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ECOLOGICAL IMPACT ASSESSMENT REPORT

for

**RATHCOOLE AGE-FRIENDLY DEVELOPMENT
TAY LANE, NEWCASTLE ROAD ,
RATHCOOLE,
DUBLIN 24**

On behalf of

Riverside Projects Limited

AUGUST 2022

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1 INTRODUCTION

Gannon + Associates were commissioned by Riverside Projects Limited, the applicant, to produce an Ecological Impact Assessment (EiA) report, including a bat roost inspection and emergence survey, in regards to the proposed development at Tay Lane, Newcastle Road, Rathcoole, Dublin 24. The proposed development broadly comprises the construction of 58no. elderly housing units.



FIGURE 1. OVERVIEW OF APPLICATION SITE LOCATION (SOURCE - BING 'BIRD'S EYE' IMAGERY).

2 METHODOLOGY

2.1 Scope of Assessment

The scope of the assessment outlined in this report comprises the following:

- Undertake desktop assessment and ecological surveys to establish the baseline environment, and evaluate the nature conservation importance of the application site;
- Identify and assess the potential direct, indirect and/or cumulative ecological impacts of the proposed project during its lifetime; and
- Where necessary, propose mitigation measures to remove or reduce those impacts at the appropriate stage of the development.

2.2 Guidance and Legislation

This report was prepared having regard to the following legislation:

- Planning and Development Acts and Regulations 2000-2015;
- Wildlife Act 1976 and Wildlife (Amendment) Act 2000;

- Flora (Protection) Order 2015; and
- European Communities (Birds and Natural Habitats) Regulations 2011.

In addition, the assessment was carried out with regard to the following guidance and best-practice documents:

- Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2019);
- Guidelines for Ecological Report Writing (CIEEM, 2017);
- Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes (NRA, 2009);
- A Guide to Habitats in Ireland (Fossit, 2000);
- Best Practice Guidance for Habitat Survey and Mapping (Smith *et al.*, 2011);
- Bat Surveys for Professional Ecologists: Good Practice Guidelines, third edition (Collins, 2016); and
- Bat Tree Habitat Key. AECOL, Bridgwater, (Andrews, H *et al.*, 2013).

2.3 Desktop Assessment

A detailed desktop assessment was carried out in order to identify any features of ecological importance which have the potential to be affected by the proposed development. This desktop assessment, completed in November 2021, relied on the following resources:

- Information on species records and distributions, obtained from the National Biodiversity Data Centre (NBDC) at maps.biodiversityireland.ie;
- Information on European sites and their qualifying features and conservation objectives, available from the National Parks and Wildlife Service (NPWS) at www.npws.ie;
- Information on waterbodies, water quality data and catchment areas available from the Environmental Protection Agency (EPA) at www.epa.ie;
- Information on geology, soils and hydrogeology available from the Geological Society of Ireland (GSI) available at www.gsi.ie;
- Satellite imagery and mapping available from multiple sources including: Ordnance Survey Ireland (OSI), Google, Bing and Digital Globe;
- Information on the status of EU protected species and habitats in Ireland (NPWS 2019a & 2019b); and
- Information on any relevant consented, in-progress or existing developments available from the respective County Council online resources.

2.4 Field Survey

Ecological field surveys were carried out by a qualified ecologist with Gannon + Associates on 27th September 2021. The methodologies followed as part of the field survey are outlined below.

2.4.1 Habitats and Flora

The habitat survey was carried out at the application site in accordance Smith *et al.* (2011) and habitats were classified to level 3 in accordance with Fossit (2000).

The application site was also searched for the presence any invasive plant species (i.e. those listed on Part 1 of the Third Schedule of S.I No. 477 of 2011, European Communities (Birds and Natural Habitats) Regulations 2011), in addition to any species protected under the Flora Protection Order 2015.

2.4.2 Non-volant Mammals

The mammal survey involved a thorough search of the application site for any signs of mammal activity. Signs searched for included, but were not limited to, the following:

- Tracks and paths;
- Droppings and/or latrines;
- Hairs;
- Resting places (e.g. setts, holts, couches, earths etc.)
- Snuffle holes; and
- Feeding remains.

2.4.3 Bats

2.4.3.1 Roost Inspection Survey

A roost inspection survey was carried out at the single storey derelict structure within the application site, in addition to any suitable trees. This survey was carried out in-line with the best practice methods outlined in the Bat Conservation Trusts "*Bat Surveys for Professional Ecologists*" (Collins, 2016).

A thorough search of the structure was conducted during daylight hours and included both the exterior and interior of the building. The building has been extensively damaged by fire, with some sections fully collapsed. The survey involved a search for evidence of bat presence within the structure, including, but not limited to:

- Droppings;
- Fur-oil stains and scratch marks,
- Dead specimens;
- Urine splashes;
- Prey items (moth/butterfly wings etc.); and
- Audible squeaking.

The survey also involved a ground-level visual assessment of trees within the proposed development site and immediate vicinity. Trees were searched, using binoculars for magnification where necessary, for the presence of potential roost features (PRF). This was carried out with accordance to the methodology given in the *Bat Tree Habitat Key* (Andrews *et al.*, 2013). The categories of potential roost features searched for are listed in Table 2 below (from Andrews *et al.* (2013)).

TABLE 1. POTENTIAL ROOST FEATURE (PRF) CATEGORIES (ANDREWS ET AL, 2013).

Decay-related PRFs	Damage-related PRFs
Woodpecker holes	Hazard-beams
Knot-holes	Frost-cracks
Flush-cuts	Subsidence, Shearing & helical spits
Tear-outs	Lightning-strikes
Double-leaders	Impact-shatters
Wounds & Cankers	Desiccation-fissures

Butt rots	Transverse-snaps
-	Lifting bark

2.4.3.2 Dusk Emergence Survey

A bat emergence survey was carried out on the single storey derelict structure by Gannon + Associates on 27th September 2021 using direct observation and handheld bat detectors (both heterodyne and full-spectrum). The purpose of the emergence survey was to determine the presence of roosting bats in the building via the direct detection of emerging bats post-sunset. The survey focussed on any potential entry/exit points identified during the roost assessment survey. The survey also assessed the levels of bat activity and species composition present within the immediate area of the proposed development site, in addition to identifying any important landscape connectivity features and/or foraging habitats.

The emergence survey followed the best practice methods outlined in the Bat Conservation Trusts “*Bat Surveys for Professional Ecologists*” (Collins, 2016). The survey commenced c.15 minutes prior to sunset and concluded c.2 hours post-sunset. Temperatures were mild and ranged from c.15 - 11°C with light winds and some light precipitation at the beginning of the survey period. Any bats detected emerging from the structure were recorded on field sheets and maps, as was any general bat activity in the immediate area.

2.4.4 Other protected fauna

Other protected fauna were recorded on a ‘as seen’ basis during the course of the field survey. The habitats within the application site were assessed for their potential to support protected species.





3 BASELINE ENVIRONMENT

3.1 Site Overview

The application site is located within Rathcoole town in west Co. Dublin. The site is bounded to the north by the N7 and an existing dwelling, to the east and west by residential developments, and to the south by an area of hardstanding. The only structure within the site is a small derelict single storey flat-roofed building that has been damaged by fire.

There are no surface water bodies present within the proposed development site. The Greenoge Stream (EPA code: 09G31) flows along Tay Lane at the western boundary of the site. This watercourse is largely culverted along its length through Rathcoole town and is culverted along the length of the site boundary. The channel briefly opens up before flowing north under the N7. The Greenoge Stream flows north after emerging from the N7 culvert for a total of c.2km where it then joins the Grifeen River (09G01). The Grifeen River flows north through west Dublin, where it ultimately enters the River Liffey at Lucan over 10km further downstream. The River Liffey outflows to the Irish Sea at Dublin Port.

3.2 Outputs of Desktop Assessment

3.2.1 Designated Sites

The site is wholly outside any nationally or internationally designated sites, and there are no such sites within the immediate surrounding area. The closest European site to the application site is the Glensamole Valley SAC, situated over 7km to the south-east. An appropriate assessment screening concluded that there is no potential for significant effects on any European site from the proposed development. Further information on European sites in relation to the proposed development is provided in the accompanying 'Report to Inform Screening for Appropriate Assessment'.

There are no NHAs within the surrounding area of the proposed development site. The closest nationally designated site is the Slade of Saggart and Crooksling Glen pNHA¹, situated approximately 2.5km to the south-east. This site is upstream and within a different surface water catchment area to the proposed development. Similarly, there is no connectivity to other pNHAs within the surrounding area (e.g. Lugmore Glen pNHA, Dodder Valley pNHA, Grand Canal pNHA etc.).

3.2.2 National Biodiversity Data Centre Records

The National Biodiversity Centre database was searched for records of protected species from within the 2km and 1km grid squares which encompasses the application site (O02D and O0126 respectively). The records from these grid square comprise some common flowering plants, a range of invertebrates, some commonly occurring urban birds (mallard, hooded crow etc.) badger, hedgehog and a number of bat species: common pipistrelle, soprano pipistrelle and Lesiler's bat.

3.2.3 EPA Water Framework Directive Fish Stock Surveys

Fish stock surveys were carried out by the EPA at sites within the Eastern River Basin District in summer of 2011 as part of the programme of sampling fish for the Water Framework Directive. This included the

¹ Proposed Natural Heritage Areas (pNHA) were published on a non-statutory basis in 1995 and have not since been statutorily proposed or designated.

Griffen River in west Dublin. The Greenoge Stream, which flows adjacent to the western boundary of the proposed development site, ultimately outflows to the Griffen River.

Surveys were carried out at two sites along the river. A total of four fish species were recorded: three-spined stickleback, brown trout, roach and eel (Kelly *et al*, 2011).

3.2.4 Results of Previous Ecological Assessments

A review of past ecological surveys and assessments which were carried out within proximity to the application site was also undertaken to inform this assessment. The results of relevant surveys and assessments are presented below.

Residential development, Predergast Lands, Rathcoole, Dublin 24

Ecological surveys were carried out in August 2017 for a residential development at the southern edge of Rathcoole town, approximately 600m from the proposed development site. Surveys recorded no evidence of protected mammal species within the site (e.g. otter, badger, Irish hare etc.). No suitable bat roosting habitats were recorded and birds recorded within the site comprised commonly occurring sub-urban species (woodpigeon, starling, etc.).

Warehouse development, Greenogue, Rathcoole, Dublin 24

Bat surveys were undertaken at the development site in summer 2018. Three species of bat were recorded foraging within the site: common pipistrelle, soprano pipistrelle and Lesiler's bat. No bat roosts were identified.

3.3 Outputs of Field Surveys

3.3.1 Habitats and Flora

The following habitats were recorded within the proposed development site. These habitats were classified according to Fossitt (2000) and identified to level 3.

- BL3 Buildings and Artificial Surfaces;
- WS1 Scrub;
- WL1 Hedgerows;
- WL2 Treelines; and
- ED3 Recolonising Bare Ground.



FIGURE 4. AREA OF HARDSTANDING, RECOLONISING BARE GROUND AND DENSE SCRUB WITHIN SITE.

The application site comprises an area of hardstanding (BL3) in the southern section of the site, much of which has been recolonised by vegetation (ED3), and area of dense scrub and immature trees in the northern section of the site. Species recorded across the areas of recolonising bare ground include rosebay willow-herb, perennial rye-grass, cock's foot, red clover, pineapple weed, nettle, ivy, ragwort, field horsetail and broad-leaved dock. Scrub (WS1) comprising largely bramble, ivy, nettle, butterfly bush and immature willows has also established across much of this section of the site.

There is a hedgerow (WL1) along the southern boundary of the site, and a treeline (WL2) of mature cypress trees occurs in the centre of the site. A further treeline of poplar trees occurs along the boundary with the N7. During the site visit, the northern section of the site, between these two treelines, comprised of scrub with some stand-alone trees (largely cypress and birch). This has since been cleared (outside of the bird nesting season), and currently comprises some stand-alone birch trees.



FIGURE 5. TREELINE AT BOUNDARY OF SITE WITH N7.

No invasive species listed under the Part 1 of the Third Schedule were recorded within the proposed development site during the site surveys.

3.3.2 Birds

A number of commonly occurring birds were recorded during the site survey, including feral pigeon, magpie, jackdaw, starling, wren, and blackbird. It is possible that the scrub, hedgerows and trees within the site are utilised as nesting habitat by some of commonly occurring urban birds.

The site does not contain any habitats such as would be expected to support any designated avifauna and/or significant populations of species of conservation concern.

3.3.3 Non-volant Mammals

No evidence of any protected mammal species was recorded within the application site during the field assessment. The application site comprises hardstanding and areas of dense scrub directly adjacent to a extremely busy national road. It is likely that fox and other ubiquitous urban mammals (e.g. hedgehog, brown rat, house mouse etc.) utilise the site of occasion.

3.3.4 Bats

The results of the bat roost inspection survey and dusk emergence survey carried out at the application site are outlined below.

3.3.4.1 Roost Inspection Survey

The only structure within the site is a small derelict single storey flat-roofed building that has been damaged by fire. This structure provides little to no shelter to support roosting bats. There is no attic space within the building, the roof has entirely collapsed and the interior heavily overgrown with vegetation. Similarly, there are no intact windows or doors remaining on the structure.



FIGURE 6. SINGLE STOREY STRUCTURE WITHIN PROPOSED DEVELOPMENT SITE.

The structure was thoroughly searched for any evidence of roosting bats. This included, but was not limited to, the following areas:

- External plaster, soffits, fascia boards etc. for grease stains and scratch marks;
- External paving, window sills and window sills, floors and walls for bat droppings;
- Where possible in suitable crevices for live bats;

- Walls and corner areas for perching stains and scratch marks; and
- Floors and surfaces for discarded moth and butterfly wings.

No evidence of roosting bats was recorded in the interior or exterior of the structure during the survey. The building does not contain features considered suitable for roosting bats. In addition, considerable light-spill was noted within the site from the adjoining residential developments and street lighting to the east and west of the site.

3.3.4.2 Dusk Emergence Survey

No bats were recorded emerging from the structure during the emergence survey. There were very low levels of incidental activity recorded in the surrounding area, comprising one Lesser's bat commuting to the south of the proposed development site.

3.3.5 Other protected fauna

There are no watercourses or wetland areas within the site and no suitable habitat for amphibians (i.e. common frog and/or smooth newt) was recorded within the site. As there are no watercourses within the site, similarly there is no potential for any protected aquatic species (e.g. lampreys, white-clawed crayfish, salmon etc.). These species were not recorded within the Grifeen River during EPA surveys, and likely do not occur along the Greenoge Stream.

The proposed development does not contain suitable habitat for marsh fritillary butterfly. No individuals, or their larval webs, were recorded within the proposed development site. In addition, devil's bit scabious, the host plant of the marsh fritillary, was not recorded within the proposed development site.

4 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The proposed development will principally consist of the construction of a four storey apartment block consisting of 58no. age-friendly residential apartments comprising 20 no. 1-bedroom units and 38no. 2-bedroom units. The proposed development also includes the provision of an ancillary community facility, associated accommodation including refuse stores and cycle stores, car and cycle parking, landscaped communal and public open space and boundary treatment works. Planning permission is also sought for internal access roads and pedestrian / cycle pathways and linkages, public lighting, landscaping, and all associated site and development works to facilitate the proposed development.

5 IMPACT ASSESSMENT

The potential impacts on the ecological receptors identified from the proposed development are outlined below. The proposed development site is situated in an urban environment and contains little elements of ecological value. The only ecological receptors identified from desktop study and field surveys relate to foraging bats and the general breeding bird assemblage at the site.

5.1 Construction Phase

5.1.1 Bird assemblage

Loss of habitat

The proposed development will result in the loss of areas of potential nesting habitat for commonly occurring urban breeding birds - namely the scrub, hedgerow and centre treeline within the development site. These areas do not comprise high value habitats, and there are considerable more suitable nesting and foraging habitats for such birds in the wider locality, primarily within nearby residential gardens and surrounding farmland. Considering the small area of habitat to be removed, and the availability of suitable, alternative habitat within the wider environment, the loss of this habitat is considered to be negligible.

Disturbance

The removal of suitable nesting habitat during the breeding season has the potential to result in the direct loss of nests and eggs/hatchlings. Should vegetation removal take place during the breeding season, this would comprise a negative impact on the local bird assemblage.

5.1.2 Bat assemblage

Loss of habitat

No bat roosts or suitable roosting features were recorded within the proposed development site. The proposed development will result in the loss of some minor areas of potential foraging habitat for bats - namely the scrub, hedgerow and centre treeline within the development site. However, considering the small area of habitat to be removed, the presence of existing light-spill within the site, and the availability of suitable, alternative habitat within the wider environment, the loss of this habitat is considered to be negligible.

Landscape connectivity

Landscape connectivity is an important element in the assessment of developments on local bat populations (Frey-Ehrenbold *et al.*, 2013). The proposed development is situated within an urban environment and is bordered on all sides by existing developments and a busy national road. Lighting associated with these developments and roads represents a barrier to bat movement within the area. The proposed development is not considered to form an important landscape connectivity function for bat species. The proposed development will therefore not result in any significant negative effects on local bat populations in terms of impacts to wider landscape connectivity.

5.2 Operational Phase

There are no impacts on ecological receptors anticipated from the operational phase of the proposed development.

6 CONCLUSION

It is considered that, provided mitigation measures proposed are carried out in full, there will not be any significant negative impact to any valued habitats, designated sites or individual or group of species as a result of the proposed development.

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