Local Authority Own Housing Development at Bluebell Waterways, Dublin 12

ECOLOGICAL IMPACT ASSESSMENT REPORT

Environmental Assessment

Built Environment

Client: **Land Development Agency**

Date: **06 May 2025**

DOCUMENT CONTROL SHEET

7068_RP03RP03_Ecological Impact Assessment Report

Project No.	7068
Client:	Land Development Agency
Project Name:	Local Authority Own Housing Development at Bluebell Waterways, Dublin 12
Report Name:	Ecological Impact Assessment Report
Document No.	RP03
Issue No.	04
Date:	06/05/2025

This document has been issued and amended as follows:

Issue	Status	Date	Prepared	Checked
01	For internal review	06 Sep 2024	NK	MH
02	Draft	11 Oct 2024	NK	MH
03	Final Draft	17 Feb 2025	NK	MH
04	Final	06 May 2025	NK	MH

Contents

1 Introduction

1.1 Statement of Purpose

The Land Development Agency (LDA), on behalf of Dublin City Council, proposes to develop new housing at Bluebell, Dublin 12 ('the proposed development' hereafter). It is intended to carry out the said Local Authority Own Housing Development in accordance with Part XI of the Planning and Development Act 2000 (as amended) and Part 8 of the Planning and Development Regulations 2001 (as amended).

Brady Shipman Martin was appointed by the LDA to prepare this Ecological Impact Assessment report (EcIA) in relation to the proposed Local Authority Own Housing Development.

The Chartered Institute of Ecology and Environmental Management (CIEEM) defines EcIA as follows (2024, p. 8):

> *"EcIA is a process of identifying, quantifying and evaluating potential effects of development-related or other proposed actions on habitats, species and ecosystems[1]. The findings of an assessment can help competent authorities understand ecological issues when determining applications for consent. EcIA can be used for the appraisal of projects of any scale including the ecological component of Environmental Impact Assessment (EIA). When undertaken as part of an EIA, EcIA is subject to the relevant EIA Regulations. Unlike EIA, EcIA on its own is not a statutory requirement. It is an evaluation process undertaken to support a range of assessments."*

The potential for any impacts on sites designated as European (Natura 2000) sites under the EU Habitats and Birds Directives was also appraised, and the results of that study are presented in a separate report (Appropriate Assessment Screening Report, prepared by Brady Shipman Martin (2024) and submitted as part of this application).

1.2 Expertise and Qualifications

This report has been prepared by Namrata Kaile, Ecologist and Environmental Consultant at Brady Shipman Martin. She holds a bachelor's degree (BSc) in Life Sciences from University of Delhi and a Master's Degree (MSc) with distinction in Environmental Sciences from Trinity College Dublin. She is a full member of Chartered Institute of Ecology and Environmental Management (MCIEEM) and has been working professionally in the field of environmental consultancy for the last five years. Namrata is experienced in undertaking baseline ecological surveys and preparing Ecological Impact Assessment Reports (EcIAs). She is also experienced in drafting and reviewing AA and EIA Screening Reports as well as in coordinating EIARs.

A technical review of this document was carried out by Ecologist Matthew Hague BSc MSc Adv. Dip. Plan. & Env. Law CEnv MCIEEM. Matthew is an Associate with Brady Shipman Martin and is a highly experienced and qualified ecologist, with a master's degree in Ecosystem Conservation and Landscape Management. He has over 20 years of experience in ecological and environmental consultancy, across a wide range of sectors. He has prepared numerous reports for AA Screening as well as Natura Impact Statements, for projects of all scales, from small residential developments to nationally important infrastructure projects. Matthew is a Chartered Environmentalist (CEnv) and a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Matthew has also

[1] Adapted from the definition originally published in Treweek (1999), *Ecological Impact Assessment* (Blackwell).

completed an Advanced Diploma in Planning and Environmental Law, at King's Inns and is a member of the Irish Environmental Law Association (IELA).

2 Methodology

2.1 Introduction

A desk-based assessment was undertaken in August and September 2024, updated in May 2025, of the Bluebell site and its environs.

In order to provide comprehensive baseline on the local ecological environment, biodiversity surveys were initially undertaken at the proposed development site by BSM on 12 June 2023. The surveys undertaken comprised habitat, invasive species, rare and/or protected species, mammals, birds and day-time bat survey.

In addition to the ecological surveys undertaken by the authors, specialist habitat and botanical surveys were undertaken on the site by Alexis FitzGerald, FitzGerald Ecology in June 2024. Extracts from the Habitat and Flora Study report (FitzGerald Ecology, 2024) are included in this report where relevant. The habitat and flora study report is included as Appendix A to this EcIA.

A breeding bird survey was also undertaken on the site between April and August 2024 by ornithologist John Fox. The survey recorded species observed on the site and a conservation status was assigned to each species based on their latest conservation status as indicated in *Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al 2021).* The breeding bird survey report is included as Appendix B to this EcIA.

Bat surveys, using bat detectors, were undertaken by specialist bat ecologist Mr Brian Keeley and his team on 3 and 4 August 2023, 31 July 2024 and 6 August 2024. Extracts from the bat survey report are included in this EcIA report where relevant. The Bat Survey Reports are included in Appendix C of this EcIA.

This report has been prepared in accordance with the following publications:

- EPA *Guidelines on the Information to be Contained in Environmental Impact Assessment reports* (EPA, 2022);
- *Environmental Impact Assessment of Projects – Guidance on Screening* (European Commission, 2017).
- *OPR Practice Note PN02: Environmental Impact Assessment Screening* (Office of the Planning Regulator (OPR) (2021);
- *Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment* (European Commission, 2013);
- *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment* (Department of Housing, Planning and Local Government, August 2018);
- *Guidelines for Assessment of Ecological Impacts of National Road Schemes* (Transport Infrastructure Ireland (formerly the National Roads Authority, 2009);
- *Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland: Terrestrial, Freshwater, Coastal and Marine* ('the CIEEM Guidelines') published by the Chartered Institute of Ecology and Environmental Management (CIEEM), September 2018, updated in September 2019 (V1.1), further updated in April 2022 (V1.2) and September 2024 (V1.3).

The following legislative instruments are relevant to this report:

- The Planning and Development Act 2000 as amended (the "Planning Acts");

- The Wildlife Act 1976 to 2021 and the Wildlife (Amendment) Act 2000;
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the "Habitats Directive");
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (the "Birds Directive");
- European Communities (Birds and Natural Habitats) Regulations 2011-2021;
- Flora (Protection) Order 2022 (SI No. 235 of 2022);
- Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment;
- European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018).

The report has regard to the following Policies and Plans:

- *Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters* (Inland Fisheries Ireland, 2016);
- *Planning for Watercourses in the Urban Environment* (Inland Fisheries Ireland, 2020);
- *All-Ireland Pollinator Plan 2021-2025* (National Biodiversity Data Centre);
- Ireland's 4th National Biodiversity Action Plan (Department of Housing, Local Government and Heritage, 2024);
- Dublin City Development Plan 2022 – 2028, including the accompanying Appropriate Assessment documentation (Natura Impact Report) and Green Infrastructure and Recreation (Chapter 10).

2.2 Appraisal Methodology

In addition to the resources listed in Section 2.1, information collated from the sources listed below was reviewed:

- Data on rare and protected plant and animal species contained in the following databases:
  - The National Parks and Wildlife Service (NPWS) of the Department of Culture, Heritage and the Gaeltacht: www.npws.ie;
  - The National Biodiversity Data Centre (NBDC) www.biodiversityireland.ie;
  - Birdwatch Ireland www.birdwatchireland.ie;
  - Bat Conservation Ireland www.batconservationireland.org;
- Recent aerial photography and photographs taken at the site;
- Recent and historic ordnance survey mapping (www.geohive.ie);
- Information on protected areas, as well as watercourses, catchments and water quality in the area available from EPA, https://gis.epa.ie/EPAMaps/;
- Information on soils, geology and hydrogeology in the area available from GSI, www.gsi.ie;
- Information on the Status of EU Protected Habitats and Species in Ireland (Article 17 report) (NPWS, August 2019);
- Information on land-use zoning from the online mapping of the Department of the Environment, Community and Local Government, http://www.myplan.ie/en/index.html.

The habitat survey was carried out with reference to Smith *et al*. (2011) and the habitats were classified in accordance with the Irish Heritage Council classification system (Fossitt, 2000). The nomenclature for Annex I habitats also follows Commission of the European Communities (2013), with any

abbreviated names for the habitats following NPWS (2019). Vascular plant taxonomy and nomenclature follows Stace (2019), whilst bryophyte taxonomy and nomenclature follow Atherton *et al*. (2010).

The site was searched for any evidence of large mammals such as otters or badgers, such as setts, commuting routes, territorial marking, latrines or feeding signs as well as paw prints, snagged hairs and piles of bedding material. Mammal surveys followed the methodologies contained in the *NRA Guidelines* for *the Treatment of Badgers Prior to the Construction of National Road Schemes* and the *Guidelines for the Treatment of Otters Prior to the Construction of National Road Schemes.*

The site was also searched for evidence of breeding birds as well as for the presence of any habitat suitable for use by overwintering birds. A conservation status was also assigned to each species based on their latest conservation status as indicated in *Birds of Conservation Concern in Ireland 4: 2020-2026* (Gilbert et al 2021).

An *Arboricultural Report* (Veon, 2024) has been prepared for the site and accompanies the Part 8 application as a standalone document. The Arboricultural data has been recorded in line with BS 5837:2012.

Day-time appraisals of potential roost sites and night-time bat activity surveys were undertaken in accordance with best practice guidelines *Bat Mitigation Guidelines for Ireland* v2 (Irish Wildlife Manuals No. 134, Kelleher and Marnell 2022), *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016), *Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes* (NRA, 2006), *Bat surveys for Professional Ecologists - good practice guidelines; fourth edition (2023) Bat Conservation Trust.*

An examination of available information from Bat Conservation Ireland (BCI) was undertaken in order to compile a list of most likely species in the overall area in addition to the evaluation of the habitat and active bat survey.

As a result of the biodiversity surveys and research, and given the habitats and species known to be present on the site and in the wider area, the amount of information gathered to date is sufficient to allow a comprehensive understanding of the potential impacts of any proposed development at the site on biodiversity and related receptors.

The specialist surveys and the assessment has been undertaken in accordance with the appropriate and latest guidelines. No significant limitations in the scope or the scale of the assessments have been identified.

2.3 Evaluation of Ecological Features

The methodologies used to determine the value of ecological resources, to characterise impacts of the proposed development and to assess the significance of impacts and any residual effects are in accordance with the NRA (TII) *Guidelines for Assessment of Ecological Impacts of National Road Schemes*[2]. This is consistent with the approach taken in the CIEEM *Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland – Terrestrial, Freshwater, Coastal and Marine*[3].

In this assessment the impacts are characterised and described based on positive or negative, extent (spatial or geographical), magnitude and duration and are described in Section 5. Any negative impacts

[2] NRA (TII), 2009. Guidelines for Assessment of Ecological Impacts of National Road Schemes. National Roads Authority

[3] The CIEEM Guidelines' (V1.2), CIEEM, April 2022

and effects identified are mitigated by incorporating specific mitigation measures or enhancement measures as described in Section 6.

As per CIEEM's guidelines, significance of effect is determined on a case-by-case basis as to how the effect either supports or undermines biodiversity conservation objectives or for biodiversity in general. Significance is determined by a combination of objective and subjective concerns.

In accordance with the NRA (TII) Guidelines, impact assessment is undertaken of sensitive ecological receptors (Key Ecological Receptors) within the Zone of Influence of the proposed project. According to the guidelines, the Zone of Influence is the 'effect area' over which change resulting from the proposed project is likely to occur and the Key Ecological Receptors are defined as features of sufficient value as to be material in the decision-making process for which potential impacts are likely.

There are no set recommended distances for the Zone of Influence to be considered for the assessment. However, it is evaluated on a case-by-case basis and is based on the extent of the area over which impacts associated with the proposed development are anticipated. For the proposed development, effects are assessed within the proposed site location (study area), its immediate surroundings and on remote downstream hydrological receptors.

As noted in the guidelines, the following geographic frames of reference are used when determining ecological value:

- International Importance;
- National Importance;
- County Importance; and
- Local Importance (Higher Value).

In the context of the proposed development site at Bluebell Waterways, Dublin 12, a Key Ecological Receptor is defined as any feature valued between Local Importance (Higher Value), such as sites containing semi-natural habitat types with high biodiversity in a local context, or populations of species that are uncommon in the locality or sites or features containing common or lower value habitats, including naturalised species that are essential in maintaining links and ecological corridors between features of high ecological value, and International Value (such as a European site).

Features of local importance (Lower Value) and features without ecological value are not considered to be Key Ecological Receptors in this context.

3 Baseline Environment

3.1 General Description of the Proposed Site and the Receiving Environment

The proposed development site (c. 2.94Ha) is located at Bluebell Avenue and Bluebell Road, Bluebell, Dublin 12 (refer to **Figure 3.1** below), south-west of Dublin city centre. The site is bounded by the Grand Canal Way to the north, the Grand Canal View apartments, Bluebell Youth & Community Centre and Bluebell Road to the east, Our Lady of the Wayside National School to the south and existing residential area to the west. The site is accessed via the existing road network off Bluebell Road and La Touche Drive.

The subject site is located in the existing residential area of Bluebell with Inchicore and Ballyfermot to the north, Walkinstown to the south, Kylemore to the west and Drimnagh to east. The surrounding area comprises a mix of uses, whilst it is predominantly residential in nature, others uses include light industry, warehousing, storage and retail/ wholesale.

The site comprises existing maisonette houses, dis-used industrial filter beds, green field, and community facilities. The remainder of the site is a mix of hard standing and overgrown landscaping across varying site levels.

Under the Dublin City Development Plan 2022-2028 (Zoning Map D) the site is zoned as '*Zone 1 Sustainable Residential Neighbourhoods'* which aims '*to protect, provide and improve residential amenities'*. The northern half of the site also has a specific objective as a 'Conservation Areas'. Refer to Figure 3.2 below.

The area to the immediate west and east is zoned as '*Zone 1 Sustainable Residential Neighbourhoods',* to the north-east is zoned as *'Zone 9 Amenity/ Open Space Lands/ Green Network',* to the south zoned as a mix of *'Zone 1 Sustainable Residential Neighbourhoods', 'Zone 15 Community and Social Infrastructure'* and *'Zone 6 Employment/Enterprise'* and to the immediate north is zoned as *'Zone 9 Amenity/ Open Space Lands/ Green Network'* and *'Zone 11 Waterways Protection'.*

The Dublin City Development Plan 2022-2028 under *Policy QHSN34 Social, Affordable Purchase and Cost Rental Housing* states - *To promote the provision of social, affordable purchase, cost rental and rental housing in accordance with the Council's Housing Strategy, Part V of the Planning and Development Act, as amended by the Affordable Housing Act 2021 and government policy as outlined in the DHLGH 'Social Housing Strategy 2020' and support the realisation of public housing.*

Figure 3.1 The location of the proposed development site at Bluebell, Dublin 12

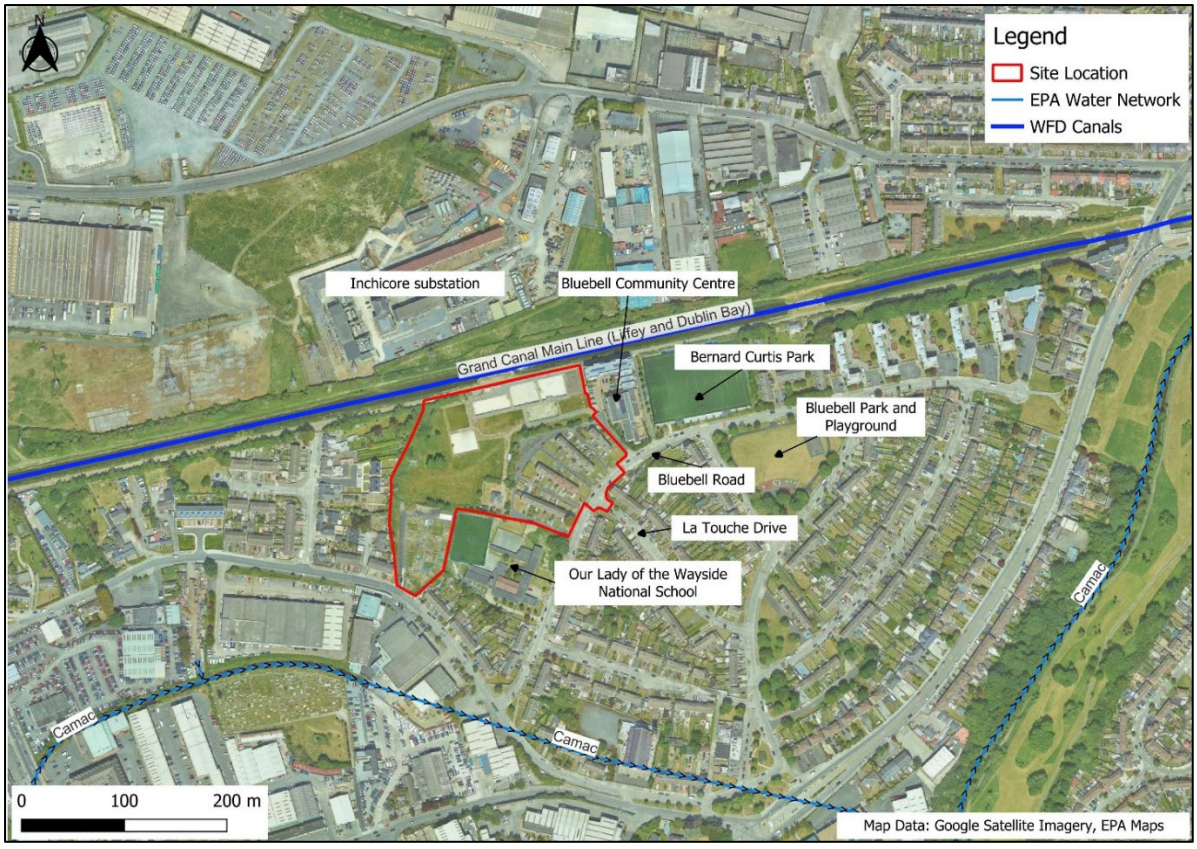
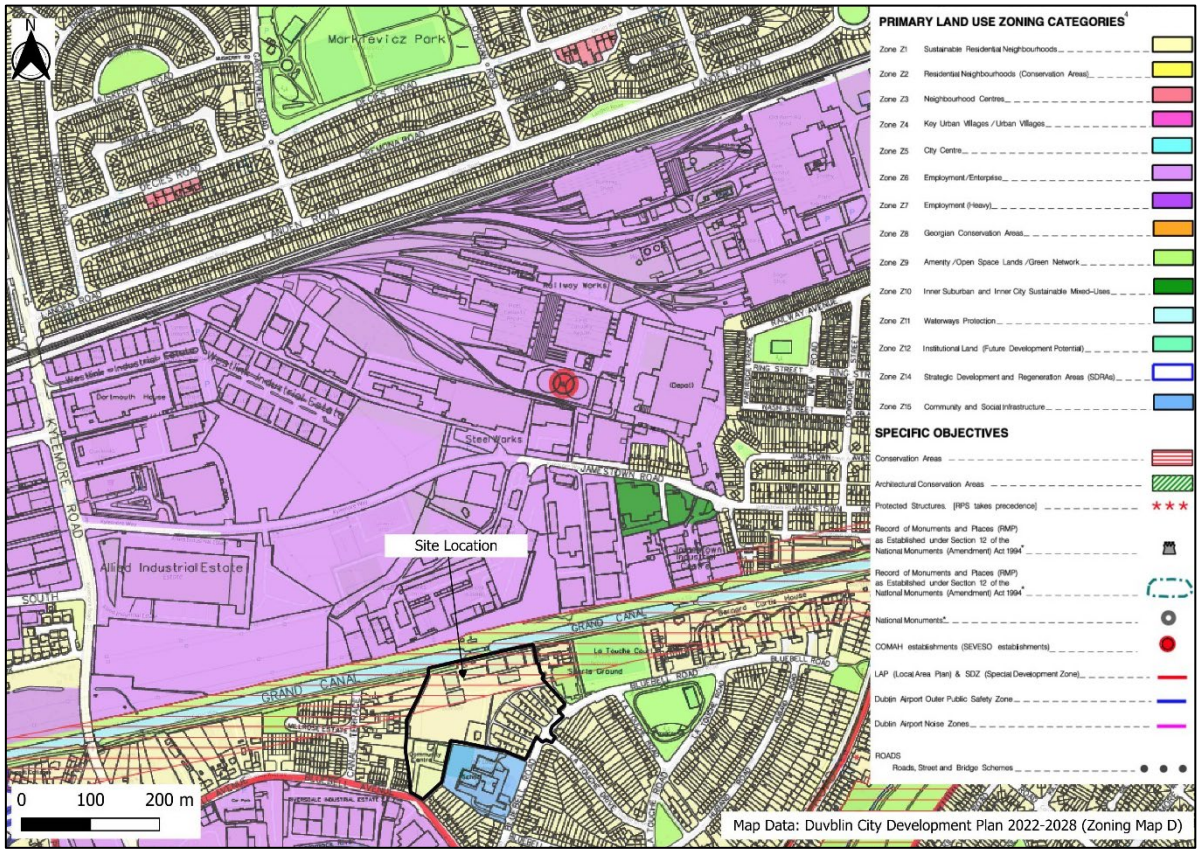


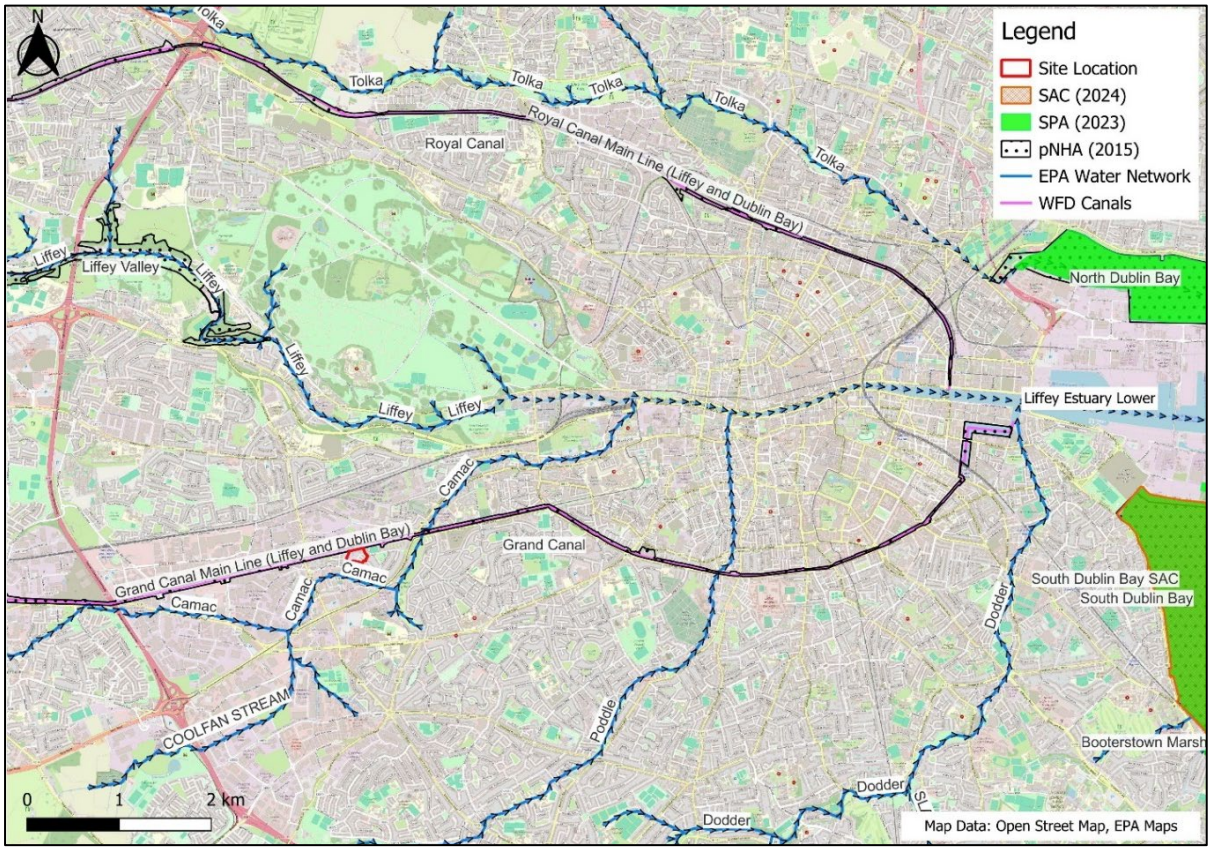
Figure 3.2 Land use zoning at the proposed development site (Dublin City Development Plan 2022-2028)



The Grand Canal is immediately to the north of the site, however a review of the Environmental Protection Agency (EPA) web-tool indicates that the there are no watercourses within the proposed site. The nearest mapped river is the Camac (EPA Code: IE_EA_09C020500) which is c. 95m to the south of the proposed development, it flows to the south-east and then north through the Lansdowne Valley Park into the transitional waters of the Liffey Estuary Upper (EPA Code: IE_EA_090_0400) near to Heuston Station. The Liffey Estuary Upper is transitional at this point and flows further east to Liffey Estuary Lower (EPA Code: IE_EA_090_0300) and finally into the coastal waters of Dublin Bay (EPA Code: IE_EA_090_0000). The proposed development site is located within the Liffey and Dublin Bay catchment (09), Liffey_SC_090 (09_15) sub-catchment and Camac_040 river sub-basins. Refer to **Figure 3.3.**

As per the WFD 2016-2021 status, the Grand Canal (IE_09_AWB_GCMLE) is of 'Good' status and is 'not at risk' and the Camac River (IE_EA_09C020500) is of 'Poor' status and is 'At risk' for river waterbodies risk. As per the WFD 2016-2021 status, the Liffey Estuary Upper (EPA Code: IE_EA_090_0400) transitional water is of 'Good' status and its risk status is under review, Liffey Estuary Lower (EPA Code: IE_EA_090_0300) is of 'Moderate' status and is 'At risk' for transitional waterbodies risk. Liffey Estuary at this location is classified as a 'nutrient sensitive area - lakes and estuaries' in accordance with the Urban Waste Water Treatment (UWWT) Directive 91/271/EEC on Urban Waste Water Treatment and S.I. 254 / 2001, S.I. 440/2004 and S.I. 48/2010. The Dublin (IE_EA_G_008) ground waterbody (GWB) underlies the proposed scheme. The WFD ground water status of the Dublin GWB is rated as 'good' (2016 – 2021 cycle) and the risk status is under 'review'.

Figure 3.3 EPA waterbodies in the proximity of the proposed development



3.2 Designated Conservation Areas

This assessment uses a source-pathway-receptor model to assess environmental risk. For the risk of an adverse effect to occur there must be a 'source', such as a construction site; a 'receptor', such as a site designated for nature conservation; and a 'pathway' between the source and the receptor, such as a watercourse that links the construction site to the proposed development site. Although there may be a risk of an impact, it may not necessarily occur, and if it does occur, it may not be significant.

The potential for any impacts on European sites from the proposed development site was considered. Full details of that study are presented in a separate report (Appropriate Assessment (AA) Screening Report, BSM 2024), submitted as part of this application under separate cover.

No sites designated conservation areas in the Natura 2000 Sites Network occur within or in the immediate vicinity of the site of the proposed development. There are a number of designated sites within the Zone of Influence of the proposed development; however, the AA Screening report concludes that, on the basis of objective information, it can be excluded that the construction and operational phases of the proposed development, individually or in-combination with other plans or projects, will have significant effects on any European site.

The site of the proposed development is not under any designation for nature conservation. There are no European sites within the immediate vicinity of the proposed development site at Bluebell, Dublin 12, Co. Dublin. The nearest sites are as follows (see also Figure 3.4):

- Special Areas of Conservation (SAC)
  - South Dublin Bay SAC (site code 000210), c. 8.2km to the east;
  - North Dublin Bay SAC (site code 000206), c. 10.7km to the north-east;

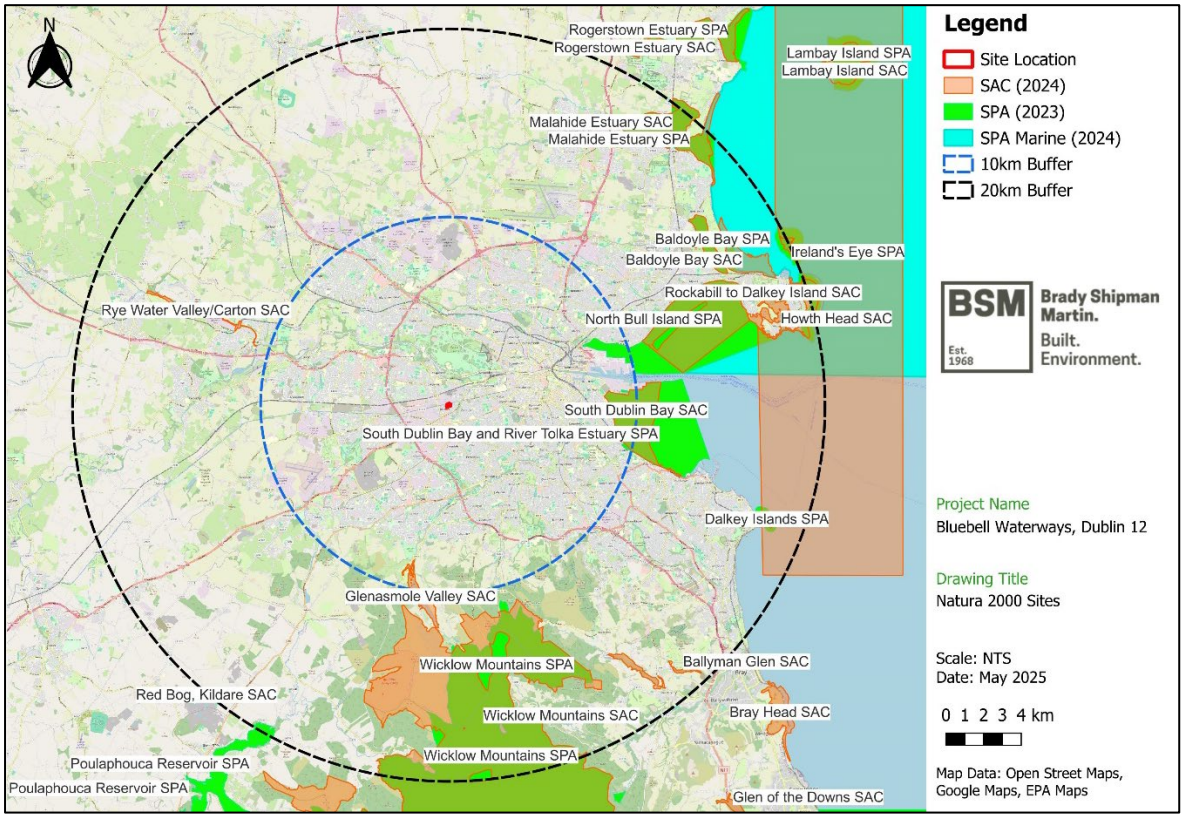
- Glenasmole Valley SAC (site code 001209), c. 8.4km to the south;
- Rye Water Valley/Carton SAC (site code 001398), c. 10.5km to the north-west;
- Wicklow Mountains SAC (site code 002122), c. 11km to the south;
- Knocksink Wood SAC (site code 000725), c. 15.7km to the south-east;
- Baldoyle Bay SAC (site code 000199), c. 15.8km to the north-east;
- Rockabill to Dalkey Island SAC (site code 003000), c. 16.4km to the east;
- Howth Head SAC (site code 000202), c. 16.5km to the north-east;
- Ballyman Glen SAC (site code 000713), c. 17.8km to the south-west;
- Malahide Estuary SAC (site code 000205), c. 18.2km to the north-east;
- Ireland's Eye SAC (site code 002193), c. 19.5km to the north-east;
- Red Bog, Kildare SAC (site code 000397), c. 19.6km to the south-east.

- Special Protection Areas (SPA)

  - North Bull Island SPA (site code 004006), c. 7.7km to the north-east;
  - South Dublin Bay and River Tolka Estuary SPA (site code 004024), c. 8.2km to the east;
  - Wicklow Mountains SPA (site code 004040), c. 10.7km to the south;
  - North-west Irish Sea SPA (site code 004236), c. 12.5km to the north-east;
  - Baldoyle Bay SPA (site code 004016), c. 16km to the north-east;
  - Dalkey Islands SPA (site code 004172), c. 17.2km to the south-east;
  - Malahide Estuary SPA (site code 004025), c. 17.2km to the north-east;
  - Howth Head Coast SPA (site code 004113), c. 19.2km to the north-east;
  - Poulaphouca Reservoir SPA (site code 004063), c. 19.3km south-west;
  - Ireland's Eye SPA (site code 004117), c. 19.5km to the north-east.

Note that the above-listed distances are linear (i.e. 'as the crow flies'). The conservation objectives of these sites are to maintain the favourable conservation condition of the Qualifying Interests / Special Conservation Interests in question. For further information, refer to the standalone AA Screening Report.

Figure 3.4 European sites within zone of influence of the proposed development. A 10km and 20km radius is shown for scale.



3.2.1 Other Designated Areas (other than European sites)

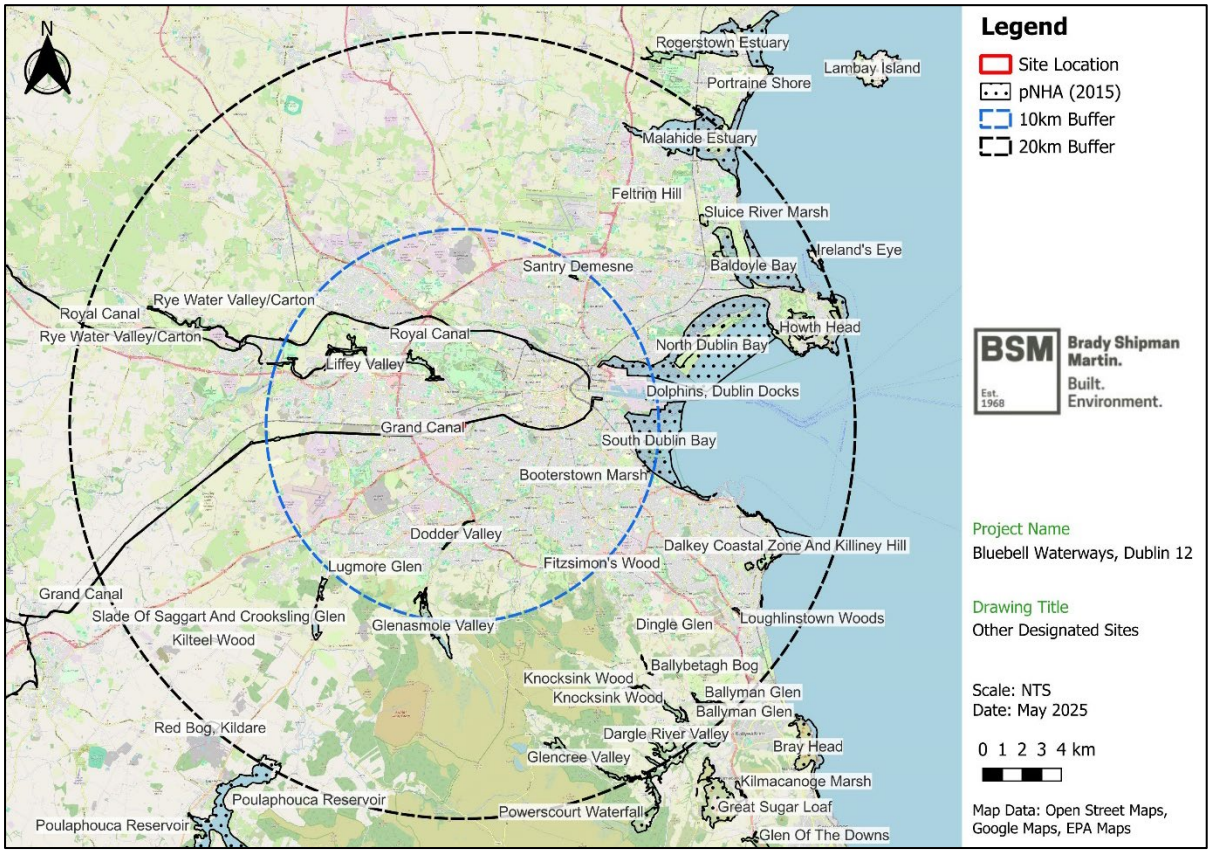
There are no fully designated NHAs within the zone of influence. The pNHAs within the immediate vicinity include:

- Proposed Natural Heritage Areas (pNHA)
  - Grand Canal pNHA (site code 002104), immediately to the north;
  - Liffey Valley pNHA (site code 000128), c. 2.4km to the north-west;
  - Royal Canal pNHA (site code 002103), c. 4.7km to the north;
  - Dodder Valley pNHA (site code 000991), c. 4.8km to the south;
  - North Dublin Bay pNHA (site code 000206), c. 7.5km to the north-east;
  - Lugmore Glen pNHA (site code 001212), c. 8.1km to the south-west;
  - South Dublin Bay pNHA (site code 000210), c. 8.2km to the east;
  - Glenasmole Valley pNHA (site code 001209), c. 8.3km to the south;
  - Dolphins Dublin Docks pNHA (site code 000201), c. 9.3km to the north-east;
  - Booterstown Marsh pNHA (site code 001205), c. 9.3km to the south-east;
  - Santry Demesne pNHA (site code 000178), c. 9.3km to the north-east;
  - Fitzsimon's Wood pNHA (site code 001753), c. 9.6km to the south-east.

Note that the above-listed distances are linear (i.e. 'as the crow flies').

Figure 3.5 illustrates all of the pNHAs within the potential Zone of Influence (including those which overlap with European sites).

Figure 3.5 pNHA sites within zone of influence of the proposed development. A 10km and 20km radius is shown for scale.



3.3 Ecological Features

The proposed development site at Bluebell Waterways is brownfield and contains 36 no. 2 bed maisonettes and an existing community facility and warehouse which are proposed to be demolished and redeveloped as part of the development proposal. The remains of a number of concrete basins (filter beds), now colonised by scrub, are present in the northern part of the site. To the south-west of the site is a community allotment site, with vegetable plots.

3.3.1 Habitats

A specialist habitat survey was undertaken on the site by Alexis FitzGerald, FitzGerald Ecology in June 2024 and it included a full survey of habitats on site including rare and legally protected plants and invasive species survey. The habitat types recorded across the site are described below and depicted in **Figure 3.6.** For further details, refer to Appendix A – Habitat and Flora Study.

There are two lengths of hedgerow (Fossitt[4] habitat category WL1) habitat found at the site, one at the centre and the other running along the western site boundary. These are dense hedgerows dominated by bramble (*Rubus fruticosus* agg.), with common elder (*Sambucus nigra*) in lesser quantities. Common hazel (*Corylus avellana*) and dog rose (*Rosa canina* agg.) were also recorded. The treeline (WL2) habitat occurs at the centre of the site and also at the north-eastern end of the site. The treelines are connected to the hedgerow habitat on site. The treelines on site, however, are dominated by the planted non-native Italian alder (*Alnus cordata*). Other species recorded in this habitat include European ash

[4] https://www.npws.ie/sites/default/files/publications/pdf/A%20Guide%20to%20Habitats%20in%20Ireland%20-%20Fossitt.pdf

(*Fraxinus excelsior)*, Elder, Sycamore maple (*Acer pseudoplatanus)*, Downy Birch (*Betula pubescens)*, common ivy (*Hedera helix)*, cleaver (*Galium aparine)*, germander speedwell (*Veronica chamaedrys)*, creeping clinquefoil (*Potentilla reptans)*, false oat-grass (*Arrhenatherum elatius*), wood avens (*Geum urbanum)*, and herb-Robert (*Geranium robertianum)*.

Flower beds and borders (BC4) habitat is found at the south-western end of the site in the community allotments area. Buildings and artificial surfaces (BL3) habitat occurs mostly at the eastern end of the site as roadways in residential areas, with additional areas at the north-eastern and south-western ends of the site, associated with the former filter beds and also a community allotment access road. Some weed species such as ribwort plantain (*Plantago lanceolata*), dandelions (*Taraxacum* agg.), and annual bluegrass (*Poa annua*) were recorded in this habitat.

The central portion of the site is dominated by dry calcareous and neutral grassland in a mosaic with recolonising bare ground (GS1/ED3). The dominant species here are Yorkshire fog (*Holcus lanatus*), rough meadow-grass (*Poa trivialis*), and red fescue (*Festuca rubra* agg.), with other species recorded in lesser quantities including creeping clinquefoil, white clover (*Trifolium repens*), creeping thistle (*Cirsium arvense*), false oat-grass, red clover (*Trifolium pratense)*, creeping buttercup (*Ranunculus repens*), common daisy (*Bellis perennis)*, common ragwort (*Jacobaea vulgaris)*, yarrow (*Achillea millefolium*), common hogweed (*Heracleum sphondylium*), and meadow vetchling (*Lathyrus pratensis*).

Cowslip *(Primula veris)* was also recorded within this habitat, which is a high-quality indicator for the Annex I habitat [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco- Brometea). This species is also rare in Dublin City. Two additional indicator species for the aforementioned Annex I habitat also recorded in this habitat were Glaucous sedge (*Carex flacca)* and common bird's foot trefoil (*Lotus corniculatus)*. Another specie of note in this habitat is small toadflax (*Chaenorhinum minus)*, which is rare in Dublin City. This habitat was likely formerly Annex I [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometea), however it does not currently meet the criteria due to a lack of sufficient positive indicator species. Its condition has been degraded by disturbance but it still harbours locally important grassland species.

An area of scrub (WS1) is found in the north-west corner of the site. This habitat is characterised by the dominance of such shrub species as bramble and common elder, with lesser quantities of sycamore maple and willow (*Salix x fragilis)*. Other species recorded include white willow (*Salix alba*), ash (*Fraxinus excelsior*), common hazel (*Corylus avellana*), and common ivy. The non-native buddleia (*Buddleja davidii*) was also recorded within this habitat. This is an area of dense shrub with a good diversity of shrub species, and it considered to be in good condition.

The main habitat at the northern end of the site is a mosaic of scrub (WS1), dry meadows and grassy verges (GS2), and buildings and artificial surfaces (BL3). The most dominant species in this mosaic is the non-native buddleia, followed by grasses such as false oat grass, cat grass (*Dactylis glomerata*), and Yorkshire fog. Some other species recorded include bramble, common ragwort, rusty willow (*Salix cinerea subsp. oleifolia*, Rosa canina agg.), Elder, downy birch (*Betula pubescens*), thistle (Cirsium vulgare), and goat willow (*Salix caprea*), alongside non-native species Italian alder, white willow (*Salix alba*), Bilbao's Fleabane, and red valerian (*Centranthus ruber*). One species of note recorded within this habitat mosaic was hedgerow crane's bill (*Geranium pyrenaicum*), which is rare in the Dublin City area. Overall, this habitat is considered to be in poor condition.

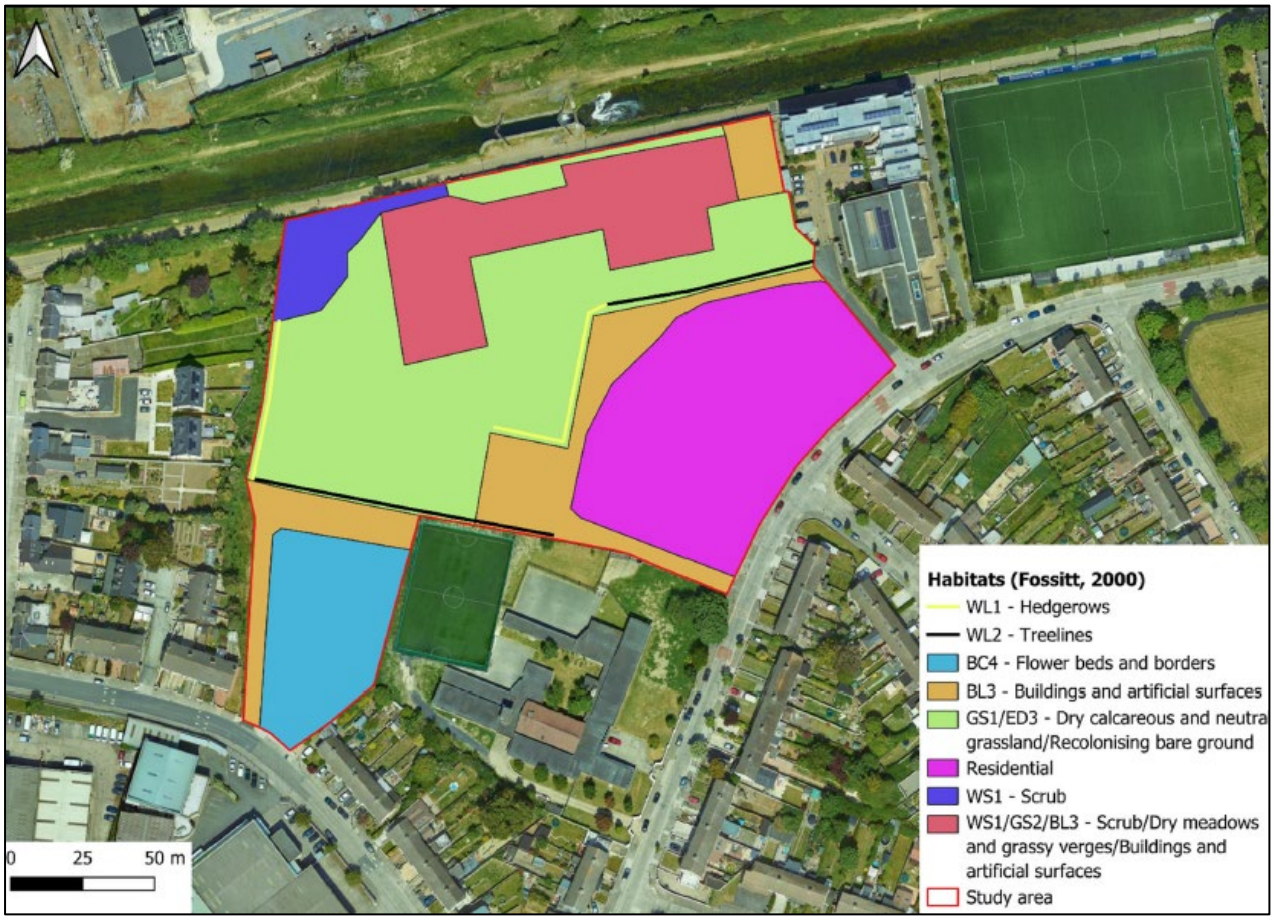
As noted in Section 4.2, the Grand Canal is close to the northern boundary of the site. The nearest mapped river is the Camac (EPA Code: IE_EA_09C020500) which is c. 95m to the south of the proposed development, it flows to the south-east and then north through the Lansdowne Valley Park into the transitional waters of the Liffey Estuary Upper (EPA Code: IE_EA_090_0400) near the Heuston Station.

The Liffey Estuary Upper is transitional at this point and flows further east to Liffey Estuary Lower (EPA Code: IE_EA_090_0300) and finally into the coastal waters of Dublin Bay (EPA Code: IE_EA_090_0000). The proposed development site is located within the Liffey and Dublin Bay catchment (09), Liffey_SC_090 (09_15) sub-catchment and Camac_040 river sub-basins.

As per the WFD 2016-2021 status, the Grand Canal (IE_09_AWB_GCMLE) is of 'Good' status and is 'not at risk' and the Camac River (IE_EA_09C020500) is of 'Poor' status and is 'At risk' for river waterbodies risk. As per the WFD 2016-2021 status, the Liffey Estuary Upper (EPA Code: IE_EA_090_0400) transitional water is of 'Good' status and its risk status is under review, Liffey Estuary Lower (EPA Code: IE_EA_090_0300) is of 'Moderate' status and is 'At risk' for transitional waterbodies risk. The Liffey Estuary at this location is classified as a 'nutrient sensitive area - lakes and estuaries' in accordance with the Urban Waste Water Treatment (UWWT) Directive 91/271/EEC on Urban Waste Water Treatment and S.I. 254 / 2001, S.I. 440/2004 and S.I. 48/2010.

An *Arboricultural Report* (Veon, 2024) has been prepared for the site. The survey identified that the trees are predominantly focused along the boundaries and includes lower quality tress such as Italian alders. There are two moderate quality trees and includes early mature sycamores. The hedgerows along the eastern, southern, and western boundaries are lower quality as they lack species diversification and structure – comprised mainly of elder, willow and bramble. Palisade fencing forms the boundary around this area, except for along the western boundary where there is a hedgerow. The southern section of the site is currently in use as community allotments. There are 18, small size, lower quality, ornamental fruit trees in this area that were planted in the recent past. There is also an early mature, lower quality tree line on the adjoining side of the western boundary wall.

Figure 3.6 Habitat map (Source: Habitat and Flora Study report (FitzGerald Ecology, 2024)



3.3.2 Rare and Protected Plant Species

The proposed development site is not under any wildlife or conservation designation. The National Biodiversity Data Centre (NBDC) database was consulted with regard to rare species (Curtis & McGough, 1988) and species protected under the *Flora Protection Order* (2022). There are no records of any protected plant species within the 2km grid square (O13B) that covers the proposed development area.

No plant species listed on the Flora (Protection) Order 2022, were recorded during the field survey in 2024. Three species of local rarity were recorded on the site; small toadflax, hedgerow crane's-bill, and cowslip.

3.3.3 Invasive Alien Plant Species

No species listed on the Third Schedule of the Habitats Regulations, such as giant hogweed (*Heracleum mantegazzianum*), Japanese knotweed (*Reynoutria japonica*), Himalayan balsam (*Impatiens glandulifera*) or three-cornered leek (*Allium triquetrum*) were recorded at the proposed development site. However, as noted above, five non-native plant species were recorded across the study area as follows - Italian alder, buddleia, red valerian, Bilbao's fleabane (*Conyza floribunda*), and toothed fireweed (*Senecio minimus*).

3.3.4 Fauna

3.3.4.1 Birds

The breeding bird survey undertaken on the site (John Fox, 2024) recorded 26 species. In accordance with *Birds of Conservation Concern in Ireland 4: 2020 to 2026* (Gilbert et all 2021), of these none were red listed, 8 were amber listed and 18 were green listed. The species encountered on the site are all widespread common birds of Ireland. No species of high conservation concern were recorded during the surveys.

Birds, as well as their nests and eggs, are fully protected under the Wildlife Act (1976) and subsequent amendments.

For further details, refer to Appendix B – Breeding Bird Survey.

3.3.4.2 Large Mammals

Badgers, hedgehogs and Irish hare are fully protected under the Wildlife Act 1976 and subsequent amendments. There are no records of these species using this site and no signs of badger, hare or hedgehog were recorded on the site or in the immediate vicinity during any of the surveys undertaken.

Similarly, no evidence of otters, protected under the Wildlife Act 1976 and subsequent amendments, and under the EU Habitats Directive (via Article 12), as transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended), was recorded. No evidence of the species (such as footprints or spraints) has been recorded at the site during the surveys undertaken.

No evidence of other large mammals (i.e. species not protected under the Wildlife Acts), such as fox and rabbit, was recorded at the site (although the authors have regularly seen foxes in the wider area).

3.3.4.3 Bats

All Irish bat species are fully protected under the Wildlife Act 1976 and subsequent amendments, and under the EU Habitats Directive, which is transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended). According to the available databases of BCI, there are no records of bats within the study area boundary.

As noted in the August 2023 bat survey report, only one bat species (common pipistrelle) was recorded foraging or commuting within the site. Very few of the trees on site had any potential as roosts, and the only semi-mature trees were very close to power lines coming from the nearby electrical substation. These power lines may produce electromagnetic or acoustic interference (and in this case, produced a consistent hum in the audible range) which could discourage bats (as well as sound-sensitive insects) from the area.

Additionally, while the site's garden and proximity to the Grand Canal could provide a good insect habitat and therefore a good opportunity for bats to feed, the area lacks wildlife corridors such as treelines or hedges that could connect the site to other suitable habitats. At present, there are few nearby habitats that could provide bats and other animals with appropriate living space.

Light pollution is also likely to be a factor in the unsuitability of this site for bats, as there is a great degree of light overspill from the substation and nearby housing estates.

Bat activity was extremely low over the entire survey period. The few bats that were observed and/or recorded over the site were only passing over briefly, and did not use the site for feeding. Because of this it is extremely unlikely that bats are using this site as a roost at any point during the year.

The 2024 bat surveys recorded slightly more bat activity, of three species (common and soprano pipistrelle as well as Leisler's bat). The report noted that low bat activity was recorded with a number of intermittent spells of feeding over the two nights of survey. Three bat species were recorded onsite, predominantly using the site as a point of commute towards the canal.

For further details, refer to Appendix C – Bat Survey Reports.

3.3.4.4 Other Fauna

No amphibians (common frog or smooth newt) have been observed during the surveys undertaken to date at the site. Similarly, no evidence of common lizard has been recorded, and the area of suitable habitat (such as exposed rock) is negligible.

Amphibians and reptiles are fully protected under the Wildlife Act 1976 and subsequent amendments.

The site was assessed for the presence of butterflies and for the suitability of the habitats for butterfly abundance and diversity. No evidence of Ireland's only protected insect, the marsh fritillary butterfly, or its food plant (devil's bit scabious (*Succisa pratensis*)) was recorded on the site.

3.3.5 Overall Ecological Valuation of the Proposed Site

The proposed development site is not under any wildlife or conservation designation. Furthermore, no rare, threatened or legally protected plant species, as listed in the *Irish Red Data Book 1 – Vascular Plants* (Curtis & McGough, 1988), the *Flora Protection Order, 2022* or the *EU Habitats Directive*, are known to occur within the site and none were recorded during the site visits carried out.

No rare habitats or habitats of significant ecological value (i.e. International or National) are present at the site. The central portion of the site is however dominated by dry calcareous and neutral grassland in a mosaic with recolonising bare ground. Three species of local rarity recorded on the site during habitat survey in June 2024 included small toadflax, hedgerow crane's-bill and cowslip.

The hedgerows and treeline present on the site form part of the wider linear habitat network in the area. The site also has high species diversity and some of these species present on site as described in Section 3.3 are rare in the Dublin city area. The areas with scrub, trees, hedges and shrubs are the habitats of most importance for the local breeding birds present on these lands.

There is no habitat on the site suitable for use, even on a very occasional basis, by any overwintering birds, such as pale-bellied Brent goose, or any other protected bird species listed as a Special Conservation Interest (SCI) in any European site within the Zone of Influence.

No red-listed bird species were noted.

The site has no value for roosting bats, nor for otters (these species are protected under Article 12 of the Habitats Directive). It also has no value for or other protected mammals such as badger or hedgehog, or for amphibians or reptiles, or rare or protected plants and the habitats present are not suitable for such species.

None of the habitats or features present on the site are Qualifying Interests/Special Conservation Interests in any European site within the Zone of Influence and none of these Qualifying Interests/Special Conservation Interests are present on the site. No evidence of any habitats or species with links to European sites was recorded during either the field surveys or desk study undertaken and no 'reservoir' type habitats (habitats which have the potential to support Qualifying Interest/Special Conservation Interest species in any European site) are present.

Overall, due to the unmanaged nature of the proposed development site it is of no more than **Local (Higher Value) importance**, as defined by the ecological resource valuations presented in the National Roads Authority/Transport Infrastructure Ireland *Guidelines for Assessment of Ecological Impacts of National Road Schemes* (NRA/TII, 2009 (Rev. 2)). The Key Ecological receptors at the site comprise the hedgerow, tree line, and calcareous grassland habitats, as well as the scrub in the north western part of the site.

4 Description of the Proposed Development

The proposed development includes for demolition of existing above ground structures on site, including the existing maisonettes and the existing community facility known as the Bungalow (which is being relocated within the site), and the construction of a residential development set out in 5 no. blocks, ranging in height from 5 to 9 storeys to accommodate 383 no. apartments, 3 no. community/cultural units and a crèche.

The primary site access is via a new entrance from Bluebell Road at the junction with La Touche Drive which includes for a new pedestrian crossing, with secondary access for pedestrians and cyclists only, from Bluebell Avenue. Car parking is provided at both below podium level and at surface level with secure bicycle parking for residents, visitors and cargo bikes provided throughout the scheme. Access is provided through the scheme onto the Grand Canal for pedestrians and cyclists.

The development also includes for a centrally landscaped public realm and an area of linear open space along the western corridor of the site which includes a play area, biodiversity planting, relocated allotments and provides access and permeability to the Grand Canal. The proposed application includes all site landscaping works, green roofs, boundary treatments, lighting, servicing, signage, and associated and ancillary works, including site development works above and below ground.

A full description is provided in the Statutory Notices.

The site layout is shown in **Figure 4.1**.

Figure 4.1 Proposed site layout (Henry J Lyons Architects, 2025)

5 Potential Impacts from the Proposed Development

5.1 Designated Conservation Areas including Screening for Appropriate Assessment

The potential for any significant effects on European designated sites (sites designated for nature conservation under the EU Habitats and Birds Directives) has been assessed separately, and a stand-alone report (Appropriate Assessment Screening Report, BSM 2025), compiled in consultation with the wider design team including the project engineers, has been prepared for submission as part of the overall Part 8 application and is submitted under separate cover.

Based on the studies undertaken and the features of the proposed development, the AA Screening process concluded that none of the habitats and species listed as qualifying interests or special conservation interests in any European site designation will be affected by the proposed development and full AA, including the preparation of a Natura Impact Statement (NIS), is not required. The following paragraphs comprise a summary of the conclusions outlined in that report:

> *In view of best scientific knowledge this report concludes that the proposed development at the Bluebell Waterways site, individually or in combination with another plan or project, will not have a significant effect on any European sites. This conclusion was reached without considering*

or taking into account mitigation measures or measures intended to avoid or reduce any impact on European sites.

It is considered that this report provides sufficient relevant information to allow the Competent Authority (Dublin City Council) to carry out an AA Screening and reach a determination that the proposed development will not have any likely significant effects on European sites in light of their conservation objectives.

There are no links or pathways between the proposed development site and any proposed Natural Heritage Areas (pNHAs), including the Grand Canal pNHA, and there will be no impacts on any of these protected sites as a result of the proposed construction works.

5.2 Habitat Loss and Disturbance to Habitats and Species within the Site

In developing the design and layout of the proposed development, consideration has been given to integrating landscape and ecological features into the final design, with significant areas of open space being provided.

The proposed residential development will result in habitat loss and this includes the clearance of much of the recolonising bare ground on site, the dry calcareous and neutral grassland, the concrete basins (filter beds) now colonised by scrub, and the replacement of the community vegetable plots to the south-west of the site. The layout of the proposed development has been designed to retain the significant trees on the western side of the site as far as practicable, and significant areas of vegetation, particularly along the western side of the site are being retained and enhanced. However, some trees, particularly in the centre and in the eastern part of the site, will be removed to facilitate the proposed development.

The proposed development will require the removal of some trees internal to the site. The Arboricultural Method Statement (Veon, 2025) outlines appropriate control measures to protect trees and hedgerows during construction.

The hedgerows and treeline present on the site form part of the wider linear habitat network in the area. The site also has high species diversity and some of these species present on site as described in Section 3.3 are rare in the Dublin city area. The areas with scrub, trees, hedges and shrubs are the habitats of most importance for the local breeding birds present on these lands.

In the absence of mitigation, the construction of the proposed residential development will have a ***slight to moderate negative impact*** on the local biodiversity of the site. There is no evidence of bats using the buildings or any other features of ecological interest on the site. There will be no impacts on wintering birds as a result of the proposed development. The enhancement and retention of existing treelines and hedgerows, extensive landscaping and planting proposed will, over time, reduce the impacts of development to ***neutral or slight positive***.

There are no features suitable for use by roosting bats (or for otters, species also protected under Article 12 of the Habitats Directive) within the site, even on an occasional basis and overall the site is of only very low suitability for foraging and commuting bats. The bat surveys undertaken in 2023 and 2024 recorded very low bat activity at the site. No bat roosts were recorded on the site. However, the loss of trees and hedgerows on site may result in a loss of *potential* roost sites. The removal of grass, hedgerow and trees will reduce the value of the site for feeding for birds.

In the absence of mitigation, the loss of habitats and disturbance from lighting presents a ***long-term moderate negative impact*** on bats. However, as noted in the bat survey report, bat activity at the site is very limited.

The 5 no. residential buildings range in height from 5 storeys to 9 storeys accommodating 388 no. apartments. There is no possibility that a building of this height would disrupt bird flight lines or impact on commuting or foraging bats – the risk of collision is imperceptible. The proposed development site is c. 7.7km from the nearest SPA (North Bull Island SPA). Birds tend to fly higher than the tallest obstruction in their flightpath and also to fly at a greater height between foraging sites. The site is not, in any case, of any significance for any overwintering birds, and neither is the surrounding area.

No significant effects on badgers and their setts and territories, or on any other protected fauna, are expected as a result of the proposed development. There will be no significant impacts on reptiles, lepidoptera or any other species groups as a result of the proposed development.

5.3 Water and air pollution

In general, site clearance, demolitions works and construction activities can pose a potential risk to water as surface / ground water arising at the site may contain contaminants. The main contaminants arising from construction activities may include suspended solids, hydrocarbons and concrete / cement products. If not properly managed, such pollutants could pose a temporary risk to surface water quality in the local surface water network during construction.

No watercourses are present within or connected to the site proposed for development. Neither the Grand Canal (to the north), nor the Camac River (to the south), are hydrologically connected to the proposed development site and therefore polluted surface water cannot be emitted directly to any surface water body. Nevertheless, there is a possibility that contaminated surface water from the site could enter the municipal surface water drainage network (e.g. during extreme rainfall events and / or high tides), thereby creating a weak, indirect hydrological pathway linking the proposed development site with downstream ecological receptors. However in the event of such an emission, and taking into consideration the high dilution factor in potential receiving watercourses, and the distances to the nearest European Sites, there is no realistic likelihood that any perceptible ecological effects would arise.

In addition, there is a potential risk to flora and fauna arising from dust deposition, which in extreme cases can inhibit photosynthesis in plants and can increase turbidity in watercourses. Construction dust tends to be deposited within 350 m of a construction site[5] with the majority of the deposition occurring within the first 50 m. The extent of any dust generation depends on the nature of the dust (soils, peat, sands, gravels, silts, etc.) and the nature of the construction activity. Due to the overall site area and scale of the development involved, there is the potential for significant dust soiling 100 m from the source. There is also the potential for traffic emissions to impact air quality in the short-term over the construction phase, particularly due to the increase in HGVs accessing the site.

Given the nature, scale and duration of the construction phase of the proposed development there is potential for ***short-term, moderate, negative impacts on water and air quality*** during the construction phase of the proposed development.

During the operational phase, typical environmental effects associated with the presence and operation of a residential apartment development are also predicted, including water consumption, surface and foul water loading to the municipal network, additional traffic volumes and direct and indirect greenhouse gas emissions. Operational phase effects are expected to be ***permanent*** in duration and ***neutral*** in impact.

[5] https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-dust-2023-BG-v6-amendments.pdf

6 Mitigation and Biodiversity Enhancement Measures

6.1 Designated Conservation areas

No designated conservation areas will be impacted in any way by the proposed development and no specific mitigation measures are required for the protection of such sites, including both European sites and proposed Natural Heritage Areas. Full details in relation to European sites are provided in the accompanying report (Appropriate Assessment Screening Report prepared by Brady Shipman Martin, 2024).

6.2 Habitats

The proposed residential development will result in habitat loss and includes the clearance of dry calcareous and neutral grassland of local ecological importance, recolonising bare ground and scrub, and the removal of some internal hedgerows and trees. However, the layout of the proposed development has been designed to retain the significant trees, and the boundary hedgerows, particularly on the western side of the site, as far as practicable.

As set out in the Landscape Architectural Design Report, prepared by The Paul Hogarth Company (2025) and submitted as part of this application under separate cover, the proposed scheme also includes for very significant new replacement and additional tree planting, which will assist in offsetting the loss of the trees to be removed. It is also proposed as part of landscaping to incorporate bat boxes, insect hotels and bird boxes for further biodiversity enhancement on site. It is proposed to provide a linear park along the entire west side of the subject site. The park will comprise of community allotments, local community outdoor terrace, neighbourhood creche garden, public play infrastructure and ecological woodland. Along the site's eastern boundary an ecological wildlife corridor will be provided.

The Arboricultural Method Statement (Veon, 2025) provides information on tree protection during the construction phase. This includes site investigation, preparation, clearance, demolition and post-development. Construction will proceed in accordance with the method statement to safeguard retained trees, tree groups and hedgerows on and adjacent to the site. Tree protective fencing will be erected outside the root protection area (RPA) of the retained trees.

The proposed landscape design and planting schedule prepared by the Paul Hogarth Company, shall incorporate pollinator-friendly species, with regard to the *Pollinator friendly planting code* from the *All-Ireland Pollinator Plan 2021 – 2025*[6]. As note above, no invasive plant species will be used in the planting, all of which has been designed to integrate and enhance the vegetation retained on the site, while incorporating new, biodiversity-focussed planting in the developed areas.

The proposed planting schedule contains no invasive species, and none will be introduced, either deliberately or inadvertently, to the proposed development site. Appropriate biosecurity measures will be implemented during the construction phase of the proposed development.

There will be no transfer of invasive plant material during the construction phase that could potentially lead to species such as giant hogweed becoming established in the area. No invasive species will be introduced, either deliberately or inadvertently, to the site. The implementation of biosecurity measures will ensure that no transfer of invasive plant material takes place during the construction phase.

[6] NBDC (2021) - https://pollinators.ie/wp-content/uploads/2021/03/All-Ireland-Pollinator-Plan-2021-2025-WEB.pdf

6.3 Fauna

The clearance of trees, hedgerows, scrub and other vegetation that may be suitable for use by nesting birds will be undertaken outside the bird nesting season (avoiding the period 1 March to 31 August). Should the construction programme require vegetation clearance between March and August, and this is unavoidable, bird nesting surveys will be undertaken by suitably qualified ecologists. If no active nests are recorded, vegetation clearance will take place within 24 hours. In the event that active nests are observed, an appropriately sized buffer zone (up to 5 m radius around the nest) will be maintained around the nest until such time as all the eggs have hatched and the birds have fledged – a period that may be three weeks from the date of the survey. Once it is confirmed that the birds have fledged and no further nests have been built or occupied, vegetation clearance may take place immediately.

There will be no impacts on badgers or other large mammals. Regardless, a pre-construction check for badgers will be undertaken prior to the commencement of construction, to ensure this remains the case.

No bat roosts will be removed as part of the proposed development and it will not be necessary to apply for a derogation licence under Regulation 54 or 55 of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). Nevertheless, bats are mobile creatures, and the absence of bat roosts at the time of surveys does not preclude the presence of future bat roosts at the site. Therefore, as a precautionary measure, any trees to be removed shall be examined for the presence of bats prior to felling. This shall be undertaken by a suitably experienced bat specialist. The discovery of a bat roost shall require a derogation from NPWS and additional mitigation.

As noted there will be no loss of bat roosts. Regardless, in order to enhance the overall ecological value of the site it is proposed to install a number of bat and bird boxes and insect hotels within the newly planted landscape and biodiversity areas. The reason for this is to maximise the ecological value of the proposed development – it is not necessary in order to mitigate any habitat loss or disturbance.

The boxes proposed are as follows (this list is subject to revision based on the availability of suitable boxes in the future):

- A minimum of 10 no. wooden bird boxes suitable for use by house sparrows, robins, blue tits and / or tree creepers (e.g. as available on BirdWatch Ireland website) will be incorporated into the landscaping at the proposed development site;
- A series of swift boxes (a minimum of four groups of three boxes) will be incorporated into the taller buildings at the site;
- A total of 8 no. Schwegler 2F (or 2FR) or similar will be included in the landscaping. Alternatively bat access to the built structures can be provided using bat access bricks or built in boxes;
- Insect / bee 'hotels' will also be incorporated into landscaped areas. These will be appropriately designed and maintained so as to minimise the occurrence of pollinator pests and disease (refer to guidance document from South East Technological University[7]).

The bat and bird boxes will be erected with advice from the project Ecologist, in appropriate areas (within unlit areas away from traffic and likely disturbance within the site, no less than 3m above the ground in uncluttered areas, facing in a southerly direction). The locations of the bat boxes shall be agreed with a bat specialist.

Bats are sensitive to light at night, and the lighting design will ensure that the proposed development will not result in impacts on bats that do commute/forage in or near the proposed development site.

[7] https://www.wit.ie/news/news/a-hotel-with-too-many-vacancies

The detailed lighting design for the proposed development will be developed with reference to the following guidance documents:

- Bats and Lighting – Guidance Notes for Planners, Engineers, Architects and Developers (Bat Conservation Ireland, 2010)[8];
- Bats and Artificial Lighting at Night, Institute of Lighting Professionals, 2023[9];
- Guidance Notes for the Reduction of Obtrusive Light GN01-21 (Institute of Lighting Professionals, 2021)[10];
- Dark Sky Ireland's Environmentally Friendly Lighting Guide[11].

The proposed lighting will have the following characteristics: -

- The minimum level of lighting will be provided within the developed areas, within the lux level criteria required by Dublin City Council.
- The light temperature of all fittings will comply with the requirements of Dublin City Council.
- No flood lighting will be provided within the proposed development and all light fittings will be LED and are designed to shine downwards and will avoid sky glow and light spill.
- Lighting will be directed onto the roadways and paths – and away from the retained vegetation on the western boundary and the open space network.

6.4 Other Fauna

No badger setts will be in any way affected by the proposed development and no impacts on any badgers are likely, nevertheless, a watching brief will be maintained by the project ecologist throughout the construction phase, in the event that badgers should establish a sett close to the working area of the proposed development at the site. In addition, day-to-day measures to ensure the welfare of badgers is maintained will be implemented as follows:

- Good house-keeping measures will be maintained and no loose netting, fencing or other materials that could trap badgers will be left out on site;
- Food waste will be secured so as not to attract badgers to the construction site at night;
- Ramps will be included in any excavation deeper than 500mm to allow animals to escape if necessary.

No other mitigation measures will be required for the protection of badgers.

No amphibians or suitable ponds / wet areas were recorded during the ecological surveys completed at the site. However, frogs are mobile species that can exploit transitory wet areas, and their absence from the site at the time of surveys does not preclude potential future use. Therefore, as a precautionary measure, any wet areas present on the site to be disturbed will be inspected by a suitably experienced ecologist prior to works being undertaken. Should any frog spawn or tadpoles be discovered, a licence to remove frog spawn may be required from NPWS.

[8] https://www.batconservationireland.org/wp-content/uploads/2013/09/BCIrelandGuidelines_Lighting.pdf
[9] https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/
[10] https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/
[11] https://www.darksky.ie/lighting-documents/#guidelines

6.5 Water

6.5.1 Construction

Together with the implementation of the Outline Construction Environmental Management Plan (CEMP) (prepared by CS Consulting Group, 2025) and submitted separately the following best practice measures will be adopted:

- A project ecologist will be appointed to oversee works and will approve drainage during construction.
- The Grand Canal, local watercourses and drains will be protected from dust, silt and surface water throughout the works.
- Local silt traps established throughout the site.
- Mitigation measures on site include dust control, stockpiling away from watercourse and drains.
- Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system and watercourses.
- Fuel, oil and chemical storage will be sited within a bunded area. The bund will be at least 50m away from drains, ditches or the watercourse, excavations and other locations where it may cause pollution.
- Bunds will be kept clean and spills within the bund area will be cleaned immediately to prevent groundwater contamination. Any water-filled excavations, including the attenuation tank during construction, that require pumping will not directly discharge to any watercourse. Prior to discharge of water from excavations adequate filtration will be provided to ensure no deterioration of water quality.
- Mitigation measures on site include dust control, stockpiling away from watercourses and drains.
- Stockpiles and runoff areas following clearance will have suitable barriers to prevent runoff of fines into the drainage system and watercourses.
- Fuel, oil and chemical storage will be sited within a bunded area. A risk-based approach will be taken.
- Bunds will be kept clean and spills within the bund area will be cleaned immediately to prevent groundwater contamination.
- During the construction works slit traps will be put in place in the vicinity of all runoff channels to prevent sediments entering the watercourse/ drains.
- Petrochemical interception and bunds in refuelling area.
- Maintenance of any drainage structure (e.g., de-silting operations) will not result in the release of contaminated water to the surface water network.
- During the works silt traps will be put in place
- No discharges will be to the watercourse during and post works
- Silt traps established throughout site including a double silt fence between the site and the watercourse.
- Sufficient onsite cleaning of vehicles prior to leaving the site and on nearby roads, will be carried out, particularly during groundworks.
- The Site Manager will be responsible for the pollution prevention programme and will ensure that at least daily checks are carried out to ensure compliance. A record of these checks will be maintained.
- The site compound will include a dedicated bund for the storage of dangerous substances including fuels, oils etc. Refuelling of vehicles/machinery will only be carried out within the bunded area.

- A project ecologist will be appointed and be consulted in relation to all onsite drainage during construction works.
- Dewatering of excavations may be necessary. Appropriate monitoring of groundwater levels during site works will be undertaken. Standard construction phase filtering of surface water for suspended solids will be carried out. Unfiltered surface water discharges or runoff are not permitted from the site into the watercourse during the works.
- Concrete trucks, cement mixers or drums/bins are only permitted to wash out in designated wash out area greater than 50m from sensitive receptors including drains and drainage ditches.
- Abstraction of water from watercourses will not to be permitted.
- Spill containment equipment shall be available for use in the event of an emergency. The spill containment equipment shall be replenished if used and shall be checked on a scheduled basis.
- Materials, plant and equipment shall be stored in the proposed site compound location;
- Plant and equipment will not be parked within 50m of the watercourse at the end of the working day;
- Hazardous liquid materials or materials with potential to generate run-off shall not be stored within 50m of the watercourse.
- All oils, fuels and other hazardous liquid materials shall be clearly labelled and stored in an upright position in an enclosed bunded area within the proposed development site compound. The capacity of the bunded area shall conform with EPA Guidelines – hold 110% of the contents or 110% of the largest container whichever is greater;
- Drip trays will be turned upside down if not in use to prevent the collection of rainwater;
- Waters collected in drip trays will be assessed prior to discharge. If classified as contaminated, they shall be disposed by a permitted waste contractor in accordance with current waste management legal and regulatory requirements;
- Plant and equipment to be used during works, will be in good working order, fit for purpose, regularly serviced/maintained and have no evidence of leaks or drips;
- No plant used shall cause a public nuisance due to fumes, noise, and leakage or by causing an obstruction;
- Re-fuelling of machinery, plant or equipment will be carried out in the site compound as per the appointed Construction Contractor re-fuelling controls;
- All persons working will receive work specific induction in relation to material storage arrangements and actions to be taken in the event of an accidental spillage. Daily environmental toolbox talks / briefing sessions will be conducted for all persons working to outline the relevant environmental control measures and to identify any environment risk areas/works.

The implementation and effectiveness of these standard best-practice mitigation measures will be inspected and recorded regularly during the construction period and where deficiencies or faults are identified they will be remedied immediately by the contractor.

6.5.2 Operation

As noted in the Engineering Services Report, prepared by CS Consulting Group (2025) and discussed in Section 3.2, surface water runoff from the development will be managed using the existing attenuation infrastructure as well as appropriate Sustainable Urban Drainage Systems (SuDS) techniques as set out in the Dublin City Development Plan 2022-2028.

The proposed foul water drainage system will connect with existing municipal infrastructure (refer to Section 3.2.1) From here, the foul water will be conveyed to the Irish Water WwTP at Ringsend, where

the effluent will be subject to treatment prior to discharge to Dublin Bay at Poolbeg. This creates an indirect hydrological pathway linking the proposed development site with European Sites in Dublin Bay.

As set out in Engineering Services Report, prepared by CS Consulting Group (2024), the peak flow calculated for the entire development that is the residential units, crèche and community centre is calculated as 12.03l/sec. The Ringsend WwTP operates under licence from the EPA (Licence no. D0034-02) and received planning permission (ABP reg. ref.: 301798) in 2019 for upgrade works, which commenced in 2018 and are expected to be fully completed by 2025. The upgrade works will result in treatment of sewage to a higher quality than current, thereby ensuring effluent discharge to Dublin Bay will comply with the Urban Wastewater Treatment Directive.

It is possible that there will be a marginal increase in demand for potable water during the operational phase. Drinking water in Dublin City is largely derived from the Poulaphouca Reservoir in Co. Wicklow. There is, therefore, a potential impact pathway (via water abstraction) from the proposed development site to the Poulaphouca Reservoir SPA (site code 004063), designated for the protection of Greylag Goose and Lesser Black-backed Gull. However, any increase in potable water demand would not be significant in the context of the total volume abstracted from the reservoir. Furthermore, there is no evidence that current levels of water abstraction are conservation threats to these SCIs.

7 Monitoring

A suitably experienced Project Ecologist will be appointed for the duration of the construction phase and regular monitoring of all related works will take place to ensure the correct and full implementation of all mitigation measures. The Project Ecologist will ensure that all construction works take place in accordance with the proposed development and any conditions imposed, the project CEMP and the mitigation measures set out in this EcIA.

As noted in Section 6, vegetation clearance will only be permitted outside the bird-nesting season. Should vegetation clearance be required during the bird nesting season, and should this work be unavoidable, such clearance will take place only after the Project Ecologist has undertaken a survey to ensure that no active bird nests or recently fledged birds are present. Pre-construction surveys will be required to ensure that any necessary tree felling or works to buildings continue to have no impact on roosting bats.

No long-term ecological monitoring is required, other than post-construction monitoring of the bat and bird boxes and insect hotels installed. The bat and bird boxes and insect hotels installed on the site will be checked annually for a period of two years post-completion of the works, to ensure that they continue to be accessible to these species. If necessary, they will be repositioned within the site.

On completion of construction, the lighting installed will be reviewed by the Project Ecologist and a bat specialist, to ensure that it is operating according to the approved specifications. The landscape architect will similarly ensure that all works undertaken are in full compliance with the landscape specification. All monitoring tasks will be recorded and logged for inspection by the site manager.

8 Conclusion

The works associated with the proposed development are considered to be localised in nature, short-term in duration and moderate in magnitude. They are not expected to give rise to significant effects on the conservation objectives and qualifying interests of any Natura 2000 sites or any other flora and fauna on site. It is proposed to incorporate significant amounts of landscape planting on site to enhance biodiversity, the key elements of which have been designed collaboratively between the project

ecologist and landscape architect. It is also proposed as part of landscaping to incorporate bat boxes, insect hotels and bird boxes for further biodiversity enhancement on site.

Overall, although the proposed development may have *slight to moderate negative impacts* on biodiversity at the site level, these impacts will be fully mitigated over time to be rendered *negligible to slight positive*.

There will be ***no long-term residual impact*** on ecological receptors, either within or in the vicinity of the proposed development, or associated with any site designated for nature conservation as a result of the proposed development.

9 References

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Appendix A – Habitat and Flora Study Report

Habitat and Flora Study of a Proposed Development Site at Bluebell, Co. Dublin

Report for *Land Development Agency*

On behalf of *Dublin City Council*

By *FitzGerald Ecology*

September 2024

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1. Introduction

Land Development Agency (on behalf of Dublin City Council) commissioned FitzGerald Ecology to produce a habitat study of a proposed development site at Bluebell, Dublin 12 (centre point is at approximately Irish Grid reference O 10746 32606). The aim of the study was to to determine the presence/absence of any rare/threatened (and other) habitats and flora at the site, with an assessment of the habitat condition which can be used to influence a biodiversity net gain approach at the site going forward.

A full vegetation study of the habitats on site was conducted (including rare/legally protected plant and invasive species surveys), along with a detailed summary report outlining and describing the various habitats and plants present on site, including detailed habitat maps and species lists.

The study area for this habitat survey can be seen in Figure 1.

2. Methodology

The habitat/plant walkover survey was carried out by Alexis FitzGerald B.A. M.Sc. on the 31st May 2024, with reference to Smith *et al.* (2011). The habitats were classified according to the Irish Heritage Council classification system (Fossitt, 2000). The abundance of each species present in each habitat was recorded using the percentage scale[1]. The locations of rare and non-native species were also recorded. EU Habitats Directive Annex I habitats were classified as per Commission of the European Communities (2013), also with reference to the corresponding national habitat survey reports and descriptions, particularly NPWS (2019). The nomenclature for the Annex I habitats also follows Commission of the European Communities (2013), with any abbreviated names for the habitats following NPWS (2019). Vascular plant taxonomy and nomenclature follows Stace (2019), whilst bryophyte taxonomy and nomenclature follow Atherton *et al.* (2010). Ecological evaluations were made according to the criteria as set out in Appendix II.

3. Baseline Study

Legally Protected and Rare Flora

No plant species listed on the *Flora (Protection) Order 2022*, were recorded during the field survey in 2024. Three species of local rarity and worthy of note were *Chaenorhinum minus*, *Geranium pyrenaicum*, and *Primula veris*. The locations of these locally rare flora can be seen in Figure 3.

Non-native (Invasive) Flora

No plant species listed on the Third Schedule of the *European Communities (Birds and Natural Habitats) Regulations, 2011* were recorded during the field surveys in 2024. Five (non-listed) non-native/introduced plant species were recorded across the study area: *Alnus cordata, Buddleia davidii, Centranthus ruber, Conyza floribunda,* and *Senecio minimus*. The locations of these invasive species can be seen in Figure 4.

[1] Percentages were recorded as follows: 0.1, 0.3, 0.5, 0.7, 1, 3, 5, 7, 10, 15, 20, 25, 30, etc., continuing in 5% steps to 100%.

Habitats

The habitat types (and/or mosaics) recorded within the study area according to the Heritage Council classification system (Fossitt, 2000) are described in detail in section 3.1 (and are also mapped in Figure 2). Full plant species lists (with percentage abundance estimates for each species) for each recorded habitat are also presented in Appendix I of this report.

The following seven habitat types (and/or mosaics) were recorded within the study area during the field survey in 2023:

- Hedgerows (WL1)
- Treelines (WL2)
- Flower beds and borders (BC4)
- Buildings and artificial surfaces (BL3)
- Dry calcareous and neutral grassland/Recolonising bare ground (GS1/ED3)
- Scrub (WS1)
- Scrub/Dry meadows and grassy verges/Buildings and artificial surfaces (WS1/GS2/BL3)

The proposed development site consists of a former water waste treatment plant. The remains of the concrete treatment areas are in situ, and have been recolonised by vegetation over time. The adjacent grassland to the south of the concrete areas is species-rich, but has been disturbed in recent times and as such, recolonising vegetation now occurs scattered within the grassland. A few older trees survive in the west of the site. Hedgerows (WL1) or treelines (WL2) habitats delineate the boundaries of the former treatment plant site, the treelines having been planted in recent times. To the south-west of this area is a community allotment site, with extensive vegetable and other plots.

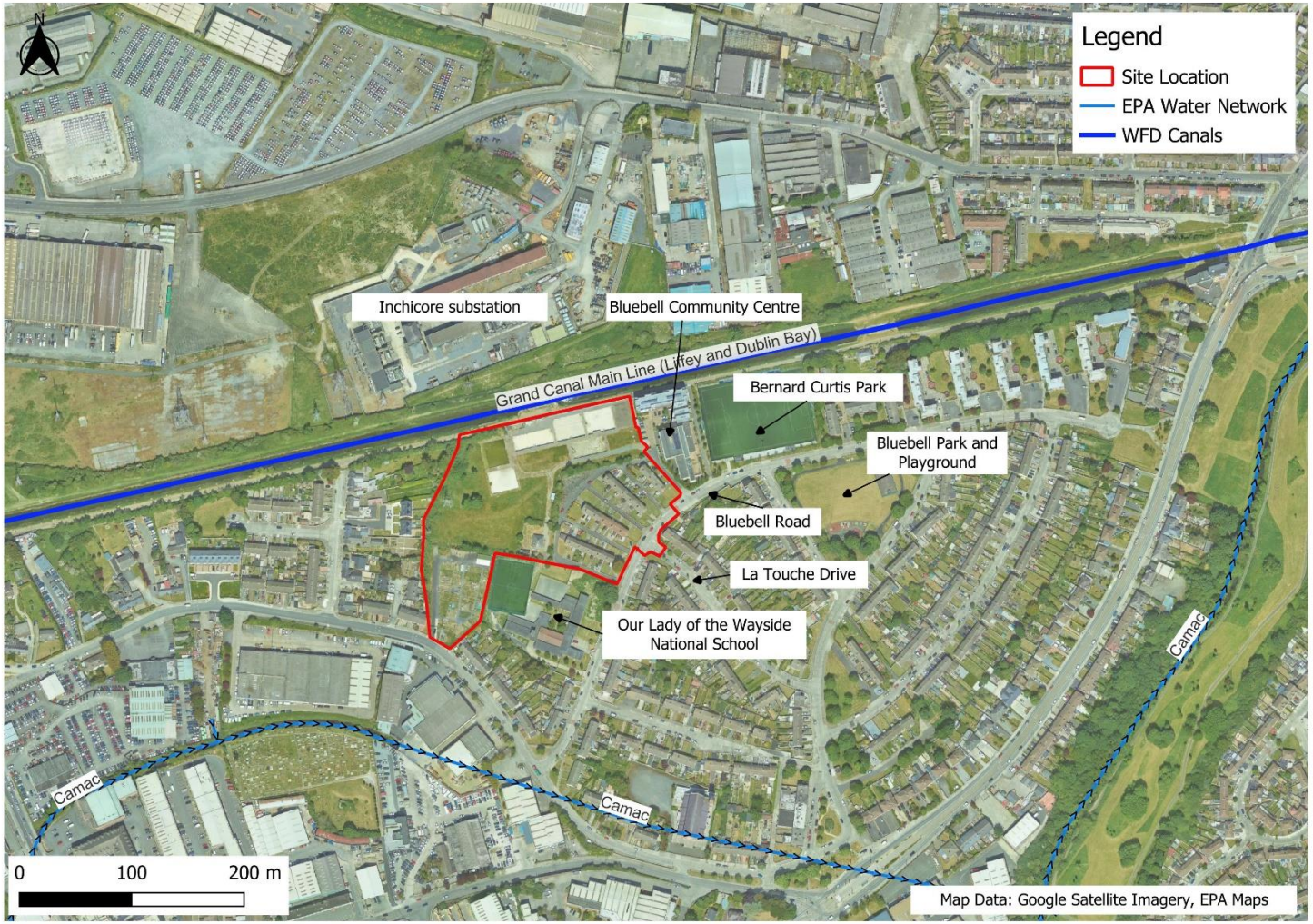

Figure 1. Study area (in red)

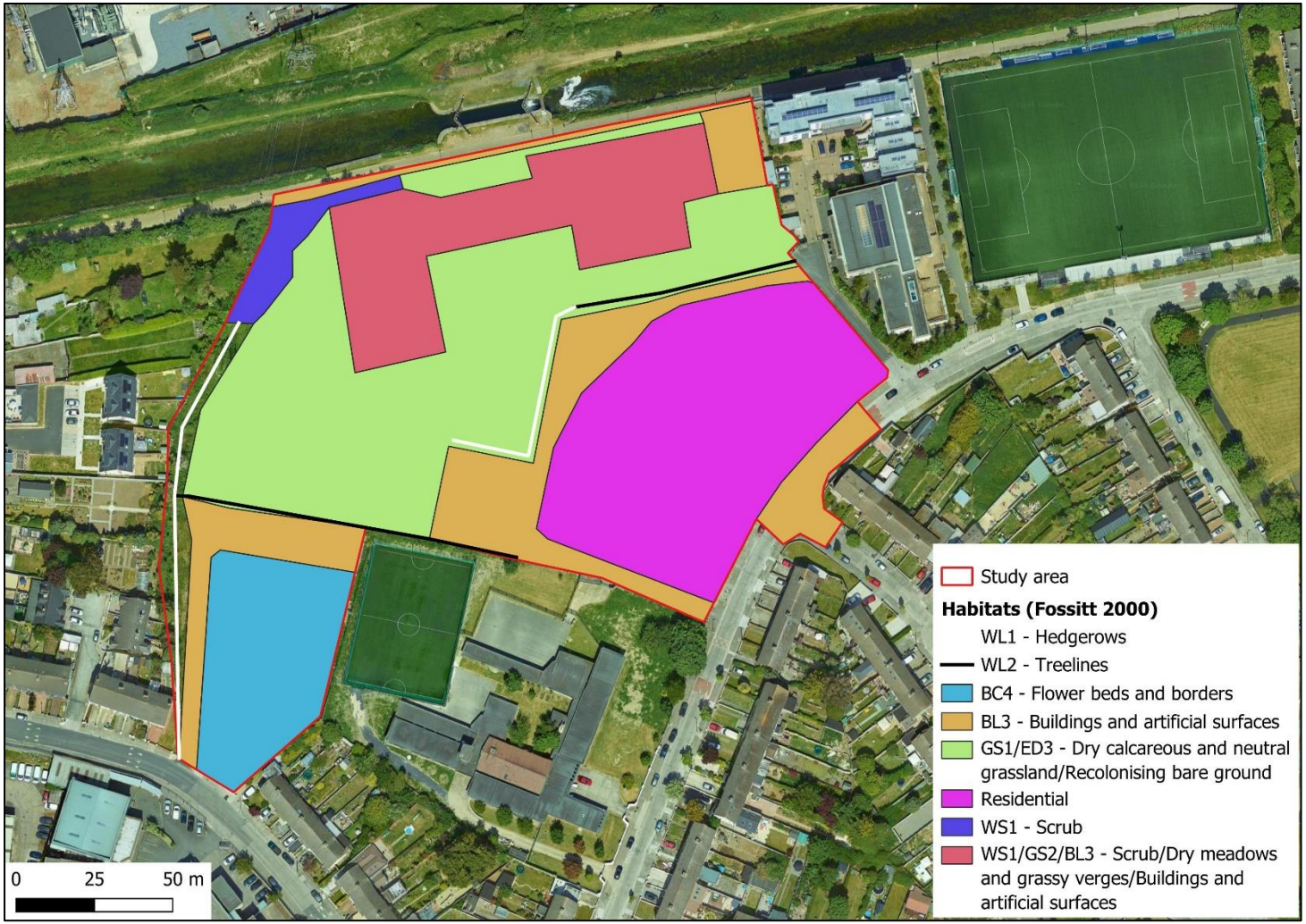

Figure 2: All habitats recorded in the study area during the field survey in 2024

Figure 3. Locally rare plants recorded within the study area during the field survey in 2024

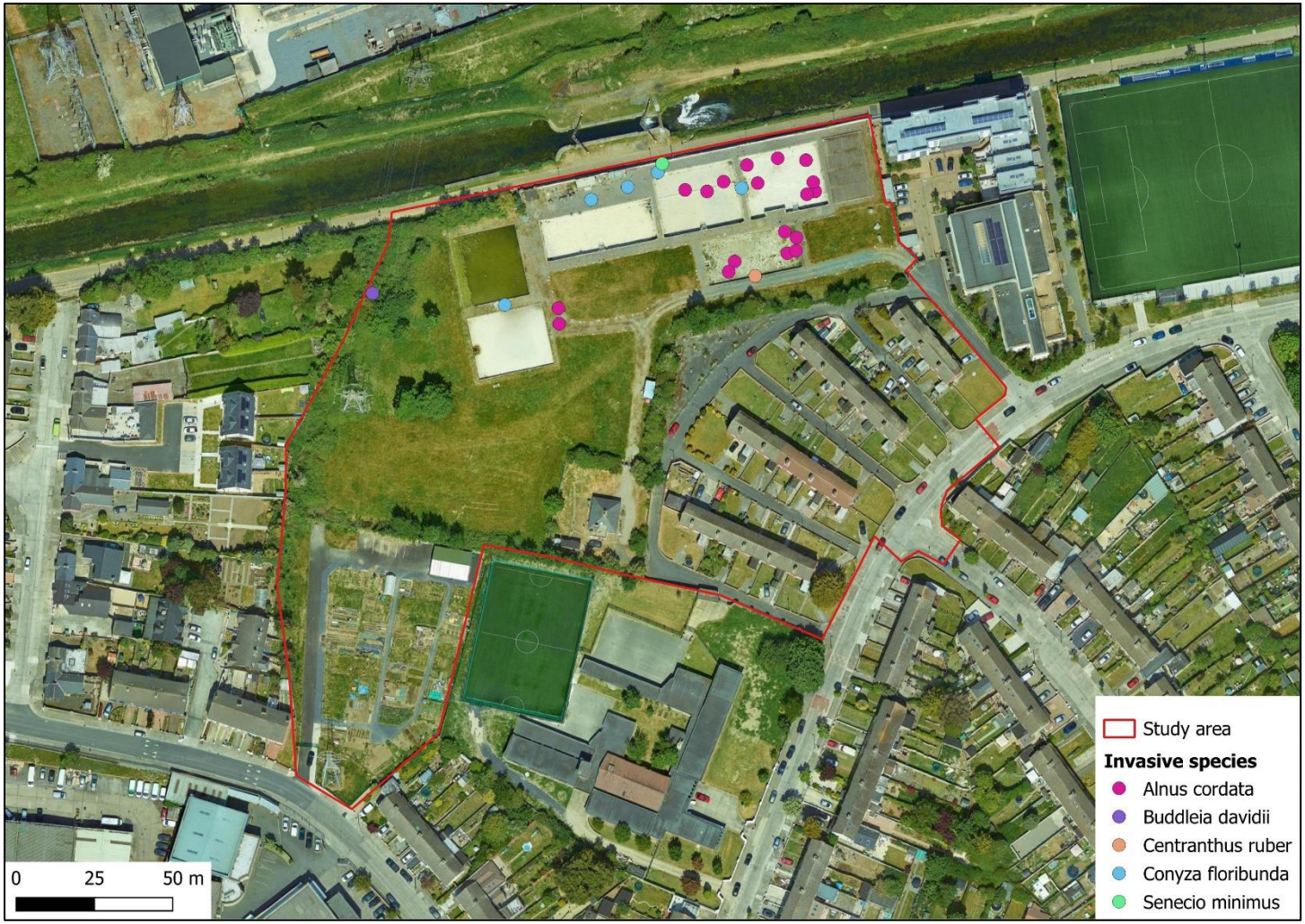

Figure 4. Invasive species recorded within the study area in 2024

3.1. Habitat descriptions

Hedgerows (WL1)

There are two lengths of Hedgerow (WL1) habitat found at the site, one at the centre and the other running along the western site boundary. These are dense hedgerows dominated by *Rubus fruticosus* agg., with *Sambucus nigra* in lesser quantities. *Corylus avellana* and *Rosa canina* agg. were also recorded. Below and through the shrub species, *Arrhenatherum elatius* is present. This habitat is considered to be of **Local importance (higher value)**, as it forms part of the wider linear habitat network in the area. It is considered to be in good condition, providing a valuable habitat to wildlife.

Treelines (WL2)

Treelines (WL2) habitat occurs at two locations within the site boundary, at the central and north eastern end of the site. They are both connected to the above-mentioned Hedgerows (WL1) habitats, and therefore contributing to habitat connectivity at the site. This habitat differs from hedgerow (WL1) habitat in that the single lines of trees are above five metres in height. The treelines on site however, are dominated by the planted non-native *Alnus cordata* with a nutrient enriched undergrowth including dense patches of *Rubus fruticosus* agg. It is therefore considered to be in poor condition. Other species recorded in this habitat include *Fraxinus excelsior*, *Sambucus nigra*, *Acer pseudoplatanus*, *Betula pubescens*, *Hedera helix*, *Galium aparine*, *Veronica chamaedrys*, *Potentilla reptans*, *Arrhenatherum elatius*, *Geum urbanum*, and *Geranium robertianum*. This habitat is considered to be of **Local importance (higher value)**, as it forms part of the wider linear habitat network in the area.

Plate 1: Treelines (WL2) habitat dominated by Alnus cordata

Flower beds and borders (BC4)

Flower beds and borders (BC4) habitat is found at the south eastern end of the site in the community allotments area. Vegetables have been widely planted in this area, but are often managed to remove any weed species. This habitat is considered to be of **Local importance (Lower value)**, given its poor habitat potential and low species diversity.

Buildings and artificial surfaces (BL3)

Buildings and artificial surfaces (BL3) habitat, occurs mostly at the eastern end of the site as roadways in residential areas, with additional areas at the north-eastern and south-western ends of the site, associated with the former waste water treatment plant and also a community allotment access road. Some weed species such as *Plantago lanceolata*, *Taraxacum* agg., and *Poa annua* were recorded in this habitat. This habitat is considered to be of **Negligible importance** due to their very low species diversity and very poor habitat potential.

Dry calcareous and neutral grassland/Recolonising bare ground (GS1/ED3)

Dry calcareous and neutral grassland in a mosaic with Recolonising bare ground (GS1/ED3) dominates the central portion of the site. The dominant species here are *Holcus lanatus*, *Poa trivialis*, and *Festuca rubra* agg., with other species recorded in lesser quantities including *Potentilla reptans*, *Trifolium repens*, *Cirsium arvense*, *Arrhenatherum elatius*, *Trifolium pratense*, *Ranunculus repens*, *Bellis perennis*, *Jacobaea vulgaris*, *Achillea millefolium*, *Heracleum sphondylium*, and *Lathyrus pratensis*.

Primula veris was also recorded within this habitat, which is a high-quality indicator for the Annex I habitat [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometea). This species is also rare in Dublin City. Two additional indicator species for the beforementioned Annex I habitat also recorded in this habitat were *Carex flacca* and *Lotus corniculatus*. Another species of note in this habitat is *Chaenorhinum minus*, which is rare in Dublin City. This habitat is considered to be of **Local importance (higher value)**, due to its high species diversity and due to the scarcity of this habitat in the vicinity. This habitat was likely formerly Annex I [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometea), however it does not currently meet the criteria due to a lack of sufficient positive indicator species. Its condition has been degraded by disturbance but it still harbours locally important grassland species.

Plate 2: Dry calcareous and neutral grassland (GS1) with Primula veris in the foreground

Plate 3: Chaenorhinum minus on site

Scrub (WS1)

An area of scrub (WS1) is found in the north-west corner of the site. This habitat is characterised by the dominance of such shrub species as *Rubus fruticosus* agg. and *Sambucus nigra,* with lesser quantities of *Acer pseudoplatanus* and *Salix* x *fragilis*. Other species recorded include *Salix alba*, *Fraxinus excelsior*, *Corylus avellana*, and *Hedera helix*. The non-native *Buddleia davidii* was also recorded within this habitat. This is an area of dense shrub with a good diversity of shrub species and it considered to be in good condition. It is considered to be of **Local importance (higher value)**, due to its broad habitat potential, given the right management conditions.

Scrub/Dry meadows and grassy verges/Buildings and artificial surfaces (WS1/GS2/BL3)

The dominant habitat at the northern end of the site is a mosaic of Scrub (WS1), Dry meadows and grassy verges (GS2), and Buildings and artificial surfaces (BL3). The most dominant species in this mosaic is the non-native *Buddleia davidii*, followed by grasses such as *Arrhenatherum elatius, Dactylis glomerata*, and *Holcus lanatus*. Some other species recorded include *Rubus fruticosus* agg., *Jacobaea vulgaris*, *Salix cinerea* subsp. *oleifolia*, *Rosa canina* agg., *Sambucus nigra*, *Betula pubescens*, *Cirsium vulgare*, and *Salix caprea*, alongside non-native species *Alnus cordata*, *Salix alba*, *Conyza floribunda*, and *Centranthus ruber*. One species of note recorded within this habitat mosaic was *Geranium pyrenaicum*, which is rare in the Dublin City area. Overall, this habitat is considered to be in poor condition. However, it is nonetheless considered to be of **Local importance (higher value)**, due to its broad habitat potential, given the right management conditions.

Plate 4: Dense patches of the non-native Buddleia davidii on site, with scattered GS2 grassland in amongst the WS1 scrub

4. Summary

This report presents a summary of findings from a habitat/flora survey in May 2024 of a proposed development site at Bluebell, Dublin 12. It discusses the main habitat features and the species composition of the listed habitats found during the field survey, as well as any rare, invasive or noteworthy species on the site. All habitats were mapped and a total of seven separate habitat types (and/or mosaics) were recorded across the study area.

In terms of each habitat's biodiversity value and condition, the areas of Hedgerows (WL1) and Scrub (WS1) are considered to be in good condition, and provide habitat connectivity in an otherwise urban environment. The mosaic of Dry calcareous and neutral grassland/Recolonising bare ground (GS1/ED3) is considered to be degraded due to disturbance but provides habitat for locally rare grassland flora. The Treelines (WL2) on site are in poor condition and are dominated by non-native species, which is likewise true for the mosaic of Scrub/Dry meadows and grassy verges/Buildings and artificial surfaces (WS1/GS2/BL3) at the northern end of the site.

5. References

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Stace, C. (2019). *New Flora of the British Isles*. *4th Edition*. C&M Floristics.

Appendix I: Species Lists

Hedgerows (WL1)		Treelines (WL2)		Buildings and artificial surfaces (BL3)	
Scientific Name	**%**	**Scientific Name**	**%**	**Scientific Name**	**%**
Sambucus nigra	30	*Alnus cordata*	80	*Plantago lanceolata*	0.3
Rubus fruticosus agg.	65	*Fraxinus excelsior*	10	*Taraxacum* agg.	0.3
Arrhenatherum elatius	1	*Sambucus nigra*	5	*Poa annua*	0.3
Corylus avellana	3	*Rubus fruticosus* agg.	40		
Rosa canina agg.	1	*Galium aparine*	3		
		Hedera helix	5		
		Veronica chamaedrys	1		
		Potentilla reptans	0.3		
		Arrhenatherum elatius	0.3		
		Acer pseudoplatanus	3		
		Geum urbanum	0.1		
		Betula pubescens	3		
		Geranium robertianum	0.1		

Dry calcareous and neutral grassland/Recolonising bare ground (GS1/ED3)		Scrub (WS1)		Scrub/Dry meadows and grassy verges/Buildings and artificial surfaces (WS1/GS2/BL3)	
Scientific Name	**%**	**Scientific Name**	**%**	**Scientific Name**	**%**
Primula veris	0.3	*Acer pseudoplatanus*	10	*Hedera helix*	60
Poa annua	1	*Rubus fruticosus* agg.	70	*Heracleum sphondylium*	20
Poa trivialis	30	*Sambucus nigra*	20	*Hypericum androsaemum*	0.1
Holcus lanatus	40	*Salix* x *fragilis*	5	*Cordyline australis*	0.3
Taraxacum agg.	0.5	*Salix alba*	1	*Clematis vitalba*	0.1
Ranunculus acris	1	*Fraxinus excelsior*	1	*Rubus fruticosus* agg.	30
Vicia sativa subsp. segetalis	1	*Corylus avellana*	1	*Acer pseudoplatanus*	60
Potentilla reptans	5	*Buddleia davidii*	1	*Cupressus* species	5
Trifolium repens	3	*Hedera helix*	1	*Ulmus* species	15
Geranium dissectum	0.1			*Castanea sativa*	1
Rhytidiadelphus squarrosus	1			*Galium aparine*	1
Medicago lupulina	3			*Ficaria verna*	1
Festuca rubra agg.	15			*Quercus* species	15
Cirsium arvense	1			*Geranium robertianum*	0.1
Rubus fruticosus agg.	0.7			*Ranunculus acris*	0.1
Primula veris	0.3			*Arum maculatum*	0.1
Arrhenatherum elatius	3			*Ilex aquifolium*	0.5
Carex flacca	3			*Vicia sepium*	0.1
Trifolium pratense	0.3			*Fissidens taxifolius*	0.1
Sinapis arvensis	0.1			*Oxyrrhynchium hians*	0.1
Cardamine pratensis	0.1			*Carex remota*	0.1
Cerastium fontanum	0.1				
Calliergonella cuspidata	0.3				
Acer pseudoplatanus	1				
Rumex crispus	0.3				
Lathyrus pratensis	0.3				
Schedonorus giganteus	0.3				

Dry calcareous and neutral grassland/Recolonising bare ground (GS1/ED3)		Scrub (WS1)		Scrub/Dry meadows and grassy verges/Buildings and artificial surfaces (WS1/GS2/BL3)	
Ranunculus repens	0.7				
Leucanthemum vulgare	0.1				
Centaurea nigra	0.1				
Heracleum sphondylium	0.1				
Rumex obtusifolius	0.1				
Rosa canina agg.	0.1				
Equisetum arvense	0.1				
Crepis capillaris	0.1				
Alnus cordata	0.1				
Vulpia bromoides	0.3				
Bellis perennis	0.1				
Achillea millefolium	0.1				
Jacobaea vulgaris	0.1				
Myosotis arvensis	0.1				
Hypericum androsaemum	0.1				
Capsella bursa-pastoris	0.1				
Papaver rhoeas	0.1				
Lavatera arborea	0.1				
Sonchus oleraceus	0.1				
Anisantha sterilis	0.1				
Lotus corniculatus	0.1				
Moehringia trinervia	0.1				
Papaver lecoqii	0.1				
Senecio minimus	0.1				
Chaenorhinum minus	0.1				
Asplenium ruta-muraria	0.1				
Sinapis arvensis	0.1				
Lamium purpureum	0.1				
Centranthus ruber	0.1				

Appendix II: Criteria for Ecological Evaluations[2]

International Importance:

- 'European Site' including Special Area of Conservation (SAC), Site of Community Importance (SCI), Special Protection Area (SPA) or proposed Special Area of Conservation.
- Proposed Special Protection Area (pSPA).
- Site that fulfils the criteria for designation as a 'European Site' (see Annex III of the Habitats Directive, as amended).
- Features essential to maintaining the coherence of the Natura 2000 Network.
- Site containing 'best examples' of the habitat types listed in Annex I of the Habitats Directive.
- Resident or regularly occurring populations (assessed to be important at the national level) of the following:
    - Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; and/or
    - Species of animal and plants listed in Annex II and/or IV of the Habitats Directive.
- Ramsar Site (Convention on Wetlands of International Importance Especially Waterfowl Habitat 1971).
- World Heritage Site (Convention for the Protection of World Cultural & Natural Heritage, 1972).
- Biosphere Reserve (UNESCO Man & The Biosphere Programme).
- Site hosting significant species populations under the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals, 1979).
- Site hosting significant populations under the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats, 1979).
- Biogenetic Reserve under the Council of Europe.
- European Diploma Site under the Council of Europe.
- Salmonid water designated pursuant to the European Communities (Quality of Salmonid Waters) Regulations, 1988, (S.I. No. 293 of 1988).

National Importance:

- Site designated or proposed as a Natural Heritage Area (NHA).
- Statutory Nature Reserve.
- Refuge for Fauna and Flora protected under the Wildlife Acts.
- National Park.
- Undesignated site fulfilling the criteria for designation as a Natural Heritage Area (NHA); Statutory Nature Reserve; Refuge for Fauna and Flora protected under the Wildlife Act; and/or a National Park.
- Resident or regularly occurring populations (assessed to be important at the national level) of the following:
    - Species protected under the Wildlife Acts; and/or
    - Species listed on the relevant Red Data list.
- Site containing 'viable areas' of the habitat types listed in Annex I of the Habitats Directive.

County Importance:

- Area of Special Amenity.
- Area subject to a Tree Preservation Order.
- Area of High Amenity, or equivalent, designated under the County Development Plan.
- Resident or regularly occurring populations (assessed to be important at the County level) of the following:
    - Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive;
    - Species of animal and plants listed in Annex II and/or IV of the Habitats Directive;
    - Species protected under the Wildlife Acts; and/or
    - Species listed on the relevant Red Data list.
- Site containing area or areas of the habitat types listed in Annex I of the Habitats Directive that do not fulfil the criteria for valuation as of International or National importance.
- County important populations of species, or viable areas of semi-natural habitats or natural heritage features identified in the National or Local BAP, if this has been prepared.
- Sites containing semi-natural habitat types with high biodiversity in a county context and a high degree of naturalness, or populations of species that are uncommon within the county.

[2] Framework and table is taken and adapted from: National Roads Authority (2009). *Guidelines for Assessment of Ecological Impacts of National Roads Schemes*. Report for National Roads Authority.

- Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.

Local Importance (higher value):

- Locally important populations of priority species or habitats or natural heritage features identified in the Local BAP, if this has been prepared;
- Resident or regularly occurring populations (assessed to be important at the Local level) of the following:
    - Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive;
    - Species of animal and plants listed in Annex II and/or IV of the Habitats Directive;
    - Species protected under the Wildlife Acts; and/or
    - Species listed on the relevant Red Data list.
- Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or populations of species that are uncommon in the locality;
- Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value.

Local Importance (lower value):

- Sites containing small areas of semi-natural habitat that are of some local importance for wildlife;
- Sites or features containing non-native species that are of some importance in maintaining habitat links.

Appendix B –Breeding Bird Survey Report

Breeding Bird Survey of
Bluebell Lands, Bluebell Rd, Inchicore, Dublin 12.
April to August 2024.

Compiled by John Fox Dip field ecology.

April to August 2024.

Fig 1. Willow Warber, Bluebell Lands Inchicore. **Photo by J Fox.**

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Summary:

Between 5th of April and 13th August 2024, five day-time visits were made to the Bluebell Lands, Bluebell Rd, Inchicore, Dublin 12. Visits were all done in the morning when birds are most active and were for a duration of no more than two hours.

During each visit the lands were observed from various vantage points and were walked slowly. The routes walked focused primarily on areas of planting, recolonising scrub, hedges and trees. All birds detected were recorded on field sheets. Bird species that were heard or seen were identified their locations noted and a breeding status assigned to them.

Data from the five visits were amalgamated and approximate positions for the birds as seen or heard were plotted on aerial photographs. Approximate populations, breeding status and conservation status were assigned to each species. Both a species table and a distribution map for amber listed bird species was prepared.

A total of 26 common bird species of Ireland were recorded on the lands, of which 8 were confirmed as breeding. No species of high conservation concern were recorded during the surveys. Eight species of medium conservation concern were recorded of which one was confirmed to breed, one probably bred, three possibly bred and the final three amber species did not breed on the lands. The remaining 18 species recorded were of least conservation concern, 7 of which were confirmed to breed on the lands, 3 probably bred, 8 possibly bred and the remaining 2 species did not bred.

Fig 2 Typical Habitat, Bluebell Lands, Inchicore. **Photo by J Fox.**

Introduction:

This Breeding Bird Survey of the lands described as Bluebell Lands, Bluebell Rd, Inchicore, Dublin 12 was commissioned by Brady Shipman Martin, Canal House, Canal Road, Dublin 2, in April 2024. The survey was undertaken during April, June, July and August of 2023.

This survey aims to describe the distribution and abundance of breeding birds occurring on the lands as outlined on the aerial photography at fig 2.

Study Area:

The site is in Inchicore, Dublin 12 on the south side of the Grand Canal. It is about 5.35km west of Dublin City Centre's O'Connell Bridge. The lands are bounded to the southeast by two storey housing and a school ground including an artificial playing pitch. To the east by a multi storey apartment development. To the west by two storey housing and associated gardens. To the north is the grand canal and its associated tow paths.

The lands themselves are quite flat and include an area of allotments, self-contained to the south. The remainder and bulk of the lands are mix of habitat types. There are large ground level and sub terranean disused water storage tanks some of which are covered and others that are open. The open tanks are about a metre deep and are now very overgrown with Buddleia and other recolonising plant species growing from them. The covered tanks are generally deeper with concrete slab flat roofs close to ground level. There are areas of hard standing, rank grassland, community gardens, trees and hedgerows, together with a number of single storey structures including shipping containers, a poly tunnel and community buildings. All the boundaries are fenced and a fence separates the allotments from the rest of the site.

The lands can be entered from several points via locked security gates. For the allotments access is from Bluebell Avenue and for the remainder of the lands, access is possible from Bluebell Road to the rear of the housing along the southeast boundary. The lands are not open to the public and access was arranged through the Bluebell Community Centre prior to each visit.

The total area of the lands is approximately 1.9 Hectares and are outlined in red at Fig 4.

The lands are generally flat but there are manmade slopes and changes in level at several locations. Much of the land is unmanaged and has been used for dumping in the recent past. There are several areas that are quite wild and unmanaged particularly along the boundaries and within the open water tanks.

Fig. 3 Allotments at Bluebell Lands Inchicore. **Photo J Fox.**

Fig 4. Bluebell Lands. Breeding Bird Survey Area Outlined Red. Aerial Photo.

Methodology:

Work commenced on site on 4th of April and finished on 9th of August 2023. Five visits were undertaken each was for approximately two hours. Visits were undertaken in the morning to coincide with the period when breeding birds are most active and therefore most easily observed. The surveys usually commenced at a little after 07.30. Earlier access was not possible.

The visits were spaced out to achieve the best overview of breeding activity within the survey period.

During each visit the lands were walked. All accessible areas were entered, and all vegetated areas and boundaries were walked slowly. Stops were made frequently to listen and scan for birds.

All observations took place when weather conditions were suitable for surveying. All species discovered were recorded, and a breeding status was determined by observation of bird behaviour against a series of standardised behavioural indicators. A conservation status was also assigned to each species based on their latest conservation status as indicated in Birds of Conservation Concern in Ireland 4: 2020-2026 (Gilbert et al 2021).

Observations were made primarily with the naked eye and through 42x10 binoculars. The songs and calls of birds were also used to identify various species and their locations on the lands. During each visit, all birds present on the land or seen close to the lands, were identified where possible and their approximate locations noted. Night-time visits were not undertaken to the lands.

Conservation Status: A list of "Birds of Conservation Concern in Ireland 4: 2020 to 2026" (Gilbert et all 2021) indicates three categories of concern as follows. See appendix 1 for more detail.

- Red list species (high conservation concern).
- Amber list species (medium conservation concern).
- Green list species (least conservation concern).

These statuses have been assigned to all regularly occurring species in Ireland. The criteria on which they have been assessed is based on their international conservation status, historical breeding declines, recent population declines, European conservation status, breeding rarity, localised distribution and the international importance of populations.

Breeding Status Indicators: The following breeding status indicators were used to establish breeding status.

1. **Confirmed Breeding**: Eggs/nest, Occupied nest, Adult carrying faecal sac or food for young or recently fledged young.
2. **Probable Breeding**: Paired birds seen, Agitated behaviour, Permanent territory, Courtship or Display, Nest building or visiting a nest site.
3. **Possible Breeding**: Species in suitable habitat during the breeding season or a singing male present.
4. **Non-Breeding**: Birds present but not likely breeding due to a lack of suitable nesting habitat and no behavioural evidence to suggest breeding on the site.

Fig 5. Overgrown Disused Water Storage Tanks at Bluebell Lands. 2024. **Photo J Fox.**

Results:

A total of 26 species were recorded on the lands. Of these species none were red listed, 8 were amber listed and 18 were green listed. See Table 1.

Table 1. Bluebell Lands, Bird Survey, Dublin 12. Bird Species Identified, Numbers Present, Breeding Status 2024.

Common Name	BTO Code	Species	Breeding Status	Estimated Numbers Present
Herring Gull	HG	*Larus argentatus*	Non	Fly over
Lesser Black-backed Gull	LB	*Larus fuscus*	Non	Fly over
Feral Pigeon	FP	*Colunba livia (domest.)*	Non	Fly over
Woodpigeon	WP	*Columba palmubus*	Probable	2 to 4 singing males
Collared Dove	CD	*Streptopelia decaocto*	Probable	1 singing male.
Barn Swallow	SL	*Hirundo rustica*	Non	Single birds fly over
Dunnock	D.	*Prunella modularis*	Confirmed	2 singing males & Juvs
Robin	R.	*Erithacus rubecula*	Confirmed	2 to 3 singing & Juvs
Song Thrush	ST	*Turdus philomelos*	Possible	1 singing male
Blackbird	B.	*Turdus merula*	Confirmed	3 to 4 pairs & Juveniles
Blackcap	BC	*Sylvia atricapilla*	Probable	1 singing male
Whitethroat (Common)	WH	*Sylvia communis*	Possible	1 bird
Willow Warbler	WW	*Phylloscopus trochilis*	Possible	1 singing male
Wren	WR	*Troglodytes troglodytes*	Confirmed	3 to 5 singing males
Great Tit	GT	*Parus major*	Possible	1 to 2 birds
Blue Tit	BT	*Parus caeruleus*	Confirmed	2 to 3 pairs & juveniles
Magpie	MG	*Pica pica*	Confirmed	4 to 6 pairs & juveniles
Jackdaw	JD	*Corvus monedula*	Non	4 birds
Hooded Crow	HC	*Corvus cornix*	Possible	1 pair
Starling	SG	*Sturnus vulgaris*	Possible	12 birds & Juveniles
House Sparrow	HS	*Passer domesticus*	Possible	4 birds
Chaffinch	CH	*Fringilla coelebs*	Possible	1 singing male
Greenfinch	GR	*Chloris chloris*	Confirmed	1 Pair & Juveniles
Linnet	LI	*Linaria cannabina*	Probable	1 pair
Goldfinch	GO	*Carduelis carduelis*	Confirmed	Singing males & Juvs
Bullfinch	BF	*Pyrrhula pyrrhula*	Possible	1 pair

No red listed species were seen on, near or flying over the lands during any of the visits.

Eight amber listed species were observed, one of which was confirmed to breed on the lands. The eight amber listed species were Herring Gull, Lesser Black-backed Gull, Barn Swallow, Willow Warbler, Starling, House Sparrow, Greenfinch and Linnet. Greenfinch was confirmed to breed with a pair holding permanent territory and recently fledged young observed. Linnet was identified as a

probable breeding species with a single pair holding permanent territory. Willow Warbler, Starling and House Sparrow were identified as possible breeding species all being found in suitable habitat and/or with singing males observed. The remaining three species Herring Gull, Lesser Black-backed Gull and Barn Swallow were identified as non-breeding and were only seen in flight over the lands.

18 green listed species were observed on the lands of which 7 were confirmed to breed on or close to the lands. The 7 green listed species confirmed to breed were, Dunnock, Robin, Blackbird, Wren, Blue Tit, and Magpie. In all cases recently fledged birds of these species were found on the lands. Another 3 green listed species were identified as probable breeding species, with singing males holding permanent territory and display flights observed. These species were Woodpigeon, Collared Dove and Great Tit. Another 6 green listed species were identified as possible breeding species with singing males or pairs identified. These species were Song Thrush, Whitethroat, Blackcap, Great Tit, Hooded Crow, Chaffinch, and Bullfinch.

Fig 6. Amber Listed Bird Species Distribution Map 2024. (For BTO Codes see Table 1)

Discussion:

The species encountered on the site are all widespread common birds of Ireland. Most species observed are currently green listed as species of least conservation concern in Ireland. No red listed species, that is, those of highest conservation concern, were identified.

Eight amber listed species, those of medium conservation concern were identified. Of the eight amber listed species one, Greenfinch, was confirmed to breed, one species, Linnet, was probably breeding, three species, Willow Warbler, Starling and House Sparrow were possibly breeding and three species, Herring Gull, Lesser Black-backed Gull and Barn Swallow were nonbreeding.

While there are some structures on the lands that could possibly have been selected as nest sites by Barn Swallow none appeared to have been adopted. The other two amber listed species Herring Gull and Lesser Black-backed Gull were identified as non-breeding due to a lack of suitable nest sites within the lands. It is however quite likely that the two Gull species did breed on structures or roofs close to the lands.

Of the green listed species seven were confirmed to breed in or very close to the lands. These species were Dunnock, Robin, Blackbird, Wren, Blue Tit, Magpie and Goldfinch. Three were probable breeding species, Woodpigeon Collared Dove, and Blackcap. Six were possible breeding species, Song thrush, Whitethroat, Great Tit, Hooded Crow, Chaffinch and Bullfinch. Two were nonbreeding species, Feral Pigeon and Jackdaw due to a lack of suitable nest sights.

Conclusion:

The survey was carried out between early April and mid-August, that being the optimal time of year to conduct a breeding bird survey.

26 species of bird typical of the habitat present were identified on the lands of which none were red listed. Eight amber listed species were identified, one of which was confirmed to breed on the lands and just one species probably bred there. Of the 26 bird species observed, 8 were confirmed to breed, 4 probably bred, 9 possibly bred and a further 5 were nonbreeding species.

The areas with scrub, trees, hedges and shrubs are the habitats of most importance for the breeding birds present on these lands. Any tree or vegetation removal should only be undertaken outside the breeding season and all healthy mature trees should be retained where possible.

Appendix 1.

Birds of Conservation of Concern in Ireland (BoCCI)

The first comprehensive analysis of the population status of birds on the island which identified those species most in need of conservation was published 16 years ago. (Newton et al 1999). It was an initial review followed the publication of the Irish Red Data Book by Wilde in 1993. A further review followed several years later (Lynas et al 2007), which include data for the first time on an all- Ireland basis. A third review six years later BoCCI (Colhoun and Cummin 2013) followed and was also on an all-Ireland basis. BoCCI in Ireland 4: (Gilbert et all 2021) was published this year and forms the basis on which the conservation statuses were assigned to the bird species in this report.

Seven quantitative criteria have been adopted to determine population status for birds in Ireland.
These include, assessments of global and European conservation status, recent population decline (both in terms of numbers and distribution), historical population decline, breeding rarity, localised distribution and international importance.

The status of 211 species in Ireland was assessed against each of the chosen criteria.
Of these 54 species, were assigned to the Red List. A further 79 species were assigned to the Amber List. The remaining 78 species were assigned to the Green List. In terms of conservation concern the Red listed species are species of immediate conservation concern,

Amber listed species are of medium-term concern while Green listed species are currently of least conservation concern.

Refrences:

- Gilbert G., Stanbury A., & Lewis L. 2021. Birds of Conservation Concern in Ireland 2020-2026. Irish Birds, 43: 1-22. Birdwatch Ireland, Kilcoole Co Wicklow.
- Colhoun, K. and Cummins, S. 2013. Birds of Conservation Concern in Ireland 2014-2019. Irish Birds, 9: 523 - 544. Birdwatch Ireland, Kilcoole Co Wicklow.
- Lynas, P., Newton, S.F, & Robinson, J.A., 2007. The Status of Birds in Ireland: an analysis of conservation concern 2008 – 2013. Irish Birds 8:149 – 166.
- Newton, S.F., Donaghy, A., Allen, D. & Gibbons, D.1999. Birds of Conservation Concern in Ireland. Irish Birds 6: 333 – 344.

Appendix C – Bat Survey Report

An Evaluation of the Bluebell Site for Potential for Bat Roost Sites and for Feeding and Commuting and Potential Impacts of the Proposed Development of the Site Upon Bats

Fionn Keeley, M.Sc.
Brian Keeley, B.Sc.

September 2023

Introduction

Bats are a widespread element of the Irish fauna and make up one quarter of all terrestrial mammal species. They are known to occur from much of the rural landscape which predominates on the island of Ireland, but they are also present within the urban environment and here they occupy buildings and occasionally trees for short or long periods. Buildings are a vital element of the annual

cycle of all Irish bat species and at no time more so than the period summer to early autumn, but many bats may also avail of buildings as hibernation sites often when the presence of bats may be impossible to determine. Trees are less commonly noted as roost sites, partly due to a younger tree population for the island than in the rest of Europe and partly due to under-reporting.

Habitat loss or modification is an issue for bats as well as many other species. Changes to a site such as tree-felling and hedgerow clearance and the introduction of new houses and entire estates may remove roost sites and reduce the lands available to bats as a feeding site or in some way prevent full utilisation of the area by bats by interfering with a bat's ability to commute through a site or roost within the site.

Bats are protected by Irish and EU law, and to prevent unlawful injury or death it is essential that a full understanding of the site is available in advance to protect the resident bats from unintentional disturbance and to create a pathway by which a legal derogation and exemption may be designed in consultation with the National Parks and Wildlife Service. This is a service of the Heritage Division of the Department of Housing, Local Government & Heritage, if impacts are likely to be severe. Prior to further significant changes to a site, it may be necessary to ensure that there will be no impact upon protected species.

Bats of less common species may be present within a site unbeknownst to owners and residents and there is a requirement to undertake a survey by suitably qualified ecologists with the appropriate equipment to determine which species are present. Should bats be present, knowledge of the species concerned and the potential consequences of the modifications of the site can assist in identifying measures to alleviate the negative effects of these changes. This is a legal requirement given the protection level for these species to ensure that the nine species' conservation status are not reduced by major changes to an area.

Seasonal surveys provide a picture of the use of a site by bats. Feeding may, for example, be more concentrated in some areas due to better shelter from wind or rain. Trees or buildings may be occupied for various purposes at the different phases in the bat's annual cycle. Bats breed in the period May to August and maternity roosts may be encountered in trees, albeit that this is rare in Ireland. Individuals or small numbers of bats may use a tree throughout the rest of the year. Male bats may use trees to perch and establish mating perches or roosts in the summer and autumn. Bats may hibernate in trees from late October (in colder autumn / winter periods) to the end of March or April.

Similarly, buildings may serve for all of the above functions. In addition to the roosting potential of buildings and trees, these elements may serve as feeding areas for bats and a substrate for their prey. Trees are essential for insect diversity, shelter for wind and rain and as landmarks. Buildings are high-potential as roost sites but may also serve as feeding areas, especially during inclement weather, when insects may shelter from wind or rain and are available as prey for species such as pipistrelle, brown long-eared bat, Natterer's bat etc.

This assessment was undertaken late during the breeding season in 2023, and took place at a time when young bats would be able to fly and hunt for themselves. Mating is underway while some bats may undergo local (or greater) migrations to be closer to winter sites or to visit mating sites. In Ireland, it is unknown if migration is a significant feature of bat ecology but there is some evidence of migration in one species (Nathusius' pipistrelle). Surveying for bats in early August is a suitable time to address the usage of a site by breeding bats and for the early phase of foraging and flight of the young. Maternity roosts would be starting to disperse by this time. The survey date provides information on the new recruits of the year from the young born in the summer, and may also provide information on the mating period as male bats are actively attracting mates and establishing mating roosts or perches.

Methodology

The survey of the Bluebell site was undertaken on August 3rd-4th, 2023, by two bat specialists with the aid of one Echometer Touch 2 Pro (EMT) handheld "real time expansion" (a term used by the manufacturer to explain that the equipment records all signals across the ultrasonic range and then speeds up the signal to create a real-time equivalent of the sounds produced by any bats encountered) bat detector and one Anabat Walkabout ultrasonic all-weather recorder.

The assessment involved a dusk survey (conducted in the 90-minute period immediately following sunset) and a dawn survey (in the 90-minute period immediately preceding sunrise) conducted on the same night. The EMT unit and Anabat Walkabout were held for the entire active survey (both dusk and dawn surveys) while a Songmeter Mini Bat was positioned close to the centre of the site for the entire period of the survey (including the overnight period). An examination of available information from Bat Conservation Ireland, including previous data from neighbouring sites, was undertaken to compile a list of most likely species in the overall area in addition to the evaluation of the habitat and active bat survey.

Survey constraints

The surveys were undertaken in a period of the year when bat activity is typically high. This should allow a surveyor to identify feeding and commuting bats and the activity of mating bats and to determine the presence of important bat roosts, important feeding areas and any commuting corridors of value to bats.

Weather conditions were overcast, dry and windy, with wind speeds up to 21 km/h. Sunset was at 21.17 with sunrise at 05.46.

Existing Environment

Bat fauna of the Bluebell site

Bat species feeding or commuting within the site

Pipistrellus pipistrellus Common pipistrelle

Roosting species

None

Very few of the trees on site had any potential as roosts, and the only semi-mature trees were very close to power lines coming from the nearby electrical substation. These power lines may produce electromagnetic or acoustic interference (and in this case, produced a consistent hum in the audible range) which could discourage bats (as well as sound-sensitive insects) from the area.
Additionally, while the site's garden and proximity to the Grand Canal could provide a good insect habitat and therefore a good opportunity for bats to feed, the area lacks wildlife corridors such as treelines or hedges that could connect the site to other suitable habitats. At present, there are few nearby habitats that could provide bats and other animals with appropriate living space.
Light pollution is also likely to be a factor in the unsuitability of this site for bats, as there is a great degree of light overspill from the substation and nearby housing estates.
Bat activity was extremely low over the entire survey period. The few bats that were observed and/or recorded over the site were only passing over briefly, and did not use the site for feeding. Because of this it is extremely unlikely that bats are using this site as a roost at any point during the year.

Potential Impacts

Loss of roosts

There is very little potential for roost loss within the site. Should bats be roosting within any tree or building when works are taking place, this would have a long-term moderate negative impact as well as being a breach of the Wildlife Act and implementation of the Habitats Directive. From all available information, there are no bats roosting within the site.

Disturbance from lighting

Lighting may be introduced for two different functions: 1) Access and safety 2) Security and policing. The former is to allow ease of use at night while the latter ensures a perceived higher security level. Lighting may affect bat species – in particular, light-intolerant bat species – during foraging and if directed at emergence points would affect all bat species, even those that will feed in illuminated areas. This is a long-term moderate negative impact without the implementation of mitigation.

Mitigation

Provision of bat boxes

Specially designed bat boxes shall be incorporated into the site to provide roosts for bats. The following design offers high roost potential - Schwegler 2FE Wall-mounted Bat Shelter. Two of these boxes should be installed in unlit areas away from power lines to encourage roosting.

Lighting

Lighting must be designed that will limit overspill from the required area for illumination and prevent light pollution. This should aim to avoid mature trees and flanking vegetation. LED is the most energy efficient source available and wherever a permanent source of night lighting is unessential, it should be motion-activated.

- Dark corridor for movement of bats along the grounds of the site. Lighting should be directed downwards away from the treetops.
- All luminaires shall lack UV elements when manufactured and shall be LED.
- A warm white spectrum (ideally <2700 Kelvin) shall be adopted to reduce blue light component.
- Luminaires shall feature peak wavelengths higher than 550 nm.
- Tree crowns in the adjacent lands shall remain unilluminated.
- Planting shall provide areas of darkness suitable for bats to feed and commute through the site.
- Trees must not be illuminated, as this would prevent their use for feeding by bats.

Impacts of the Development following Mitigation

This will result in no negative impacts upon bat species with proper implementation of the proposed measures. The measures proposed meet the requirements proposed in the Commission notice Guidance document on the strict protection of animal species of Community interest under the Habitats Directive, (Brussels, 12.10.2021 C(2021) 7301 final).

APPENDICES

Field notes on bat activity

A bat was heard just beyond the hedge at the site's western boundary at 21.43, but no signal was recorded and the bat's species could not be determined. Another bat passed overhead at 21.50, flying north from the southern border along the centre line of the site (towards the pylons). Again no signal was recorded from this bat.

The following morning a common pipistrelle was recorded near the centre of the site (just north of the pitch) at 05.11. This was the only bat observed or recorded over this period.

Bat Conservation Ireland data: search results

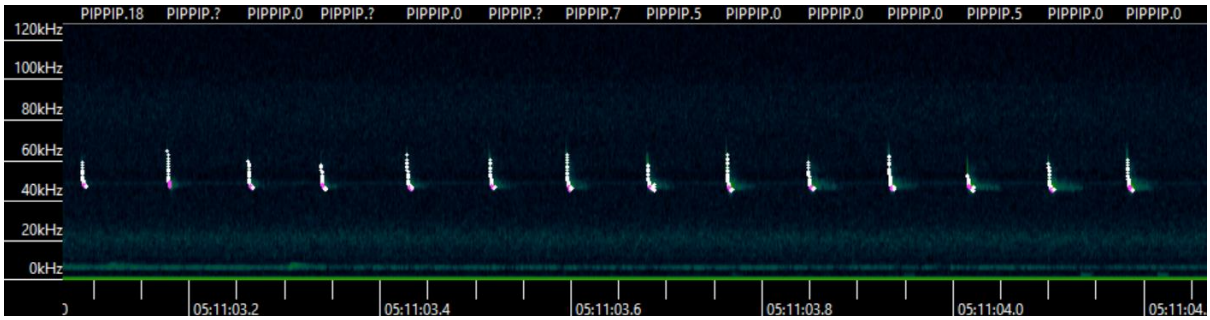
Survey	**EIS and Road Surveys - Conor Kelleher**
Date	**2007-07-08**
Grid Ref	**O1000032000**

Bat Observations

Recorder Name	Species	Sampling Method
Conor Kelleher	Pipistrellus pipistrellus (45kHz)	Heterodyne bat detector
Conor Kelleher	Pipistrellus pygmaeus	Heterodyne bat detector
Conor Kelleher	Myotis daubentonii	Heterodyne bat detector
Conor Kelleher	Nyctalus leisleri	Heterodyne bat detector

Species recorded by surveyor 1 using an Echometer Touch 2 Pro

DATE	TIME	SPECIES
04/08/2023	05:11	PIPPIP



Common pipistrelle recorded at 05.11

A bat assessment of

Bluebell Waterways, Dublin 12.

By Wildlife Surveys Ireland Ltd

Donna Mullen M.P.P.M D.E.N.V.S. P

Brian Keeley BSc

Ferdia Keeley BSc

2024 Report

Fionn Keeley MSc

Maio, Tierworker, Kells Co Meath

Date

18/08/2024

www.wildlifesurveys.net

Summary of report

While the area is of some significance to bat feeding and socialising, no bats were seen to be roosting onsite. Activity was sparse but present, and the wind barrier and vegetation this site provides to bats feeding along the canal is of some significance. With appropriate planting and lighting control, some of this can be restored upon development.

The 2023 report found similarly sparce bat activity with the same three bat species using the site.

Bat species found roosting

None

Mitigation

(1) All buildings shall be checked by a bat specialist for the presence of bats prior to major repair work or demolition. Should a bat be discovered, the structure concerned is a bat roost and the NPWS shall be advised of the presence of the bat immediately. Additionally, a derogation shall be acquired from NPWS following the provision of a bat conservation plan to ensure that any bat is afforded full protection from injury, that alternative roosts are provided to compensate for roost loss and that bats are removed under licence by a suitably qualified bat specialist to facilitate work on the roost. If a roost is discovered, no work may take place while the bats are breeding- May 1st until Sept 1st.

(2) 8 x 2F Schwegler bat boxes must be installed on site. These must be placed on trees, buildings, or poles, at least 3 metres high, with a clear drop below them – as bats must drop to fly. They must be placed in a dark area. They can be purchased from https://www.veldshop.nl/en/schwegler-bat-box-2f.html. If these boxes cannot be erected on trees within the site, built-in bat boxes shall be required in their place. The proposed type are Schwegler 2FR for each 2F that cannot be placed on a tree in a suitable unlit location at a height of 3 metres or greater.

(3) If bats or nesting birds are discovered at any stage of the building work, building work must cease and a bat specialist and the Conservation Ranger must be contacted. Bat roosts may not be worked on from May until September.

(4) **Lighting**
Lighting must be designed that will limit overspill from the required area for illumination and prevent light pollution. This should aim to avoid mature trees and flanking vegetation. LED is the most energy efficient source available and wherever a permanent source of night lighting is unessential, it should be motion-activated.

- Dark corridor for movement of bats along the grounds of the site. Lighting should be directed downwards away from the treetops.
- All luminaires shall lack UV elements when manufactured and shall be LED.
- A warm white spectrum (ideally <2700 Kelvin) shall be adopted to reduce blue light component.
- Luminaires shall feature peak wavelengths higher than 550 nm.
- Tree crowns in the adjacent lands shall remain unilluminated.
- Planting shall provide areas of darkness suitable for bats to feed and commute through the site.
- Trees must not be illuminated, as this would prevent their use for feeding by bats.

(5) Removal of trees and hedgerow will lead to a loss of feeding for individual bats. Planting with native species will enhance the area for bats and birds. Plant species from the All-Ireland Pollinator Plan must be included. All-Ireland Pollinator Plant species list - http://www.biodiversityireland.ie/wordpress/wp-content/uploads/Pollinator-friendlyplanting-code-temporary-draft.pdf Consideration should be given to providing a range of vegetation heights, by the use of ivy and climbers on walls, and the retention and planting of trees and hedgerows.

Introduction

Bats are a widespread element of the Irish fauna. They are known to occur from much of the rural landscape and to a lesser extent, the urban environment and here they occupy buildings and occasionally trees for short or long periods. Houses and other buildings are a vital element of the annual cycle of all Irish bat species and at no time more so than the period May to August, but many bats may also avail of buildings as hibernation sites. In sites such where there are no buildings, there is still the potential for roosting within trees or within nearby houses and feeding within the site proposed for development. Changes to a site including building demolition or renovation and tree and hedge removal may reduce the options available to bats as a roosting site, place bats at risk of injury or death and may also affect their feeding and commuting activity.

Bats are protected by Irish and EU law (see Appendices) and to prevent unlawful injury or death, it is essential that a full understanding of the site is available in advance to protect the resident bats from unintentional harm and to create a pathway by which a

legal derogation and exemption may be designed in consultation with the National Parks and Wildlife Service of the Department of Housing, Local Government and Heritage.

Buildings provide a variety of roosting opportunities for bats for various elements of the annual cycle. Similarly, trees have a great significance either as bat roost sites (which is hugely under-reported) or through feeding sites and shelter from the elements.

This assessment will address the potential for bat roosts within the site and identify the potential for impacts upon bat feeding and commuting within the lands that form the proposed site of alteration based upon a visual assessment of the lands and a walkover bat detector survey to determine the potential for roost sites within the nearest buildings and trees on site or adjacent to the site based on bat emergence and return behavior.

Bat species found feeding and commuting

Common pipistrelle – *Pipistrellus pipistrellus*

Soprano pipistrelle – *Pipistrellus pygmaeus*

Leisler's bat – *Nyctalus leisleri*

Desktop Survey of the existing environment

Thanks to Bat Conservation Ireland for their data. All data from this report will be placed on their database.

Distribution data

See Appendices I for bat data within 10km of the site.

Habitat Classification (Fossitt 2000)

WL2 (Treelines) semi- mature and mature trees

WL1 (Hedgerow)

GAI (Grassland)

GA2 (Amenity grassland)

BA3 (Buildings)

Date
31/7/24

6/8/24

Temperature and weather conditions

31/7/24

Sunset: 05:24

Dry, clear

17℃

Wind 6 km/h

Sunrise: 21:20

Dry, calm

16℃

Wind 13 km/h

6/8/24

Sunset: 21:14

Dry, slight breeze

15℃

Wind 18 km/h

6/8/24

Sunrise: 06:04

Dry, slight breeze

14℃

Wind 23 km/h

Lux levels

7 Lux from community centre

18 Lux from factory across canal

25 lux at housing

194 lux streetlamps

Complexity of lands and ability to cover ground during surveys

All areas were accessible.

Survey constraints

(1) Mobility of bats – Bat species are mobile and can move from roost to roost, depending on roost availability, feeding availability and weather conditions. They may move to roosts which have not been identified in this report in order to hibernate or create mating or feeding perches. A bat survey is a snapshot of bat activity over the survey time.

(2) Identification of bats - It can be difficult to differentiate *Myotis* species. For this reason, sound files are included within the report. Brown long eared bats are very quiet, and their presence can be overlooked in bat surveys as they may not register on bat detectors.

Methodology

Bat Survey - Equipment

Exide Lamps

Head torch

Song Meter Mini Bat remote detector with Kaleidoscope Pro sound analysis

Two handheld Echometer Touch detectors

Surveys are designed with reference to the recognised documents below:

- Heritage Council's Bat Survey Guidelines for the Traditional Farm Buildings Scheme
- National Parks and Wildlife's Bat Mitigation Guidelines for Ireland
- Bat Surveys: Surveying Buildings (Including Bat Identification) Developed on behalf of the Bat Conservation Trust
- English Nature's Bat Mitigation Guidelines

- - Bat surveys for Professional Ecologists - good practice guidelines; fourth edition (2023); Bat Conservation Trust; London.
- - A conservation plan for Irish Vesper Bats , Irish Wildlife Manual No. 20; National Parks and Wildlife Service; Department of Environment, Heritage and Local Government. - The status of E.C. Protected Habitats and Species in Ireland - Conservation status in Ireland of habitats and species listed in the European Council directories on Conservation of Habitats; Flora and Fauna 92/43/EFC. (Department of Environment, Heritage and Local Government) –
- Bat Mitigation Guidelines for Ireland (Irish Wildlife Manual no.25) Department of Environment, Heritage and Local Government.

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Survey

Preliminary Ecological Appraisal
Daytime Assessment/ Preliminary Roost Appraisal

The area covered by this site contains an estate of red brick houses with felt roofs, one slate tiled community centre and a number of immature trees with two to three more mature trees.

Housing estates

Desc 4 trees on site border.

Desc 4 Trees on site border

Desc 2 tree central to site.

Trees onsite were largely Description 4 (no potential), due to their immaturity and lack suitable size or crevices for bat roosting.

The tree in the middle of the site was description 3 and showed greatest potential for bat roosting.

31/7/24

Moderate bat activity was recorded throughout the night on July 31st, despite relatively low recordings on surveyors' detectors.

Activity increased significantly late into the night and significant feeding and social calling was recorded around the tree central to the site for a number of hours throughout the night. Consistent common and Leisler’s bat activity was recorded throughout the night.

The site's proximity to the canal makes it more favourable for bat feeding as the site creates a wind barrier in an area that is otherwise quite exposed to the wind.

There is a possibility that the lower activity at the start of the night was caused by the fact that a large fire had been lit along the canal and the smoke was blown onto this site.

Yellow-Leisler's bat

Red-common pipistrelle

Blue-Soprano pipistrelle

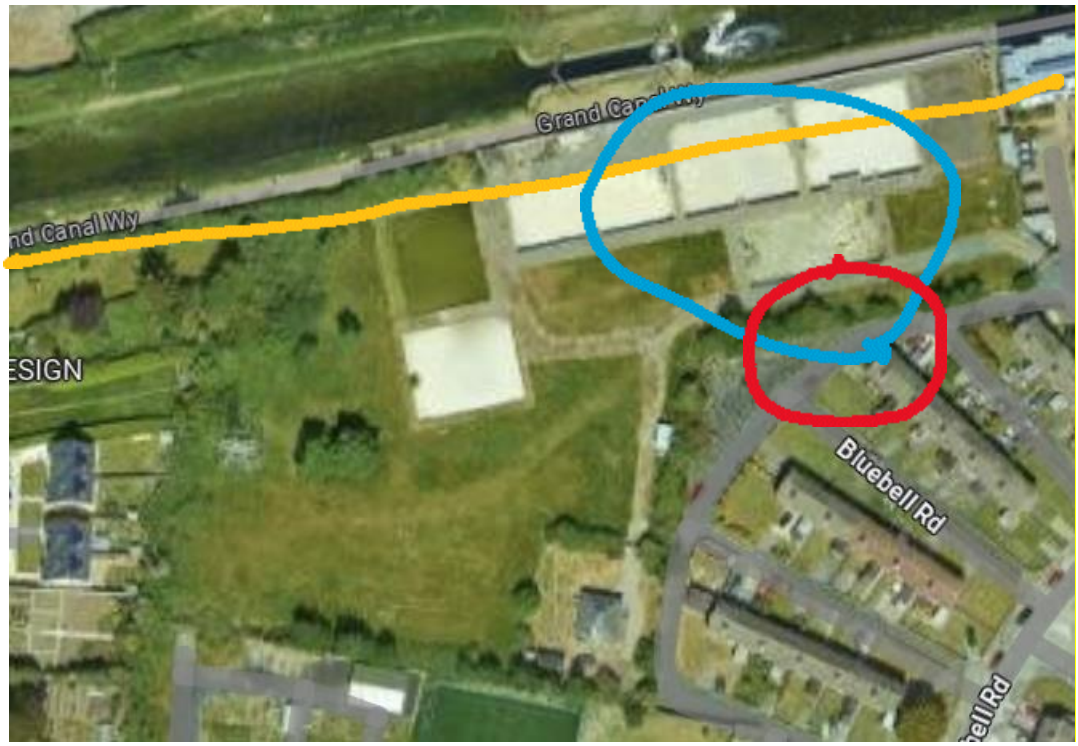
Mini Data

Sum of FILES	Column Labels								
Hour	9	10	11	12	13	14	15	16	Grand Total
LEISLER'S BAT	1	18	5	2	6	1			33
COMMON		1				1	8	15	25
SOPRANO						1	2		3
Grand Total	**1**	**19**	**5**	**2**	**6**	**3**	**10**	**15**	**61**

6/8/24

Activity was considerably reduced for this survey with only a handful of bat passes recorded throughout the night. Leisler's, common and soprano pipistrelle bats were recorded again but with considerably less frequency.

At least two Leisler's bat were seen to commute across the site to feed along the canal side.



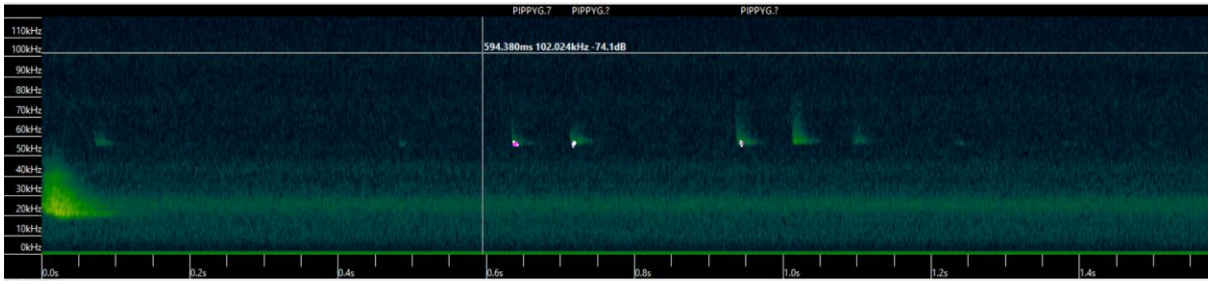
Yellow-Leisler's bat

Red-common pipistrelle

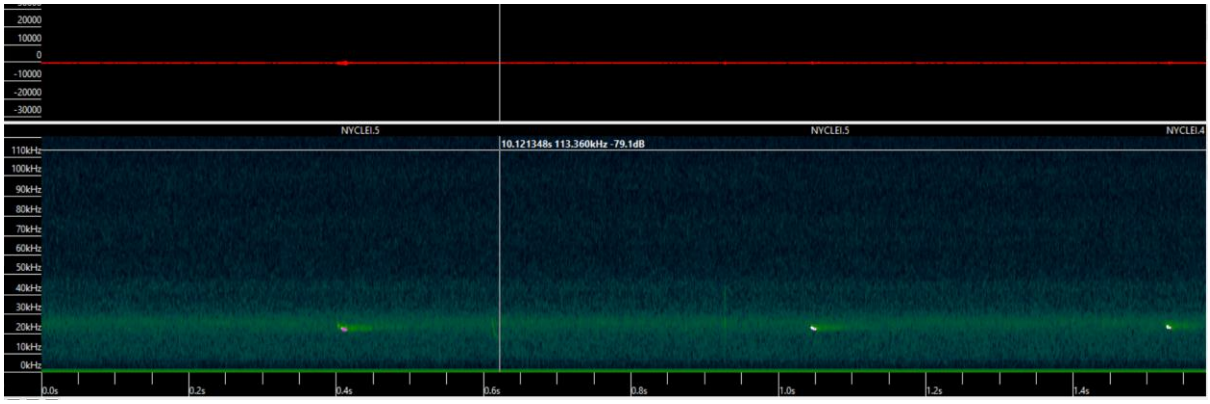
Blue-Soprano pipistrelle

Hour	8	9	1	2	3	4		Grand Total
LEISLER'S BAT		2					2	4
SOPRANO			3		1			4
Grand Total	**0**	**2**	**3**	**2**	**1**	**4**	**2**	**8**

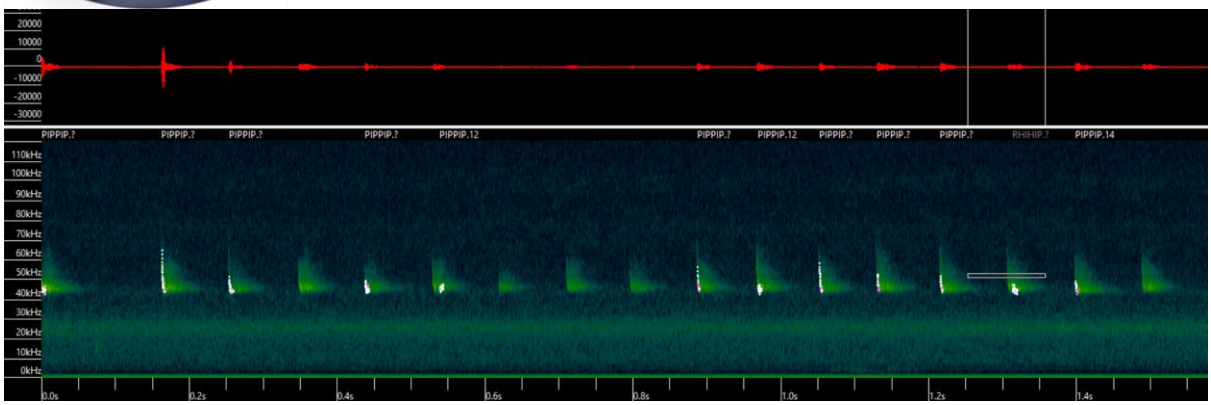
Sum of FILES	Column Labels	
Hour	**10**	**Grand Total**
LEISLER'S BAT	28	28
COMMON	6	6
SOPRANO	2	2
Grand Total	**36**	**36**



Soprano Pipistrelle 23:07



Leisler's bat 23:11



Common Pipistrelle 04:10

Results

Despite the fact that any roosting in trees or buildings on site is highly unlikely, the continued feeding throughout the night shows that this site is of commuting, feeding and social significance to Leisler's, common pipistrelle and soprano pipistrelle bat.

Very few of the trees on site had any potential as roosts, and the only semi-mature trees were very close to power lines coming from the nearby electrical substation. These power lines may produce electromagnetic or acoustic interference (and in this case, produced a consistent hum in the audible range) which could discourage bats (as well as sound-sensitive insects) from the area.

Additionally, while the site's garden and proximity to the Grand Canal could provide a good insect habitat and therefore a good opportunity for bats to feed, the area lacks wildlife corridors such as treelines or hedges that could connect the site to other suitable habitats. At present, there are few nearby habitats that could provide bats and other animals with appropriate living space.

Light pollution is also likely to be a factor in the unsuitability of this site for bats, as there is a great degree of light overspill from the substation and nearby housing estates.

Results of the august 3-4th 2023 showed activity was extremely low over the entire survey period. The few bats that were observed and/or recorded over the site were only passing over briefly, and did not use the site for feeding. Because of this it is extremely unlikely that bats are using this site as a roost at any point during the year.

In 2024 low bat activity was recorded with a number of intermittent spells of feeding over the two nights of survey. Three bat species were recorded onsite, predominantly using the site as a point of commute towards the canal.

Results of both 2023 and 2024 surveys concluded similarly low bat activity, with a slight increase in 2024.

Project Description

The proposed development will consist of:

- *Demolition of all existing structures on site, including the existing 36 no. 2 bed maisonettes and the existing community facility known as the Bungalow (which is being relocated within the site), and the construction of a residential development set out in 5 no. blocks, ranging in height from 5 to 9 storeys to accommodate 388 no. apartments, 3 no. community/cultural units and a crèche. The site will accommodate 102 no. car parking spaces, 1074 no. bicycle parking spaces, storage, services and plant areas. Landscaping will include a new central public plaza, residential courtyards, and a western linear parkland which includes relocated allotments.*

- *The 5 no. residential buildings range in height from 5 storeys to 9 storeys accommodating 388 no. apartments comprising 20 studios, 136 no. 1 bed units, 192 no. 2 bed units and 40 no. 3 bed units. The residential buildings are arranged centrally on the site and around residential courtyards at podium and ground level. Balconies and terraces to be provided on all elevations at all levels for each block. The breakdown of residential accommodation is as follows:*

  - *Block 1 is a 7 to 8 storey building accommodating 79 no. units comprising 28 no. 1 bed units, 43 no. 2 bed units, 8 no. 3 bed units.*

  - *Block 2 is a 6 to 9 storey building accommodating 86 no. units comprising 23 no. 1 bed units, 50 no. 2 bed units, 13 no. 3 bed units.*

  - *Block 3A/3B is a 6 storey building accommodating 83 no. units comprising 10 no. studios, 43 no. 1 bed units, 30 no. 2 bed units.*

  - *Block 4A/4B is a 5 to 6 storey building, accommodating 76 no. units comprising 27 no. 1 bed units, 35 no. 2 bed units, 14 no. 3 bed units.*

  - *Block 5 is a 5 to 7 storey building accommodating 64 no. units comprising 10 no. studios, 15 no. 1 bed units, 3 no. 2 bed units, 5 no. 3 bed units.*

- *The residential Blocks 2 and 3A/3B sit at podium level (Level 1) above ground level which contains residential car-parking, cycle parking, plant areas and ground floor uses. Blocks 2, 3A/3B and 4B have ground floor uses which include a crèche of c. 289 sq.m, with associated external play space, and 3 no. community/cultural units with a total floor area of 654 sq.m. The relocated Bungalow is to be contained within the ground floor of Block 2 with associated external space. Total gross floor area of proposed other uses is 943sqm.*

- *The primary site access site is via a new entrance from Bluebell Road at the junction with La Touche Drive which includes for a new pedestrian crossing, with secondary access for pedestrians and cyclists only being from Bluebell Avenue. The residential car parking, 94 spaces, is provided at below podium level between Blocks 2 and 3A/3B and at surface level, 2 no. crèche, 2 no. community and 4 no. car share spaces are provided at surface level. Secure bicycle parking for residents is provided at ground floor level within or adjacent to all blocks with a total of 776 spaces provided, in addition to 254 short term spaces and 44 cargo bike spaces provided through the scheme. Plant, ESB sub-stations, storage areas, waste storage areas and other associated facilities are also provided at ground level of all blocks. Access is provided through the scheme onto the Grand Canal for pedestrians and cyclists.*

- *The development also includes for a new centrally landscaped public plaza in addition to an extensive area of linear open space is provided along the western corridor of the site and includes a play area, biodiversity planting, relocated allotments and provides access and permeability to the Grand Canal. The proposed application includes all site landscaping works, green roofs, boundary treatments, lighting, servicing, signage, and associated and ancillary works, including site development works above and below ground.*

Predicted Impacts Before Mitigation

(1) Loss of feeding and commuting habitat. With the mitigation in place, there will still be a moderate residual long term effect on local bat populations, as it will take several years to reestablish the canopy and insect diversity which is found in the mature ivy clad trees.

(2) Loss of roosting habitat – The provision of bat boxes on site will mitigate the effects of any potential roost loss. There will be a mild long term negative effect on roosting bats.

(3) Light Pollution – Even with the measures listed, there will still be some light pollution. There will be a mild negative long term residual effect on individual bats.

Mitigation and Habitat Enhancement Measures

The most significant way to enhance this site for bat activity is the planting of native trees and hedgerow along the border of the canal and to replace any felled trees or removed shrubbery.

The wind barrier along the canal is of clear importance to bat feeding and socialising as the area is otherwise quite exposed above 3.5m high, so it is crucial that planting measures are taken to restore this wind barrier as quickly as possible.

Furthermore, this area should remain unlit so not to deter bat activity, refer to lighting note for guidance.

Predicted Impacts After Mitigation

It is predicted that there will be a slight negative impact as the site is used by three bat species, however it is unlikely that roosts will be disturbed.

Appendices I

10 km radius bci data

BCIreland data: search results 7 Aug 2024
Search parameters: Roosts with observations of all species within 10000m of O105323
Roosts

Name	Grid reference	Species observed
11 Pembroke Cottages	O1929	Nyctalus leisleri
139 Stillorgan Rd	O1830	Unidentified bat
2 Louvain	O1829	Unidentified bat,Nyctalus leisleri
23 Woodbrook Park	O1228	Nyctalus leisleri
33 Inchicore Rd	O1234	Unidentified bat
36 Oaklawn Wood	O0036	Nyctalus leisleri
4 Crookshare	O0125	Unidentified bat
60 Cremore	O1227	Unidentified bat
7 Stirling Park	O1530	Unidentified bat
71 Forest Hill	O0226	Unidentified bat
Abbotstown House	O0939	Nyctalus leisleri

Airlie Stud Stable Block, Adamstown, Co. Dublin	O0233	Unidentified bat
Anna Liffey House	O0436	Pipistrellus spp. (45kHz/55kHz),Plecotus auritus
Avalon	O0041	Pipistrellus pygmaeus,Myotis mystacinus
Bailiff\\\'s/Superintendent\\\'s Lodge	O1035	Pipistrellus pygmaeus
Barnacullia	O1724	Unidentified bat
Beech Tree Roost St Catherines Park	O0135	Myotis daubentonii
Blanchardstown Hospital	O0839	Pipistrellus spp. (45kHz/55kHz),Pipistrellus pygmaeus
Boland\\\'s Mill	O1733	Pipistrellus pipistrellus (45kHz),Nyctalus leisleri
Castleknock College	O0836	Plecotus auritus,Pipistrellus pygmaeus,Pipistrellus pipistrellus (45kHz),Nyctalus leisleri,Myotis spp.
Castleknock D	O0935	Pipistrellus pygmaeus
Cheeverstown house	O1228	Pipistrellus pygmaeus
Church at St. Mary\\\'s Hospital	O1034	Plecotus auritus
Church of the Nativity of the Blessed Mary	O0326	Plecotus auritus
Deerfield House, Phoenix Park	O1135	Plecotus auritus
Dublin Electricity Generating Station building	O2033	Pipistrellus pipistrellus (45kHz)
Dunboyne Bridge	O0142	Myotis natterreri
Esker House	O0334	Pipistrellus spp. (45kHz/55kHz),Plecotus auritus
Farmleigh House	O0936	Pipistrellus pygmaeus,Nyctalus leisleri,Myotis daubentonii
Former Pathology Building	O1533	Pipistrellus pygmaeus
Grange Hill	O1625	Myotis natterreri,Pipistrellus pipistrellus (45kHz)
Hunter Residence	O0441	Pipistrellus pygmaeus,Unidentified bat
Industrial buildings, Former Paper Mills	O1730	Pipistrellus pipistrellus (45kHz)
Kingsfurze	O0835	Unidentified bat
Knockmary Hill Lodge	O1034	Pipistrellus spp. (45kHz/55kHz)
Large Clock Tower	O0936	Pipistrellus pipistrellus (45kHz)
Laundry Gate Lodge	O1235	Pipistrellus pygmaeus
Lime Tree Roost, St Catherines Park	O0136	Pipistrellus pipistrellus (45kHz)
Lucan Spa Hotel Roost	O0235	Pipistrellus spp. (45kHz/55kHz)
Luttrellstown Castle cave	O0536	Myotis daubentonii
Luttrellstown Castle folly	O0536	Plecotus auritus,Myotis natterreri
Mc Kee Barracks	O1335	Myotis mystacinus
Mock church tower	O1136	Nyctalus leisleri
Mountjoy House	O1036	Plecotus auritus

Mountjoy House building	O1036	Plecotus auritus
National Concert Hall	O1532	Pipistrellus pygmaeus
Old Industrial Site	O1434	Pipistrellus pipistrellus (45kHz)
Old shower block	O1234	Pipistrellus spp. (45kHz/55kHz)
Open fronted industrial unit	O1730	Pipistrellus pipistrellus (45kHz),Pipistrellus pygmaeus
OPW Storage Areas	O1235	Plecotus auritus
Owner unknown	o0438	Pipistrellus pipistrellus (45kHz)
Private Residence, Tobermaclugg Lane, Lucan, Co. Dublin	O0124	Nyctalus leisleri,Pipistrellus pipistrellus (45kHz)
Rathcoole House	O0126	Unidentified bat
Santry, Tree Roost	O1640	Unidentified bat
Shed at Deerkeeper\'s Lodge	O1134	Plecotus auritus
Small clock tower	O0936	Nyctalus leisleri
St Brigids Castleknock	O0837	Plecotus auritus
St Marys	O1533	Nyctalus leisleri
St Marys	O1335	Nyctalus leisleri
St Pius	O1533	Unidentified bat
Stirling Road Bridge	O0142	Myotis natterreri
Tandys Lane Farmhouse, Adamstown, Co. Dublin	O0233	Unidentified bat,Plecotus auritus
Tibradden Stableyard, Tibradden House, Rathfarnham, Dublin 16	O1424	Pipistrellus spp. (45kHz/55kHz)
Tierney Residence	O0541	Unidentified bat
Two storey house, Balgarra	O1824	Pipistrellus pipistrellus (45kHz)
Two storey house, Grasslands	O1824	Plecotus auritus,Pipistrellus pipistrellus (45kHz)
US Ambassador\\\'s residence and outbuildings	O1035	Plecotus auritus
Viking Components Europe	O1533	Unidentified bat
Warrenstown House, Blanchardstown Road North, Blanchardstown, Dublin 15	O0740	Pipistrellus pipistrellus (45kHz),Pipistrellus pygmaeus,Nyctalus leisleri,Pipistrellus spp. (45kHz/55kHz)
Whitechurch Church of Ireland	O1425	Plecotus auritus

Transects

Name	Grid reference start	Species observed

Ad-hoc observations

Survey	Grid reference	Date	Species observed

Appendices II

Legislation

Bats are protected under the 1996 Wildlife Act, the 2000 Wildlife (Amendment) Act, Stat Ist 94 of 1997, Stat Ist 378 of 2005, The Habitats Directive, The Bonn and Bern Convention, and the Euro bats agreement.

The European Community (Natural Habitats) Regulations S.I. No 94 of 1997 states:

23(1) The Minister shall take the requisite measures to establish a system of strict protection for the fauna consisting of the animal species set out in Part 1 of the First Schedule prohibiting –

a) All forms of deliberate capture or killing of specimens of those species in the wild.

1. The deterioration or destruction of breeding sites or resting places of those species.

The EU Habitats Directive

Article 12(1) of the 'Council Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora (Habitats Directive) states:

"Member States shall take the requisite measures to establish a system of strict protection for the animal species listed in Annex IV(a) and their natural range, prohibiting:

a) all forms of deliberate capture or killing of specimens of these species in the wild.

b) deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation, and migration.

c) deliberate destruction or taking of eggs from the wild.

d. deterioration or destruction of breeding sites or resting places."

The EU Habitats Directive (92/43/EEC) lists all Irish bat species in Annex IV and one Irish species, the lesser horseshoe bat (Rhinolophus hipposideros), in Annex II. Annex II includes animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation (SACs) because they are endangered, rare, vulnerable, or endemic. Annex IV includes various species that require strict protection. Article 11 of the Habitats Directive requires member states to monitor all species listed in the Habitats Directive and Article 17 requires States to report to the EU on the findings of monitoring schemes.

The Bern and Bonn Conventions

Ireland is also a signatory to a number of conservation agreements pertaining to bats such as the Bern and Bonn Conventions. The European Bats Agreement (EUROBATS) is an agreement under the Bonn Convention. Ireland and the UK are two of the 31 signatories. The Agreement has an Action Plan with priorities for implementation. Devising strategies for monitoring of populations of selected bat species in Europe is among the resolutions of EUROBATS.

1.3.1 The Bern Convention

Article 6 of the “Convention on the Conservation of European Wildlife and Natural Habitats’ (Bern Convention) reads:

“Each Contracting Party shall take appropriate and necessary legislative and administrative measures to ensure the special protection of the wild fauna species specified in Appendix II. The following will in particular be prohibited for these species:

a) all forms of deliberate capture and keeping and deliberate killing.

b) the deliberate damage to or destruction of breeding or resting sites.

c) the deliberate disturbance of wild fauna, particularly during the period of breeding, rearing and hibernation, insofar as disturbance would be significant in relation to the objectives of this Convention; ...

Appendix II lists strictly protected fauna species and this list includes “Microchiroptera, all species except Pipistrellus pipistrelles”.

The EUROBATS Agreement

The ‘Agreement on the Conservation of Populations of European Bats’ (EUROBATS) was negotiated under the ‘Convention for the Conservation of Migratory Wild Species’ (Bonn Convention) and came into force in January 1994. The legal protection of bats and their habitats are given in Article III as fundamental obligations:

“1. Each Party shall prohibit the deliberate capture, keeping or killing of bats except under permit from its competent authority.

2. Each Party shall identify those sites within its own area of jurisdiction which are important for the conservation status, including for the shelter and protection, of bats. It shall, taking into account as necessary economic and social considerations, protect such sites from damage or disturbance. In addition, each Party shall endeavour to identify and protect important feeding areas for bats from damage or disturbance.”

The Agreement covers all European bat species.

Appendices III

Bat Biology

Female bats gather in groups known as maternity roosts in summer to have their young. They generally have one baby each year, so are slow to reproduce, and disturbance of a maternity roost can be catastrophic.

In winter bats move to old stonework, trees, and caves to hibernate. They are also found in modern buildings during building work or demolition. They are especially vulnerable here as they are slow to awaken, and if tree felling is carried out without checking for bats, they can easily be killed.

Appendices IV

Songmeter mini data

DATE	TIME	HOUR	TIME-12	PULSES	
31/07/2024	23:11:24	23	11:11:24	32	LEISLER'S BAT
31/07/2024	22:15:18	22	10:15:18	31	LEISLER'S BAT
01/08/2024	02:22:11	2	14:22:11	28	LEISLER'S BAT
31/07/2024	22:16:45	22	10:16:45	25	LEISLER'S BAT
01/08/2024	01:17:54	1	13:17:54	26	LEISLER'S BAT
01/08/2024	00:40:03	0	12:40:03	21	LEISLER'S BAT
31/07/2024	22:15:28	22	10:15:28	18	LEISLER'S BAT
31/07/2024	22:11:42	22	10:11:42	20	LEISLER'S BAT
31/07/2024	22:13:59	22	10:13:59	17	LEISLER'S BAT
31/07/2024	22:14:51	22	10:14:51	18	LEISLER'S BAT
31/07/2024	22:18:06	22	10:18:06	18	LEISLER'S BAT
01/08/2024	01:28:15	1	13:28:15	14	LEISLER'S BAT
31/07/2024	22:14:07	22	10:14:07	17	LEISLER'S BAT
31/07/2024	22:27:36	22	10:27:36	12	LEISLER'S BAT
31/07/2024	22:17:04	22	10:17:04	24	LEISLER'S BAT
31/07/2024	23:28:13	23	11:28:13	11	LEISLER'S BAT
01/08/2024	01:40:50	1	13:40:50	10	LEISLER'S BAT
31/07/2024	22:11:55	22	10:11:55	10	LEISLER'S BAT

31/07/2024	22:12:55	22	10:12:55	10	LEISLER’S BAT
01/08/2024	01:34:27	1	13:34:27	7	LEISLER’S BAT
01/08/2024	00:20:07	0	12:20:07	8	LEISLER’S BAT
31/07/2024	22:12:22	22	10:12:22	11	LEISLER’S BAT
31/07/2024	22:16:58	22	10:16:58	6	LEISLER’S BAT
01/08/2024	01:47:15	1	13:47:15	8	LEISLER’S BAT
31/07/2024	22:12:11	22	10:12:11	5	LEISLER’S BAT
31/07/2024	22:53:26	22	10:53:26	7	LEISLER’S BAT
31/07/2024	22:00:04	22	10:00:04	12	LEISLER’S BAT
31/07/2024	23:39:30	23	11:39:30	4	LEISLER’S BAT
31/07/2024	23:56:27	23	11:56:27	4	LEISLER’S BAT
31/07/2024	21:56:26	21	09:56:26	3	LEISLER’S BAT
31/07/2024	22:13:48	22	10:13:48	3	LEISLER’S BAT
31/07/2024	23:11:34	23	11:11:34	2	LEISLER’S BAT
01/08/2024	02:34:32	2	14:34:32	3	COMMON
01/08/2024	02:40:47	2	14:40:47	5	SOPRANO
01/08/2024	03:05:41	3	15:05:41	4	SOPRANO
01/08/2024	03:06:02	3	15:06:02	5	COMMON
01/08/2024	03:11:50	3	15:11:50	2	NoID
01/08/2024	03:11:08	3	15:11:08	6	NoID
01/08/2024	03:13:31	3	15:13:31	3	NoID
01/08/2024	03:12:55	3	15:12:55	7	NoID
01/08/2024	03:23:55	3	15:23:55	3	COMMON
01/08/2024	03:30:06	3	15:30:06	3	COMMON

01/08/2024	01:28:25	1	13:28:25		LEISLER'S BAT
01/08/2024	04:23:54	4	16:23:54		COMMON
01/08/2024	04:24:22	4	16:24:22		COMMON
01/08/2024	04:24:35	4	16:24:35		COMMON
01/08/2024	04:24:48	4	16:24:48		COMMON
01/08/2024	04:31:37	4	16:31:37		COMMON
01/08/2024	04:37:43	4	16:37:43		COMMON
01/08/2024	04:40:45	4	16:40:45		COMMON
01/08/2024	04:42:46	4	16:42:46		COMMON
01/08/2024	04:43:48	4	16:43:48		COMMON
01/08/2024	03:34:21	3	15:34:21	66	COMMON
01/08/2024	03:10:09	3	15:10:09	67	COMMON
01/08/2024	04:24:38	4	16:24:38	33	COMMON
01/08/2024	03:27:36	3	15:27:36	26	COMMON
01/08/2024	03:36:04	3	15:36:04	26	COMMON
01/08/2024	03:37:36	3	15:37:36	27	COMMON
01/08/2024	04:15:22	4	16:15:22	27	COMMON
01/08/2024	04:17:47	4	16:17:47	27	COMMON
01/08/2024	04:14:11	4	16:14:11	28	COMMON
01/08/2024	04:41:15	4	16:41:15	28	COMMON
01/08/2024	04:42:00	4	16:42:00	28	COMMON
01/08/2024	03:13:54	3	15:13:54	2	SOPRANO

Night 2 mini

DATE	TIME	HOUR-12	PULSES	MANUAL ID
07/08/2024	05:27:44	17	30	LEISLER'S BAT
07/08/2024	05:27:54	17	18	LEISLER'S BAT
07/08/2024	05:34:28	17	20	
07/08/2024	02:40:20	14	21	
06/08/2024	21:11:54	9	5	LEISLER'S BAT
06/08/2024	21:50:12	9	5	LEISLER'S BAT
06/08/2024	22:19:55	10	2	
07/08/2024	02:40:30	14	3	
07/08/2024	01:06:07	13	37	
07/08/2024	01:33:40	13	25	
07/08/2024	01:10:07	13	24	
07/08/2024	01:10:17	13	2	
06/08/2024	22:27:05	10	76	
07/08/2024	04:12:05	16	56	
06/08/2024	23:13:53	11	44	
07/08/2024	01:47:20	13	48	
07/08/2024	05:10:18	17	40	
06/08/2024	21:56:48	9	38	
06/08/2024	22:27:15	10	32	
07/08/2024	01:02:55	13	28	
07/08/2024	03:31:16	15	28	
06/08/2024	22:33:55	10	24	
07/08/2024	01:03:13	13	23	SOPRANO

07/08/2024	03:53:37	15	23	SOPRANO
07/08/2024	01:08:05	13	23	SOPRANO
07/08/2024	00:58:07	12	23	
07/08/2024	00:58:17	12	12	
07/08/2024	01:47:49	13	11	SOPRANO

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