



PRELIMINARY BAT ROOST ASSESSMENT
REPORT FOR THE PROPOSED DEVELOPMENT
OF A SOCIAL AND AFFORDABLE HOUSING
SCHEME WITH CIVIC SPACE, BALLYBURKE
ROAD, KNOCKNACARRRA , GALWAY, CO.
GALWAY FOR GALWAY CITY
COUNCIL_ENV_GCC_005

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1. Introduction

Envirico has been commissioned by Galway City Council, to undertake ecological surveys of a proposed development site located at, Ballyburke Road, Knocknacarra, Galway City, Co. Galway.

A description of the proposed works is presented in Section 3. See **Appendix I – Site Pictures** for pictures of the general site and each of the potential bat roosting features.

The purpose of this preliminary bat roost assessment report is to determine the potential presence or absence of bats on site. Site layout and figures can be found in **Appendix II – Site Figures**. Envirico ecologists were on site on the 14th and 15th of July 2023 to carry out inspections.

1.1 Site Owner/Manager

Galway City Council

1.2 Site Address

Ballyburke Road, Knockacarra, Galway City, Co. Galway

1.3 Site GPS Co-Ordinates

53.270148, -9.120784

1.4 Scope of Survey

This survey covered the following items:

- External inspection of potential roosting sites (i.e. buildings and trees) within the proposed development site.
- Recommendations for further surveying if required.

1.5 Survey Limitations:

While every effort was taken to identify the presence external roost entry points on the site, this survey consisted of an external visual inspection only and cannot be taken as a guarantee as to the presence or absence of Bat species on site.

2. Site Description

The proposed development site in Ballyburke, is a semi natural habitat probably due to undergoing no management practice. The site consists of habitats such as recolonising bare ground (ED3), spoil and bare ground (ED2), earth banks (BL2), abandoned grassland areas (GS2) and scrub (WS1). These habitats are within what is a 'greenfield site' where recent development was observed on site. To the north east of the site, where the proposed development is planned, there is an occupied house and treelines associated with the garden of the house. These habitats, as well as the occupied house were searched for features that may be potential bat roosts.

3. Proposed Development

The proposed development site is located in Ballyburke, Knockacarra Co. Galway. The proposed development consists of demolishing one existing dwelling to allow for consolidating of the lands owned by Galway City Council to develop a key new “Local Centre” housing development. The Galway City Development Plan 2017-2023 and the newly adopted development plan 2023-2029 highlights the site as significant in the area and requires the need for establishing a local centre. The focal point of this new local centre will be a central plaza area with local commercial units fronting onto it. This will provide for a communal open space which will serve the local and surrounding areas. It is envisioned, in line with the development plan, that local services will be provided in these units such as a convenience store, café, hairdresser etc.

84 residential units are proposed and are broken up into 71 apartments across four blocks and 13 terraced family units across two blocks. Of the apartments proposed 40% of these are designed as age friendly / universal design units which by being located adjacent to the local centre services proposed will be very accessible. There are a high proportion of 3/4 bedroom family houses in the area. With an ever-changing demographic these units over the long term will facilitate downsizers moving to more suitable housing, while also living close to their local community. The proposed layout of the site responds to existing established pattern of development in that the building lines of the proposed apartment blocks south of Maoilin and Drisin align with the existing building line of these estates. The treatment of the proposed building heights in these areas also responds to the adjacent form of 2 storey development in that the apartment blocks step up from 2 storey elements adjacent the existing housing developments to limit any overshadowing concerns and raise up to 3-6 storey elements where applicable in order to ensure a suitable density is achieved on the site. Terraced housing is proposed to the North East corner of the site to integrate with the existing terraced housing of Drisin whilst also providing for a pedestrian/cycle link onto the existing Ballymoneen road to the west.

Site layout and figures can be found in **Appendix II – Site Figures**

4. Bats in Ireland

All species of bats in Ireland are listed in Annex IV of the Habitats Directive (92/43/EEC) which requires their strict protection within their natural range. It is prohibited under Article 12 of the Directive to deliberately capture, kill, or disturb these species or to destroy or damage breeding sites or resting places of such listed species. The Habitats Directive is transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). Similarly, the Wildlife Act 1976 and subsequent amendments provides protection to animals of National importance, including bats.

Bats roost in trees, buildings, bridges and anywhere where suitable crevices remain for them to enter and exit. Bats tend to roost in old abandoned buildings, attics, roof cavities and crevices. During this assessment a number of guidance documents were assessed, including;

- Andrews, H. & Gardener, M., (2016). Bat Tree Habitat Key – Database Report 2016. Bridgwater: AEcol.
- Collins, J., (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Edition, Bat Conservation Trust, London
- Hundt, L., (2012). Bat Surveys: Good Practice Guidelines, 2nd Edition. Bat Conservation Trust, London
- Kelleher, C. & Marnell, F., (2006). Bat Mitigation Guidelines for Ireland. Irish Wildlife Manuals, No. 25. Dublin: National Parks and Wildlife Service, Department of Environment, Heritage and Local Government.

5. Desktop Assessment

An ecological desktop review was undertaken on the 21st July 2023 to appraise existing documentation and data sets containing information on bat observations, bat related protected sites and bat habitat potential within the area. Sources, publications and datasets consulted included;

- Species and habitat records from the National Biodiversity Data Centre;
- Aerial photography and 1:50000 mapping;
- Bat Habitat Suitability Index maps (Lundy *et al.*, 2011);
- Details and Qualifying Interests of protected European sites.

The Bat Habitat Suitability Index provides maps which detail the suitability of habitat for bats within Ireland and helps predict where bat species might occur (Lundy *et al.*, 2011). The maps are constructed using spatial units of the OSI National Grid whereby these spatial units are given a Bat Habitat Suitability Index ranging from 0 to 100 with 0 being the least favourable and 100 being the most favourable for bats.

The area encompassing the proposed development around the Ballyburke and Ballymoneen Roads, Knockacarra, holds an overall Bat Suitability Index of 37.44 for all bat species, indicating a relatively low suitability for bats in general in the area. However, when broken down by individual bat species, the Index suggests that favourable habitat may be present for at least seven species. The Habitat Suitability Indices for each of these species are shown in Table 1 below:

Table 1: Habitat Suitability Index

Common Name	Scientific Name	Habitat Suitability Index
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	48
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	57
Nathusius' pipistrelle	<i>Pipistrellus nathusii</i>	11
Brown Long-Eared Bat	<i>Plecotus auritus</i>	56
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	3
Daubenton's Bat	<i>Myotis daubentonii</i>	37
Natterer's Bat	<i>Myotis nattereri</i>	42
Whiskered Bat	<i>Myotis mystacinus</i>	34
Leisler's Bat	<i>Nyctalus leisleri</i>	49

Bat species' records from the National Biodiversity Data Centre, (NBDC), were assessed within the 2km grid square (M22) that encompasses the proposed development site. This data search revealed that no bat species were recorded within the 2km grid square that encompassed the site. The search was expanded to a 10km grid square that encompassed the site and the wider surrounds and returned records for seven bat species; Daubenton's Bat (*Myotis daubentonii*) last recorded in August 2014, Lesser Horseshoe Bat (*Rhinolophus hipposideros*) last recorded in January 2015, Brown Long-eared Bat (*Plecotus auratus*) last recorded in May 2007, Lesser Noctule (*Nyctalus leisleri*) last recorded in May 2015, Natterer's Bat (*Myotis nattereri*) last recorded in May 2005, Common Pipistrelle (*Pipistrellus pipistrellus*) last recorded in May 2014 and Soprano Pipistrelle (*Pipistrellus pygmaeus*) last recorded in May 2014.

6. Methodology

6.1 Preliminary Roost Assessment (Collins, 2016)

A preliminary roost assessment is a detailed inspection of the exterior and interior of a structure to look for features that bat could use for entry/exit and roosting and to search for signs of bats (Collins, 2016). The overall aim of this survey is to determine the presence of bats and the need for further survey and mitigation as a result. In many cases it is not possible to access all sections of a structure, therefore an absence of bat evidence does not equate to an absence of bats.

A detailed examination of features should be carried out during daylight, systematically through all parts of the structure. External feature searches should include windows, peeling paint, fascia, gaps under roofing felt, under tiles etc. Internal feature searches should include access points, attics and any other crevices/areas suitable as roosting habitat. During both internal and external searches evidence of droppings, dead specimens, urine splashes, fur-oil stains, feeding remains, etc. should be looked for. For trees horizontal and/or vertical cracks along tree limbs or trunk, knot holes, cankers, voids, crevices (including lifting bark) and thick ivy growth (stems should be a minimum of 50mm diameter) should all be assessed.

This survey type can be carried out at any time of the year under any weather conditions. Once roosting features are noted their suitability to hold roosting bats is then determined. Table 2 details the description of the characteristics of roosting features as per their bat suitability.

Table 2: Bat roost suitability (Collins, 2016)

Suitability	Description of Roosting habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain Potential Roosting Features (PRFs) but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

7. Survey Findings

7.1 Preliminary Roost Assessment

An external feature preliminary roost assessment was undertaken on the 16th June 2023, with the aim of assessing potential roosting features within the site. Survey conditions are noted in Table 3. During the assessment, potential bat roost activity was observed under gaps under fascia, with grease stains, of existing prefab buildings. A gap over piping was noted on the north of the buildings. A large proportion of the buildings appear to be in disrepair or hold notable cavities, potentially leading to the development of such features. **Appendix II – Site Figures.**

Table 3: Date and conditions during the preliminary roost assessment

Date	Time	Cloud cover	Precipitation	Wind	Temperature	Habitat surveyed
14 th & 15 th July 2023	16:00 to 17.30 Fri 17.00 to 18.00 Sat	100%	Frequent thunder showers	F0-1	20° C	Greenfield site consisting of habitats such as recolonising bare ground, earth banks, scrub, treelines, dry meadows grassy verges, wet grassland, amenity grassland, stream and occupied dwelling house

Table 4: Results of the preliminary roost assessment

Structure	Location	Description	Structure proposed to be removed?	Bat roost potential
Greenfield	ITM 525231, 725020	Greenfield site with numerous habitats, ranging from grassland, scrub, bare ground. No PBRs within the greenfield site.	Yes	Low
Treeline at east of site – by greenfield site and houses	ITM 525408, 725041	Non-native mature tree line of conifer species. These trees are ivy covered with numerous branches. Potential to support small roosts, but no bat activity observed during this survey.	Not known at this time of survey	Low
Gap in fascia at north facing gable of house	ITM 525373, 725057	Gap present in the fascia of the apex of the roof at the North facing apex. Potential access for bats to roost in the internal fabric of the roof structure. No signs of bat activity around this feature.	Yes	Low
Gap between roof slates and fascia at same location	ITM 525373, 725057	Gap present between the roof slates and the fascia at the apex of the roof at the North facing gable of the building. Potential access for bats to the roof interior. No signs of bat activity around this feature.	Yes	Low
Gap in fascia at gable facing West	ITM 525362, 725052	Gap in the fascia at the apex of the roof at the West facing gable, there is a gap where the two fascia boards meet. Potential access for bats to enter the roof or crevice spaces. No signs of bat activity around this feature.	Yes	Low

Gaps in chimney structure	ITM 525368, 725047	In the chimney structure, there appears to be crevices in the concrete where some concrete has deteriorated and fallen away. These crevices may support bat roosts but may not be deep enough to provide sufficient roosting habitat.	Yes	Low
Unoccupied dwelling house	ITM 0526242 0724420	Significant gaps between roof tiles and fascia, may provide entry if not blocked by ceiling felt, difficult to make out if entry to attic space was provided on west facing gable. No signs of bat activity	Yes	Low
Holes in fascia	ITM 525374, 725043	At the back of the house (South facing gable), there are two holes drilled into the fascia for two pipes. The holes potentially may be of a large enough diameter for bats to enter the fascia to roost. However, no signs of bat activity (staining, droppings etc) were observed.	Yes	Low
Break in fascia material	ITM 525387, 725050	At the east facing gable of the house, there is a section of fascia that is broken away. This may provide potential for bats to enter the fabric of the building to roost. No signs of bat activity observed	Yes	Low
Ivy covered trees	ITM 525405, 725051	In the garden of the house, there are ivy covered non-native conifer trees. They may provide some potential, however, due to the presence of foliage, this was difficult to observe. No signs of bat activity in these features.	Not known at this time of survey	Low

8. Recommendations

Confirmatory surveys are required following evidence of potential bat presence found during the site walkovers. It is recommended that follow up Emergence/Re-entry Surveys are carried out at points of interest noted in Section 7. Owing to the general state of disrepair of some structures on site it is further recommended that any buildings due for renovation, repair, repointing or demolition are assessed internally for potential roost features. If buildings are to be demolished care must be taken and if a bat is identified or observed to be flying from the building when demolition occurs, all works must stop and the National Parks and Wildlife Services (NPWS) be called immediately.

- If trees on site must be felled, it should be completed in the period of late August to late October/early November, (during which bats are capable of flight and thus can avoid).
- A close-up inspection of the trees should be completed immediately prior to felling, utilising the appropriate equipment, (endoscope, torch and bat detector), and access to a hoist or teleporter is essential for the assessment of potential roosting features and crevices.

9. References

Andrews, H. & Gardener, M., (2016). Bat Tree Habitat Key – Database Report 2016. Bridgwater: AEcol.

Collins J., (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Edition. Bat Conservation Trust, London

Hundt, L., (2012). Bat Surveys: Good Practice Guidelines, 2nd Edition. Bat Conservation Trust, London

Kelleher, C. & Marnell, F., (2006). Bat Mitigation Guidelines for Ireland. Irish Wildlife Manuals, No. 25. Dublin: National Parks and Wildlife Service, Department of Environment, Heritage and Local Government.

Lundy, M.G., Aughney, T., Montgomery, W.I., & Roche, N., (2011). Landscape conservation for Irish bats & species specific roosting characteristics. Bat Conservation Ireland.

Appendix I – Site Pictures



Photo 1: Treeline at east of site by greenfield site and houses



Photo 2: Treeline at east of site by greenfield site and houses



Photo 3: Gap in fascia and between fascia and brick wall in north facing gable of house



Photo 4: Gap in fascia in gable facing west



Photo 5: Gaps in structure of chimney



Photo 6: Holes for 2 outlet pipes



Photo 7: Missing piece of fascia on east facing gable of house



Photo 8: Non-native coniferous treeline

Appendix II – Site Figures

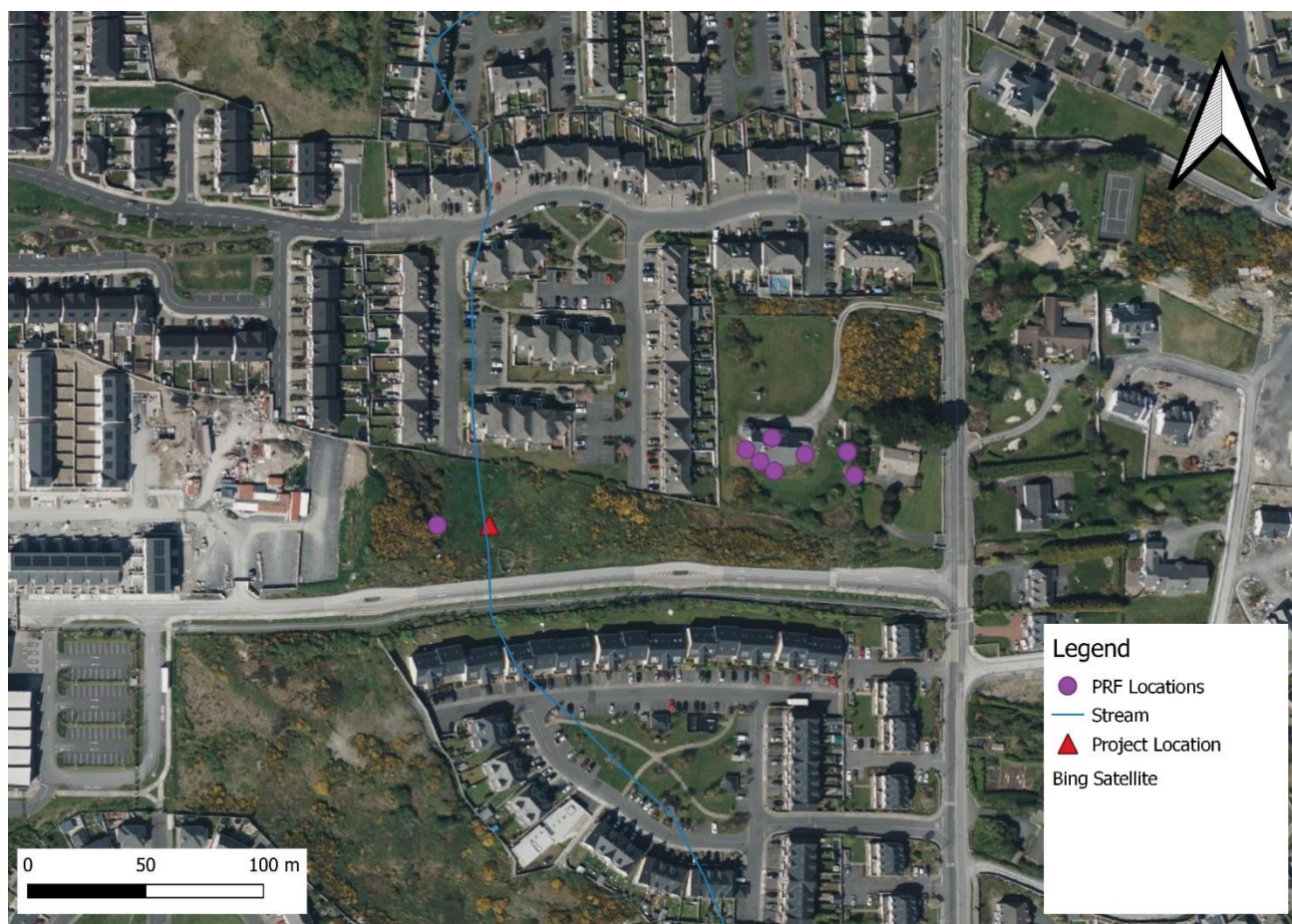


Figure 1: PRF locations within proposed development site in Ballyburke



Figure 2: Habitat map of proposed development site

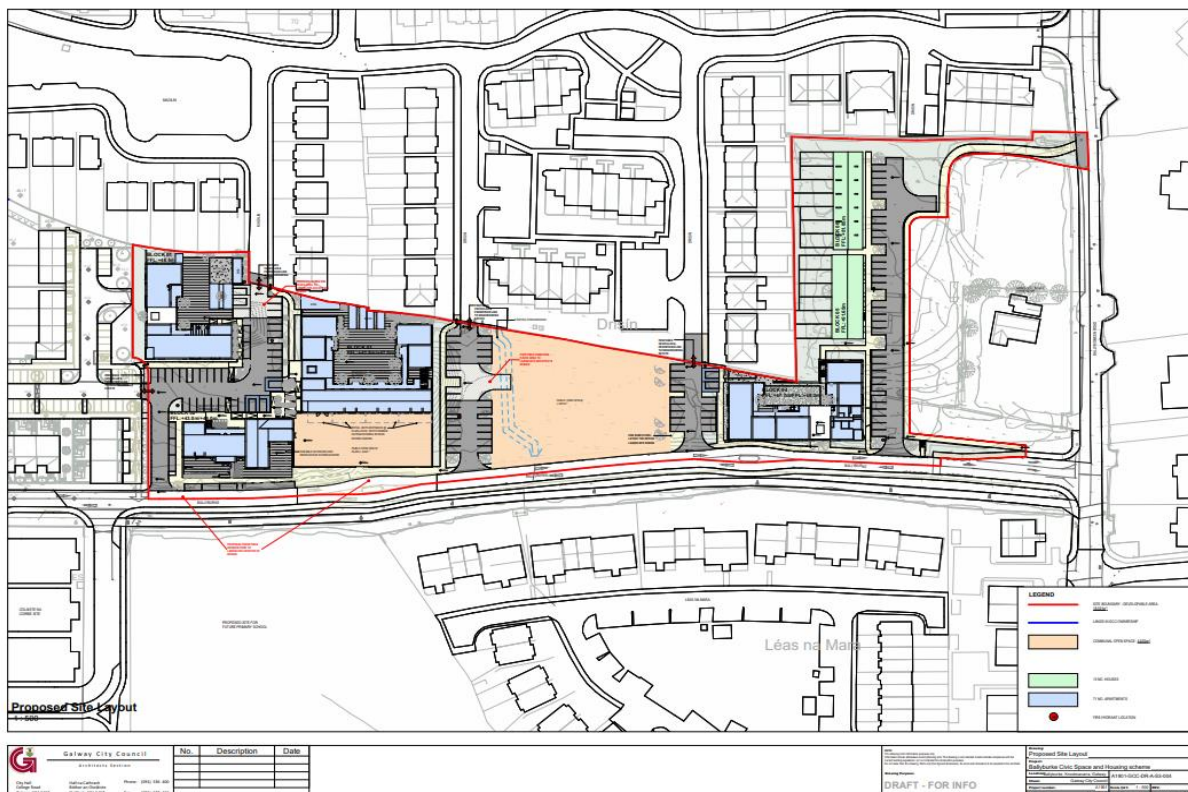


Figure 3: Draft plan for proposed development in Ballyburke