however, these birds were in the feeding flock
Woodpigeon	*Columba palumbus*	Green	18th June 2025 22nd July 2025	Probable breeding. Pair observed in

Species Common Name	Scientific Name	BoCCI Status	Dates Recorded	Breeding Activity
			12th Aug 2025	suitable nesting habitat in breeding season
Wren	*Troglodytes troglodytes*	Green	18th June 2025 22nd July 2025 12th Aug 2025	Confirmed. Recently fledged young.
2024 Breeding Results				
Blackbird	*Turdus merula*	Green	25th June 2024 25th July 2024	Probable breeding. Pair observed in suitable nesting habitat in breeding season
Blue Tit	*Cyanistes caeruleus*	Green	9th Aug 2024	Possible breeder. Species observed in breeding season in suitable nesting habitat
Bullfinch	*Pyrrhula pyrrhula*	Green	25th June 2024 25th July 2024	Probable breeding. Pair observed in suitable nesting habitat in breeding season
Feral Pigeon	*Columba livia domestica*	Unclassified	25th June 2024	Non-breeder. Flyovers.
Herring Gull	*Larus argentatus*	Amber	25th June 2024	Non-breeder. 2nd calendar year on the roof but there was no breeding or suspected breeding of Herring Gulls on the Site.
Hooded Crow	*Corvus cornix*	Green	25th June 2024 25th July 2024	Possible breeder. Species observed in breeding season in suitable nesting habitat
Magpie	*Pica pica*	Green	25th June 2024 9th Aug 2024	Possible breeder. Species observed in breeding season in suitable nesting habitat
Pied Wagtail	*Motacilla alba yarrelli*	Green	25th June 2024	Non-breeder. Flyover only.
Robin	*Erithacus rubecula*	Green	25th June 2024 25th July 2024 9th Aug 2024	Confirmed. Recently fledged young.

Species Common Name	Scientific Name	BoCCI Status	Dates Recorded	Breeding Activity
Rook	*Corvus frugilegus*	Green	25th June 2024	Non-breeder. Flyover only.
Sparrowhawk	*Accipiter nisus*	Green	25th June 2024 25th July 2024	Confirmed breeder. Adults seen on the June survey and at least two fledged juveniles were found giving begging calls on the Site. They were involved in a food pass too, which was something I had not encountered in Sparrowhawk behaviour before.
Swallow	*Hirundo rustica*	Amber	25th July 2024 9th Aug 2024	Non-breeding, flying, and feeding over the Site.
Swift	*Apus apus*	Red	25th June 2024 25th July 2024	The first survey was a dusk survey to look for potential breeding Swifts. As sunset approached, seven Swifts fed over the buildings. At 22:00, they all departed the area and did not fly into the building on Site. Surveyor confident that the birds were not breeding here and instead feeding over the Site. In July, two Swifts fed high over the sky but were ranging widely.
Woodpigeon	*Columba palumbus*	Green	25th June 2024 25th July 2024 9th Aug 2024	Probable breeding. Pair observed in suitable nesting habitat in breeding season
Wren	*Troglodytes troglodytes*	Green	25th June 2024 25th July 2024 9th Aug 2024	Confirmed. Recently fledged young.

While active nests were not observed during the breeding bird surveys it is assumed that many of the birds are nesting on Site given the suitability of the habitats present which the birds may be using e.g., treelines, hedgerows, woodland, and parkland.

The breeding bird surveys undertaken in 2022 and 2023 recorded Jackdaw. Jackdaws were observed nesting in the chimneys of Tabor House and Milltown Park House in previous years where birds were observed bringing nesting material to the chimneys, with some nests already constructed. Eggs are laid from mid-April on and young would tend to fledge 7-8 weeks later (mid-end June). Jackdaws may lay a second clutch. The presence of Jackdaws on Site could indicate that they are breeding regularly on Site, given previous evidence and the suitability of the buildings, particularly the chimneys as a nesting site.

A Herring Gull chick and parents were observed nesting on one of the chimney stacks of Tabor House in June 2025 by a surveyor when deploying a bat static detector in the attic of this building. The chick was heard calling by the surveyor who investigated confirming an active nest was present (**Figure 8.51**). Given observations of this species nesting on the roof of Tabor House in previous surveys, they may nest here regularly.

Internal inspections of Tabor House as part of the bat roost assessment recorded evidence of feral pigeon usage of parts of this building as recently as 2025. Access via roof holes and open windows have allowed birds to roost and nest within the building for a period of time based on the amounts of guano present.

Given the presence of Swifts feeding over the area, and the suitability of the buildings for nesting Swifts, Swift Breeding Bird Surveys were undertaken in 2024 and 2025. These surveys aimed to determine whether this Site holds a breeding population of this Red-listed species. However, no evidence of breeding Swallow, House Martin or Swift was recorded on or in any of the buildings during these targeted surveys.

Figure 8.51: Image of the Herring Gull chick and nest observed on the chimney of Tabor House in June 2025 (Source: DNV).

Of the species recorded on Site where nesting/breeding was confirmed, the only species of conservation concern is the Herring Gull, which is Amber-listed in Ireland. Jackdaw and Woodpigeon are both Green-listed species.

Herring Gull is a Special Conservation Interest (SCI) species for which one SPA is designated, the Ireland's Eye SPA 004117 (breeding and wintering), and also falls under the umbrella category of 'wetland and waterbirds' for which other important sites are designated e.g., I-WeBS and Ramsar sites. However, the AA Screening Report (DNV, 2023) for the proposed development determined regarding the Herring Gull usage of the Site that *"this breeding pair is unlikely to form part of the SPA assemblage considering the distance between the Site and the SPA (>14km), and the fact that this species widely use urban rooftops as a breeding resource".* In addition, the AA Screening Report concludes that *"impacts on this SPA owing to the project are not anticipated*".

Additionally, the existing buildings on Site which provide suitable nesting habitat for this and other species, namely Jackdaw, are being retained, therefore there will be no removal of this nesting habitat type within the Site.

As a precautionary approach, due to the suitability of the proposed Site for breeding bird species, in the form of hedgerow, woodland and tree habitats, and the confirmed breeding of Herring Gull, Jackdaw and potentially Woodpigeon within the existing buildings on Site, the Site has been valued as being of **Local Importance – Higher Value** for birds. As such, breeding bird species are included as a KER in this report.

8.9.4.4.2.2 Wintering Bird Survey Results

While the results of wintering bird surveys are no longer valid, per CIEEM advice note on the Lifespan of Ecological Reports & Surveys (2019), they are included for clarity. The Site has since been assessed (in 2024 and 2025) as having negligible habitat for wintering birds and so no further wintering bird surveys were required beyond what was previously conducted. Nonetheless, dated results are included to support the conclusion that the Site is not suitable for wintering birds.

Bird surveys were undertaken during the winter months in 2020/21 and 2022/23 to determine the usage of the Site by wintering waterbird species. These bird surveys recorded no wintering birds on Site. A single Curlew was recorded flying across the Site on one occasion, without stopping or landing within the Site (JBA, 2021).

The 2022/23 surveys conducted by DNV similarly recorded no usage of the Site by wintering birds. Species such as Herring Gull and Common Gull (*Larus canus*) were recorded in flight over the Site; however, none were recorded landing within the Site. The Site is not within any known flight lines of sensitive wintering waterbird species and no significant movement of birds over the Site was observed.

Site visits in Summer 2025 determined that there was no need for repeat winter bird surveys at the Site of the Proposed development as there has been no change in the suitability of the Site for wintering waterbirds i.e., it remains overgrown and unmanaged.

In addition to the above, per the AA Screening report produced for application under separate cover (DNV, 2025) the grassland at the Site of the proposed development is considered unsuitable due to its rank, unmanaged nature and high sward. As a result of this management

regime, the grass is infrequently mown and possesses a sward height of >15cm. This unmanaged grassland was present on Site prior to the purchase of the Site by the applicant and was recorded again during the ecological surveys carried out by JBA Consulting and DNV from the period 2020-2025, inclusive (**Figure 8.52** & **Figure 8.53**).

Based on the above, and the results of both the Screening for Appropriate Assessment, and the winter bird surveys carried out on Site to date, which did not record any wintering waterbird birds using the Site, nor habitat suitability for same within the Site, the Site is considered to be of **Less than Local Importance** for wintering waterbirds.

Figure 8.52: Photograph from the sales brochure of the Sandford Road Site showing the unmanaged grassland with tall grass, taken in 2019.

(Source: Sandford Road Sales Brochure, GVA Donal O Buachalla)

Figure 8.53: Photograph taken during a Site visit of the Sandford Road Site showing the unmanaged grassland with tall grass, taken in 2025. (Source: DNV)

8.9.4.5 Fish

8.9.4.5.1 Desk Study Results

A fish survey of the River Dodder was carried out by Inland Fisheries Ireland (IFI) in 2018. Five fish species were recorded at nine sites surveyed on the Dodder River Catchment in 2018. Brown trout (*Salmo trutta*) was the most abundant species captured and ranged in length from 6 to 29.4cm. Four age classes, 0+, 1+, 2+ and 3+, were present with 1+ being the most abundant cohort. European eel (*Anguilla anguilla*) was recorded at just one site (Site 9). Minnow (*Phoxinus phoxinus*), stone loach (*Barbatula barbatula*) and three- spined stickleback (*Gasterosteus aculeatus*) were also present (IFI, 2023b). Two sites were assigned Good fish ecological status, however, the remaining did not achieve the minimum acceptable ecological status level of 'Good' in 2018, as required by the Water Framework Directive. Seven were assigned Moderate status or below. There are a number of artificial barriers in the River Dodder catchment which prevent or limit the migration of salmonids to their spawning sites (Matson et al., 2019). Furthermore, a single Brown Trout was captured during a transitional water survey carried out by IFI in the Upper Liffey Estuary in 2010 (Kelly et al. 2010).

Three fish species were recorded at the two sites surveyed on the River Dodder in 2017. Brown trout was the most abundant species captured. Four age classes for brown trout (0+, 1+, 2+ and 3+) were present with 0+ being the most abundant cohort. Both sites were previously surveyed on a number of different occasions, with fluctuations in fish species density over the years. European eel, lamprey sp. (*Lampetra sp.)* and minnow were not recorded during the two most recent surveys conducted at each site. Both sites were assigned a fish ecological status of moderate. (Matson et al., 2018). The 2009 and 2014 surveys of the River Liffey (noted above) identified Lamprey species in both years (Kelly et al., 2015). Furthermore, River Lamprey (*Lampetra fluviatilis*) were captured during a transitional water survey carried out by IFI in the Upper Liffey Estuary in 2010 (Kelly et al., 2010).

While not targeted specifically, the River Dodder is encompassed within the eastern river basin district (ERBD) which was sampled as part of 179 river sites sampled in 2023 and 2022 during the national WFD fish monitoring programme, the results support the findings of the above, while Dodder-specific species counts or individual site ecological classifications can be accessed via the detailed dataset at the *Opendata ArcGIS portal* for each monitoring report / programme.

There are no NBDC records of European Eel within grid square O13Q (2km), however, Eel were captured further downstream, in a transitional water survey carried out by IFI in the Upper Liffey Estuary in 2010 (Kelly et al., 2010) and both the Upper and Lower Liffey Estuary in 2008 (Central and Regional Fisheries Boards, 2008).

As there are no watercourses within or near the proposed development site, fish surveys were not required.

8.9.4.6 Amphibians & Reptiles

8.9.4.6.1 Desk Study Results

Records for one amphibian and three reptiles exist in the 2km (O13Q) grid square in which the proposed development lies. These are listed in **Table 8.22** below:

Table 8.22: Records for amphibian and reptile species in 2km (O13Q) grid square (NBDC, 2023).

Species Name	Date of Last Record	Title of Dataset	Legal Status/Designation
Common Frog *(Rana temporaria)*	12/02/2007	Irish National Frog Database	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex V || Protected Species: Wildlife Acts
Common Lizard *(Zootoca vivipara)*	08/09/1968	Reptiles and Amphibians Distribution Atlas 1978 (*An Foras Forbartha*)	Protected Species: Wildlife Acts
Snapping Turtle *(Chelydra serpentina)*	27/07/2009	National Invasive Species Database	-
Yellow-bellied Slider (*Trachemys scripta scripta)*	01/06/2018	National Invasive Species Database	-

8.9.4.6.2 Field Study Results

The Site does not contain any ponds, or standing bodies of water and as such is not considered to be suitable for amphibians. Additionally, no amphibians, namely Common Frog (*Rana temporaria)* and Smooth Newt (*Lissotriton vulgaris*) were recorded within the Site during field surveys. Common Lizard are a widespread species in Ireland, known to occur in a variety of locations, and the Site does provide some superficial suitability for this species in terms of shelter (existing boundary wall crevices), basking (areas of hardstanding) and

commuting/foraging (grassland habitat). However, it is noted that the Site is an isolated greenspace within a highly managed urban built environment, and is therefore unlikely to support a population of Common Lizard.

As such this Site is considered to be of **Less than Local Importance**, for amphibians and reptiles, and they are not being assessed further in this report.

8.9.4.7 Invertebrates

8.9.4.7.1 Desk Study Results

No invertebrate species listed under the Habitats Directive were recorded within the 2km grid square by the NBDC. One species was listed as "Near threatened" while two invertebrates were listed as invasive species, as shown in **Table 8.23** below. In addition, the Environmental Protection Agency (EPA) EPA River Biologists database indicates the presence of White-clawed Crayfish (*Austropotamobius pallipes)* in the River Dodder in 2007.

Table 8.23: Records of threatened and invasive invertebrate species in 2km (O13Q) grid Square (NBDC, 2023).

Species Name	Date of Last Record	Title of Dataset	Legal Status/Designation
Harlequin Ladybird (*Harmonia axyridis)*	17/10/2022	Ladybirds of Ireland	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> High Impact Invasive Species || Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Large Red-Tailed Bumble Bee (*Bombus Melanobombus lapidarius)*	07/06/2019	Bees of Ireland	Threatened Species: Near threatened
Jenkins' Spire Snail (*Potamopyrgus antipodarum)*	09/09/2016	A national macroinvertebrate dataset collected for the biomonitoring of Ireland's river network, 2007–2018 (EPA)	Invasive Species: Invasive Species || Invasive Species: Invasive Species >> Medium Impact Invasive Species

8.10 Project Description

8.10.1 Proposed Development Description

Sandford Living Limited intend to apply for permission for a Large-Scale Residential Development at a c. 4.26 hectare site at Milltown Park, Sandford Road, Dublin 6, D06 V9K7. Works are also proposed on Milltown Road and Sandford Road to facilitate access to the development including improvements to pedestrian facilities on an area of c. 0.16 hectares. The development's surface water drainage network shall discharge from the site via a proposed 300mm diameter pipe along Milltown Road through the junction of Milltown Road / Sandford Road prior to outfalling to the existing drainage network on Eglinton Road (approximately 200 metres from the Sandford Road / Eglinton Road junction), with these works incorporating an area of c. 0.32 hectares. The development site area, road works and drainage works areas will provide a total application site area of c. 4.74 hectares.

The development will principally consist of: the demolition of c. 4,847.5 sq m of existing structures on site including Milltown Park House (880 sq m), Milltown Park House Rear Extension (2,031 sq m), the Finlay Wing (622 sq m), the Archive (1,240 sq m) and the Link Building between Tabor House and Milltown Park House Rear Extension to the front of the Chapel (74.5 sq m); the refurbishment and reuse of Tabor House (1,575 sq m) and the Chapel (768 sq m) and the provision of a single storey glass entrance lobby to the front and side of the Chapel (52 sq m); and the provision of 562 No. residential units comprising 6 No. three-bed courtyard houses and 556 No. apartment units (70 No. studios, 176 No. one-bed units, 267 No. two-bed units and 43 No. three-bed units).

Block A1 will range in height from 5 No. storeys to 8 No. storeys and will comprise 81 No. apartment units; Block A2 will range in height from 6 No. storeys to 8 No. storeys and will comprise 139 No. apartment units; Block B will range in height from 3 No. to 7 No. storeys and will comprise 74 No. apartment units; Block C will range in height from 4 No. storeys to 7 No. storeys and will comprise 151 No. apartment units; Block D will range in height from 3 No. storeys to 5 No. storeys and will comprise 30 No. apartment units; Block E will be 2 No. storeys in height and will comprise 6 No. courtyard type houses; and Block F will range in height from 5 No. storeys to 7 No. storeys and will comprise 81 No. apartment units.

The development also includes the provision of: cultural/community space within Tabor House (4 No. storeys including lower ground floor level) and the Chapel (2 No. storeys including lower ground floor level and mezzanine level) (1,698 sq m) with associated outdoor space (248 sq m); a café/restaurant (179 sq m) and a creche (375 sq m) within Block F with associated outdoor creche play area; ancillary residents' amenities and facilities (324 sq m) within Blocks B & C; and a single storey bin store and substation adjacent to Block F (101 sq m).

The development also provides a new access from Milltown Road (which will be the principal vehicular entrance to the site) in addition to utilising and upgrading the existing access from Sandford Road as a secondary access principally for deliveries, emergencies and taxis; new pedestrian access points; pedestrian/bicycle connections through the site; 319 No. car parking spaces (288 No. at basement level and 31 No. at surface level); set down area for deliveries; bicycle parking; 22 No. motorcycle spaces; bin storage; boundary treatments; private balconies and terraces facing all directions; hard and soft landscaping including public open space and communal open space; green/blue roofs; PV panels; substations; lighting; plant; lift cores and overruns; and all other associated site works above and below ground.

The proposed development has a gross floor space of c.50,196 sq m above ground level over a partial basement (under part of Blocks A1 and A2 and under Blocks B and C) measuring c. 10,550 sq m, which includes parking spaces, bin storage, bike storage and plant.

See **Figure 8.54** below for Site layout.

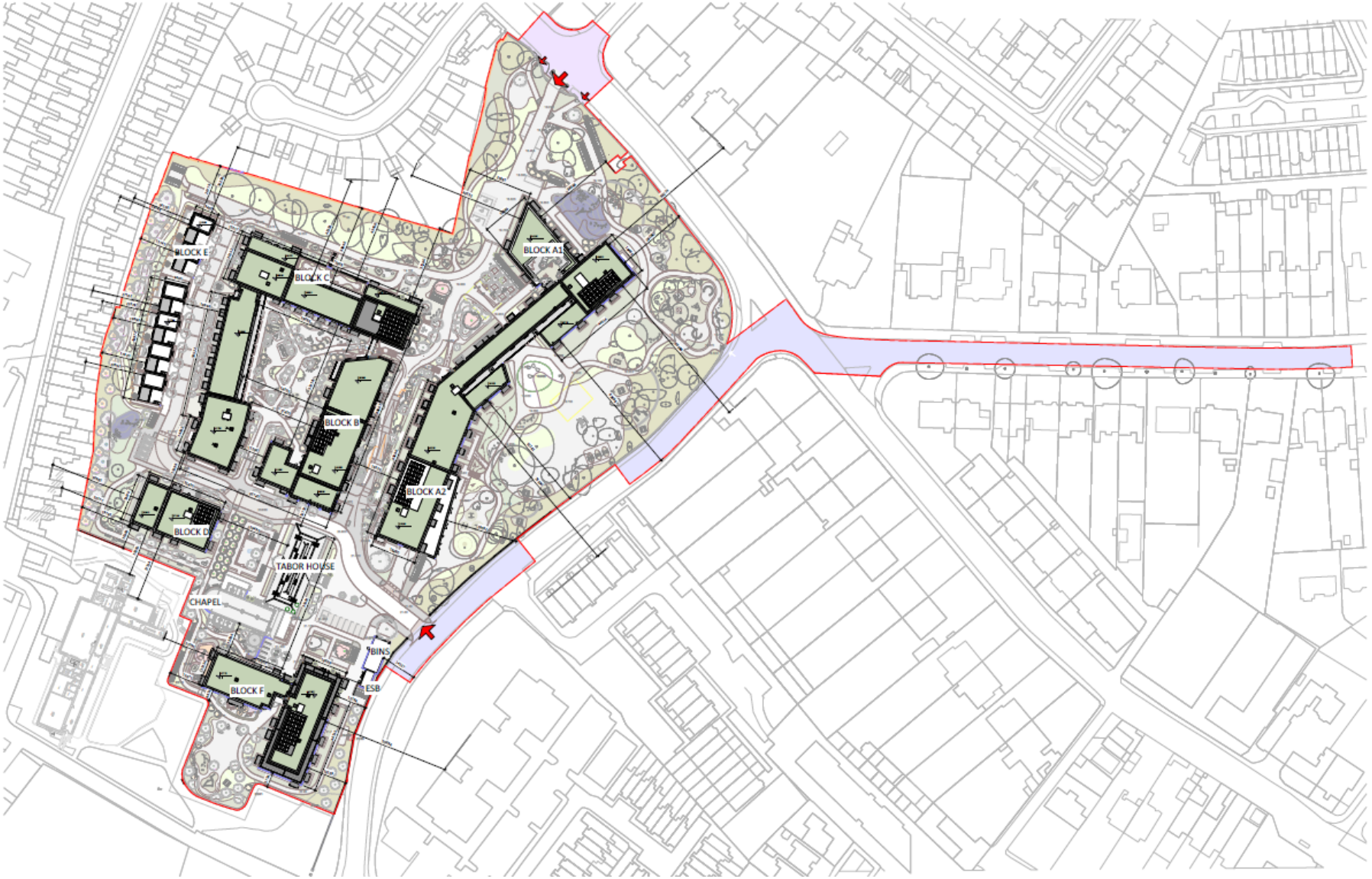

Figure 8.54: Proposed Site Layout (EXTRACTED FROM 19037C-OMP-OO-O8-DR-A-1109 - PROPOSED SITE PLAN – ROOF LEVEL, 2025)

8.10.2 Proposed Drainage & Water Supply

Foul water drainage will be connected to existing Dublin city combined sewers during the operational phase of the project. The foul water will be directed to Ringsend Waste Water Treatment Plant (WWTP) where it will be treated. Foul waters are eventually discharged at the Poolbeg discharge point which is located c. 1km from the WWTP.

Surface water sewers from the proposed development will discharge at attenuated flows to the existing drainage network on Eglinton Road (approximately 200m from the Sandford Road / Eglinton Road junction where the public line increases to a 300mm diameter pipe). In order to achieve the required drainage invert levels on Site, approximately 160m of the existing drainage network along Eglinton Road will need to be replaced with a 300mm pipe running at a flatter gradient. The total length of the surface water outfall from the point it crosses the Site boundary at Milltown Road to the discharge point on Eglinton Road is approximately 300m. As noted in the DBFL (2025a) *Infrastructure Design Report (IDR)* enclosed separately, detailed topographic and GPR surveys were carried out along the proposed outfall route (Milltown Road, through the junction of Milltown Road/Sandford Road and Eglinton Road) to assess feasibility concerning the location of existing services.

Surface water discharge rates from the proposed surface water drainage network will be controlled by a vortex flow control device (Hydrobrake or equivalent) and associated attenuation systems (Stormtech Chambers /Attenuation Basins at ground level, blue /green roof type systems on apartment roofs and at podium level). Surface water runoff from the roofs of the courtyard houses located along the western boundary will be routed to the proposed surface water pipe network via soakaway pits in the back gardens with overflows routed to main drainage network.

Surface water runoff from all on-street parking within the development will be captured by permeable paving before entering the surface water network.

Surface water runoff from the majority of site's internal street network will be directed to the proposed pipe network via tree pits or other SUDS features such as bioretention areas and permeable paving (with overflows to the network.) In limited instances, surface water runoff from paved areas will be directed to the proposed pipe network via conventional road gullies.

Any incidental surface water runoff generated from the basement carpark would drain through a separate system beneath the basement slab (out falling to the proposed foul drainage network via a petrol interceptor).

Any incidental surface water runoff generated from the basement carpark would drain through a separate system beneath the basement slab (outfalling to the proposed foul drainage network via a petrol interceptor).

In addition, the Site's surface water management infrastructure has been designed in accordance with the *Greater Dublin Strategic Drainage Study* (GDSDS, 2005). To prevent any increased flooding within the vicinity of the proposed development, it is proposed to implement SUDS measures (as discussed in the IDR) so as to limit the amount of discharge from the Site. The implementation of these SUDS measures will not increase the risk of flooding elsewhere. It is considered that the proposed development will have a negligible impact on the existing flood regime of the area. The following methodologies are being implemented as part of a SuDS treatment train approach:

- Green and Blue Roofs including roof areas draining via SuDS – Courtyard houses (located along the site's western boundary) drain via soakaway pits in the back garden with overflows discharging into the main drainage network.
- Surface water runoff from the site's internal street network will be directed to the proposed pipe network via tree pits or other SUDS features like bioretention areas with overflows to main drainage network.
- Surface water runoff from on-street and curtilage parking will be captured by permeable paving.
- Soft Landscaped/Grassed Areas – Slows runoff at source.
- Attenuation of the 30 and 100-year return period storms by way of attenuation basin / Stormtech chambers at ground level.
- Installation of a vortex flow control device (Hydrobrake or equivalent), limiting surface water discharge from the site to 6.0 l/sec.
- Surface water discharge will also pass via a Class 1 full retention fuel / oil separator (sized in accordance with permitted discharge from the site).

The details for each are summarised below. See DBFL (2025a) for further details.

Green Roofs:

These are proposed on courtyard houses, onto which vegetation is grown or habitats for wildlife/biodiversity are established. The proposed build-up will be an extensive type with 100mm minimum construction depth and sedum planting.

Blue Roofs:

Soft landscaped podium/roof areas will have typical soil depths of up to 300mm to facilitate grassed areas, plants, shrubs and trees i.e. similar to a deep intensive green roof build up.

Roof areas draining via SUDS:

Duplex units located along the Site's western boundary drain via porous aggregates beneath permeable paved driveways (providing an additional element of attenuation).

Green areas over podium:

Soft landscaped podium areas will have typical soil depths of up to 300mm to facilitate grassed areas, plants, shrubs and trees i.e., similar to a deep intensive green roof build-up.

Permeable paving:

Permeable pavements enable SUDS designers to direct rainfall straight into a SUDS structure for cleaning and storage or infiltration into the ground. Surface water runoff from curtilage parking spaces associated with duplex units located along the western boundary will be captured by permeable paving. Permeable paving will also be located over the podium, whereby free-draining material will build up and will reduce the flow rate from these areas.

Soft/landscaped green areas:

These will serve to slow the runoff rate at source.

Retention fuel/oil separator:

This is to be installed on the surface water drainage system so as to protect the receiving waters from pollution by oil from vehicles and machinery in the basement carpark.

Tree pits:

Tree pits are proposed to be in green space areas. Tree pits and planters will be designed to collect and attenuate runoff from the surrounding landscape by providing additional storage within the underlying structure. The soils around trees can also be used to filter out pollutants from runoff directly.

The use of tree pits is also in line with the *Dublin City Tree Strategy 2016 – 2020*, whereby trees are acknowledged as an important asset within Dublin City to be managed in a coordinated fashion, whilst creating greater awareness and appreciation of this valuable resource (Dublin City Council, 2016c).

Surface water runoff from the Site's internal street network will be directed to the proposed pipe network via tree pits or other SUDS features like swales or bioretention areas with overflows to conventional road gullies.

Attenuation tanks:

Attenuation of the 30 and 100-year return period storms within Stormtech Attenuation Chambers or equivalent. The proposed attenuation system attenuates surface water to restrict the outflow runoff. This ensures the development will not give rise to any impact downstream of the Site.

Flow Control:

It is proposed to provide a vortex flow control device (hydrobrake, or equivalent), at the outfall of the surface water catchment to restrict surface water discharge from the Site to 2.0 l/sec/h. Surface water discharge will also pass via a Class 1 full retention fuel/oil separator (sized in accordance with permitted discharge from the Site).

Further information on drainage at the proposed development can be found in the IDR (DBFL, 2025a).

8.10.3 Proposed Landscape Plan

The landscape plan for the Proposed Development integrates a strong ecological and biodiversity enhancement strategy.

Key features of the landscape plan include:

- Extensive native and wildlife-friendly planting, such as;
    - wildflower meadows,
    - raingardens, and;
    - layered understory vegetation
    - to create green corridors and habitat connectivity.
- Existing high-value trees, including elm specimens, are retained where feasible:

- This is complemented by new native tree and new shrub planting to strengthen ecological networks

The design incorporates biodiverse green and blue roofs planted with Irish-origin wildflower mixes, providing foraging habitats for birds and bats while contributing to the SUDS strategy.

Additional ecological enhancement design includes:

- 10 No. bird boxes,
- 3 No. bat boxes,
- 70 No. swift bricks,
- 2 No. insect hotels, and;
- 10 No. log piles

All of which will be strategically located to support nesting, roosting, and invertebrate diversity throughout the Site.

In addition, dark zones and buffer zones are maintained within the lighting strategy in order to protect bat movement, while pesticide-free management (detailed further below) ensures pollinator health. Communal spaces such as amenity terraces and edible gardens further enhance ecological value and resident engagement, setting a benchmark for sustainable urban design.

An extract of the proposed landscape plan (soft planting) is shown in **Figure 8.55,** below. For further information on the landscape plan / design and the ecological function of these key elements integrated into the proposed landscape plan, please refer to the Biodiversity Enhancement Plan (DNV, 2025), provided under separate cover.

Figure 8.55: Proposed Landscape Plan (Cameo and Partners, 2025).

8.10.4 Proposed Lighting Plan

A bat friendly lighting plan has been developed in co-ordination with Pritchard Thelmis (2025) and is shown below. In summary; the external lighting strategy for Milltown Park has been designed to balance functionality, aesthetics, and ecological sensitivity. All lighting uses warm white LED sources (2700K) with full cut-off optics to prevent upward spill, and is DALI dimmable with curfew controls set for 10:30 PM. Dark Zones are maintained free of artificial light to protect bat commuting corridors, while Buffer Zones use only low-level bollard lighting with reduced outputs and warm colour temperatures. Vehicular routes are lit by 6 m columns achieving EN 13201-2 suburban standards, while pedestrian routes employ multi-head columns, 4 m amenity posts, and bollards for informal paths. Feature lighting, including tree up lights, festoon lights in community areas, and heritage lanterns, which are strictly controlled and curfewed. The design complies 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
- Controlled and directional lighting to control light direction and spill

Design details that were incorporated specifically with a view to protecting nocturnal fauna, bat in particular, are included in Section 8.14.1.5 below. All measures incorporated into the lighting design work harmoniously with the landscape plan to establish dark zones / a dark corridor which wraps around key commuting and foraging features of the Site that are being maintained and enhanced.

8.10.5 Description of the Construction Phase

8.10.5.1 Construction Phase Schedule

The construction programme is approximately 34 months for the construction phase. The proposed phasing of the works is outlined in the *Preliminary Construction Management Plan (PCMP)* prepared by DBFL Consulting Engineers (DBFL, 2025c) and the *Infrastructure Design Report (IDR)* (DBFL, 2025a) and has been summarised below as follows:

- Phase 1 – Site Set Up, Enabling Works and Demolitions
- Phase 2 – Basement Box
- Phase 3 – Block D, Block F and works at Tabor House and The Chapel
- Phase 4 – Block A1, Block A2, Block B, Block C and Block E (Courtyard Houses).

For the duration of the construction phase, typical working hours shall be between 07:00 – 18:00 Monday to Friday (excluding bank holidays) and between 08:00 – 15:00 on Saturdays, subject to restrictions imposed by the local authority. No working will be allowed on Sundays or public holidays.

Exceptions to the above are:

- Construction works will not be undertaken during public holidays or on Sundays, and;

- Subject to agreement with the local authority, out-of-hours work may be required for water main and foul drainage connections.

8.10.5.2 Proposed Water Drainage During Construction

During construction, surface water will be managed as follows:

- Weather conditions and typical seasonal weather variations will be taken into account when planning stripping of topsoil and excavations with the objective of minimizing soil erosion.
- All oils, fuels, paints and other chemicals will be stored in a secure bunded hardstand area. Refuelling and servicing of construction machinery will take place in a designated hardstand area which is also remote from any surface water inlets (where not possible, such activities are to be carried out off Site).
- Concrete batching will take place off Site and wash down and wash out of concrete trucks will take place off Site (at authorized concrete batching plant locations in full compliance with relevant planning and environmental consents).
- The construction compound will include adequate staff welfare facilities including foul drainage and potable water supply. Foul drainage discharge from the construction compound will be tankered off-site to a licensed facility until a connection to the public foul drainage network has been established.

These measures are best practice measures and in line with *the Greater Dublin Regional Code of Practice for Drainage Works* (Dublin City Council, 2021). The first objective of the Code of Practice is Compliance with best environmental practices and relevant environmental legislation such as the *Water Framework Directive*.

8.10.6 Description of the Operation Phase

The Operational phase of the proposed development will see the use of the Site as intended through the occupation of residential dwellings and operation of the associated creche, and café/restaurant.

It is anticipated that road use (vehicular, cyclists and pedestrian activity) along Milford Road and Sandford Road will increase from the existing baseline as a result of the proposed development due to an increase in residential traffic in the area.

8.11 Potential Effects of the Proposed Development

8.11.1 Construction Phase

8.11.1.1 Potential Impacts on Designated Sites

8.11.1.1.1 Special Areas of Conservation and Special Protection Areas

The closest European sites to the Site of the proposed development are South Dublin Bay and River Tolka Estuary SPA and South Dublin Bay SAC which are c.2.20km to the East. The AA Screening Report containing information for the purposes of Stage 1 Screening for AA (DNV, 2025) is presented in a separate document with this application, the conclusions of which are presented below:

"The proposed development at Lands at Milltown Park, Sandford Road, Dublin 6, D06 V9K7has been assessed taking into account:

- *The nature, size and location of the proposed development and possible impacts arising from the Construction and/or Operational Phase.*
- *The qualifying interests and conservation objectives of the European sites.*
- *The potential for in-combination effects arising from other plans and projects.*

In conclusion, upon the examination, analysis, and evaluation of the relevant information, and applying the precautionary principle, it is concluded by the authors of this Report that, on the basis of objective information, the possibility ***may be excluded*** *that the proposed development will have a likely significant effect on any of the European sites identified in this AA Screening as maintaining an S-P-R pathway with the proposed development. These Sites are listed below:*

- *South Dublin Bay SAC (000210).*
- *North Dublin Bay SAC (000206).*
- *Rockabill to Dalkey Island SAC (003000).*
- *South Dublin Bay and River Tolka Estuary SPA (004024).*
- *North Bull Island SPA (004006).*
- *Wicklow Mountains SAC (002122).*

As a result of this AA Screening, it has been concluded that the proposed development at Milltown Park, Sandford Road, Dublin 6, will not have a significant adverse impact on any European site within the ZOI of the proposed development."

8.11.1.1.2 Proposed Natural Heritage Areas

The closest proposed NHA is the Grand Canal pNHA which is located 1.49km north/northwest of the proposed development Site.

In terms of potential impacts, the AA screening (DNV, 2025) has identified the presence of a surface water pathway during construction and operation where surface water will be discharged to the surface water network and foul water will be treated at Ringsend WWTP. The surface water network discharges to River Dodder which connects to River Liffey further downstream and eventually reaches Dublin Bay. There is also the potential for land (surface water) and air pathways to occur, owing to the proposed development, which is assessed below.

With regards to Dublin Bay, the AA Screening concludes that the proposed development will not impact on the European sites within Dublin Bay, including via surface water pathway. As the pNHAs within Dublin Bay have the same receptors, these are covered by the assessment in the AA Screening report and are therefore not considered to be impacted. These are: the South Dublin Bay pNHA, North Dublin Bay pNHA, Howth Head pNHA, Baldoyle Bay pNHA, Ireland's Eye pNHA and Malahide Estuary pNHA.

In addition, any pNHAs that occur upstream of the above-mentioned sites, with no other pathway to the proposed development (land or air) can also be ruled out for further assessment in this report, e.g., Booterstown Marsh which occurs further inland/adjacent to South Dublin Bay, and Feltrim Hill pNHA and Sluice River Marsh pNHA which both occur upstream of Baldoyle Bay.

The following pNHA sites occur directly upstream from the Dodder River, into which the proposed development is likely to drain: Dodder Valley, Lugmore Glen, and Glenasmole Valley. While Liffey Valley pNHA occurs further upstream from the discharge point of the Dodder River at Ringsend. Similarly, the Royal Canal occurs to the north of the River Liffey and discharges into this river upstream at the North Wall. As such, these sites are not considered to be within the ZOI and are therefore not considered further in this report.

And finally, the following pNHAs sites are terrestrial habitats, meaning the only potential connection to the site would be via air pathways: Ballybetagh Bog, Loughlinstown Woods, Knocksink Woods, Fitzsimon's Wood, Ballyman Glen, Glenacree Valley, Powerscourt Woodland, Santry Demesne, Slade of Saggart and Crooksling Glen, and Dingle Glen. However, accounting for the type of habitats present, the prevailing winds, the distance between these sites and the proposed development, these sites are not considered to be within the ZOI and are therefore not considered further in this report.
Therefore, there is a potential hydrological link between the Site of the proposed development and the following remaining pNHA sites via the local stormwater drainage network:

- The Grand Canal pNHA, and
- Dolphins, Dublin Docks pNHA

As a result, these are included for further assessment below.

The Grand Canal is a man-made waterway linking the River Liffey at Dublin with the Shannon at Shannon Harbour and the Barrow at Athy. Many different habitats are found within the canal boundaries including hedgerow, tall herbs, calcareous grassland, reed fringe, open water, scrub, and woodland.

The Grand Canal supports coarse fish species including pike (*Esox lucius*), Rudd (*Scardinius erythrophthalmus*), Bream (*Abramis brama*) and Tench (*Tinca tinca*). The canal is also important for supporting Opposite-leaved pondweed *Groenlandia densa* (Flora Protection Order 1987), and Glutinous snail (*Myxas glutinosa)* (Dublin City Biodiversity Action Plan 2015-2020). The latter is a very rare freshwater snail, which requires pollution-free, extremely clear, calm, and calcium-rich water. However, the ecological value of the canal lies more in the diversity of species it supports along its linear habitats than in the presence of rare species (NPWS, 2009a).

The Dolphins, Dublin Docks pNHA is comprised of two mooring 'dolphins' in the River Liffey near Pigeon House Harbour. These 'dolphins' are used by nesting terns with approximately 350 pairs of Common tern recorded in 2006 (Dublin City Biodiversity Action Plan, 2021 – 2025).

Construction Phase Surface Water

Stormwater generated at the Site during the Construction phase will discharge to the existing surface water system which in turn discharges to the River Dodder, and eventually Dublin Bay via the Liffey. A Hydrological and Hydrogeological Qualitative Risk Assessment (HRA) was prepared for the proposed development (AWN, 2023). The HRA was carried out to assess the potential for any likely significant impacts on receiving waters within protected areas, during both the Construction and Operational phase of the proposed development. It is noted that

this assessment was carried out in the absence of any consideration of any measures intended to avoid or reduce harmful effects potentially caused as a result of the proposed development (i.e. mitigation measures).

According to this assessment, "*there are no pollutant linkages as a result of the construction or operation (without the use of mitigation) of the proposed development which could result in a water quality impact which could alter the habitat requirements of the Natura sites within Dublin Bay*". This applies also to the two aforementioned downstream pNHAs that maintain indirect hydrological links to the Site.

The HRA also states:

> *"Should any silt-laden stormwater from construction or hydrocarbon-contaminated water from a construction vehicle leak/tank leak manage to enter into the surface/combined water sewer, the suspended solids will naturally settle within the sewer; however, in the event of a worst case hydrocarbon leak of 1,000 litres this would be diluted to background levels (established as surface water quality objectives as outlined in S.I. No. 272 of 2009, S.I. No. 386 of 2015 and S.I. No. 77 of 2019) by the time the stormwater reaches the nearest Natura 2000 Sites (South Dublin Bay and River Tolka Estuary SPA, South Dublin Bay SAC, North Dublin Bay SAC, North Bull Island SPA, c. 2.5 km). It can be concluded that the in-combination effects of surface water arising from the Proposed Development taken together with that of other permitted developments will not be significant based on the in-combination low potential chemical and sediment expected loading. Therefore, based on the loading of any hazardous material considered in the worst-case scenarios mentioned in Section 3.1 above during construction and operation phases, there is subsequently no potential for impact on downgradient Natura 2000 habitats (South Dublin Bay and River Tolka Estuary SPA, South Dublin Bay SAC, North Dublin Bay SAC, North Bull Island SPA, which is located 2.5 km from the site)."*

Furthermore, the HRA states that in a worst-case scenario of an unmitigated leak and not considering the operation of the SuDS and interceptor already included in the design, no perceptible risk to any Natura 2000 Sites is anticipated given the distance from source to Dublin Bay protected areas (c. 2.5 km). Potential contaminant loading will be attenuated, diluted and dispersed near source area.

Foul drainage during construction from staff welfare facilities will be tankered off Site to a licensed facility until a connection to the public foul drainage network has been established. Therefore, it can be concluded that there will be no likely significant effects on the water quality of any of the designated sites (pNHAs or European Sites, etc.) within Dublin Bay during the Construction phase of the proposed development.

Construction Phase Ground Water

The Site is located underlain with bedrock type: '*Dark limestone & shale ('calp)'* (GSI, 2023) and the aquifer vulnerability at the Site is low, with part of Eglinton Road within an area of moderate vulnerability (EPA, 2023). This aquifer is surrounded by aquifers of medium and low vulnerability to the north, south and east, i.e. in the direction of the designated Sites within Dublin Bay.

Given that the Site is located at a distance from the designated sites within Dublin Bay, and is itself located in an area of predominantly low aquifer vulnerability, likely significant

negative effects on the designated sites within Dublin Bay are not anticipated; either from the proposed development on its own or cumulatively with other projects. The HRA (AWN, 2023) also confirms the above and concludes that "*there is no potential for a change in the groundwater body status or significant source pathway linkage through the aquifer to any Natura 2000 site*". This applies also to the two aforementioned downstream pNHAs that maintain indirect hydrological links to the Site.

8.11.1.1.3 Other Designated Sites

Dublin Bay is a designated I-WeBs site with multiple subsites stretching from north of Howth to the south at Killiney Beach and Bay as shown in **Figure 8.56** below.

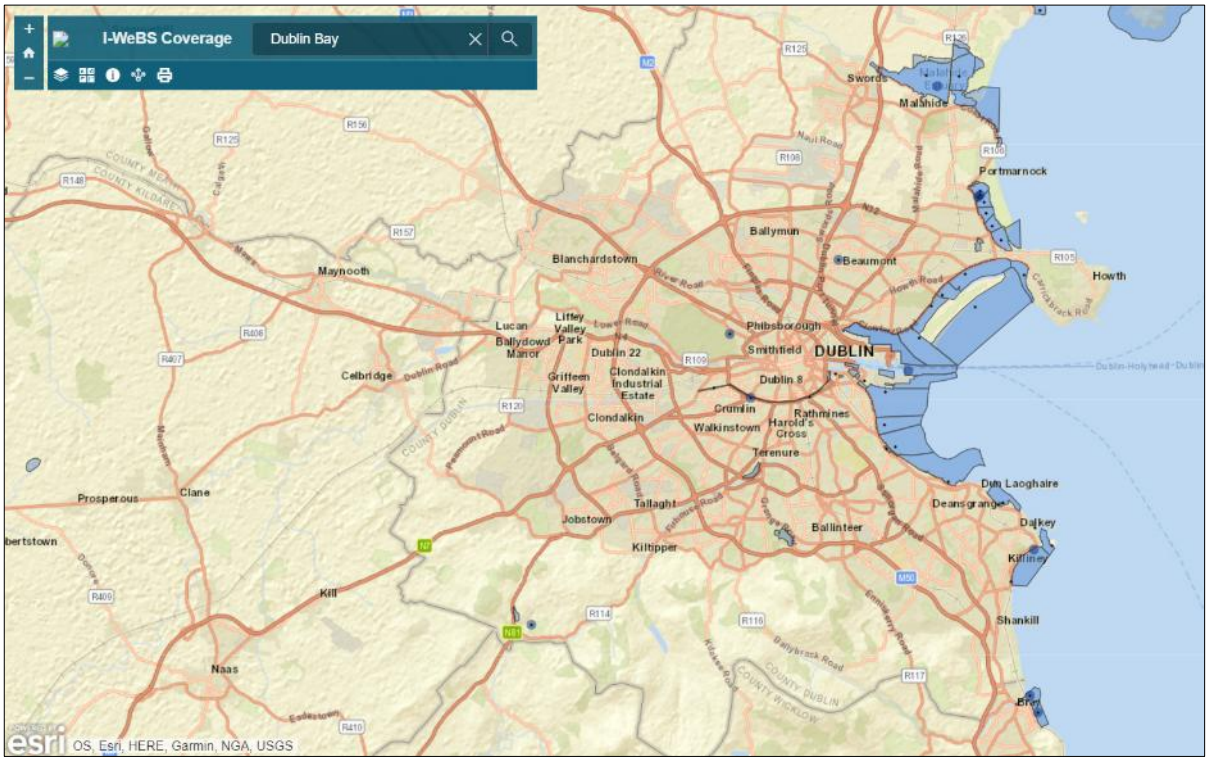

Figure 8.56: Dublin Bay I-WeBs Site and Sub-Sites Map

(Source: I-WeBs, 2023)

These 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. However, the AA Screening Report (DNV, 2025) determined that there was no potential for significant negative impacts on any SPA designated Sites owing to the proposed project. Accounting for this, and, given the intervening distance between the Dublin Bay I-WeBs site (and sub-sites contained therein) and the proposed development, the potential for impact owing to the project is unlikely to occur.

North Dublin Bay SAC (000206) is also a designated national nature reserve and Ramsar wetland site; North Bull Island. While Dublin Bay also contains another Ramsar site; Sandymount Strand/Tolka Estuary, and the entirety of Dublin Bay, including green space in

the city, is a designated UNESCO Biosphere (Dublin City Council, 2016) as shown in **Figure 8.57**.

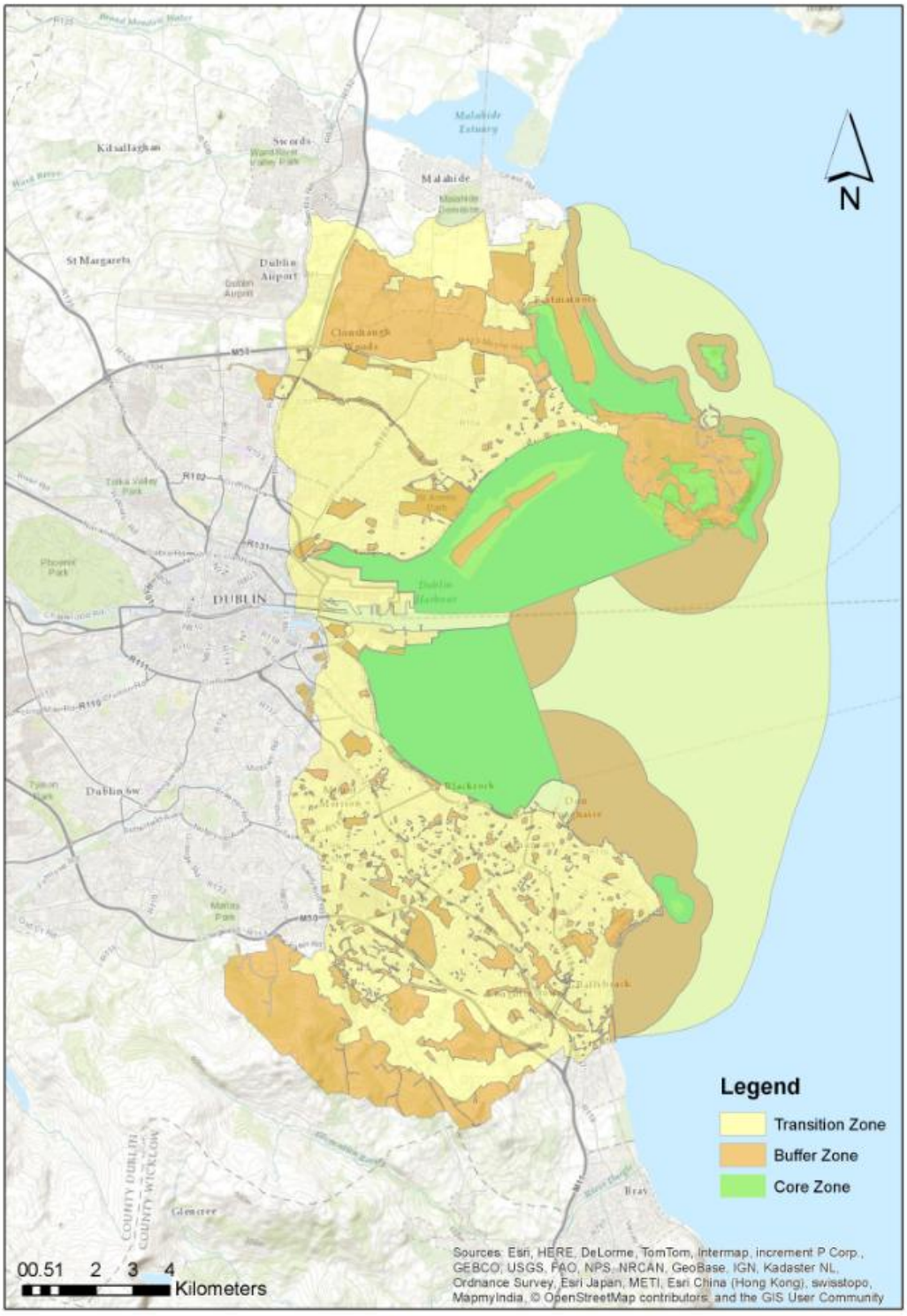

Figure 8.57: Dublin Bay Biosphere Zoning Map

(Source: Catchments.ie, 2023)

The North Dublin Bay SAC (000206) is also a designated national nature reserve and Ramsar wetland site; North Bull Island is located within Dublin Bay, and, as the AA Screening Report

concluded European sites within Dublin Bay are not anticipated to be significantly affected by the project, impacts on these sites are unlikely, given they are located within the same bay and are subject to the same receiving environment.
While the proposed development Site lies within Dublin Bay Biosphere, it is located within the transition zone of the Dublin Bay Biosphere.

The Dublin City Council website (2023) states the following in relation to the transition zone of the Dublin Bay Biosphere:

> *"The transition zone is the outer part of the Biosphere. Sustainable social and economic development is strongly promoted here. It includes residential neighbourhoods, harbours, ports and industrial and commercial areas. e.g., Dublin Port Company, a member of the Dublin Bay Biosphere Partnership, maintains pontoons within the port to provide nesting spaces for Common and Arctic terns, which are protected species under the EU Birds Directive."*

Therefore, the transition zone comprises the outer part of the Biosphere, which is where the proposed development Site is located, and sustainable social and economic development is strongly promoted here (DublinCity.ie, 2023). Ringsend WWTP, to which effluent from the project will flow, is located within the core zone of the Biosphere, and, as such, there is the potential for water quality impacts to occur. The upgrades works to increase the capacity of the WWTP are underway, however, as discussed in Section 8.12.3, even in the absence of these upgrades, significant impacts to the ecology of Dublin bay are not expected. The Biosphere is not included for further assessment as it is addressed by proxy by the findings of the AA Screening which accompanies this application under separate cover.

8.11.1.2 Invasive Alien Plant Species

Several IASPs were recorded on Site on during the DNV walkover surveys carried out on Site to date.

Of this list, only two species are high-impact species listed on the Third Schedule of European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011), namely Spanish Bluebell and Three-cornered Leek. High-impact Cherry Laurel was also recorded as seedlings and bushes within the woodland sections of the Site, however this species is not listed on the Third Schedule of S.I. 477 of 2011. The Medium impact invasive species recorded on Site include Butterfly Bush, Traveller's Joy, and Himalayan Honeysuckle. Low impact Winter Heliotrope and Snowberry were also recorded within the woodland sections of the Site.

In addition, Ragwort *Jacobaea vulgaris* which is not an invasive plant species but is considered a noxious weed under the Noxious Weeds Act, 1936 (and amended), was also recorded along the grassy verges contiguous to the carpark. Should any of these invasive alien plant species be spread off-site during the proposed works (e.g., vegetation clearance) they may cause nuisances at other locations.

Regarding the medium or lower-impact species (including noxious weeds); as these are not considered to be high-risk flora species, potential impacts of their spread can be addressed by good site biosecurity hygiene and best practice removal methods. TII (2020) guidance '*The Management of Invasive Alien Plant Species on National Roads – Technical Guidance'* will be consulted with regard to the treatment, removal and disposal of invasive flora at the Site. Although not all KERs are deemed at risk of impacts associated with these invasive species, best practice mitigation and biosecurity measures are recommended in Section **Error! Reference source not found.**.

8.11.1.3 Impacts to Habitats & Flora

As per the landscape proposal prepared by Cameo & Partners Design Studio (2025) and as detailed in their *Landscape Design Statement*, it is proposed to retain the majority of the woodland habitats (WD2) and the majority of the field boundaries that make up the linear habitats at the Site, including much of the old stone wall that runs along the eastern section of the Site.

Some sections of scrub and treelines will be lost due to the footprint of the development, including access roads and pathways which will provide connectivity throughout the Site for future residents. The scrub and treeline along the western boundary extent will be partially removed to allow for the residential dwellings to be constructed. This scrub is bramble dominant, however, invasive species (IAS) are also present along sections of this habitat (e.g., Snowberry and Winter Heliotrope), which, if left alone, could potentially outcompete native species and become dominant. Some trees will be retained, the treeline will be reinstated post construction phase (and post IAS treatment) to maintain this ecological corridor.

The loss of scrub will result in some loss of habitat connectivity/diversity throughout the Site; however, this is deemed to be fairly minimal based on the relatively recent nature of much of the scrub within the Site and the presence of IAPS species within same. Treeline habitat will also be removed to facilitate the construction of the residential dwellings and associated infrastructure. This occurs to the west and east of the existing carpark, and further west near the scrub habitat, as well as further south where the primary access point is proposed for the

development. The treeline west of the carpark is Holly dominant, and the treeline east of the carpark is comprised of mixed non-native conifer species. The small treeline to the south is comprised of Yew and Beech.

The grassland west and north of Tabor House was used for foraging by bats. This habitat will be removed throughout the Site to facilitate the works. This could have a minor impact on bats using the Site for foraging. However, grassland and wildflower meadows will be planted as part of the proposed landscaping of the Site once the construction phase is complete, as per the landscape management plan, and thus impacts will be **neutral** in the long-term overall.

While a loss of scrub and treeline habitat will occur at the Site, the landscape plan proposes to retain the majority of the northern and eastern woodland habitats, and the western treeline boundary habitat, ensuring habitat connectivity is maintained at the Site as part of the final design. Furthermore, new tree planting is proposed across the centre of the Site, where grassland habitat currently exists. The increased tree cover at the Site, along with the increase in shrub planting, will provide new varied habitats within the centre of the Site that will create habitat stepping stones throughout the Site. The maintenance of habitat connectivity around the Site through the retention of the northern and eastern woodland areas will ensure that this is a **short to medium-term, negative, moderate** impact until the replacement habitats have been planted/established.

8.11.1.4 Potential Impacts on Fauna

8.11.1.4.1 Non-volant Mammals

Impacts to Small Mammals

The proposed development could have a potential **negative, permanent, moderate** impact at a local level on small mammals utilising the Site. Small mammal species, such as hedgehogs and pygmy shrew, which may be present at the Site, 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.
In the absence of mitigation measures, the removal of the treeline, hedgerow and scrub habitat constitutes a **negative, short-term, significant** impact at a local level.

While evidence of Red Fox was observed during the field visits, and the removal of the GS2 grassland habitat could lead to a potential negative impact, Red Fox is not afforded any specific conservation in Ireland, other than that of the Wildlife Act 1976, as amended, and are considered a widespread and abundant species. Nevertheless, Red Fox is a resilient mammal species that has adapted to human environments and will likely to continue to frequent the Site once developed.

The proposed landscaping will result in the loss of existing grassland at the Site and its conversion to smaller sections of open space grassland, hardstanding and fenced garden habitat. This will result in a **permanent, negative, moderate** impact to small mammals at the Site scale, through a loss of connectivity or access to areas of the site to forage. The external margins of the Site will, however, continue to provide habitat connectivity around the Site and into adjoining lands.

Disturbance of small mammal species due to lighting (particularly nocturnal species), noise and dust generated during the construction phase, although unlikely, is possible and, as such, a precautionary approach is adopted with these disturbances representing potential **negative, short-term, slight** impacts at a local scale in the absence of mitigation.

Impact to Badger (if present)

While burrows were noted on Site during ecological surveys, these were either unsuitable for Badger or disused. The result of which being that there was a lack of evidence of badger activity/badger setts recorded during field surveys at the Site. The proposed development Site is located in an urban environment with pockets of green spaces interspersed, and so the removal of any suitable badger habitat could result in a reduction in connectivity for this species. However, the woodland habitat along the perimeter of the Site is being retained. Therefore, given the absence of this species during field surveys, and the retention of the woodland habitats on the Site, any habitat loss associated with the proposed development will have an **imperceptible and neutral impact** on badger in the absence of mitigation.
There is the risk if badger do frequent the Site, of construction related injuries or entrapment. This would represent a **negative, short-term, significant impact** to badgers at the local scale in the absence of mitigation.

8.11.1.4.2 Amphibians

There is no suitable habitat within the proposed development Site for amphibian species such as Common Frog or Smooth Newt. As such no significant effects on amphibians during either the construction or the operational phase of the proposed development are anticipated.

In addition, SUDS measures including permeable paving, petrol interceptors, and attenuation storage tanks have been incorporated into the design to treat and minimise surface water runoff from the Site.

Therefore, the potential impact to amphibians on Site or within connected watercourses during the operational phase of the development is considered to be **neutral.**

8.11.1.4.3 Bats

Bat activity was generally low throughout the Site during all surveys. No bat roosts were recorded within the buildings surveyed during the suite of surveys that inform this chapter. A combination of internal inspections, static detector deployment and emergence surveys identified no bat roosts within these structures, and therefore, it can be concluded that no bat roosts will be lost or disturbed as a result of the Proposed development.

With regard to the proposed works themselves, it is noted that the proposed alterations to existing buildings involve the demolition of two buildings of negligible roost suitability (The Archive and the Finlay Wing) and one building of low roost suitability (Milltown Park House & Rear Extension) (this is sometimes referred to as two buildings in other application documents, but for the purposes of bat surveys has been considered one building due to the interconnected nature of the structure); and the renovation of two buildings of moderate roost suitability (Tabor House and the Chapel). The buildings with bat roosting suitability are therefore being retained.

With regard to the moderate roost suitability buildings, the following is understood with regards the works proposed that could impact bats if found to be roosting within their PRFs in the future.

Chapter 7 of the Environmental Impact Assessment Report (EIAR) on Architectural Heritage, prepared by Molloy & Associates Conservation Architects notes the following relevant alterations for Tabor House (i.e., those involving the roof or attic):

- It is proposed to insulate the attic level, whilst retaining ventilation above as required of a traditional pitched roof.
- It also notes the repair of main roof structure to be carried out as required and that it is proposed to repair the slated roof using traditional methodologies, and repair/ replace any copper linings where cracked.

Regarding the Chapel, Chapter 7 of the EIAR notes the following relevant proposals that involve the roof or ceiling:

- The vaulted timber-clad ceiling and roof trusses will remain exposed and appreciable within the reconfigured space.
- Breaches in coffered ceiling panels will be sealed at decoration stage to reduce air leakage as part of insulation strategy.
- It also notes the repair of the main roof structure as required and that it is proposed to repair the slated roof using traditional methodologies, and repair/ replace any copper linings where cracked.
- The choir balcony, rose window, pews and organ will be retained.

Although no roosts were recorded within buildings on Site, it is important to note that bat roosting activity can be transient in nature, with bats adopting and using different roosts in different years. Works to repurpose buildings with roost potential could result in **negative, permanent, significant** impacts should bats be roosting within same during the works.

As such and given the above proposals regarding attic insulation and roof slate repair, further surveys are considered best practice ahead of works commencing on these buildings, especially given that an unknown amount of time could pass between the surveys detailed in this chapter and the works on Site commencing (see Section 8.14.2.7 for further details).

A number of trees are proposed to be removed to facilitate the works, although only trees of negligible and low bat roost potential are being removed. As such, this could have a potential **negative, permanent, slight** impact at a local level on bat species that may be using the Site, in the absence of suitable mitigation measures.

Additionally, the proposed development could have a potential **negative, permanent, moderate** impact at a local level on bat species utilising the Site, in the absence of mitigation measures, through the removal of suitable commuting and foraging habitat, i.e., treelines and grassland. However, the majority of the woodland at the Site is being retained and incorporated into the landscaping of the Site, alongside wildflower meadow and open space grassland areas. This will result in the maintenance of woodland edge habitats, with grassland glades and native understorey planting within the Site; favourable commuting/foraging habitats for bats.

8.11.1.4.4 Birds

The proposed development could have a potential **negative, permanent, moderate** impact at a local level on bird species utilising the Site, such as Robin, where present, in the absence of mitigation measures, through the removal of the treeline, hedgerow and scrub habitat.

Breeding Birds

While species recorded during the breeding bird surveys can largely be considered to be breeding on Site or in the vicinity of the Site, three species were confirmed to be breeding on Site, specifically within the existing buildings to the south. This includes Jackdaw, Herring Gull, and Woodpigeon. Targeted surveys for Swift, Barn Swallow and House Martin were also undertaken during the breeding survey seasons (including in 2025), however, no evidence of breeding Swallow, House Martin or Swift was recorded on or in any of the buildings during these targeted surveys.

Jackdaw and Herring Gull were observed nesting on the southwest chimney of the existing Tabor House, while a pair of Woodpigeon may be using a drainage vent as a nesting site on the existing Finlay Wing within the Site. Another Jackdaw nest was observed on the south chimney of the existing Milltown Park House and Extensions. Jackdaw and Woodpigeon are BoCCI Green-listed in Ireland, while Herring Gull is an Amber-listed species. Both Tabor House and the Chapel are being retained and refurbished, while the remaining buildings are earmarked for demolition to facilitate the works. As such, potential nest locations for Jackdaw and Woodpigeon will be removed, however, the effects of this are considered to be insignificant as suitable nesting habitat is abundant for these species within and surrounding the Site.

The increased noise and dust levels associated with the construction phase of the proposed development, along with the loss of some nesting habitat has the potential to cause **negative, short-term, moderate** impacts on local bird populations in the absence of mitigation.

8.11.1.4.5 Other Fauna

8.11.1.4.5.1 Fish

There are no watercourses within the proposed development Site. The nearest watercourse is the River Dodder which is located 500m south-east. As such, significant effects on fish species are not anticipated during the construction phase.

In addition, SUDS measures, including permeable paving, petrol interceptors, and attenuation storage have been incorporated into the design to treat and minimise surface water runoff from the Site. Therefore, the potential impact to fish species within the River Dodder during the operational phase of the proposed development is considered to be **neutral.**

8.11.1.4.5.2 Reptiles

While no evidence of Common Lizard was observed during field surveys, there is some suitable habitat present on Site for this species. As such, there may be some loss of foraging habitat to Common Lizard associated with the proposed development should this species be present on-site. This is offset somewhat by the landscape plan which includes the retention of some of the stone wall that runs along the eastern extent of the Site boundary adjacent to Milltown Road, and the hedgerow planting per the landscape plan. Lizards may also use the various private gardens associated with the residential development and green landscape areas that are proposed as part of the proposed development at the Site. Potential impacts on Common Lizard are deemed to be **permanent, neutral and not-significant**.

8.11.1.4.5.3 Invertebrates

While there are no watercourses or bodies of standing water present at the proposed development Site, the removal of scrub and treeline habitat could have the potential to impact on invertebrates, however, no rare or protected species were recorded during Site visits, and accounting for this in addition to the abundance of suitable habitat in the surrounding area, the potential impacts are considered to be **short term and imperceptible** at a local level during the construction phase.

However, the use of SUDS measures in the project design which includes features such as soft landscaping, tree pits, and green roofs on apartment blocks, could result in a positive impact on invertebrate diversity and numbers. Additionally, SUDS measures including permeable paving, petrol interceptors, and attenuation storage tanks have been incorporated into the design to treat and minimise surface water runoff from the Site.

Therefore, the potential impact to invertebrates on Site or within connected watercourses during the operational phase of the development is considered to be **neutral.**

8.11.2 Operational Phase

8.11.2.1 Downstream Designated Sites

In terms of potential hydrological connections to downstream designated sites, the Operational Phase effects are deemed **'not significant'** due to the potential for dilution of pollutants in the surface water network (e.g., the Dodder River, River Liffey, and Upper Liffey Estuary) before reaching Dublin Bay, and the SUDS measures included as part of the Project design to treat surface waters at the Site (green roofs, rain gardens, swales, tree pits and permeable paving), as per the requirements of the *Greater Dublin Regional Code of Practice for Drainage Works*[4] .

Per the AA Screening report; with regard to the consideration of embedded mitigation in the assessment process the following is noted. In Case C 721/21 Eco Advocacy, the Court of Justice of the European Union held that, regarding the interpretation of Article 6(3) of Directive 92/43 (as amended), the Article must be interpreted as meaning that:

"In order to determine whether it is necessary to carry out an appropriate assessment of the implications of a plan or project for a site, account may be taken of the features of that plan or project which involve the removal of contaminants and which therefore may have the effect of reducing the harmful effects of the plan or project on that site, where those features have been

[4] https://www.sdcc.ie/en/services/planning/planning-applications/water-and-drainage-considerations/

incorporated into that plan or project as standard features, inherent in such a plan or project, irrespective of any effect on the site".
As such, standardised embedded mitigation (such as the use of SUDS in large-scale residential led developments), that are incorporated into the design of a proposal or project and which may result in the elimination of likely significant effects on European sites, but where the primary reason of the embedded mitigation is not to protect a European site, are permitted for consideration when screening for AA. This is consistent with the policy of Dublin City Council (SI122) to "To require the use of Sustainable Drainage Systems (SUDS) in all new developments, where appropriate, as set out in the Greater Dublin Strategic Drainage Study …".

However, even in the absence of SUDS measures, the potential for likely significant effects at downstream designated sites as a result of operational surface water run-off is deemed to be negligible, due to the following:

- Operational surface waters will discharge to existing storm sewer infrastructure located along Eglinton Road and not directly to any waterbody (e.g., The River Dodder).
- The capacity for dilution and mixing that exists within the receiving stormwater infrastructure during periods of rainfall, and ultimately the River Dodder, River Liffey and Dublin Bay.

8.11.2.2 Impacts on Nocturnal Fauna

Artificial lighting introduced during the operational phase can significantly alter nocturnal habitat quality. Public lighting, particularly high-intensity or poorly directed luminaires, can fragment or eliminate areas of suitable foraging and commuting habitat for bats, which rely on dark corridors for safe movement between roosts and feeding sites. Increased illumination can deter light-sensitive species such as Pipistrellus and Myotis bats, reducing access to insect-rich areas and disrupting established flight paths. Similarly, nocturnal mammals like hedgehogs (*Erinaceus europaeus*) may experience reduced foraging opportunities and increased predation risk due to heightened visibility under artificial light. These changes represent a **negative, permanent, and significant** impact at the Site scale in the absence of mitigation, as they can lead to long-term displacement of species and reduced ecological functionality of green spaces.

Mitigation typically involves implementing a bat-sensitive lighting strategy, such as using low-spill, warm-spectrum LEDs, dimming during off-peak hours, and maintaining unlit corridors along hedgerows and treelines to preserve connectivity for nocturnal fauna. Please refer to section 8.14 for mitigation measures proposed to be employed at the Site.

8.11.2.3 Impacts on Breeding Birds

During the operational phase, the presence of residents, routine traffic, and general human activity will introduce a baseline level of noise and movement within the development. While such disturbance can theoretically influence sensitive species, the habitats within and adjacent to the Site are already subject to urban pressures and background noise, meaning local bird populations are likely habituated to these conditions. Breeding birds typically adapt to predictable, low-intensity disturbance associated with residential areas, and no significant displacement or reduction in nesting success is anticipated.

Consequently, the predicted effect is considered **neutral, permanent, and imperceptible**, as it does not alter population dynamics, habitat availability, or conservation status at any meaningful scale.

8.11.2.4 Bird/Building Collisions

With regard to the potential for flight-line obstruction/collisions posed by the buildings proposed at the Site, winter bird surveys carried out over the 2021/22 and 2022/23 recorded no established flight-lines over the Site, nor usage of the Site by waterbirds listed as SCI's for the relevant SPAs.

The building envelope of the Proposed development consists of a diverse range of façades which vary in terms of material composition, uniformity and size (**Figure 8.58**). These architectural design features provide important visible cues as to the presence and extent of the proposed structures to any commuting/foraging bird species should they be in the vicinity of the Site and help to break up reflective surfaces which may disorientate birds (City of Toronto, 2016). The overall heterogeneity and design features of the building envelope coupled with maximum height of 26.3m further reduce the risk of collision. As such, likely significant effects relating to flight-line obstruction/collisions are not deemed likely to occur.

Figure 8.58: Example of the proposed northern building elevations of Block C, showing the mixed façade composition and interspersed areas of glazing

(Source: OMP Drawing: 19037-C-OMP-ZZ-ZZ-M3-A-0002.).

8.11.3 Summary of KERs for Assessment of Potential Impact

The ecological value of designated sites, habitats, flora and fauna associated with the proposed development Site are evaluated below. This evaluation follows the Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009). KERs are those

ecological receptors for which detailed assessment is required, on the basis of ecological value and likely significant impacts. KERs are outlined in **Table 8.24,** with a rationale for the evaluation provided in the relevant Section in Section 8.8.4 above. Ecological resources of below 'Local Importance (higher value)' should not be selected as KERs for which detailed assessment is required (NRA, 2009).

Table 8.24: Designated European Sites within the ZOI, included/excluded for further assessment.

Designated Site/Species/Habitat	Evaluation	Key Ecological Receptor (KER)
SACs & SPAs*	International importance	No
Grand Canal pNHA	National Importance	Yes
Dolphins, Dublin Docks pNHA	National Importance	Yes
All other pNHAs within ZOI*	National Importance	No
Dublin Bay I-WeBs Sites	International Importance	No
Dublin Bay Biosphere	International Importance	No
Stone Walls & Other Stonework (BL1)	Local Importance – Lower Value	No
Buildings & Artificial Surfaces (BL3)	Local Importance – Higher Value	Yes
Dry Meadows & Grassy Verges (GS2)	Local Importance – Lower Value	No
Mixed Broadleaf/Conifer Woodland (WD2)	Regional Importance	Yes
Scattered Trees & Parkland (WD5)	Less than Local Importance	No
Hedgerows (WL1)	Less than Local Importance	No
Treelines (WL2)	Regional Importance	Yes
Scrub (WS1)	Local Importance – Higher Value	Yes
Ornamental/Non-native Scrub (WS3)	Less than Local Importance	No
Scrub and Ornamental/Non-native Shrub Mosaic (WS1/WS3)	Less than Local Importance	No
Badger	Local Importance – Higher Value	Yes
Hedgehog	Local Importance – Higher Value	Yes
Pygmy Shrew	Local Importance – Higher Value	Yes
Bat Assemblage	Local Importance – Higher Value	Yes
Breeding Birds	Local Importance – Higher Value	Yes
Wintering Birds	Less than Local Importance	No
Common Lizard, Amphibians and Invertebrates	Less than Local Importance	No

*(listed in Section 8.9.1.3 above).

The following sections provide an assessment of the impact of the proposed development on local ecology.

As per CIEEM (2024):

> *"Where mitigation is fully integrated into the design and there is high confidence that it will be delivered, the assessment should consider the significance of the residual effects of the mitigated project. Where mitigation is not yet embedded in the design (e.g., measures to be implemented via a Construction Environmental Management Plan), potential impacts should be assessed in the absence of mitigation. Presenting the results of the assessment 'with' and 'without' mitigation allows the need for mitigation and/or compensation to be clearly identified. Where there is any uncertainty, then the with/without mitigation approach to assessment should be used to ensure transparency."*

In this instance, mitigation has been integrated into the surface water drainage of the site (via SUDS), landscape plan and public lighting plan. As such, the impact of these plans is taken into account when assessing other relevant impacts (e.g., habitat loss).

8.12 Cumulative Impacts

8.12.1 Existing Granted Planning Permissions

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 EcIA 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 8.25**.

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.

Table 8.25: An assessment of nearby granted developments for potential cumulative impacts with the Proposed Development that could adversely affect KERs.

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
Reference: 3886/22 **Granted:** 17/08/2022	The development will consist of the demolition of the existing 5-storey office/residential building on site (the total area for demolition is 2,910 sq.m.) and the construction of a new residential scheme on 11 floors at a height of 42.1m above ground level over an existing and extended basement. The residential development will comprise 20 No. 3-bed units all with winter gardens, communal roof garden and winter garden, terraces at fifth and seventh floors, residential amenity space at ground floor including meeting room, concierge and gym.	Ca.150m south	Owing to proximity potential cumulative impacts are: • Water quality • Lighting (bats)	Potential for in-combination impacts not foreseen due to mitigations included in planning applications to address same and ensure no significant impact arises as a result of the proposed development, mitigations include best practice water quality measures, bat sensitive lighting design which includes bat buffer and dark zones, landscape plan with significant retention of trees on site and reinstatement planting	Y
Reference: 3116/22 **Granted:** DCC decided to Grant Permission on 18th May 2022.	Planning permission for the development will consist of the construction of a two-storey archive storage and office building with c.765 sq. m of combined floorspace provided including the following: (i) a reception area, an oratory, an archive storage room, research reading room, offices, storage rooms, staff canteen, toilets, shower, passenger lift, audio room and ancillary space; (ii) rooflights, photovoltaic panels and lift over-run at roof level; (iii) 9 No. parallel car parking bays along the existing roadway with the existing fence	Ca. 23m south, directly on the opposite side of road leading to Cherryfield Avenue Upper.	Owing to proximity potential cumulative impacts are: • Water quality • Lighting (bats)	This granted planning application has a small footprint overall, however, a key impact arising from this would be construction phase noise / disturbance and lighting from the proposed building, as mitigations for same are included in the proposed development, and the	Y

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
Final grant on 30th June 2022	relocated to the site boundary and 15 No. new cycle parking spaces; (iv) residual car parking, hard and soft landscaping, heat pump and all associated site development works.			granted application also comprises construction phase best practice measures, including a lighting report that considers bats in the design. As such, cumulative impacts are not foreseen.	
Reference: 4115/21 **Decision:** Refused/ under appeal ACP-313048-22 and subsequently ACP Granted Permission on 26th July 2023 (Amendment: Granted by DCC on 28th July 2025)	The proposed development will consist of the following: Demolition of the existing buildings on site, with a total combined gross floor area (GFA) of 1,739 sq.m; Construction of a Build-to-Rent (BTR) residential development, comprising 97 No. BTR apartments with a mix of 48 No. 1 bed units and 49 No. 2 bed units in 3 No. blocks of part 3, part 4, part 5 and part 6 storeys in height, over basement level, including resident support and amenity facilities. The total GFA, including the basement level, of the proposed development is 9,216 sq. m; Block A, fronting Milltown Road, comprises 23 No. BTR units including 9 No. 1 bed units and 14 No. 2 bed units in a part 3, part 4 and part 5 storey building, over a basement level. Block A and Block B will be connected by a bridge link from first to fourth-floor levels. Resident support and amenity facilities are proposed at ground floor and basement level of Block A. Balconies are proposed on the north, east and south elevations; Block B adjoins Block A to the east and Block C to the west, comprises 34 No. BTR units including 14 No. 1 bed units	Ca. 145m south	Owing to location and size potential cumulative impacts are: • Water quality impacts	Water quality impacts would be the largest cumulative concern arising from the proposed development and this granted application, however, suitable mitigation measures are in place for both, ensuring no significant impact on water quality arises for the duration of the construction phase. Additionally, Ringsend WWTP is operational, compliant and has capacity for both developments so overloading on same during the operational phase is not foreseen. As such, cumulative impacts	Y

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
	and 20 No. 2 bed units, in a part 4, part 5 and part 6 storey building, over a basement level. Balconies are proposed on the north and south elevations, and terraces are proposed on the south elevation; Block C adjoins Block B to the east, comprising 40 No. BTR units including 25 No. 1 bed units and 15 No. 2 bed units, in a part 4, part 5 and part 6 storey building, over a basement level. Balconies are proposed on the north and south elevations, and terraces are proposed on the south and west elevations; The development includes ancillary resident support and amenity facilities for the BTR residential units with a total floor area of 302 sq. m, including a co-working area, meeting room, coffee dock, lounge and concierge at ground floor level and a gym, shared kitchen, media room and parcel store at basement level; The proposal includes communal open space and public open space, including improvements to the public realm and a shared space with an entrance plaza / set down area on the existing access road from Milltown Road; The basement level contains 47 No. car parking spaces, 2 No. motorcycle spaces and 150 No. cycle spaces. The basement level also includes bin storage, cores and plant rooms; The proposal includes 54 No. cycle parking spaces (including 4 No. cargo spaces) at surface level, a turning point, a new vehicular access to the basement level from Milltown Road, and associated improvements to Milltown Road			arising from same are not expected.	

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
	(which includes alterations to the existing footpaths / public road, with relocation of the existing pedestrian crossing and bus stop, which are external to the planning application site boundary and subject to agreement with the Planning Authority); The proposal includes an ESB substation and associated set down area, landscaping, boundary treatment, lighting, PV panels, site services and all associated site works.				
Reference: 4578/22 **Granted:** 27th January 2025. Subject to Third-Party Appeal. Granted by An Coimisiún Pleanála on 18th January 2024. **Decision:** Decision quashed by Order of the High Court and is remitted to	Planning permission for a Build to Rent residential development on lands at 'Dunelm', Rydalmount, Milltown Road, Dublin 6. The site is located to the east of the Green Luas line, to the south of residential dwellings at No's 1 and 2 Rydalmount and east of the residential dwelling known as 'Kadiv' at Rydalmount, Milltown Road. The proposed Build to Rent residential development will consist of the following: • Demolition of the existing building (comprising the residential dwelling known as 'Dunelm') and structures on site; • Construction of a Build-to-Rent (BTR) residential development, comprising 63 No. BTR apartments with a mix of 5 No. studio units, 27 No. 1 bed units, 30 No. 2 bed units and 1 No. 3 bed unit in two No. blocks (Block A and Block B), including resident support and amenity facilities;	Ca. 907m southwest	Owing to location and size potential cumulative impacts are: • Water quality impacts • Disturbance to otter/bats near Dodder River during construction	The proposed development has provided suitable mitigations for the protection of bats on site and has provided consideration for potential impacts on otter of the River Dodder, as the proposed development is at a remove from this river, noise and lighting impacts on fauna of the Dodder during the construction phase are unlikely to occur, similarly, water quality impacts have been addressed through appropriate mitigations and operational phase	Y

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
An Coimisiún Pleanála under new case number ACP Ref. PL29S.322089. Still awaiting decision at the time of writing.	• Block A, to the south of the site, comprises 55 No. BTR units, including 1 No. studio, 27 No. 1 bed units, 26 No. 2 bed units and 1 No. 3 bed units, in a part 4 to part 6 storey, over lower ground floor and basement level building (maximum of eight levels to Milltown Road). Resident support and amenity facilities are proposed at basement, ground and fifth-floor level. Balconies are proposed on the northwest, southwest, southeast and northwest elevations; • Block B, to the northwest of the site, comprises 8 No. BTR units, including 4 No. studio units and 4 No. 2 bed units, in a 4-storey building. Balconies are proposed on the south, east and north elevations. Block A and Block B will be connected by a bridge link at first to third-floor level; • The development includes ancillary resident support and amenity facilities for the BTR residential units, with a total floor area of 252.5 sq. m, including a large item storage area and a bike and bin store at basement level, concierge/management area and foyer area at ground floor level and lounge/ residential function room at a fifth-floor level all within Block A and a pavilion communal amenity building to the north of Block A; • The proposal includes communal open space at ground level and a communal roof terrace at fifth-floor level of Block A; • The basement level (Block A) contains 10 No. car parking spaces, 1 No. motorcycle space, 6			treatment at Ringsend WWTP. As such, the potential for cumulative impact to arise is not foreseen.	

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
	No. e-scooter spaces and 98 No. cycle spaces (including 2 No. cargo spaces). The basement level also includes bin storage, a storage room for apartments and cores. A generator room, sprinkler tank room and water storage tank room are proposed at lower ground floor level; • The proposal includes 32 No. cycle parking spaces and 2 No. car parking spaces at surface level, accessed from the existing access road and new vehicular access to the basement level from Milltown Road; • The proposal includes associated public realm works to Milltown Road, including alterations to the existing footpaths/ public road, a new signalised junction incorporating advanced cycle stacking lanes in the westbound direction, set back of the existing road median, provision of a new signalised pedestrian crossing of Milltown Road, provision of an uncontrolled pedestrian crossing of the development access junction and associated signals, tactile paving and road markings; • The proposal includes an ESB substation and associated set down area, landscaping, boundary treatment, PV panels, green roofs and a plant enclosure at roof level, site services and all associated site works necessary to facilitate the development.				
Reference: WEB2190/24	Permission is being sought for: -Demolition of 169 sq.m of existing commercial buildings.	6.01km west	none	No significant impacts are anticipated owing to scale of works and distance from the	Y

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
Granted: 01st August 2024 **Decision:** Third Party Appeal to An Bord Pleanála Submitted on 30th August 2024(ABP-320695-24). Decision Due on 21st January 2025 (still pending as of June 2025).	-Erection of 6 two-storey (plus attic) townhouses (as previously approved). -6 car parking spaces and associated site works (including drainage).			proposed development. As such, cumulative impacts can be ruled out.	
Reference: 4283/24 **Granted:** DCC decided to Grant Permission on 8th November 2024	Permission is being sought for development a protected structure, comprising construction of a 72 sqm one bed two storey mews with access onto Marlborough Lane, Dublin 4, and all associated services and site works	6.02km west	none	No significant impacts are anticipated owing to scale of works and distance from the proposed development. As such, cumulative impacts can be ruled out.	Y

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
Final grant 16th December 2024					
Reference: WEB2190/24 **Granted:** DCC Decided to Grant Permission on 18th November 2024 Final grant on 21st January 2025	Damon McCaul (Headmaster) intends to apply for permission for development at Gonzaga College, Sandford Road, Dublin 6, D06 KF95. The development will consist of the internal reconfiguration and full renovation of an existing 2 storey science block (c. 830 sq m) and the construction of a new 3 storey extension with a rooftop observatory (c. 1,431 sq m) all accommodating a new Science, Technology, Engineering, Arts, and Mathematics (STEAM) facility, located to the north-east of the college. The extension will connect to the existing 2 storey science building to the south via a double-height atrium and to the existing Sandford Grove House (educational use) to the west via a new glazed walkway at second floor level. The development will also include: the removal of an external fire escape and associated minor works to the eastern facade of Sandford Grove House; works to the hard standing areas to the north and north-west of the college to provide a reconfigured and landscaped car parking area for 13 No. staff parking spaces (incl. 1 No. accessible space and 3 No. electric charging point), bus set-down spaces and bicycle parking; and the provision of a new ESB	Ca.240m south-east	potential cumulative impacts are: • Lighting (bats) – internal spill	The proposed development includes mitigations for bat species including a bat sensitive lighting design with a hierarchy of lighting applied, dark zones and buffer zones along high value commuting and foraging habitat, directional lighting, low level lighting, LED lighting, reduction of light spill and lighting controls. This granted application is complemented by a landscape plan which provides screening planting, tree protection measures, and low level lighting, all of which further reduce the potential for cumulative impact to occur. As such, cumulative impacts are not foreseen.	Y

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
	substation and switch-room (c. 25 sq m) located to the west of the college. The development will also comprise hard and soft landscaping; piped infrastructure and ducting; drainage infrastructure; green roofs; changes in levels and all associated site development and excavation works above and below ground.				
Reference: WEBLRD6063/25-S3 (ACP Ref. LH29S.323142) **Granted:** DCC decided to Grant Permission on 3rd July 2025 **Decision:** Third-Party Appeal to An Coimisiún Pleanála lodged on 25th July 2025. Granted 12th November 2025).	The proposed development comprises the following: • Site clearance and demolition of extensions to rear of Nos. 85, 87, 89, 93, 95, 97, 99, and 101 Clonskeagh Road, and the side and rear extension of No. 103 Clonskeagh Road. All other buildings previously on the application site were demolished under Reg. Ref.: 2620/14, as amended by Reg. Ref.: 2308/16 / ABP Ref.: PL29S.247062 and Reg. Ref.: 3159/17 / ABP Ref.: 300024-17; • Construction of a purpose-built student accommodation (PBSA) and residential development in 5 No. blocks (Blocks 1-5) ranging from part 1 to part 7 No. storeys in height above a lower ground level, and extension and renovation of 14 No. existing residential dwellings at Clonskeagh Road; • The proposed development includes 439 No. PBSA bedspaces in Blocks 2-5 (including 133 No. studios and 306 No. bedspaces in 40 No. clusters, comprising 4 No. 6 bed clusters, 6 No. 7 bed clusters, and 30 No. 8 bed clusters); and 16 No. residential apartments in Block 1 (including 1 No. studio, 4 No. 1 beds, and 11 No.	4.74k northwest	Potential cumulative impacts include: • Water quality impacts, particularly those affecting the fauna of the Dodder River (otter)	The granted application includes extensive studies completed on the River Dodder, with extensive consideration given to aquatic fauna including otter, including the provision of extensive surveys along the Dodder River to determine otter activity and mitigations including pre-construction surveys to ensure protection of same. The project was designed with the protection of water quality and protected species including bats and otter in mind. Similarly, the proposed development has adopted a similar approach, ensuring significant impact to	Y

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
	2 bed apartments). The PBSA includes ancillary student amenities at lower ground and upper ground levels, including a reception, lounge, gym, yoga studio, games room, cinema room, dining room, laundry, office, study and meeting rooms. All PBSA clusters are served by a communal living / kitchen / dining room. The development also includes floorspace for Class 10 (community/arts) and/or Class 11 (cultural) uses within Block 1, and café use within Block 2; • Block 1, which fronts onto Clonskeagh Road to the west of the site, comprises 16 No. residential apartments (1 No. studio, 4 No. 1 beds, and 11 No. 2 beds), in a part 1 to part 4 storey building, above lower ground level. An external communal roof terrace is proposed at 3rd floor level on the northern, western and southern elevations. Floorspace for Class 10 (community/arts) and/or Class 11 (cultural) uses (with a Gross Floor Area (GFA) of 604 sq.m) is located at lower and upper ground floor level. Balconies are provided on the eastern and western elevations. A double ESB substation and switch rooms are located at upper ground floor level and a plant area is proposed at roof level; • Block 2, to the north-east of the site, comprises 103 No. purpose-built student bedspaces (including 1 No. 6 bed cluster, 3 No. 7 bed clusters, and 4 No. 8 bed clusters, and 44 No. studios), in a part 3 to part 6 storey building, above lower ground level. Ancillary internal student amenities are provided at upper and			same does not occur. As such, cumulative impacts are ruled out.	

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
	lower ground levels. Café use is also provided at upper ground level. A plant area is proposed at upper ground level and at roof level; • Block 3, to the east of the site, comprises 121 No. purpose-built student bedspaces, (including 1 No. 6 bed cluster, 1 No. 7 bed cluster, and 8 No. 8 bed clusters, and 44 No. studios), in a part 3 to part 7 storey building, above lower ground level. Ancillary internal student amenities are provided at lower ground level. A plant area is proposed at upper ground floor level and at roof level; • Block 4, to the south-east of the site, comprises 90 No. purpose-built student bedspaces (including 2 No. 6 bed clusters, 2 No. 7 bed clusters, and 8 No. 8 bed clusters), in a part 5 to part 6 storey building, above lower ground level. A plant area is proposed at roof level; • Block 5, to the south of the site, comprises 125 No. purpose-built student bedspaces (including 10 No. 8 bed clusters, and 45 No. studios), in a part 5 to part 6 storey building, above lower ground level. A plant area is proposed at roof level; • The lower ground level also contains car and cycle parking, and ancillary facilities including plant rooms, waste storage areas and block cores. A total of 33 No. car parking spaces are provided (14 No. student accommodation spaces, 16 No. residential spaces, 2 No. community/arts/cultural use spaces, and 1 No. car share space), and 2 No. motorcycle spaces.				

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
	A total of 575 No. cycle parking spaces are provided, including 472 No. secure cycle parking spaces (440 No. student accommodation spaces, 28 No. residential spaces, and 4 No. community/cultural use spaces) located at lower ground level, and 103 No. short stay visitor cycle parking spaces (88 No. student accommodation spaces, 8 No. residential spaces, and 7 No. community/arts/cultural use spaces) provided at surface level; • The development also includes the extension and renovation of the 14 No. existing residential dwellings at Nos. 59, 61, 63, 65, 73, 85, 87, 89, 93, 95, 97, 99, 101 and 103 Clonskeagh Road, including lower / ground and ground / first floor rear extensions and roof terraces at 1st floor level on the eastern elevations of Nos. 99, 101 and 103 Clonskeagh Road, (providing 1 No. 1 bed, 9 No. 2 beds, and 4 No. 3 bed houses), associated external and internal alterations, alteration to front and rear private open space, including bin shelters fronting Clonskeagh Road, and a bin store structure adjoining No. 65 Clonskeagh Road; • The proposed development will also provide communal open space for the PBSA and the residential apartments, outdoor space for the community/arts/cultural use, hard and soft landscaping, boundary treatments, and a biodiversity corridor along the River Dodder along the full length of the eastern site boundary;				

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
	• The proposal includes 2 No. vehicular and pedestrian / cycle entrances from Clonskeagh Road (a vehicular access to the podium level and a ramped cycle access to the lower ground level to the north of the site, and a vehicular ramped access to the lower ground level to the southern part of the site), and associated public realm works (which includes alterations to the existing footpaths / public road, internal vehicular and pedestrian routes, boundary treatments, and utility connections); • The development also provides for flood defence and alleviation works, including flood walls along the eastern site boundary, a catchment trench fronting Clonskeagh Road to the west of Block 1, flood defence wall to replace the existing railing to the western side of Clonskeagh Bridge, and flood defence wall and embankment to the south of Farmer Brown's Public House, Clonskeagh House, 68 Clonskeagh Road, Dublin 6. The proposal includes for lowering of the sluice gates and provision of grade control structures to the Smurfit Weir along the eastern boundary of the site to provide for improved fish passage; and • All associated site development and infrastructural works, including foul and surface water drainage, including attenuation storage, PV panels at roof level, provision of utilities, and lighting.				
Reference: WEB2775/24	The proposed amendments seek to alter the permitted development from a Build to Rent	4.21km northwest	None	No new pathway determined from proposed amendments,	Y

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
Granted: DCC decided to Grant Permission on 23rd June 2025 Final grant (amendment) 28th July 2025	apartment scheme to a standard apartment scheme, and comprises of the following: • Omission of Condition No's 3, 4 and 5 of the An Bord Pleanála Order under ABP Ref.: 313048-22; • Alterations to 3 No. units at ground floor level to provide private amenity space to each unit on the north elevation, and associated alterations to the north elevation; and • All associated site development works. The permitted development (ABP Ref.: 313048-22 and DCC Reg. Ref.: 4115/21) provides 74 No. residential units and there is no proposed change to the total number or mix of units permitted.			therefore cumulative impacts are ruled out.	
Reference: 3011/24 (ACP Ref. ABP-320695-24) **Granted:** DCC decided to Grant Permission on 1st August 2024 **Decision:**	The development will consist of: the internal reconfiguration and full renovation of an existing 2 storey science block (c. 830 sq m) and the construction of a new 3 storey extension with a rooftop observatory (c. 1,431 sq m) all accommodating a new Science, Technology, Engineering, Arts, and Mathematics (STEAM) facility, located to the north-east of the college. The extension will connect to the existing 2 storey science building to the south via a double-height atrium and to the existing Sandford Grove House (educational use) to the west via a new glazed walkway at second floor level.	6.01km west	none	No significant impacts are anticipated owing to scale of works and distance from the proposed development. As such, cumulative impacts can be ruled out.	Y

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
Granted Permission by An Coimisiún Pleanála on 23rd July 2025.	The development will also include: the removal of an external fire escape and associated minor works to the eastern facade of Sandford Grove House; works to the hard standing areas to the north and north-west of the college to provide a reconfigured and landscaped car parking area for 13 No. staff parking spaces (incl. 1 No. accessible space and 3 No. electric charging point), bus set-down spaces and bicycle parking; and the provision of a new ESB substation and switch room (c. 25 sq m) located to the west of the college. The development will also comprise: hard and soft landscaping; piped infrastructure and ducting; drainage infrastructure; green roofs; changes in levels and all associated site development and excavation works above and below ground				
Reference: 3937/23 (amended under DCC Reg. Ref. WEB2142/24) **Granted:** DCC Granted Permission on 14th September 2023	The demolition of the existing Anglesea Stand and Anglesea Terrace structure and the provision of to a new grandstand (6,775 person capacity), a 2 level (storey) hospitality and services building (Pocket Building), a club shop and substation (overall 8,892 sq.m). Amendment: minor alterations to the internal arrangement; alterations to the external elevations to include an increase in the overall height to c.24.04m (c.2.74m increase); increase in total capacity of the stand to 6,844 (69 No. additional spectators).	2.3km northwest	none	The granted application is restricted to the existing urban footprint of the Anglesea stand stadium, which comprises minor modifications and is at a remove from any protected site and the Dodder River, as such, cumulative impacts are ruled out.	Y

Planning Application	Development Description	Distance to Proposed development	Potential Credible Cumulative Impact	Assessment for in-combination effects	Ruled in out (Y/N)
(Amendment: DCC Granted Permission on 16th December 2024)					

8.12.2 Relevant Policies and Plans

The following policies and plans were reviewed and considered for possible in-combination effects with the proposed development:

- National Biodiversity Action Plan 2023-2027
- Dublin City Biodiversity Action Plan 2021-2025
- Dublin City Development Plan 2022-2028

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 Dublin City Development Plan (DCDP) 2022-2028), an NIS has been prepared which identifies appropriate mitigation.

The Dublin City County Development Plan 2022-2028 has directly addressed the protection of European sites through specific policies. The Biodiversity Action Plan for Dublin City 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.

8.12.3 Operation of Ringsend 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 GDSDS. The GDSDS set out the drainage requirements for the Greater Dublin Area (GDA) up to 2031. The GDSDS 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 soils, 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.

8.12.4 Do Nothing Scenario

The Site currently comprises a former Jesuit College that is no longer in use. If the proposed development were not to proceed, it is likely that the existing parkland, comprising grassland, treelines, and woodland, would remain largely unchanged and subject to minimal management. Presently, the grassland is not intensively maintained and is cut infrequently, resulting in a rank sward. Over time, this lack of management could lead to naturalisation, increasing floral diversity and successional processes toward scrub and, eventually, woodland would continue. While this may enhance structural diversity, it would occur without targeted ecological management.

However, the woodland areas already support invasive non-native species, which have the potential to outcompete native ground flora and alter habitat composition if left unmanaged. Without intervention, these species could spread within the Site, reducing biodiversity value and compromising habitat integrity.

Although the potential for invasive species to spread beyond the Site is limited, due to the absence of exposed soil and the dominance of hardstanding in the surrounding urban area, their gradual expansion within the woodland is plausible. Opportunistic colonisation by ruderal or 'weed' species in cracks of hard surfaces and low-traffic areas may also occur, though this would be minor and largely cosmetic.

Overall, in the absence of development, the Site would likely retain its current character, with incremental changes driven by natural succession and invasive species proliferation. These changes would not constitute a significant ecological enhancement and could, in fact, lead to a decline in habitat quality without appropriate management.

8.13 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; Land, Soils and Geology; Air Quality; and Population and Human Health.

8.13.1 Landscape

Open spaces will be provided within the Site to provide amenity areas for residents and the public, which will include play areas, fitness areas and benches. Trees will be thinned within the existing woodlands to facilitate this, which, in the absence of mitigation, could impact on wildlife using the woodland habitats for cover or foraging.

As a result, mitigation measures involve the planting of native shrubs in the understory which will enhance the woodland structure and the planting of 230 No. new trees across the Site. The planting of native shrubs will enhance the understory in the woodland as it presently is dominated by non-native shrub species, and the species selected will also ensure that the area along the perimeter is largely inaccessible to the public, maintaining a commuting/foraging corridor for species that may be using the woodland habitat. In addition, many of the removed trees will be compensated somewhat by the planting of other native and non-native tree species throughout the Site. Overall, these measures will provide a habitat for wildlife to safely commute around the wilder margins of the Site and will also provide nesting/feeding opportunity for birds.

Therefore, the interactions between biodiversity and landscape are considered to be **long-term, slight and neutral.**

8.13.2 Land, Soils and Geology, Air Quality

The works involve the removal of vegetation such as trees and scrub via the stripping of topsoil and excavations to facilitate the works. It will also generate dust and potentially impact on the air quality in the locality. However, the generation of dust will be temporary and is restricted to the construction phase of the project. As such, it is not anticipated to have the ability to cause a significant impact on biodiversity.

The impact of the interactions between land, soils and geology, air quality and biodiversity are considered to be **short-term, imperceptible, and neutral**.

8.13.3 Population and Human Health

The open space within the site will provide amenity areas for residents and the public alike, which includes play areas, fitness areas and benches. This will involve thinning of trees within the woodland which, without mitigation, could impact on wildlife in the area for which the woodland provides cover and foraging ground. Mitigation measures involve planting native shrubs in the understory which will enhance the woodland structure and planting of 230 No. new trees across the site.

Interaction with population and human health involves the provision of lighting to provide a safe outdoor realm for residents which, without mitigation, could impact on nocturnal species, particularly on bats. Mitigation measures proposed include the provision of a dark corridor with restricted lighting in the core and buffer zones as appropriate, and a lighting design minimising impact on bats and another nocturnal animals, ensuring suitable commuting and foraging habitat is maintained.

With the implementation of the outlined mitigation measures, the interaction between population/human health and biodiversity will be **long-term, not significant and neutral.**

8.13.4 Archaeology

Interaction with archaeology relates to the construction phase where archaeological monitoring could record archaeological material adjacent to preserved mature trees. However, the potential impact on individual trees due to any archaeological findings is not anticipated to have a significant impact on the overall biodiversity on site.

The impact of the interactions between archaeology and biodiversity is considered to be **long-term, not significant and neutral.**

8.14 Avoidance, Enhancement, Best Practice and Mitigation Measures

8.14.1 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.

8.14.1.1 Collision Risk

Collision risk has been assessed in detail in the accompanying AA Screening Report (DNV, 2025). The below section summarises the key findings and embedded design features:

- Building Height: Maximum height of 8 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.

8.14.1.2 CEMP

The Construction Environmental Management Plan (CEMP) has been developed collaboratively by 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 (DBFL, 2025).

8.14.1.3 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.
- Interceptors.
- Attenuation Tanks.

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

8.14.1.4 SUDS Measures

The proposed development integrates a suite of green infrastructure 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.

Biodiverse roods, including green and blue roof systems, are incorporated across multiple buildings as part of the integrated SUDS and landscape design. These roofs will be planted with native Irish-origin wildflower seed mixes, providing seasonal nectar and pollen resources for pollinators such as bees and butterflies, while also offering foraging opportunities for birds and bats. By introducing vegetated roof habitats, the development enhances habitat connectivity within an urban context, supports invertebrate diversity, and contributes to ecosystem services such as stormwater attenuation, urban cooling, and microclimate regulation. Additional benefits include reduced surface water runoff and improved building energy efficiency, aligning ecological enhancement with sustainability objectives. Management measures, including inspection, invasive species control, and reseeding protocols, are detailed in the accompanying Habitat Management Plan (HMP).

Rain gardens are also proposed within the site as part of the SUDS strategy to manage stormwater by filtering and slowing runoff, reducing flood risk, and improving water quality. These features function as micro wetland-like habitats, supporting moisture-tolerant plant species and creating niches for amphibians, aquatic invertebrates, and pollinators. By intercepting and infiltrating surface water, rain gardens contribute to groundwater recharge and maintain soil health. Their structural diversity and seasonal flowering further enhance site biodiversity while delivering climate resilience benefits.

Embedding these features into the project design ensures that ecological considerations are integral to the development rather than applied retrospectively. This approach delivers measurable biodiversity gains, strengthens habitat connectivity, and supports species of conservation concern within an urban setting. In addition, these measures provide multiple co-benefits, including improved water management, reduced heat island effects, and enhanced amenity value for residents, aligning the project with best practice in nature-based solutions and sustainable development.

8.14.1.5 Lighting Plan

The lighting strategy for the proposed development has been proactively designed and informed by the results of targeted bat surveys undertaken on-site. 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.

The use of modern LED luminaires provides precise directional control, significantly reducing unnecessary light spill and preserving dark 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.

The lighting plan maintains dark zones along boundary habitats that form an ecological corridor. This low-level illumination safeguards nocturnal activity for mammals, including bats. This approach ensures that the natural darkness required by many species, specifically bat species, who are especially sensitive to light, is preserved.

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.

8.14.2 Construction Phase Mitigation Measures

8.14.2.1 Mitigation 1: 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.

8.14.2.2 Mitigation 2: Reduction of noise-related impacts

Short-term increases in disturbance levels as a direct result of human activity and through increased generation of noise during the Construction/Infill Phase can have a range of impacts depending upon the sensitivity of the ecological receptor, the nature and duration of the disturbance and its timing.

To mitigate this disturbance, the following measures will be implemented:

- Selection of plant with low inherent potential for generating noise.
- Siting of plant as far away from sensitive receptors as permitted by Site constraints.
- Avoidance of unnecessary revving of engines and switch off plant items when not required.
- Keep plant machinery and vehicles adequately maintained and serviced.
- Proper balancing of plant items with rotating parts.
- Keep internal routes well-maintained and avoid steep gradients.
- Minimize drop heights for materials or ensure resilient material underlies.
- Where noise originates from resonating body panels and cover plates, additional stiffening ribs or materials should be safely applied where appropriate.
- Limiting the hours during which Site activities likely to create high levels of noise are permitted.
- Appointing a Site representative responsible for matters relating to noise.
- Monitoring typical levels of noise during critical periods and at sensitive locations.

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.

8.14.2.3 Mitigation 3: Air Quality Control (Dust Reduction)

In order to protect the surrounding environment from dust deposition during earthworks, the following mitigation measures are proposed and included in the accompanying CEMP (DBFL, 2025):

- Dust generation will be controlled through proper placement of stockpiles away from sensitive receptors and taking note of the prevailing wind direction.
- In situations where the source of dust is within 25m of sensitive receptors screens (permeable or semi-permeable) will be erected.
- Stockpiles will be located in sheltered parts of the Site and watered where required.
- Staff will monitor dust levels during working hours.
- Bowsers will be available during dry periods for surface watering to keep unpaved areas moist.
- Any dust emitting works will be postponed during high winds (gales) until winds have subsided.
- Vehicles delivering material will be covered to prevent the escape of dust.

- A wheel washing facility will be installed near the Site compound for use by vehicles exiting the Site.

8.14.2.4 Mitigation 4: Timing of Vegetation Clearance/Building Renovation

Vegetation Clearance

To ensure compliance with the Wildlife Act 2000 as amended, the removal of areas of vegetation will not take place within the nesting bird season (March 1st to August 31st inclusive) to ensure that no significant impacts (i.e., nest/egg destruction, harm to juvenile birds) occur as a result of the proposed development. Where any removal of vegetation within this period is deemed unavoidable, a qualified Ecologist will be instructed to survey the vegetation prior to any removal taking place. Should nesting birds be found, then the area of habitat in question will be noted and suitably protected until the Ecologist confirms the young have fledged.

Table 8.26 provides guidance for when vegetation clearance is permissible. Information sources include The Herpetological Society of Ireland, the British Hedgehog Preservation Society's *Hedgehogs and Development* and *The Wildlife (Amendment) Act, of 2000*.

The preferred period for vegetation clearance is **within the months of September and October**. Vegetation will be removed in sections working in a consistent direction to prevent entrapment of protected fauna potentially present (e.g., Hedgehog). Where this seasonal restriction cannot be observed, a check for active roosts and nests, as well as signs of amphibians, will be carried out immediately prior to any Site clearance by an appropriately qualified ecologist and repeated as required to ensure compliance with legislative requirements.

Tabor House and Chapel Renovation Works

Should renovation work to The Tabor House roof or loft space be required e.g., insulation, roof repair, grouting etc., further surveys are required to ensure inadvertent impacts to roosting bats do not occur if they are present (please see Section 8.14.2.7 for details). These surveys will be conducted by a suitably qualified ecologist acting as Ecological Clerk of Works (ECoW).

Demolition or reroofing of buildings must also take place outside of the bird nesting season (March to August inclusive) to avoid impacts to nesting bird species e.g., Herring Gull. If works are to take place in 2026, or years thereafter, they will take place outside of the bird nesting season or the chimneys will be 'bird-proofed' by a specialist contractor prior to nest building/egg laying and a check for breeding birds will be conducted by the ECoW before any demolition works start.

Table 8.26: Seasonal restrictions on vegetation removal. Red boxes indicate periods when clearance/works are not permissible.

<table>
<tr><th>Ecological Feature</th><th>January</th><th>February</th><th>March</th><th>April</th><th>May</th><th>June</th><th>July</th><th>August</th><th>September</th><th>October</th><th>November</th><th>December</th></tr>
<tr><td>Amphibians</td><td colspan="2">Vegetation /habitat clearance permissible</td><td colspan="3">Amphibian breeding season (Estimated)
No habitat destruction unless confirmed to be devoid of tadpoles and other signs of amphibians</td><td colspan="7">Vegetation/habitat clearance is permissible if devoid of tadpoles and signs of amphibians.</td></tr>
<tr><td>Breeding Birds</td><td colspan="2">Vegetation clearance permissible</td><td colspan="5">Nesting bird season
No clearance of vegetation or works permitted unless confirmed to be devoid of nesting birds by an ecologist.</td><td colspan="5">Vegetation clearance permissible.</td></tr>
<tr><td>Hibernating mammals (namely Hedgehog, Pygmy Shrew)</td><td colspan="3">Mammal hibernation season
No clearance of vegetation is permitted unless confirmed to be devoid of hibernating mammals by an ecologist.</td><td colspan="6">Vegetation clearance permissible.</td><td colspan="3">Mammal hibernation season
No clearance of vegetation or works to relevant structures is permitted unless confirmed to be devoid of hibernating mammals by an ecologist.</td></tr>
<tr><td>Bats</td><td colspan="6">Tree felling is to be avoided unless confirmed to be devoid of bats by an ecologist</td><td colspan="3">Preferred period for tree-felling</td><td colspan="3">Tree felling is to be avoided unless confirmed to be devoid of bats by an ecologist</td></tr>
</table>

8.14.2.5 Mitigation 5: Small Mammal and Fauna Protection

The following general avoidance measures will be incorporated to minimise impacts to mammals during the Construction Phase:

Hours of work

The hours of working will be limited to daylight hours where possible, so as to limit disturbance to nocturnal and crepuscular animals.

Waste management

As best practice, all construction-related rubbish on Site e.g., plastic sheeting, waste, wires, bags, netting in which animals can become entangled 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.

Excavations & Pipes

Trenches/pits must be either covered when not in use/at the end of each working day with caps (especially at night) or include a means of escape for any animal falling in and getting stuck. If this is not possible, then a strategically placed plank or object should be placed in the corner of an excavation to enable animals to safely escape (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 badgers from gaining access as may happen when contractors are off-site.

8.14.2.6 Mitigation 6: Invasive Alien Plant Species Management

Several invasive alien plant species were recorded during ecological surveys carried out on Site. The IAPS Site Assessment and Management Plan Report (Invasive Plant Solutions, 2023) has been updated following the most recent survey in April 2023, to include Three-cornered Leek in the scope of the IAPS management. Listed below are the measures proposed in this report prepared by Invasive Plant Solutions to mitigate and treat IAPS on Site.

Biosecurity Measures for management and treatment of IAPS on Site:

The following measures will be adhered to, to avoid the introduction or dissemination of medium/low-risk invasive species to and from the Site of the proposed development. For the Construction Phase, the contractor will prepare a project-specific IAPS standard operating procedure document, in advance of work commencement. The document should be prepared by an IAPS specialist and should cover the bio-security measures to be taken, including the maintenance of records, to screen for the introduction of IAPS onsite, and to enable their tracing if such an introduction occurs; and to ensure no transmission of IAPS offsite. These measures to include:

- Based on the outcome of the IAPS Site surveys carried out in December 2020, April and September 2021, April 2022, March 2023 and April 2023, the continuing and expanding presence of IAPS on Site was confirmed, namely Three-cornered Leek and Spanish Bluebell.

- Adopting the precautionary principle, regular Site monitoring is to be maintained, with further IAPS inspections to be scheduled during the 2023 growing period in order to validate the emergence of IAPS on Site.
- The IAPS Report and Management Plan (including subsequent updates) are to be circulated to any adjoining landowners that may be affected by the IAPS presence and to the relevant authorities, where appropriate.
- The IAPS Site Management Plan should be updated following further IAPS inspections during the growing period in 2023.
- All areas of infestation should remain securely fenced off, including a 5-7m buffer zone, where appropriate. Fencing should be strong and incorporate advisory signage. Where stands are small or have been successfully treated, then advisory signage on a timber post will be sufficient.
- No ground maintenance, opening up or any other ground disturbance is to take place within fenced (infested) areas without prior approval, or consultation and under explicit direction and supervision of an IAPS Specialist, with strict bio-security conditions.
- Where works in the fenced (infested) areas must take place, the activity must first be approved by an IAPS specialist, with the development of a suitable 'Task Specific' method statement, that ensures no viable plant material of rhizome should be disturbed or removed from zones of infestation.
- Where future development proposals could encroach onto the IAPS-infected areas, a Site-specific ground remediation programme (including vertical and horizontal protection) should be developed and deployed to provide for the removal and bio-secure disposal of all infested soils and include any other relevant measures required to ensure strict biosecurity compliance across the Site and works.
- All relevant staff and Site visitors are to be briefed on the identification, risks and dangers of IAPS on Site, as well as the Site-specific protocols in place for the management of same. Specialist advice should be sought where there is uncertainty as to the identity of any plant species encountered.
- The accompanying Management Plan and treatment methodology should be screened for potential impacts on ecological receptors and sensitivities, where they exist per S.I. 155/2012; the European Communities (sustainable use of pesticides) Regulations.
- When using herbicides as part of the Management Plan/remediation programme, consideration must be given to the proximity of ecological receptors and designated sites. Non-residual, aquatic-approved herbicides should be specified for treatment, where herbicide use is deemed suitable.

In addition to the above, the following best practice procedures should be adhered to (As per Section 18 of the IAPS Site Assessment and Management Plan Report (2023)):

- Validation that all machinery/vehicles are free of IAPS, prior to their first introduction to the Site.
- Certification should be obtained from suppliers that all imported soils and other fill/landscaping materials are free of IAPS.
- A regular schedule of Site inspections across the IAPS growing seasons, for the duration of the construction works programme.
- Appropriate and effective Site biosecurity hygiene to ensure that no IAPS are transmitted off-site for the duration of the proposed works.
- The IAPS management plan should be updated as required.

This management and treatment programme will be continued multi-annually, until either eradication has been fully achieved or future development proposals have been approved and scheduled, whichever is sooner.
In the event of development being approved in the short term, this management plan recommends the deployment of an IAPS-infested soil remediation programme, comprising the bio-secure off-site disposal of all IAPS-infested soils, under NPWS licence, to an approved and licenced waste acceptance facility. This process will be based on up-to-date survey information, to validate the full extent of IAPS present, carried out over the intervening period and immediately in advance of the remediation process commencing. The management plan also recommends that the remediation process should be carried out independently of, and in advance of, the primary development works commencing. It should be executed by, or carried out under the direct management of, an IAPS specialist.

In its ongoing implementation, this management plan will ensure that initial bio-security measures are deployed at all IAPS locations, that a structured, multi-annual, Site monitoring and herbicide control programme will be employed across the duration planning consent process, and that, if then necessary, a full IAPS infested soil remediation process will be carried out and completed in advance of the commencement of any proposed development project.

Further information on IAPS on Site can be found in the following document produced by Invasive Plan Solutions: "Invasive Alien Plant Species: Site Assessment Report and Management Plan" (Invasive Plan Solutions, 2025).

8.14.2.7 Mitigation 7: Ecological Clerk of Works (ECoW) for demolition/tree/PRF removal works

A precautionary approach will be adopted during the demolition of Milltown Park House, the renovation of Tabor House and the Chapel, and the removal of trees with bat roosting potential. A suitably qualified Ecologist will act as an Ecological Clerk of Works (ECoW) for the duration of these works.

Pre-commencement roost surveys/inspections will be conducted by the ECoW of the buildings set for demolition and renovation prior to these works taking place. This will ensure that the baseline bat roosting / breeding bird status of buildings in question is reconfirmed ahead of the works, thus ensuring no impacts to roosting bats / nesting birds should they take up residence in the meantime and no offences being committed under the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011) or the Wildlife Acts 1976 (as amended).

The demolition & renovation methodologies will be developed in consultation with the ECoW, and detailed Method Statements, including any bird and bat-specific mitigation measures, will be agreed with the Local Authority. This will ensure that no bats are present or impacted by the works.

It is also possible that trees can become damaged in the time between the original roost assessment survey and the tree felling taking place, and this can sometimes increase the bat roost suitability of a tree, providing new roost features e.g., cracks, holes etc. Similarly, these features can provide nesting opportunities for small local passerines. As such, a pre-felling check will be conducted by a suitably qualified Ecologist of all trees to be felled at the Site prior to felling taking place. This may entail an endoscope check from ground level/ or mobile elevated work platform (MEWP).

Trees will be felled during the start or end of the hibernation period (so either in September/October or February/March) 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 ECoW can confirm no roosting bats are present. Should a roosting bat be found within trees or the buildings 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).

Where demolition / felling works cannot take place outside of the bird nesting season, pre-commencement checks by a suitably qualified ecologist will be required to confirm no breeding birds are present.

Should a nesting bird be found at the Site, no felling of the tree or demolition of the building 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.

Similarly, vegetation clearance will follow a precautionary protocol to avoid impacts on breeding or hibernating Hedgehogs within woodland habitats. Prior to machinery use, the ECoW will visually inspect the Site. Clearance will proceed on a rotational basis, retaining scrub patches to maintain cover and foraging opportunities for Hedgehogs.

In addition, during the Construction Phase, piles of dead wood and brash will be created in undisturbed areas to provide refuges and enhance habitat complexity for invertebrates and small mammals.

8.14.2.8 Mitigation 8: Construction Phase Lighting Regime

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 mammal and bat 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, LED luminaires with a warm white spectrum (2700K–3000K) will 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.

8.14.2.9 Mitigation 9: Tree Protection

Prior to the commencement of any construction activities, protective fencing will be installed around all retained trees in strict accordance with BS 5837:2012 - Trees in Relation to Design, Demolition and Construction: Recommendations. This fencing will safeguard both the canopy and the Root Protection Areas (RPAs) from accidental damage during site works. The installation must be inspected and formally signed off by a qualified arborist before construction begins to ensure compliance with the standard.

Once erected, these exclusion zones will remain in place for the duration of the works. No ground clearance, excavation, earthworks, stockpiling of materials, or movement of machinery will be permitted within the fenced areas. This approach ensures the long-term health and stability of retained trees and prevents soil compaction or root disturbance.

8.14.2.10 Mitigation 10: Bat Boxes

The Proposed Development will result in the loss of some trees with bat roost suitability. Twenty trees were considered to be of low roosting suitability i.e., containing 'PRF-I' features capable of supporting individual bats, during the PBRA surveys of the trees to be felled on Site. Two trees on Site were identified as having 'PRF-M' features, capable of supporting multiple roosting bats.

To compensate for the loss of the above potential roosting habitat at the Site, 10 No. bat boxes will be erected on suitably sized trees at the Site under the guidance of a suitably qualified Ecologist. These bat boxes will be of the durable woodcrete variety and capable of supporting multiple crevice- dwelling bat species e.g., the Shwegler 2F bat box.

Suitably locations will be established within the mature woodland habitats in the north and east of the Site, within the dark buffer zone area. These boxes will provide an important roost habitat for bat species which may be using the Site and will work in tandem with the following, to ensure that the proposed development will not result in a significant adverse effect on bat species:

- The reinstatement of grassland habitat and wildflower meadows along edge habitat (e.g., woodland/scrub/hedgerow edges);
- The reinstatement of scrub and hedgerow habitat, with low intervention hedgerow management;
- The planting of multiple tree species within the Site;
- The bat friendly lighting plan (including dark corridor along Site margins with high value habitat for bats); and
- The planting of green roofs on select buildings to provide additional foraging and commuting habitat.

8.14.3 Operational Phase Mitigation Measures

8.14.3.1 Mitigation 11: Bat-friendly Lighting

The proposed development will see a shift from baseline lighting levels within the Site, owing to the fact that the Site, in its current state, is largely disused and experiences low levels of maintenance. As such mitigation measures must be incorporated to ensure that there is no significant adverse effect on bats and other nocturnal species that may be using the Site.

Therefore, a bat friendly lighting plan has been developed in collaboration with DNV and the lighting Consultants, Thelmis Pritchard, to ensure that significant impact from same, on bat species which may be using the Site, will not occur. There are three key elements to the lighting plan which are considered and discussed below. These are:

- Light emitted from the proposed buildings;
- Light emitted from public lighting proposed as part of the development works; and
- Light emitted from external sources, e.g., traffic on Milltown Road.

It is considered that light emitted from the proposed buildings is unlikely to impact on commuting and foraging bat species as they will be located predominantly within the centre of the Site, whereas the commuting and foraging habitat for bats is largely associated with the linear features of the Site which occur contiguous to the Site boundary (with the exception of the western extent) and the adjacent grassland/wildflower meadows. However, the following measures are proposed to further ensure that light spill from the proposal will not occur; night-time light spill via windows/entrances; and the levels of spill/glare from outdoor lighting in place on the building exterior and throughout the Site will be minimised through selective lighting measures, such as fittings set back into the room (**Figure 8.59**), particularly those utilised for units facing towards the buffer zone (discussed further).

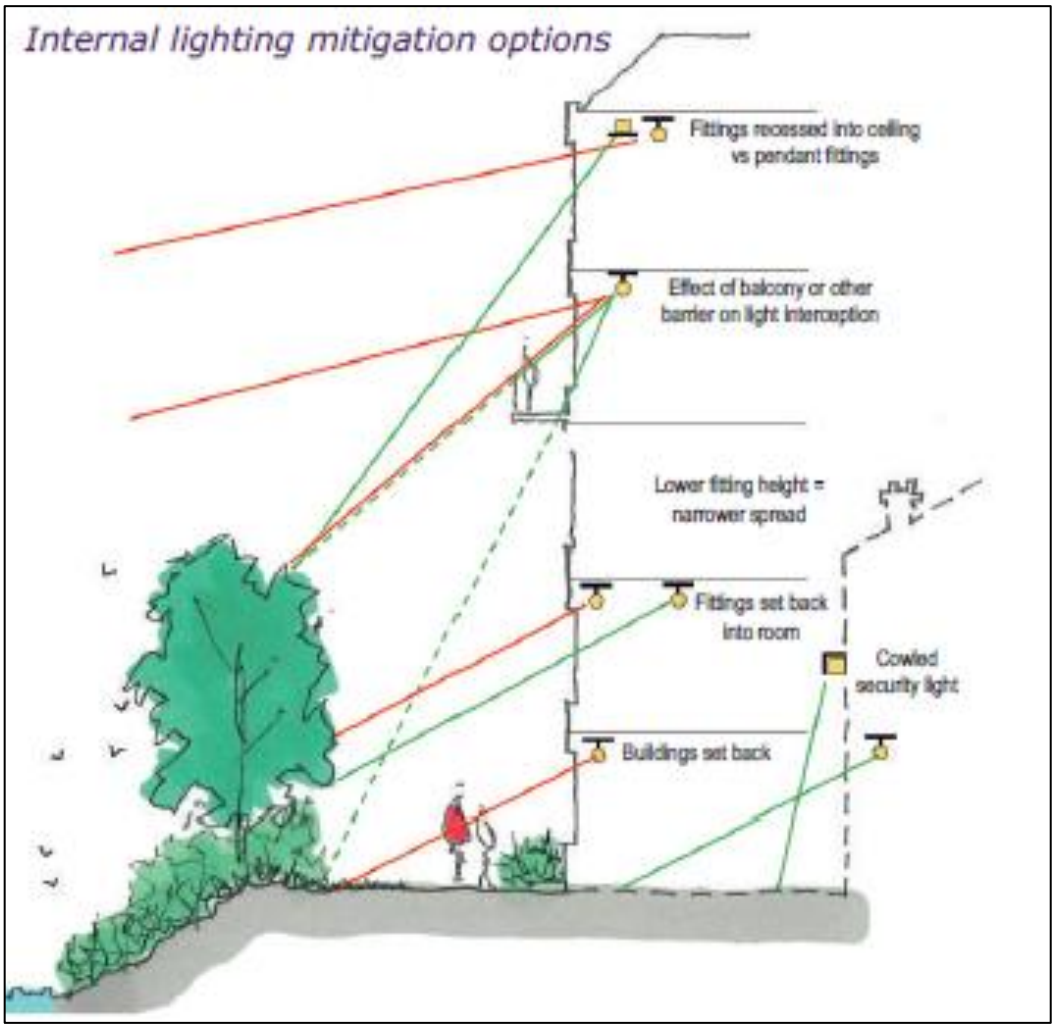

Figure 8.59: Mitigation options for internal lighting (Source: ILP, 2018)

Regarding public lighting at the proposed development, the following design mitigation is incorporated into the Lighting Report and Drawings prepared by Pritchard Themis (2025) which will alleviate the risk of light disturbance to bats:

Hours of illumination:

Feature lighting of trees and on the west side facades of Tabor House and the Chapel will be turned off at curfew 22:30 all year round. Lighting in the secret garden area behind the chapel will be set to turn off at this curfew during summer months May to September inclusive

Light levels and type:

The specification and colour temperature of light treatments is chosen based on their tolerability by bats. UV-free LED luminaires will be used as they are ideal due to their sharp cut-off, lower intensity, and dimming capability. A warm white spectrum (no higher than 3000K) will be used to reduce the blue light component. The LED luminaires will also feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to the Bats. Bollards that sit within the buffer zone of the dark corridor will have a light output set to a down-rated driver to ensure a lower lux level.

Light fittings that occur in the buffer zones of the dark zone will have lower output levels pre-set within the drivers to ensure levels comply with the lower lux levels required. These levels shall still be acceptable for any road or pathway that they light and still in compliance with the levels and band of performance defined for such areas in standard EN: 13201-2. Column heights of lamp posts and direction of light. Any light sources located within these buffer zones will also be 2700k colour temperature or warmer with a registering peak spectral wavelength of 550nm or higher.

Additionally, as bats most likely forage and commute in the unlit areas surrounding the Site, the following measures are in place to reduce the amount of light spillage where it is not needed:

- The height of lamp columns will be 6m or less with a 2700 kelvin warm white LED light source.
- Lighting will be directed away from retained vegetation that provide foraging and commuting potential for bat species on site, i.e., the woodland habitat along the north and eastern boundaries.
- The use of uplighting will be restricted to the central route between the proposed buildings. Any uplighters will be fitted with cowls and controlled light optics to control light spill. Downlighting will be used in locations close to the woodland and retained vegetation. Uplighting of trees and west side facades of Tabor House and the Chapel will be turned off at 22:30 during summer months.
- Along secondary pedestrian pathways a shorter, 4 metre high column provides illumination to key access points within the site. In areas to the south of the site, where ecology buffer zones are crossed by these paths, lights will be set with lower outputs to provide for the lower lux levels required.
- Bollards with a height of 800mm will be used on tertiary pedestrian routes, including the footpath along the woodland. The bollards along the woodland will have a spacing of 9-13m apart. The footpath surface will be of a natural material which does not create a reflection, minimising any potential upward reflection of the light.

A dark corridor is also proposed as part of the lighting plan, whereby the areas identified as of high importance/value for foraging and commuting bats will not be subject to any artificial lighting, thereby maintaining suitable light levels for the bat species. The dark corridor will encompass a core dark zone, and a buffer area with limited lighting, and will include the woodland habitat to the north and eastern extent of the Site as well as the southern section of the Site around the existing buildings (**Figure 8.60**). Planting is proposed along these routes to provide foraging opportunities for bats and will comprise native wildflower meadows and fruit trees, which will replace the commuting and foraging areas lost to the development e.g., the holly treeline in the centre of the site and the meadow grassland to the west of Tabor House, whilst the open spaces will be subject to the above listed mitigations from public and building lighting, and will provide a significant buffer habitat between the proposed dark corridor and the built area.

Furthermore, landscaping on site has been designed in such a way that it maintains connectivity not just throughout the site, but also to the surrounding areas and the wider urban landscape.

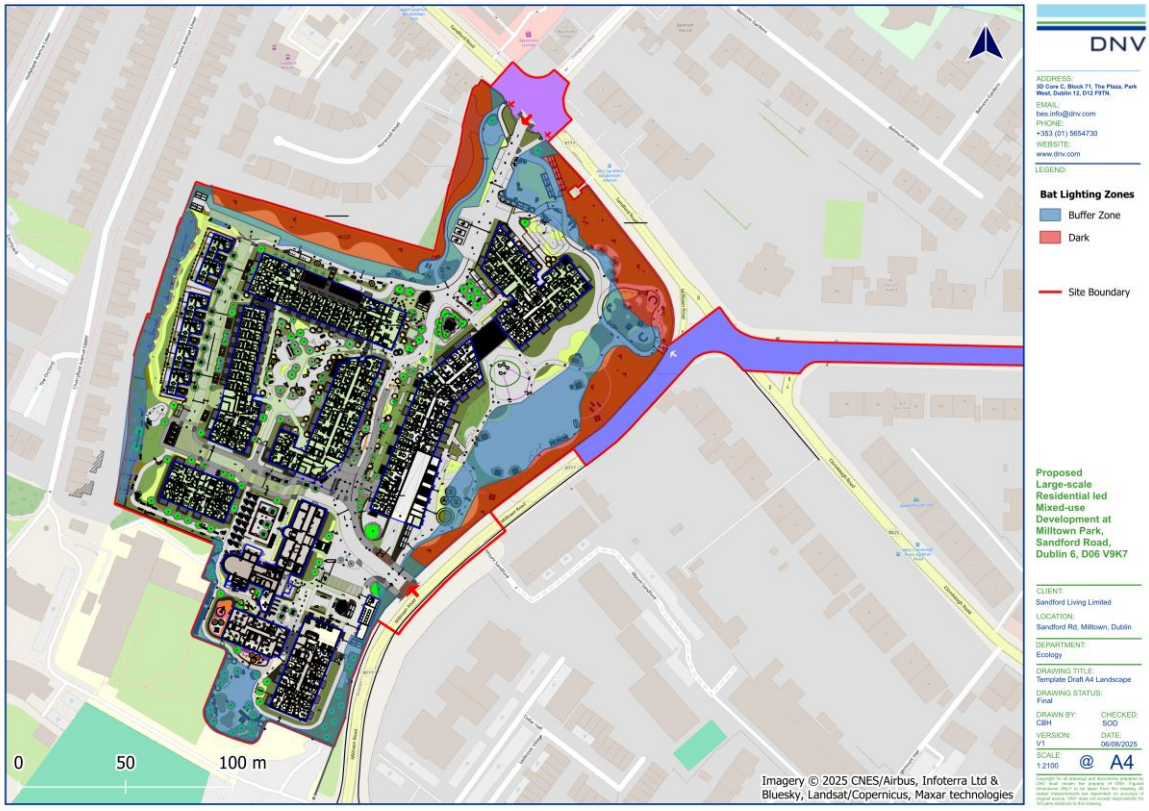

Figure 8.6o: Dark corridor for bats including key habitat where no artificial lighting or restricted lighting in summer is provided. The supporting habitat will act as a buffer zone where restrictions to lighting are incorporated (Source: DNV, Cameo & Partners, Pritchard Themis, and QGIS)

Finally, lighting from the surrounding environment, particularly at Milltown Road, could have the potential to impact on the commuting and foraging habitat for bats to the east. Particularly where the existing old stone wall will be lowered in parts. However, dense planting of native vegetation is to be planted here along the wall and under the existing mature tree canopy of the woodland, which will prevent any significant increase in light to the area, thus maintaining the dark corridor as proposed.

8.14.4 Proposed Enhancement Measures

A suite of enhancement measures are proposed at the Site. the below sections provides information on each, while further information on the landscape design, and the below enhancement measures can also be found in the Biodiversity Enhancement Plan (BEP), and Habitat Management Plan (HMP) that accompany this report under separate cover.

8.14.4.1 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.

8.14.4.2 Enhancement 1: Wildflower Meadows

The Landscape Plan includes areas of wildflower meadow. A prominent section will be present in the north of the Site, referred to as a 'woodland glade' area in the Landscape Design Statement (Cameo + Partners Ltd., 2025a), and will run along the woodland section at this location. Smaller islands and linear strips of meadow are proposed throughout the Site, particularly in the east and north-east. Spread among areas of woodland understorey planting and amenity grassland, these areas will be managed using a low-intervention approach with a reduced mowing regime (1-2 cuts per year).

Should reseeding by local flora not be possible; all wildflower seeds to be used in the installation of the wildflower meadow areas 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).

The proposed wildflower meadows will serve to provide nectar and pollen for pollinators (bees, butterflies), seeds for birds, and habitat for invertebrates. They also improve soil health and contribute to carbon storage, and can offer cover for small mammals from predation, as well as foraging opportunities.

8.14.4.3 Enhancement 2: Biodiverse Roofs

Green roofs are proposed across the majority of buildings within the development to deliver significant biodiversity gains and integrate nature-based solutions into the urban fabric. In line with the Landscape Plan, these roofs will be planted exclusively with native wildflower species of Irish origin, ensuring seasonal nectar and pollen availability for pollinators such as bees and butterflies. This approach supports invertebrate diversity and provides additional foraging opportunities for birds and bats, particularly in an otherwise built environment where such resources are limited.

Beyond ecological benefits, green roofs contribute to stormwater attenuation as part of the Sustainable Drainage Systems (SUDS) strategy, reducing surface water runoff and improving water quality. They also enhance microclimate regulation, mitigate the urban heat island effect, and improve building energy efficiency. By embedding these features into the design, the development promotes habitat connectivity, supports pollinator networks, and aligns with best practice in green infrastructure and climate resilience.

8.14.4.4 Enhancement 3: Native Planting

The Landscape Plan also includes the reinstatement of trees, scrub, and hedgerows lost due to Construction works. Whilst higher value trees will be retained, the majority of trees planted as part of the proposed development will be native species and will comprise a mix of species already present on Site.
There are currently six elm trees on Site comprising 5 No. *Ulmus Procera* & 1 No. *Ulmus glabra* species. Following pre-planning application consultations with Dublin City Council (in the previous SHD application) it was recommended to consider the importance of retaining elm trees extant on the Site where possible.

As such, tree protection of this species has been a key tenet of the proposed design. Tag #220 *Ulmus procera* & tree tag #214 *Ulmus glabra* present on Site are to be retained. It is proposed that the elms removed will be replaced with trees with better long-term prospects, as advised by CMK, due to the limited long-term potential of elm as a result of Dutch Elm Disease, which has had a significant impact on the native elm tree population.

The planting of native shrubs in the ground layer of the woodland habitat will provide cover and nesting opportunities for birds and small mammals. While the mixed planting of wildflowers, heritage lawn, fruit trees and green roofs will attract insects which is a food resource for multiple species including birds, bats, and hedgehog.

8.14.4.5 Enhancement 4: Bird Box/Swift Brick Scheme

A bird box/Swift brick scheme is proposed to be installed at the Site of the proposed development and should be implemented with the landscape plan so as to enhance the potential bird nesting habitat in the area during its Operational Phase.

A total of 10 No. bird boxes are proposed to be installed on suitable trees around the Site, to provide nesting habitat for breeding birds that may be using the Site. The location of bird boxes will be advised by a suitably qualified ecologist.

In addition, and as part of this scheme, it is proposed to include 70 No. Swift bricks. These nest bricks will be installed at least 5 metres above the ground, in safe areas where they will not be disturbed. As the bricks tend not to overheat, they can be placed on any aspect, N, S, E, W. Care will be taken to ensure no obstacles or plate glass windows are located below the bricks.

The Swift bricks are installed side by side, in sets of 10 on each block, as Swifts are a social nesting species, on suitable buildings within the proposed development. Potential suitable locations on the buildings for the Swift bricks include:

- Lower Continuous Façade - Install boxes on the main vertical wall below the recessed section, ensuring they remain at least 5 m above ground.
- Under Eaves or Overhangs - If the recess creates an overhang, boxes can be mounted underneath for shelter. (unlikely possible in this scenario)
- Side Elevations - Use gable ends or side walls that remain flush and unobstructed.
- Swift Bricks - Integrate swift bricks into the recessed wall during construction for a discreet solution.
- Balcony Underside - If the recess creates a terrace, the underside of that slab can host boxes, provided they are protected.

It is advised to install a Swift calling system (one per block) where Swift bricks will be located 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.

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

Guidelines for the bird box scheme should also follow guidelines published by Swift Conservation Ireland, and those published by Birdwatch Ireland entitle "Saving Swifts" (2009/2010).

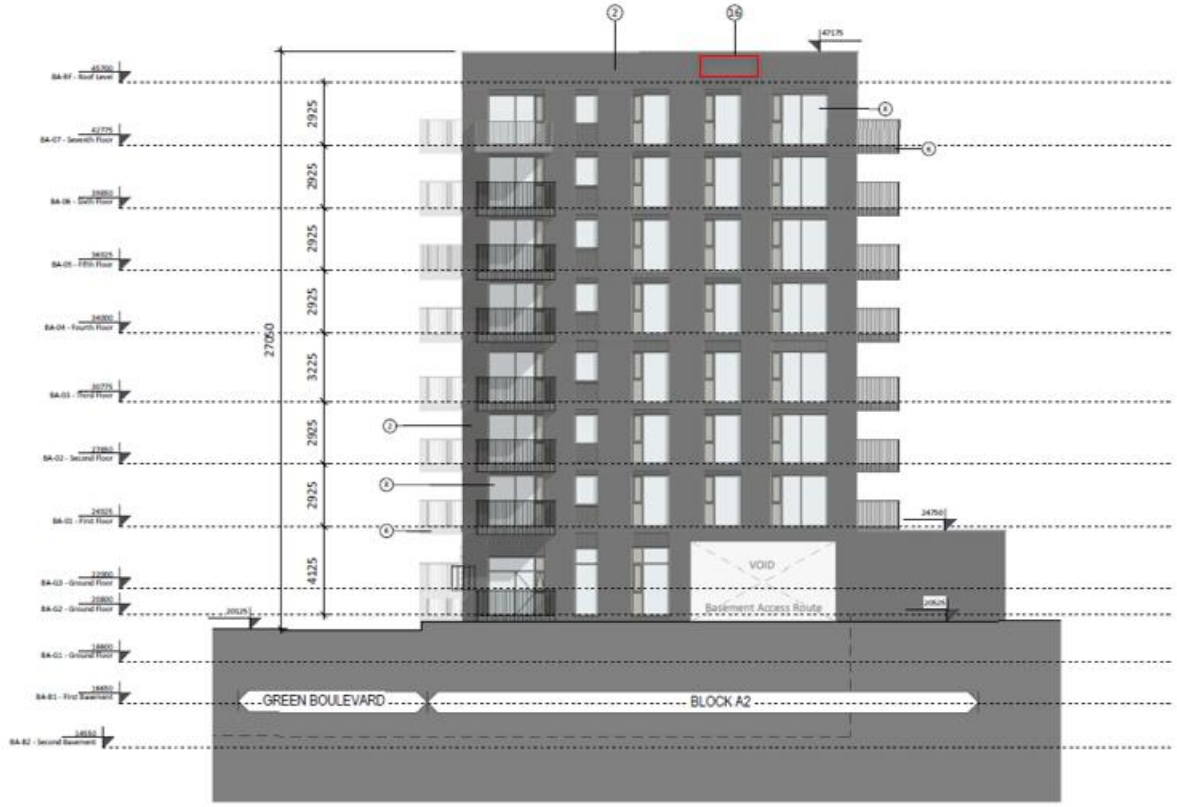

Figure 8.61: Example of Swift Bricks (item No. 16) incorporated into the south elevation of Block A2.

(Source: OMP, 2025, extract from Drawing: 19037C – OMP – ZZ – ZZ - M3 – A - 0002)

8.14.4.6 Enhancement 5: Insect Hotels

The Landscape Plan incorporates the installation of two insect hotels within the Site during the operational phase, providing valuable microhabitats for pollinators and other beneficial invertebrates. These structures will be strategically located in areas intended to remain undisturbed, such as perimeter zones where dense scrub vegetation is proposed. Positioning insect hotels in sheltered, low-disturbance areas maximizes their ecological function by offering nesting and overwintering opportunities for solitary bees, ladybirds, lacewings, and other species that contribute to pollination and natural pest control.

In addition to supporting invertebrate diversity, insect hotels play an important role in strengthening the Site's ecological network by creating food resources for birds and small mammals. Their integration into the landscape complements other biodiversity measures, such as native planting and green roofs, ensuring a holistic approach to habitat creation. Clear signage and community engagement initiatives can further enhance awareness and stewardship of these features, promoting long-term ecological benefits.

8.14.4.7 Enhancement 6: Understorey with Woodland

In order to preserve the boundary woodland, which comprises multiple species in the canopy layer, it is proposed to include a dense understory layer along the perimeter of the Site in the northern and eastern boundaries where the woodlands are located. Said understory is to

comprise of native species such as Bramble (*Rubus fructicosus)*, Common Dogwood (*Cornus sanguinea)*, Common Hawthorn (*Crataegus monogyna)*, Common Holly, Elder and Guelder Rose (*Viburnus opulus)*.

These will provide a great source of nectar and pollen further enhancing biodiversity within the Site, and limit access to these wilder areas, whilst also providing an aesthetic function. In addition, the understory will provide suitable habitat for small mammals to commute and forage safely, whilst also connecting the Site to the wider ecological landscape.

8.14.4.8 Enhancement 7: Log Piles for invertebrates and fauna

Piles of logs and woody vegetation arising from tree felling will be retained in secluded, undisturbed margins of the Site. These features will provide essential refuges and foraging opportunities for a range of species, including Common Frog and small mammals such as Hedgehog and Pygmy Shrew.

In addition to supporting larger wildlife, these areas of woody debris will benefit local invertebrate communities by offering shelter and food sources, thereby enhancing the Site's ecological complexity. Over time, the gradual decomposition of logs will enrich soil organic matter, supporting fungi and detritivores, which in turn provide prey for birds and small mammals.

By embedding these features into the construction phase, the development promotes biodiversity, strengthens habitat connectivity, and aligns with best practice for ecological enhancement in urban landscapes.

8.14.4.9 Enhancement 8: Low Intervention Woodland Understorey Management

The existing woodland understorey areas proposed to be retained within the Site within the woodland along its outer margins, will be managed in a way that maximises the ecological value they provide at the Site, with habitat connectivity maintained along the margins of the Site; connecting the various in the 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 scrub/understorey areas more naturally, they will provide more in terms of biodiversity; through increased plant diversity, increase provision of food resources and higher quality shelter to wildlife inhabiting and commuting through the area.

It is acknowledged that there will be significant landscaping undertaken at the Site, resulting in changes to the nature of some of the woodland understorey habitats found on Site. For the woodland understorey areas running along the outer margins of the Site, the following management approach is proposed to maximise their biodiversity value and offset the loss of any sections of existing understorey/scrub habitat at the Site.

- The woodland understorey located along the outer boundaries of the Site will, as much as is practicable, link up with each other. The provision of an almost continuous vegetative margin around the Site; through planted scrub and trees, will maintain habitat connectivity with the surrounding environment.

- The understorey areas along the outermost sections of the Site will be maintained in a wild state as dense, scrub habitat with minimal intervention. This will recreate the natural scrub habitat conditions present within the existing woodland.
- Where trimming of dense scrub understorey 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 scrub/understorey cutting will be done **outside of the nesting season (March 1st-August 31st)** and due consideration of the Wildlife Act 1976 (as amended) needs to be taken.
- Where possible, minimise the frequency woodland understorey areas are cut, if at all, (as cutting annually stops the scrub species flowering and fruiting) and cut in a three year rotation rather than all at once - this will ensure some areas of dense vegetation will always flower (Blackthorn in March, Hawthorn in May etc.).
- Where they occur naturally, Bramble and Ivy should be allowed to grow, as they provide key nectar and pollen sources in summer and autumn.

Methods to Avoid:
Woodland understorey will not be over-managed. Tightly cut vegetation means there are fewer flowers and berries, thus reducing available habitats, feeding sources and suitable nesting Sites.

Scrub/understorey vegetation 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. Red-listed bird species such as Yellowhammer in particular nest up until the end of August.

8.15 Monitoring Required

8.15.1 Pre-construction Phase Monitoring

8.15.1.1 Ecologist – Pre-construction Phase Bat Roost Assessment

A precautionary approach will be adopted to ensure compliance with wildlife legislation and best practice. Pre-construction bat roost assessment surveys will be undertaken by a suitably qualified bat ecologist approximately 2–3 months prior to site clearance, during an appropriate season for bat activity. These surveys will confirm the current status of the Site with respect to bat roosts and identify any changes since previous assessments.

The focus will be on structures with the highest potential for roosting, particularly Tabor House, the Chapel and other buildings scheduled for demolition. In addition, all trees proposed for removal will be re-assessed for roost potential, as tree condition can deteriorate over time, increasing the likelihood of features such as cracks, cavities, or loose bark that may support roosting bats.

This proactive approach ensures sufficient time to comply with NPWS licensing requirements and implement any necessary mitigation measures before works commence. Should evidence of bats be found, works will cease immediately, and NPWS will be consulted to agree appropriate actions. By embedding this process into the project timeline, the development safeguards bat populations and demonstrates adherence to ecological best practice.

8.15.2 Construction Phase Monitoring

8.15.2.1 Ecologist – Building Watching Brief for Bats

An Ecologist will be instructed as an ECoW to supervise the renovation of the Chapel and Tabor House in the event that bats are found during works on the roofs and loft spaces in particular. Should any bats be found, all works in that area will cease and a derogation licence may be required.

8.15.3 Operational Phase Monitoring

8.15.3.1 Bat Ecologist – Public Lighting

Once the development has been completed a suitably qualified bat ecologist will be required to assess the night-time lighting in place at the Site and will make recommendations where required to mitigate any impacts to local bats. The bat ecologist will consult this report to understand the priority areas for bat commuting/foraging at the Site.

8.15.3.2 Bat Ecologist – Bat Monitoring Surveys

Following guidelines form NPWS (2016) and Marnell et al. (2022), bat use of the Site will be monitored post-construction to evaluate the effectiveness of implemented measures for foraging, commuting habitat, and roosting sites. Monitoring will be carried out by a qualified ecologist during the summer months (May - September) and will include activity surveys such as transects and automatic static detectors. The detailed scope will be agreed with Dublin City Council Biodiversity Department. In line with Marnell et al. (2022), monitoring should also consider ongoing maintenance of mitigation features and adaptive management where necessary to ensure long-term functionality.

8.15.4 Schedule of Monitoring Requirements

Table 8.27: Schedule of Monitoring proposed for key ecological receptors at the Site.

Ecological Receptor	Relevant Stage of the Proposed Development	Monitoring Type	Details
Bats	2-3 months prior to Site clearance	Ecologist	A pre-construction bat roost assessment survey will be conducted by a suitably qualified **Ecologist 2-3 months before Site clearance is due to begin**; to confirm the status of the Site with regard to bat roosts. This will include surveys of the buildings marked for demolition on Site, along with the Tabor House loft space, the Chapel if deemed necessary, and the trees proposed for removal at the Site; to ensure that any changes to the status of these buildings and trees are accounted for (trees can deteriorate in quality over time and their bat roost potential improves as a result).
Birds & Small Mammals	Construction Phase	Ecologist	If clearance during the period March 1st – August 1st (i.e., the breeding bird nesting season) is required, an ecologist will liaise with the Site manager and survey prior to clearance. **It is noted that clearance will be avoided during this period wherever possible** through good management of the construction timeline.
	Construction Phase	Ecologist	An ecologist will be instructed to supervise any vegetation removal to ensure that impacts to small mammals and other species are minimised/avoided.

Ecological Receptor	Relevant Stage of the Proposed Development	Monitoring Type	Details
Bats	Operational Phase	Bat Ecologist	Once the development has been completed a suitably qualified bat ecologist will be required to assess the night-time lighting in place at the Site and will make recommendations where required to mitigate any impacts to local bats. The bat ecologist will consult this report to understand the priority areas for bat commuting/foraging at the Site.
Bats	Operational Phase	Bat Ecologist	Once the development has been completed a suitably qualified bat ecologist will be required to conduct bat surveys at the Site **for one-year post construction** to evaluate implemented measures to provide foraging and commuting habitat and roosting sites for bats. The monitoring will take place in the summer months May – September in the form of activity surveys including transects and automatic static detectors.

8.16 Summary of Impact Assessment

The tables below present a summary of the assessment when mitigation approaches are considered and included. A more detailed description of mitigation measures is provided in the text above. Residual impacts are also described. **Table 8.28** provides a summary of the construction impact and **Table 8.29** provides a summary of operation impacts.

Table 8.28: **Summary of Construction Impacts.**

		Effect Without Mitigation					Summary of Mitigation Measures	Monitoring	Effect with Mitigation / Monitoring				
Likely Significant Effect	**Extent**	**Quality**	**Significance**	**Duration**	**Type**	**Probability**			**Quality**	**Significance**	**Duration**	**Type**	**Probability**
Water quality effects on the Grand Canal pNHA	National	Adverse	Imperceptible, not significant	Short Term	Indirect	Unlikely	No waterbodies within the proposed development, & water quality effects are not foreseen	N/A	N/A	N/A	N/A	N/A	N/A
Water quality effects on Dolphins, Dublin Docks pNHA	National	Adverse	Imperceptible, not significant	Short Term	Indirect	Unlikely	No waterbodies within the proposed development, & water quality effects are not foreseen	N/A	N/A	N/A	N/A	N/A	N/A
Vegetation removal effecting on: Mixed broadleaved/conifer woodland; Treelines; Scrub; Grassland.	Local & Regional for treelines	Adverse	Moderate	Short-term for habitats that will be reinstated	Direct	Likely	Protection of retained vegetation, i.e., no works undertaken within the tree root protection zone and secure the regeneration of young trees within the woodland. Planting of native species in the woodland understorey. Planting of trees, native and non-native mix, within the Site. Implementation of green roofs on the new buildings of blocks A, B, C, D and F. Wildflower meadows will be planted for use by foraging/commuting bats. These will be planted with wildflower meadow from native wildflower seed to provide a valuable resource for pollinators and thus continue to provide foraging resource for bats, although there will be a	N/A	Neutral	Not significant	Short-term	Residual	Likely

		Effect Without Mitigation					Summary of Mitigation Measures	Monitoring	Effect with Mitigation / Monitoring				
							temporary loss of foraging habitat during construction before the wildflower meadow is established.						
Reduced water quality effecting on aquatic receptors (fish)	Regional	Neutral	Imperceptible, not significant	Temporary	Indirect	Unlikely	No waterbodies within the proposed development, & water quality effects are not foreseen	N/A	N/A	N/A	N/A	N/A	N/A
Loss of foraging and commuting habitat and; noise and human activity disturbance; injury/entrapment; effecting on terrestrial mammals	Local	Adverse	Minor-significant	Short-term	Direct	Likely	Limiting construction works to daylight hours where possible, thus minimising the effect on nocturnal mammals. Construction materials not in use will be cleared away. Pipes will be covered when not in use to prevent animals from getting trapped. Planks or objects to be placed in excavations to allow mammals to escape if they fall in. Vegetation will be removed on a rotational basis to provide cover and nesting habitat. The woodland on Site will be retained and enhanced with native species planted in the understorey providing cover and foraging opportunities for mammals. Tree planting within the Site will provide connectivity between the boundary habitats. Enhancement measures proposed will also provide suitable	ECoW supervision of vegetation Clearance	Neutral to adverse	Not significant	Short-term disturbance	Residual	Likely

		Effect Without Mitigation					Summary of Mitigation Measures	Monitoring	Effect with Mitigation / Monitoring				
							shelter/foraging habitat for terrestrial species.						
Loss of foraging and commuting habitat; loss of suitable roost habitats and; lighting disturbance effecting on bats	Local	Adverse	Slight-Significant (if bats roost in Tabor House during renovations)	Permanent	Direct	Likely	Lights will be switched off during non-working hours where possible and directional lighting will be used. A warm white spectrum (2700 K – 3000 K) on light will be used to reduce the blue light component. Pre-construction bat surveys of the roof space of Tabor House, The Chapel and Milltown Park House will be required 2-3 months prior to any demolition or renovation works occurring. A re-examination of the trees marked for felling will be conducted 2-3 months prior to felling. If features are confirmed as not being suitable for use as roosts, then work can continue. If bats/evidence of bats/or suspected roosts are found, then these will be legally protected, and a derogation licence will be needed to move forward with the works with appropriate mitigation in place. Bat boxes will be installed on trees present within the woodland. Ivy will have to be removed from the area surrounding the placement of each Bat	Supervision of building demolition/ repurposing works and tree felling as required based on results of pre-commencement surveys by an Ecologist.	Neutral to adverse	Not significant	Permanent	Residual	Unlikely

		Effect Without Mitigation					Summary of Mitigation Measures	Monitoring	Effect with Mitigation / Monitoring				
							box (1m radius).						
Noise and human activity disturbance and loss of foraging and nesting habitat effecting on breeding birds	Local	Adverse	Moderate	Short term	Direct	Likely	Any clearance of trees and scrub will be conducted outside of the bird nesting season (March to August inclusive). Demolition or reroofing of buildings must take place outside of the bird nesting season (March to August included). If works are to take place in 2026, or years thereafter, it will take place outside of the bird nesting season or the chimneys will be bird-proofed by a specialist contractor prior to nest building/egg laying and a new breeding bird check by a qualified ecologist will take place before any demolition works start. Planting of native shrubs and tree species within the Site will compensate for loss of foraging and nesting habitat. Bird boxes will be installed within the woodland.	ECoW supervision of vegetation Clearance	Neutral	Not significant	Short term	Residual	Likely

Table 8.29: **Summary of Operation Effects.**

		Effect Without Mitigation					Summary of Mitigation Measures	Monitoring	Effect with Mitigation / Monitoring				
Likely Significant Effect	**Extent**	**Quality**	**Significance**	**Duration**	**Type**	**Probability**			**Quality**	**Significance**	**Duration**	**Type**	**Probability**
Noise and human activity disturbance and; loss of foraging and commuting	Local	Adverse	Minor	Permanent	Direct	Likely	The woodland on Site will be retained and enhanced with dense native species planted in the understorey providing cover and	N/A	Neutral	Not significant	Permanent	Residual	Unlikely

		Effect Without Mitigation					Summary of Mitigation Measures	Monitoring	Effect with Mitigation / Monitoring				
habitat effecting on terrestrial mammals							foraging opportunities for mammals. Tree planting within the Site will provide connectivity between the boundary habitats.						
Lighting disturbance and loss of foraging and commuting habitat effecting on bats	Local	Adverse	Significant	Permanent	Direct	Likely	A dark corridor will be maintained around the boundary of the Site to provide commuting and foraging habitat for bats. The design mitigation detailed in section 8.14.3.1 will be adhered to which will alleviate the risk of light disturbance to bats.	Monitoring one-year post-construction to evaluate implemented measures to provide foraging and commuting habitat and roosting sites for bats. The monitoring will be carried out by a suitably qualified ecologist and take place in the summer months of May – September in the form of activity surveys including transects and automatic static detectors.	Neutral	Not significant	Permanent	Residual	Unlikely
Noise and human activity disturbance effecting on breeding birds	Local	Neutral	Imperceptible, not significant	Permanent	Direct	Unlikely	N/A	N/A	N/A	N/A	N/A	N/A	N/A

8.17 Residual Impact

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

In summary, the construction mitigation measures detailed in this chapter (e.g., the timing of vegetation clearance, and pre-construction checks by an Ecologist), along with the design features to be adopted to minimise adverse impacts to fauna on the Site, will be sufficient to reduce any identified potential impact to KERs associated with the Site to 'not significant'.

Furthermore, there is a likelihood of some positive residual impacts for species groups such as birds (e.g., Swift) and pollinators in particular.

8.18 Difficulties Encountered

There were no difficulties encountered in compiling the information for Chapter 8 Biodiversity.

8.19 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 bricks, bird boxes, bat boxes, 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 invasive alien flora species impacting on the quality of the scrub and woodland habitats it supports.

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.

8.20 References

AIP Ireland (2020) Bird Migration and Areas With Sensitive Fauna [online], Available [ONLINE] at http://iaip.iaa.ie/iaip/Published%20Files/AIP%20Files/ENR/EI_ENR_5_6_EN.pdf [Accessed November 2025]

Bat Conservation Trust and Institution of Lighting Professionals (2023) Guidance Note 08/23: Bats and artificial lighting in the UK. ILP, Rugby.

BWI (2012) 'CBS Manual Guidelines for Countryside Bird Survey participants'. Available [ONLINE]
at
http://www.birdwatchireland.ie/LinkClick.aspx?fileticket=ZMHg4m%2BJc7k%3D&tabid=116 [Accessed November 2025]

Catchments.ie. (2025). Dublin Bay UNESCO Biosphere. Available [ONLINE] at https://www.catchments.ie/dublin-bay-unesco-biosphere/ [Accessed November 2025]
CIEEM (2018) 'Guidelines For Ecological Impact Assessment in the UK and Ireland - Terrestrial, Freshwater, Coastal and Marine'. Available [ONLINE] at https://cieem.net/wp-content/uploads/2019/02/Combined-EclA-guidelines-2018-compressed.pdf

CIEEM (2024). Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, version 1.3, September 2024.

City of Toronto (2016) 'Bird-Friendly Best Practices Glass'. Available [ONLINE] at https://www.toronto.ca/wp-content/uploads/2017/08/8d1c-Bird-Friendly-Best-Practices-Glass.pdf

CMK Horticulture & Arboriculture Ltd (2025) Arboricultural Assessment, Arboricultural Impact and Tree Protection Strategy Report - Milltown Park, Ranelagh, Dublin 6.

Collins, J. (Ed.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition), 4th edn. Ed, The Bat Conservation Trust, London. Available [ONLINE] at https://www.bats.org.uk/resources/guidance-for-professionals/bat-surveys-for-professional-ecologists-good-practice-guidelines-4th-edition

Collins, J. (Ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition), 3rd edn. ed, The Bat Conservation Trust, London. Available [ONLINE] at https://cdn.bats.org.uk/uploads/pdf/Resources/Bat_Survey_Guidelines_2016_NON_PRINTABLE.pdf?v=1542281971

DBFL. (2025a). Infrastructure Design Report. 190226-XX-XX-DBFL- RP-C-0002-IDR. DBFL Consulting Engineers. Produced December 2025.

DBFL. (2025b). Site Specific Flood Risk Assessment Report. 190226-XX-XX-DBFL-RP-CE-0003-SSFRA. DBFL Consulting Engineers. Produced December 2025.

DBFL. (2025c). Preliminary Construction Management Plan. 190226-XX-XX-DBFL-RP-C-0004-PCMP. DBFL Consulting Engineers.

Department of Housing, Planning and Local Governments (2018) 'Guidelines for planning authorities and An Board Pleanála on carrying out environmental impact assessment'. Available [ONLINE] at https://www.gov.ie/en/publication/53aee9-guidelines-for-planning-authorities-and-an-bord-pleanala-on-carrying/ [Accessed November 2025]

DHLGH (2022). 'Third Cycle River Basin Management Plan 2022 - 2027; Consultation Report'. Available [ONLINE] at https://www.catchments.ie/third-cycle-draft-river-basin-management-plan-2022-2027-consultation-report/ [Accessed November 2025]

DHPLG (2018). Guidelines for planning authorities and An Bórd Pleanála on carrying out an environmental impact assessment.

DNV (2025a). Appropriate Assessment Screening Report for a Proposed Large-scale Residential led Mixed-use Development at Milltown Park, Sandford Road, Dublin 6, D06 V9K7, on behalf of Sandford Living Limited.

DNV (2025b), Biodiversity Enhancement Plan for a Proposed Large-scale Residential led Mixed-use Development at Milltown Park, Sandford Road, Dublin 6, D06 V9K7, on behalf of Sandford Living Limited.

DNV (2025c). Habitat Management Plan for a Proposed Large-scale Residential led Mixed-use Development at Milltown Park, Sandford Road, Dublin 6, D06 V9K7, on behalf of Sandford Living Limited.

DoHPLG (2018) 'River Basin Management Plan for Ireland 2018-2021', Available [ONLINE] at https://www.housing.gov.ie/sites/default/files/publications/files/rbmp_report_english_web_version_final_0.pdf [Accessed November 2025].

Dublin City Council (2021) 'Greater Dublin Regional Code of Practice for Drainage Works', available: https://www.dublincity.ie/sites/default/files/media/file-uploads/2018-08/Greater_Dublin_Regional_Code_of_Practice_V6-0.pdf [Accessed November 2025].

Dublin City Council (2022) 'Dublin City Biodiversity Action Plan 2021 - 2025', Available: [ONLINE] at https://www.dublincity.ie/residential/parks/strategies-and-policies/biodiversity-action-plan-2021-2025 [Accessed November 2025]

Dublin City Council (2025) Dublin Bay Biosphere. Available [Online] at https://www.dublincity.ie/dublin-city-parks-strategy/4-resources-and-services/46-natural-areas-biodiversity/465-dublin-bay-biosphere [Accessed November 2025]

Dublin City Council. (2016c). Dublin City Tree Strategy 2016 – 2020. Available [PDF] at https://www.dublincity.ie/sites/default/files/media/file-uploads/2018-08/Dublin_City_Tree_Strategy_2016-2020.pdf [Accessed November 2025]

EirGrid (2012). Ecology Guidelines for Electricity Transmission Projects. Prepared by Natura Environmental Consultants.

EirGrid (2016). EirGrid Evidence Based Environmental Studies Study 5: Birds. Prepared by EirGrid plc with the assistance of RPS Group.

EirGrid (2020). Ecology Guidelines for Electricity Transmission Projects.

Enviroguide Consulting (2022) Natura Impact Statement for Proposed Mixed-use Development at lands east of St Paul's College, Sybil Hill Road, Raheny, Dublin 5. Prepared for Raheny 3 Limited Partnership.

EPA (2022) Guidelines on the Information to Be Contained in Environmental Impact Assessment Reports. Environmental Protection Agency. Available [ONLINE] at https://www.epa.ie/publications/monitoring--assessment/assessment/EIAR_Guidelines_2022_Web.pdf

EPA (2025) EPA Online Map Viewer. Available [ONLINE] at https://gis.epa.ie/EPAMaps/ [Accessed November 2025]

Fossitt, J.A. (2000) A Guide to Habitats in Ireland, Heritage Council of Ireland series, Heritage Council/Chomhairle Oidhreachta: Kilkenny. Available [ONLINE] at https://www.npws.ie/sites/default/files/publications/pdf/A%20Guide%20to%20Habitats%20in%20Ireland%20-%20Fossitt.pdf

GDSDS. (2005). Greater Dublin Strategic Drainage Study. Available [ONLINE] at http://www.greaterdublindrainage.com/wp-content/uploads/2011/11/GDSDS-Final-Strategy-Report-April-051.pdf

Gilbert, G., Stanbury, A., Lewis, L. (2021) Birds of Conservation Concern in Ireland 2020-2026 - Leaflet. Available [ONLINE] at https://birdwatchireland.ie/publications/birds-of-conservation-concern-in-ireland-bocci-2020-2026/

GSI (2025) Geological Survey Ireland Spatial Resources. Available [ONLINE] at https://dcenr.maps.arcgis.com/apps/MapSeries/index.html?appid=a30af518e87a4coab2fbde2aaac3c228 [Accessed November 2025]

Handby, T. (2022a) GPS Tagging Report: Light-bellied Brent Goose movements in Dublin. Irish Brent Goose Research Group, pp. 10–14.

Handby, T. (2022b) Movement ecology and habitat selection of Light-bellied Brent Geese in urban landscapes. PhD Thesis, University of Exeter [Accessed 24 November 2025].

IFI (2023) Water Framework Directive Fish Monitoring Programme: Summary Report 2022. Inland Fisheries Ireland. Available at: https://www.fisheriesireland.ie [Accessed 20 November 2025].

IFI (2024) Water Framework Directive Fish Monitoring Programme: Summary Report 2023. Inland Fisheries Ireland. Available at: https://www.fisheriesireland.ie [Accessed 20 November 2025].

ILP. (2018). 'Guidance Note 08/18. Bats and Artificial Lighting in the UK - Bats and the Built Environment series.' Bat Conservation Trust. Available [ONLINE] at https://cdn.bats.org.uk/uploads/pdf/Resources/ilp-guidance-note-8-bats-and-artificial-lighting-compressed.pdf?v=1542109349

Inland Fisheries Ireland (IFI)(2025a). Sampling Fish in Rivers 2017 Factsheet No. 7 - ERBD Dodder River Catchment. Available [ONLINE] at https://www.fisheriesireland.ie/search?keywords=river+dodder [Accessed November 2025]

Inland Fisheries Ireland (IFI)(2025b). Sampling Fish in Rivers 2018 Factsheet No. 2 - ERBD Dodder River Catchment. Available [ONLINE] at https://www.fisheriesireland.ie/search?keywords=river+dodder [Accessed November 2025]

Institution of Lighting Professionals (ILP). (2023). Guidance Note 08/23: Bats and artificial lighting at night. In collaboration with the Bat Conservation Trust.

Invasive Plant Solutions (2025) Invasive Alien Plant Species: Site Assessment Report. Issue 12.

Irish Water (2018) Ringsend Wastewater Treatment Plant Upgrade Project Environmental Impact Assessment Report, available: https://www.water.ie/planning-sites/ringsend-planning/environmental-documents/

Irish Water (2025) 'Ringsend Wastewater Treatment Plant Upgrade Project. Available [ONLINE] at https://www.water.ie/projects/local-projects/ringsend/ [Accessed November 2025]

I-WeBs. (2025). Online Site Map Viewer. Available [ONLINE] at https://bwi.maps.arcgis.com/apps/View/index.html?appid=1043ba01fcb74c78bc75e306eda48d3a. [Accessed November 2025]

JBA (2021) Milltown Park, Sandford Road, Ranelagh, Dublin 6 - Screening for Appropriate Assessment, JBA Consulting Engineers and Scientists Ltd, Dublin.

Keeley, B. (2018) A Bat Assessment of Alexandra College July 2018 and Implications for Demolitions and Construction within the Grounds.

Kelleher, C., Marnell, F. (2006) Bat Mitigation Guidelines for Ireland, Irish Wildlife Manuals No. 25, National Parks and Wildlife Service /Department of Environment, Heritage, and Local Government, available: https://www.npws.ie/sites/default/files/publications/pdf/IWM25.pdf

Kelly, F.L., Connor, L., Matson, R., Feeney, R., Morrissey, E., Coyne, J. and Rocks, K. (2015) Sampling Fish for the Water Framework Directive - Summary Report 2014. Inland Fisheries Ireland, Citywest Business Campus, Dublin 24, Ireland. Available [ONLINE] at http://wfdfish.ie/wp-content/uploads/2010/05/WFD_Report_2014_FINAL.pdf

Kelly, F.L., Matson, R., Connor, L., Feeney, R., Morrissey, E., Wogerbauer, C., Rocks, K. (2012) Water Framework Directive Fish Stock Survey of Rivers in the Eastern River Basin District, Inland Fisheries Ireland, Swords Business Campus, Swords, Co. Dublin, Ireland.

King, J. (2010) Habitat selection and foraging ecology of Light-bellied Brent Geese. Journal of Applied Ecology, 47(2), pp. 367–375.

Macklin, R., Brazier, B. & Sleeman, P. (2019). Dublin City otter survey. Report prepared by Triturus Environmental Ltd. for Dublin City Council as an action of the Dublin City Biodiversity Action Plan 2015-2020. Available [PDF] at https://a.storyblok.com/f/47927/x/609e85ec32/dublin-city-otter-report-2019.pdf

Marnell, F., Kelleher, C. & Mullen, E. (2022). Bat mitigation guidelines for Ireland v2. Irish Wildlife Manuals, No. 134. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland

Marnell, F., Kingston, N., Looney, D. (2009) 'Ireland Red List No. 3: Terrestrial Mammals'. Available [ONLINE] at https://www.npws.ie/sites/default/files/publications/pdf/RL3.pdf

Marnell, F., Looney, D., Lawton, C. (2019) 'Ireland Red List No. 12: Terrestrial Mammals'. Available [ONLINE] at https://www.npws.ie/sites/default/files/publications/pdf/Red%20List%20No.%2012%20Mammals.pdf

Matson, R., Delanty, K., Gordon, P., O'Briain, R., Garland, D., Cierpal, D., Connor, L. Corcoran, W., Coyne, J., McLoone, P., Morrisey-McCaffrey, E., Brett, T., Ní Dhonnabhain, L. and Kelly, F.L., (2018) Sampling Fish in Rivers 2017 – Dodder, Factsheet No. 7. National Research Survey Programme. Inland Fisheries Ireland.

Matson, R., Kelly, F., & Champ, W. (2018) Fish Stock Survey of the River Dodder Catchment 2017. Inland Fisheries Ireland.

Matson, R., Kelly, F., & Champ, W. (2019) Fish Stock Survey of the River Dodder Catchment 2018. Inland Fisheries Ireland.

Mitchell-Jones, A.J. (2004) Bat Mitigation Guidelines English Nature, Peterborough. Available [ONLINE] at https://cieem.net/resource/bat-mitigation-guidelines/

NBDC (2025) Biodiversity Maps - Online Map Viewer. National Biodiversity Data Centre Biodiversity Maps. Available [ONLINE] at https://maps.biodiversityireland.ie/Map [Accessed November 2025]

NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview. Unpublished NPWS report.

NPWS (2025) Download Boundary Data | National Parks & Wildlife Service [online], available: https://www.npws.ie/maps-and-data/designated-site-data/download-boundary-data [Accessed November 2025]

NRA (2008b) Environmental Impact Assessment of National Road Schemes- A Practical Guide. National Roads Authority. Available [PDF] at https://www.tii.ie/technical-services/environment/planning/Environmental-Impact-Assessment-of-National-Road-Schemes-Practical-Guide.pdf

NRA (2009a) National Roads Authority Guidelines for Assessment of Ecological Impacts of National Road Schemes. Transport Infrastructure Ireland. Available [PDF] at https://www.tii.ie/technical-services/environment/planning/Guidelines-for-Assessment-of-Ecological-Impacts-of-National-Road-Schemes.pdf

NRA (2009b) Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes. National Roads Authority. Available [ONLINE] at https://www.tii.ie/technical-services/environment/planning/Ecological-Surveying-

Techniques-for-Protected-Flora-and-Fauna-during-the-Planning-of-National-Road-Schemes.pdf

NRA (2010) 'Guidelines on The Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads', available: http://www.tii.ie/technical-services/environment/construction/Management-of-Noxious-Weeds-and-Non-Native-Invasive-Plant-Species-on-National-Road-Schemes.pdf. [Accessed November 2025]

OPR (2021a). OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management.

OPR (2021b). OPR Practice Note PN02 Environmental Impact Assessment Screening.
OSI (2023). GeoHive [online], GeoHive, available: http://map.geohive.ie/mapviewer.html [Accessed March 2023]

Parnell, J., Curtis, T. (2012) Webb's An Irish Flora [online], 8th ed, Trinity College Dublin. Available [ONLINE] at http://www.corkuniversitypress.com/product-p/9781859184783.htm

Pritchard Thelmis (2025). Design Book 13 – Lighting Report for Milltown Park, Sandford Road, Dublin 6. Produced December 2025.

Russ, J., (2012). British bat calls: a guide to species identification. Pelagic publishing.

Smith, G.F., O'Donoghue, P., O'Hora, K., Delaney, E. (2011) 'Best practice guidance for habitat survey and mapping'. The Heritage Council: Ireland. Available [PDF] at https://www.heritagecouncil.ie/content/files/best_practice_guidance_habitat_survey_mapping_onscreen_version_2011_8mb.pdf

Summers, R. & Critchley, C. (1990) Use of grassland and field selection by Brent Geese Branta bernicla. Journal of Applied Ecology, 27, pp. 834–846.

Teagasc. (2023). Bats and their Habitats. Available [ONLINE] at https://www.teagasc.ie/news--events/daily/environment/bats-and-their-habitats.php

Thornton O'Connor Town Planning (TOC) (2021) Environmental Impact Assessment Report In respect of a Residential Development at Milltown Park, Sandford Road, Dublin 6 Submitted on Behalf of Sandford Living Limited. Volume II -EIAR.

TII (2020). The Management of Invasive Alien Plant Species on National Roads – Technical Guidance. GE-ENV-01105, Dec 2020.

Triturus Environmental Ltd. (2025) 2025 otter survey at Smurfit Paper Mills, River Dodder, Clonskeagh, Co. Dublin, to inform a Section 54 derogation application. Available [online] at 2025-08-13 Resub Smurfit Paper Mills otter survey & derogation report.pdf