Site of Residential Development at Leopardstown Road Planning Ref D17A/0337/C8

Bat Survey

Version: 7th of August 2025

ecofact
biodiversity + ecology

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1. INTRODUCTION

Ecofact were commissioned to undertake a bat survey of the site of a proposed residential development on Leopardstown Road. The location of the subject site is shown in Figure 1.

The current report provides the results of desk study, daytime habitat inspection, emergence watch, and activity survey. The purpose of the survey was to establish if bats were present or not, and to recommend any actions that are necessary to protect bats.

The survey was completed during June 2025 during the appropriate bat activity season, and coincided with optimal weather conditions. Construction works had already commenced at the site at the time of the current survey.

1.1 Bat species in Ireland

There are eleven recorded bat species in Ireland, nine of which are considered resident on the island. Eight resident bat species and one of the vagrant bat species are members of the Vespertilionidae family. The ninth resident species is the Lesser Horseshoe Bat *Rhinolophus hipposideros*, which belongs to the Rhinolophidae family.

The resident Irish bat species are:

- Daubenton's bat (*Myotis daubentionii*)
- Whiskered bat (*Myotis mystacinus*)
- Natterer's bat (*Myotis nattereri*)
- Leisler's bat (*Nyctalus leisleri*)
- Nathusius' Pipistrelle (*Pipistrellus nathusii*)
- Common Pipistrelle (*Pipistrellus pipistrellus*)
- Soprano Pipistrelle (*Pipistrellus pygmaeus*)
- Brown Long-eared bat (*Plecotus auritus*)
- Lesser Horseshoe Bat (*Rhinolophus hipposideros)*

Other bat species (vagrants) recorded are:

- Brandt's bat (*Myotis brandtii*)
- Greater horseshoe bat (*Rhinolophus ferrumequinum*)

According to Bat Survey Guideline for Professional Ecologists (Collins, 2016), bat species found in Ireland are thought to have a core sustenance zone of between one and four kilometres. A core sustenance zone refers to the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost. This may be used to infer a likely zone of influence for bats if a roost were to occur within the subject lands.

1.2 Legislation Relating to Bats

Bats are strictly protected under both national and international law. The purpose of this legislation is to maintain and restore bat populations within their natural range. This implies that the habitats on which they rely and the ecology of their life cycles should not be compromised by human activities. Where activities have the potential to compromise bat populations, measures are required to be put in place

to avoid impacts or compensate and mitigate for those impacts. The key legislation which provides protection to bats is outlined below.

In the Republic of Ireland, all bats and their roosts are protected under Schedule 5 of the *Wildlife Act 1976* (amended 2000). It is unlawful to disturb either without the appropriate Licence.

In addition to domestic legislation bats are also protected under the *EC Directive on the Conservation of Natural habitats and of Wild Fauna and Flora* (Habitats Directive 1992). This Directive seeks to protect rare species, including bats, and their habitats and requires that appropriate monitoring of populations be undertaken. All bat species are protected under Annex IV of the EU Habitats Directive, while the lesser horseshoe bat (*Rhinolophus hipposideros*) is listed under Annex II. Member states are required to designate Special Areas of Conservation for all species listed under Annex II in order to protect them. The EU Habitats Directive has been transposed into Irish law with the European Communities (Birds and Natural Habitats) Regulations 2011.

A total of 41 SACs have been designated for the Annex II species lesser horseshoe bat (1303), of which nine have also been selected for the Annex I habitat 'Caves not open to the public' (8310).

Ireland has also ratified two international conventions which afford protection to bats amongst other fauna. These are known as the 'Bern' and 'Bonn' Conventions. *The Convention on the Conservation of European Wildlife and Natural Habitats* (Bern Convention 1982), in relation to bats, exists to conserve all species and their habitats. *The Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention 1979, enacted 1983) was instigated to protect migrant species across all European boundaries, which covers certain species of bat.

1.3 Derogation licences

Any works interfering with bats and especially their roosts, may only be carried out under a derogation Licence granted by National Parks and Wildlife Service (NPWS) pursuant to Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 (which transposed the EU Habitats Directive into Irish law).

The destruction, alteration or evacuation of a known bat roost is a notifiable action and can only be carried out with a derogation licence from the National Parks and Wildlife Service. Any works that might interfere with bats or their roost sites can only be carried out under licence to derogate from Regulation 23 of the Habitats Regulations 1997 and Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 (which transposed the EU Habitats Directive into Irish Law). Details with regards to Appropriate Assessments, procedures and parameters under which derogation licences may be obtained are outlined in Circular Letter NPWS 2/07 *'Guidance on Compliance with Regulation 23 of the Habitats Regulations 1997 – strict protection of certain species / applications for derogation licences'* issued on the 16th of May 2007 on behalf of the Minister of the Environment, Heritage and Local Government.

Figure 1 Location of the subject site at Leopardstown Road.

2. METHODOLOGY

2.1 Guidelines

The survey and assessment had regard to the methodology outlined in:

- *Bat Mitigation Guidelines for Ireland v2* by Marnell *et al*., (2022);
- *Bat Tree Habitat Key (BTHK)* by Andrews, H (2018);
- *Bat Surveys for Professional Ecologists: Best Practice Guidelines 3rd Edition* by Collins (2016)
- *Guidance on the strict protection of certain animal and plant species under the Habitats Directive in Ireland* by NPWS (2021);
- *Bat Workers' Manual 3rd Edition* by JNCC (2004) and;
- *British Bat Calls: A Guide to Species Identification* (Russ, 2012).

Table 1 Definition of bat roost types adapted from Collins (2016).

Roost Type	Definition
Day Roost	A place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.
Night Roost	A place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.
Feeding Roost	A place where individual bats or a few individuals rest or feed during the night but are rarely present by day.
Transitional/occasional Roost	Used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.
Swarming Site	Where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites.
Mating Sites	Where mating takes place from late summer and can continue through winter.
Maternity Roost	Where female bats give birth and raise their young to independence.
Hibernation Roost	Where bats may be found individually or together during winter. They have a constant cool temperature and high humidity.
Satellite Roost	An alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

2.2 Desk study

The bat suitability of habitat in the study area for bats was obtained using the National Biodiversity Data Centre (NBDC) database. This map provides a picture of the broad scale geographic patterns of occurrence and local roosting habitat requirements for Irish bat species. The maps are a visualization of the results of the analyses based on a 'habitat suitability' index. The index ranges from 0 to 100, with 0 being least favourable and 100 most favourable for bats (Lundy *et al* 2011).

The NBDC online National Bat Database of Ireland was also accessed to review bat records in the study area. Also, Bat Conservation Ireland records were also reviewed. Previous bat surveys of the site and general area were also reviewed.

A full list of sources is provided in the references section of this report.

2.3 Field Surveys

The was visited on the 17th of June 2025. This survey involved a daytime inspection of the site during daylight hours. The surveys involve looking for evidence of roosting bats including live bats, remains of dead bats, droppings, staining, and feeding remains. Ther site was revised on the 18th June 2025.

An emergence and activity survey was undertaken following the site inspection on the night of the 17th to 18th of June 2024. The emergence survey extended from 30 mins before dusk to 2.5 hours after. This survey was completed by two ecologists. The surveys involved the use of handheld bat detectors (Elekon Batscanner, Echo Meter Touch Pro 2). Bat detectors with ultrasonic microphones are used as the ultrasonic calls produced by bats cannot be heard by human hearing. Bat species emerging from the buildings and adjoining trees on the site were recorded. The surveys also employed the use of a thermal imaging scope (Zeiss DTI6 unit with both 20mm and 40mm lenses).

A Passive Static Bat Survey was also completed using three Anabat Chorus units. This type of survey involves leaving a static bat detector unit (with ultrasonic microphone) in a specific location and set to record for a specified period of time. Bats which pass near enough to the monitoring unit are recorded and their calls are stored for analysis post surveying. Static detector A was placed at the rear of St. Joseph's House, Static detector B was placed on the northwestern side of the site, while Static detector C was placed on the front of St. Joseph's House. The purpose of this survey was to compliment the emergence/activity survey completed by the ecologists on the site.

Data recorded on the Anabat units was downloaded and analysed using Anabat Insight software. Bat Calls were identified to species level (where possible) with reference to *British Bat Calls: A Guide to Species Identification* (Russ, 2012). Audio files are a maximum of 15 seconds long and each audio file is taken as a bat pass for each bat species recorded within the audio file.

Each bat pass recorded does not equate to the number of individuals of bats flying in vicinity of the recording device but is representative of bat activity levels. Some species such as the pipistrelles will continuously fly around a habitat and therefore it is likely that a series of bat passes within a similar time frame (i.e. separate audio files within a small time frame) is one individual bat. On the other hand, Leisler's bats tend to travel through an area quickly and therefore an individual sequence of echolocation calls or bat pass is more likely to be indicative of individual bats.

2.4 Limitations

The weather conditions were optimal for the surveys and they were completed within the appropriate season. However, construction works had already commenced on the site and this will have affected the survey results.

3. RESULTS

3.1 Desk Study

The National Biodiversity Data Centre (NBDC) maps landscape suitability for bats based on Lundy *et al*., (2011). The maps are a visualisation of the results of the analyses based on a 'habitat suitability' index. The index ranges from 0 to 100, with 0 being least favourable and 100 most favourable for bats. Table 1 below gives the suitability of the study area for the bat species found in Ireland (based on NBDC) along with their Irish Red List Status (from Marnell et al., 2009).

The overall assessment of bat habitats for the current study area is given as 17.44, which is considered to be 'Low'. However, the rating for a number of bat species (Soprano Pipistrelle, Common Pipistrelle, Leisler's bat) is 'Moderate'. The site is located on the Leopardstown Road (R113). It is located in an urban area surrounded by residential and other developments. The overall context of the site is fragmented urban/suburban habitat which is generally not ideal for bats.

Table 2 Suitability of the study area for the bat species previously recorded in the Leopardstown site area (based on the NBDC data). Irish Red list status also indicated (based on Marnell *et al.,* 2009).

Common name	Scientific name	Suitability index	Irish red list status
All bats		17.44	
Soprano pipistrelle	*Pipistrellus pygmaeus*	30	Least Concern
Brown Long-eared bat	*Plecotus auritus*	23	Near Threatened
Common Pipistrelle	*Pipistrellus pipistrellus*	32	Least Concern
Lesser Horseshoe Bat	*Rhinolophus hipposideros*	0	Least Concern
Leisler's bat	*Nyctalus leisleri*	34	Least Concern
Whiskered bat	*Myotis mystacinus*	14	Least Concern
Daubenton's bat	*Myotis daubentonii*	3	Least Concern
Nathusius' Pipistrelle	*Pipistrellus nathusii*	10	Least Concern
Natterer's bat	*Myotis nattereri*	11	Least Concern

3.1.1 Previous Records

There are very few bat records on the National Bat Database of Ireland for the Leopardstown area. There are records of Common and Soprano pipistrelles and Leisler's bat within the NBDC 2 km square O22D. The closest bat record is from Leopardstown golf course from 2017 and was for a Common Pipistrelle. However, bats are generally under recorded in Ireland and records available for a particular are often limited.

According to the Bat Conservation Ireland database, all the most widespread bat species are known to be present within a 5 km radius of the site; Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, Leisler's bat, Brown Long-eared Bat, Daubenton's bat, Natterer's bat and Whiskered bat.

3.1.2 Previous surveys of the site

A previous ecological survey of the site was completed by Scott Cawley (2017). It is stated in this report that the bat surveys were undertaken during a time of year when bats are expected to be hibernating. Therefore a bat emergence and activity survey was not completed. It is acknowledged in this report that signs of roosts, such as droppings and staining, may be obscured by weather or the presence of other objects within a suitable space, and this is particularly true if a roost is small in size. Access to some of buildings was not possible on the day that the Scott Cawley (2017) visit took place so internal inspections were not completed.

The ideal time to undertake bat surveys is during the summer months when bats are active. During the winter period bats hibernate and may not be present at roosts they use during the breeding season. Although surveys for bat signs and bat potential can be carried out at any time of year, roosts used by a small number of bats can be particularly difficult to detect in the winter months. It is noted that any derelict building could, at any time, be used by roosting Pipistrelles. Even minor bat roosts for common bat species like Pipistrelles are still *strictly protected*. However, works causing disturbance and roost loss can proceed with suitable mitigation and under the authorisation of a derogation licence.

There were three other buildings on the site (Annaghkeen House, Marian Villa, and Dalwhinnie House) during the Scott Cawley (2017). These were were demolished prior to the current survey (see below). Scott Cawley (2017) identified that bats were a Key Ecological Feature of the site and noted that the presence of bats could not be ruled out due to timing of surveys outside of the bat activity season.

The Scott Cawley (2017) report also stated that the "*existing buildings and two mature trees within the subject lands [] have potential suitability for roosting bats, and therefore the proposed development has the potential to result in the loss of a roost*" and also that "*the presence of a roost or foraging/commuting bat activity within the subject lands cannot be ruled out at this stage due to the timing of surveys outside of the optimal season for confirming their presence/absence*".

A subsequent bat survey was completed at the site by Keeley (2021). During this survey bats were noted feeding throughout the site at low density while Common Pipistrelle bats were recorded roosting in Dalwhinnie house, that has now been demolished under licence. A single bat was seen to enter and remain in Dalwhinnie. Keeley (2021) noted that "*neither these nor any other buildings examined showed evidence of large numbers of bats and usage by bats is very low and attributable to individual bats rather than a breeding roost, for example. However, there are three buildings used as bat roosts within the site and other bats are roosting nearby off-site and feeding within the site including soprano pipistrelle and potentially brown long-eared bat*".

Keeley (2021) also noted that a Leisler's bat was roosting in St. Joseph's house. A Leisler's bat was seen to enter the roof of St. Joseph's on 18th April 2021. Keeley (2021) also noted that "*there were two Leisler's bats feeding over the buildings (St. Joseph's and Ann Sullivan Centre) and around mature pines within the site over a relatively sustained period in April 2021 and this species was also noted in this area in 2019. Leisler's bat activity was evident during the June survey, especially south of St. Joseph's and in the neighbouring gardens*". Keeley (2021) also added that "*while bats were seen to approach St. Joseph's prior to sunrise on 11th June 2021, no bats entered the building*".

Other species noted by Keeley (2021) included Soprano Pipistrelle and a single Brown long-eared bat signal over the two periods of survey (2019 and 2021). However, it was noted that no bats were recorded emerging from or returning to trees within the site. Overall, roost potential was considered to be very low or entirely absent for most trees and shrubs according to Keeley (2021). There was good potential for individual roosting bats behind loose bark on pine trees. Most other trees offered no cavities or were growing in cluttered conditions that would limit their accessibility to bats.

An updated survey of Dalwhinnie House was then completed by Ecology Ireland (2022). The building was inspected externally and internally on the 25th of August 2022. No signs indicating the presence of bats were recorded during the visit. It was reported that the structure has been unoccupied in recent times and a considerable amount of vandalism was apparent. Windows were broken and the rear of the property was unsecured. There was a significant amount of litter and graffiti in evidence. A roost emergence survey of Dalwhinnie House was then carried out on the evening of the 8th of September 2022. There were no sightings of bats entering or departing the property and overall, there was limited

bat activity detected close to Dalwhinnie. It was noted that there was a floodlight across the Leopardstown Road that was shining on the front of the property. It was decided to apply for a derogation licence, on the basis that the building had previously been confirmed to be used by bats and on a precautionary basis, given that bats could use the structure on an occasional and ongoing basis.

3.1.3 Previous bat derogation licences

- Derogation Licence '**DER/BAT 2021 – 42'** was issued by NPWS in connection with the Renovation and Demolition works at St. Joseph's House (Keeley, 2021)

- Derogation Licence '**DER/BAT 2022 – 119'** was issued by NPWS for the demolition of Dalwhinnie House (Ecology Ireland, 2022).

3.1.4 Planning conditions

Condition 18 of the planning permission is as follows:-

> ***18.*** *The mitigation measures in relation to bats set out in the Ecological Impact Assessment by Scott Cawley submitted in support of the application shall be followed. Bat activity surveys consisting of dusk emergence and dawn re-entry surveys of the existing trees and building identified as having potential features suitable as bat roosts shall be carried out in the May - August Period. If a bat roost is identified, a derogation licence shall be applied for to National Parks and Wildlife Services it is intended to remove or otherwise interfere with it.*
>
> ***Reason:*** *To prevent any injury occurring to bats or their breeding or resting places which are afforded protection under the Habitats Directive 1992.*

The mitigation in the Scott Cawley report is as follows:-

> **BM1:** In order to rule out the presence of roosting bats within the existing buildings and trees within the subject lands identified with potential roost features, bat activity surveys consisting of a dusk emergence and a dawn re-entry survey during the active bat season (May-August for maternity colonies) will be undertaken. The survey should be conducted by ecologists with experience in bat surveying. If bats are confirmed to be using the property, then an application for a derogation licence will be made to permit the removal of the bat roost.
>
> **BM2:** If no bats are confirmed to be roosting as a result of carrying out the surveys, a precautionary approach will be applied as follows: if bats are encountered during removal of roofing or other construction or demolition works then works may have to be delayed until the Local Conservation Ranger of the National Parks and Wildlife Service is consulted. Bat boxes (the type specified would depend on the species, number of bats and location of roost entrance) may have to be erected on the exterior of the buildings.

Scott Cawley should not have recommended further surveys as "mitigation". Mitigation are actions taken to avoid, reduce, or offset known adverse effects on protected species or habitats. Surveys determine whether such effects are likely in the first place. Recommending a survey as "mitigation" is therefore conceptually flawed. If a project may affect a European protected species (e.g. bats), the presence or likely presence of those species must be established at the time of assessment, before a decision to permit the development is made. The Court of Justice of the European Union (CJEU) judgement (Hellfire Massey C166/22) held that derogation licences should be applied for and granted if needed,

before planning consent is considered so that the planning consent reflects the need to comply with Article 12 of the Habitats Directive 92/43/EEC.

3.1.5 Additional background information

The was visited on the 17th of June 2025. Major construction works were already underway at this time. The ecologists who completed the survey were not made aware of this until the site was visited, It also some time later that we were informed of previous derogation licences being in place in relation to buildings on the site.

Dalwhinnie House was already demolished and it is understood that this was completed under DER/BAT 2022 – 119. Annaghkeen House and Madona House/ Marian Villa were also previous houses on the site noted by Keeley (2021) and Scott Cawley (2017). These houses were no longer present and it is not known when they were removed. The client has stated that these were surveyed by site ecologist Dr. Gavin Fennessy (Ecology Ireland) and no bats were present.

St. Joseph's house was being worked on at the time of the visit. The site manager gave an account of how this building had been set on fire. Apparently a group of teenagers broke in and set fire to an old mattress which spread through the building on 31st May 2024. The fire brigade and guards attended the site to put out the fire and investigate.

The client also confirmed that constriction works on the site commenced in November 2024 and works in St. Joseph's house started in May 2025. The client confirmed that no bats were seen at any time during these works.

3.2 Field Survey

3.2.1 Daytime Inspection

The site is located on the Leopardstown Road (R113). It is located in an urban area with the M50 motorway located c.600m to the south. It surrounded by residential and other developments. A Greenway runs along the northern boundary of the site. Beyond this is Leopardstown Park and there is a GAA grounds to the southeast at the other side of Leopardstown road. The overall context of the site is fragmented urban/suburban habitat which is generally not ideal for bats.

When the site was visited it became apparent that this was an active construction site with extensive works ongoing. There were no remaining potential bat habitats on the southern part of the site, with major works ongoing. The previous buildings Dalwhinnie House, Annaghkeen House, and Madona House/ Marian Villa were no longer present. St. Joseph's house was intact but extensive works were ongoing inside this building. The works had not taken place on the roof, which was damaged, presumably from the fire.

The treeline on the northern boundary of the site was intact and trees to the east of St. Joseph's house were also still present. The remaining trees on the site were adequately protected with fencing. However, other trees and vegetation had been removed from the site which would be expected as construction works were ongoing.

St. Joseph's house was an active construction site and this could not be fully accessed due to health and safety reasons, apart from a visual inspection at the door entrances. However any bat signs within this building would have already been removed by the fire and subsequent construction works. The site

offices were present near the site entrance and this area was all a busy working construction site with no bat potential. Due to deep site excavations and other work the full site was also not accessible for health and safety reasons.

It was decided to focus the emergence survey work on St. Joseph's house as despite the fire and disturbance it was considered that this building still had some bat roosting potential.

St. Joseph's house is derelict and has not been occupied for some time. The house was inspected in detail and a number of potential entry/exit points for bats were recorded. There were numerous gaps in the soffits, eaves, and roof that had potential to be used by bats. No evidence of bat activity was visible on the outside of the building. The areas around the building were searched for bat droppings and none were found. However, the survey was completed in a busy construction site and it would be expected that most signs of bats would have been dispersed by the activities. It was also not possible to check areas in the roof to rule out previous usage by bats, due to access issues.

Parts of the roof had collapsed due to presumably to the fire damage, however other areas were intact. A feature that looks like a bat tile is present. This not mentioned in the previous bat survey reports and the purpose of this small structure is not known. It looks like a bat tile, and could function as one. Bat tiles, also known as bat access tiles or vents, are specialized roof tiles designed to provide a safe passage for bats to enter and exit a roof space while maintaining the roof's weatherproofing. It may also be some type of a vent. This and other features in the building were selected for investigation during the emergence survey. It is noted that at the time of the survey the ecologists were not aware of the surveys completed by Keeley (2021) and Ecology Ireland (2022).

3.2.2 Emergence Watch

Three species of bat were recorded during the survey: Leisler's Bat, Common Pipistrelle, and Soprano Pipistrelle. A small number (probably 2-3) of Common Pipistrelle bats were recorded emerging from the roof of St. Joseph's House. These bats emerged at dusk and were recorded at both the rear and front of the building. Two Leisler's bats may have emerged from trees on the site. Overall, bat activity levels were very low on the site. Most of the activity recorded involved the same individual bats passing up and down while foraging, mainly at the rear of St. Joseph's House.

The most frequent bat species recorded was Common Pipistrelle. Small numbers of this bat species were confirmed to be roosting in the building (<5 individuals). The exact area where these bats emerged was not fully clear. This is typical of a survey like this, especially when dealing with a large, tall building, multiple potential entry/exit points, and very small numbers of bats. However, it was clear that the bats did emerge from the building from the roof area.

The next most frequent bat species recorded was Leisler's bat. Two Leisler's bats also appeared on the site and were detected at dusk on the northern side. It again wasn't clear where the bats came from. However, they flew in low which means the roost was nearby and crossed the centre area of the site. These bats did not emerge from the house. It is possible that they came from outside the site and entered from the northern boundary, but it cannot be ruled out that they emerged from trees on the site. It is also acknowledged that the retained trees are being protected. These two bats passed through the site and left over the houses on the southern boundary. Occasional Leisler's bats were recorded later in the survey, but these bats were flying high above the site and passing through the area.

Soprano Pipistrelle bats were also detected, but these individual bats were not roosting on the site, and it may have been a single bat that was recorded a few times. This bat was foraging along the northern boundary of the site.

The first Common Pipistrelles that emerged from the building did so juts before dusk and came out and went back into the building near the courtyard area at the rear. This was the clearest indication that the bats were roosting in the house. But the exact entry exist point could not be identified. Another Common Pipistrelles also entered the site from outside the boundary at dusk, and the bats were flying back and forth behind the building in the corridor between the trees and building. One further bat emerged at the front of the building. The numbers of Common Pipistrelles that emerged from the building were thought to be only 2-3 bats, with the estimate falling into the lowest <5 category. This is a minor day roost for Common Pipistrelles and no other bat species was recorded emerging.

After initial activity around dusk and shortly after, activity levels were low. There were significant periods of time when no bats were recorded. This is not surprising, considering the disturbed nature of the site, which is set within a suburban area with significant habitat fragmentation. The site was affected by light spill, particularly in areas closer to Leopardstown Road. A very large floodlight on the GAA grounds was causing very high levels of illumination on the site. There were other impacts from street lights, but this floodlight would be expected to have a major impact on how bats use the site. The illumination actually reached as far back as the front of St. Joseph's House, and the only truly dark areas of the site were the rear of St. Joseph's House and the northwestern boundary. A Fox (Vulpes vulpes) was recorded on the site during the survey.

The Anabat stationary detectors were set up one hour before dusk, and due to the low bat activity recorded and the risk of the detectors being damaged on a busy construction site the following day, they were removed at the end of the emergence/activity survey (2.5 hours after dusk). The total number of bat passes and the percentages of passes from the stationary Anabat units are given in Tables 3-5.

On Anabat A, a total of 61 bat passes were recorded. On Anabat B, a total of 48 bat passes were recorded. On Anabat C, a total of 31 bat passes were recorded. Static detector A was placed at the rear of St. Joseph's House, Static detector B was placed on the northwestern side of the site, and Static detector C was placed at the front of St. Joseph's House. The majority of bat passes recorded were Common Pipistrelle. The results from the static detectors were in line with the observations made during the active surveys, and no additional species were recorded.

It is noted again that each bat pass does not equate to the number of individual bats flying in the vicinity of the recording device but is representative of bat activity levels. Some species, such as the Pipistrelles, will continuously fly around a habitat, so it is likely that a series of bat passes within a similar time frame (i.e. separate audio files within a small time frame) represent one individual bat. Overall, the survey confirmed that small numbers of Common Pipistrelle were roosting in St. Joseph's House (2-3 individuals). Two Leisler's bats were either roosting in trees on the site or roosting nearby. The site is of limited value to bats for foraging and commuting, and only minor bat roosts are present. The site is already very impacted and disturbed, affected by light pollution, especially light spill from the floodlight on the GAA grounds.

Table 3 Results from Anabat Express Static detector A, 17th to 18th June 2025.

Common name	Species name	No.	%
Common Pipistrelle	*Pipistrellus pipistrellus*	51	83.6
Soprano pipistrelle	*Pipistrellus pygmaeus*	5	8.2
Unidentified pipistrelle	*Pipistrellus spp.*	1	1.6
Leisler's bat	*Nyctalus leisleri*	4	6.6
Total		**61**	

Table 3 Results from Anabat Express Static detector A, 17th to 18th June 2025.

Common name	Species name	No.	%
Common Pipistrelle	*Pipistrellus pipistrellus*	36	75.0
Soprano pipistrelle	*Pipistrellus pygmaeus*	2	4.2
Unidentified pipistrelle	*Pipistrellus spp.*	5	10.4
Leisler's bat	*Nyctalus leisleri*	5	10.4
Total		**48**	

Table 3 Results from Anabat Express Static detector A, 17th to 18th June 2025.

Common name	Species name	No.	%
Common Pipistrelle	*Pipistrellus pipistrellus*	20	64.5
Soprano pipistrelle	*Pipistrellus pygmaeus*	0	0.0
Unidentified pipistrelle	*Pipistrellus spp.*	2	6.5
Leisler's bat	*Nyctalus leisleri*	9	29.0
Total		**31**	

4. IMPACTS

4.1 Introduction

The ecological value of this urban site for bats has already been significantly diminished due to prior habitat fragmentation, artificial lighting, and anthropogenic disturbance. Recent events, specifically the fire damage, vegetation and building clearance, and ongoing construction works, have compounded these impacts, resulting in further loss of roosting, foraging, and commuting opportunities for bats. Removal of the other buildings on the site was completed under licence, as discussed above.

The main remaining St. Joseph's house building suffered substantial damage due to a fire caused by vandalism. Fire can have the following ecological consequences for bats:

- Destruction of roost features: Roof voids, cracks, crevices, and other suitable roosting structures may have been damaged or lost entirely, particularly those within the loft or roof space where Common Pipistrelle bats are typically found.
- Thermal disruption: The temperature and humidity conditions of potential roosting areas can be altered, making them unsuitable for continued use.
- Toxic residues and odours: Ash, soot, and chemical residues may discourage bats from returning, even if the physical roost structure remains intact.

Despite this, a small number of Common Pipistrelles were recorded using the roof area during the current survey. The building does not seem to have been all damaged by the fire and there are still extensive areas of the derelict building that would appear to provide potential roost features for bats.

Construction activity is now ongoing on-site, including within the fire-damaged building. Works have included clearing debris and general structural interventions. Although construction is not occurring at dusk or during nighttime hours, the presence of daytime works still poses a number of potential impacts. Even in the absence of direct physical disturbance during active hours, vibrations, noise, and increased human presence during the day can cause displacement of roosting bats. Removal of trees and shrubs on the site also further reduces local foraging opportunities and connectivity. This affects the availability of insect prey and the ability of bats to commute through a site. Noise, vibration, and dust are all other impacts from an active construction site that can have an impact on bats and their habitats.,

The cumulative impact of fire damage, minor roost loss, ongoing construction works, and loss of vegetative structure is likely to have significantly reduce the value for the site for bats overall. It is far from best practice to be assessing the importance of a site for bats while construction works are already underway. For Common Pipistrelles - one of the more urban-tolerant bat species - limited roosting and foraging may still occur, but continued disturbance could result in eventual roost abandonment altogether.

It is acknowledged that the baseline ecology surveys of the site completed by Scott Cawley (2017), Keeley (2021), and Ecology Ireland (2022) concluded that the site only ever had minor bat roosts present and was a marginal habitat for bats to start with. The site does not seem to have previously supported a major bat roost, but it did provide limited but meaningful opportunities for roosting and foraging, particularly for species tolerant of urban environments. The fire and subsequent construction activities have directly and indirectly impacted this habitat, causing loss or degradation of minor roosts and reducing the site's ecological connectivity.

4.2 Roost Habitat Loss

No works can take place on the roof of St. Joseph's house in the absence of a derogation licence. The building is a confirmed bat roost. The evidence points to this probably being a minor day roost used by small numbers of male or non-breeding bats. Works on the roof of the building will result in the loss of a roost – so mitigation and a derogation licence will be required a precaution.

However, the current survey only identified a minor roost with <5 bats present. Also the previous bat surveys, most notable the Keeley (2021) survey, ruled out the presence of a significant roost in this building. However, in urban environments, where roost availability is already limited, even minor losses can affect local bat populations. Also, even small roosts containing individual bats are strictly protected.

It is noted that any derelict building could, at any time, be used by roosting Pipistrelles. It is not an unusual finding and this is a common an adaptable bat species. The building has already been subject to significant disturbance as a result of the fire and construction works. The Keeley (2021) survey had already ruled out the likelihood of a significant bat roost being present.

The current survey has also concluded that there are trees on the site with potential bat roosting features. This was already documented in the baseline surveys and the remaining trees are being protected and no further trees will be removed. The Keeley (2021) survey did not identity any tree roosts.

4.3 Foraging & Commuting Habitat Loss

The site provides bat some marginal foraging and commuting habitat. It is already very disturbed, affected by habitat fragmentation, and there is a flood light in the GAA grounds which is resulting in excessive light spill into the site. Developing the site will affect bat habitats further but this has already been accounted for the the original ecological assessments. The implementation of the landscaping and protection of the remaining trees will improve foraging and commuting habitats for bats when development work is completed.

4.3 Disturbance, Displacement, & Lighting

The proposed development is already affected by significant disturbance. This will reduce when the development is completed. The implementation of the landscaping and protection of the remaining trees will improve habitats for bats when development work is completed.

The proposed development will likely result in increased lighting on the proposed development site which can cause habitat loss. Increased lighting will impact commuting and foraging bats. The site is, however, already affected by light spill from adjoining areas.

5. MITIGATION

5.1 License Requirements

As bats are roosting in the roof of St. Joseph's House a derogation licence is required. This derogation licence is required under Regulation 54 of the European Communities EC (Birds and Natural Habitats) Regulations 2011 and must be obtained from the National Parks and Wildlife Service in advance of any works taking place on the roof. Disturbance of a known bat roost is a notifiable action under current national and European legislation. It is accepted that the building and site are already disturbed and impacted and St. Joseph's house was affected by a fire prior to construction works commencing.

5.2 Avoidance Mitigation

Works on the roof in St. Joseph's House can be planned for outside active bat season and completed under a derogation licence. Works should take place during the period October to February. It is unlikely that bats would use the building during the winter months.

Once the mating season ends bats will move to their hibernation sites. This generally occurs after September. Therefore, works which involve the removal of roosts should take place between November and the end of March to avoid the possibility of any bats being present. It is not envisaged that any bats are present during the winter, but this remains a possibility. If bats are recorded during any point the construction works NPWS must be immediately contacted.

5.3 Compensatory roosts

Bat boxes should be installed on mature trees on the site offering artificial roosting accommodation. This should mitigate for the loss of roosts on the site. It is recommended that 10 no. Schwegler 3FF bat boxes be obtained. The Schwegler 3FF is a large flat, crevice-type box, suited for many species of bat, including Common Pipistrelle. This bat box is also open at the bottom which allows droppings to fall out, meaning cleaning and maintaining the box is not required and does not have to be in a very accessible location.

The selected tree and position should be on a tree with clean bark (no ivy) and have no branches for a 1m radius around the box. The boxes should be placed as high as possible, at least 4m above the ground to avoid predation. Ideally the boxes should be sheltered from strong winds and exposed to sun for part of the day, i.e., usually erected facing in a south-east to south-west direction. The bat boxes should also be situated in areas where there is no artificial lighting which would deter bats from using the boxes. An ecologist will need to advise on the location and orientation of these bat boxes based on the relevant guidelines.

A roof compartment for bats accessed by bat tiles should also be at least considered for St. Joseph's House. The purpose of the tile already in place on the roof should also be investigated. It may be a vent but this is the type of future that bats use and it looks like a bat tile. It may not be possible to do anything on St. Joseph's House as it is a listed building/

6.5 Landscaping

The trees on the site are already being protected and will be retained and additional planting with native tree species should be completed if feasible. Plants chosen for landscaping should also follow the All-

Ireland Pollinator Plan, which would provide suitable foraging opportunities for bat species in the area, as well as promote biodiversity (National Biodiversity Data Centre, 2021).

5.4 Lighting

The proposed development will likely result in addition light spill on and around the proposed development site. This has already been assessed in the planning permission granted. Guidance for minimising light spill is given in the Bat Conservation Trust & Institute of Lighting Professionals (2018) guidance, as well as Bat Conservation Ireland's *Bats & Lighting: Guidance Notes for Planners, Engineers, Architects and Developers* (2010). The planning authority should advise the adjoining GAA club to consider these documents.

6. CONCLUSIONS

Any further works on St. Joseph's House will require a derogation licence to be in place. The bats are present in the roof only, and certainly no works can take place on the roof area until this licence is in place.

The current report will support the derogation licence application and includes mitigation proposals including a generous bat box scheme.

The fact that St. Joseph's House was burned and vandalised prior to construction works commencing is a mitigating factor here. Bats were already disturbed by the fire, and there not been a major impact on bats here as a result of the construction works. The demolition of other buildings on the site was also completed under licence. There is no evidence that there was any significant on bat roost on this site and pre-construction surveys were completed.

The current works also commenced in the autumn of 2024 and bats would have left for their hibernation sites at that time. If you were doing the works under licence this is when you would start works anyway. Also, no bats were seen at any time during the works.

The site provides bat some marginal foraging and commuting habitat. It is already very disturbed, affected by habitat fragmentation, a previous fire and vandalism, and there is a flood light in the GAA grounds which is resulting in excessive light spill into the site. The current construction works have affected bat habitats further but this has already been accounted for the the original ecological assessments. The implementation of the landscaping, protection of the remaining trees, works on the roof of St. Joseph's House being undertaken in the autumn/winter months under licence, and the provision of a generous bat box scheme, will significantly improve roosting, foraging and commuting habitats for bats in the area.

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7th of August 2025

PLATES

Plate 1 Construction works were already underway at the site at the time of the current survey.

Plate 2 View of the site with St. Joseph's House in the background. Extensive construction works on the site were ongoing at time of the survey.

Plate 3 Construction disturbance on the site at the time of the current survey.

Plate 4 Hardstanding area and construction compound near the site entrance.

Plate 5 Existing trees on the site protected by a barrier.

Plate 6 Front view of St. Joseph's house, June 2025.

Plate 7 View of the northern side of St. Joseph's house, June 2025.

Plate 8 Courtyard at the rear of St. Joseph's house, June 2025.

Plate 9 The internal areas of St. Josephs's house could not be inspected due to health and safety issues. However, it was confirmed that the building had been damaged by fire, and internal works had been completed (cleaning out etc.).

Plate 10 Internal areas of house – cleaned out after the fire.

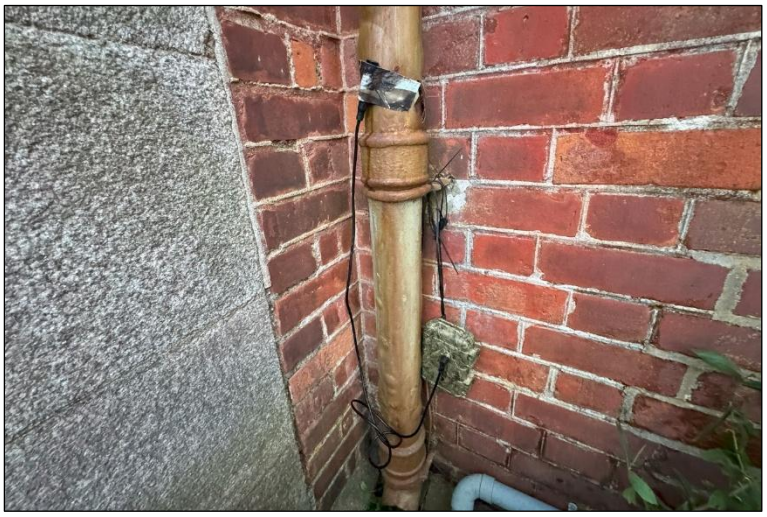

Plate 11 Anabat static detector placed at St. Joseph's house, June 2025.

Plate 12 One of the three Anabat static detector placed at St. Joseph's house, June 2025.

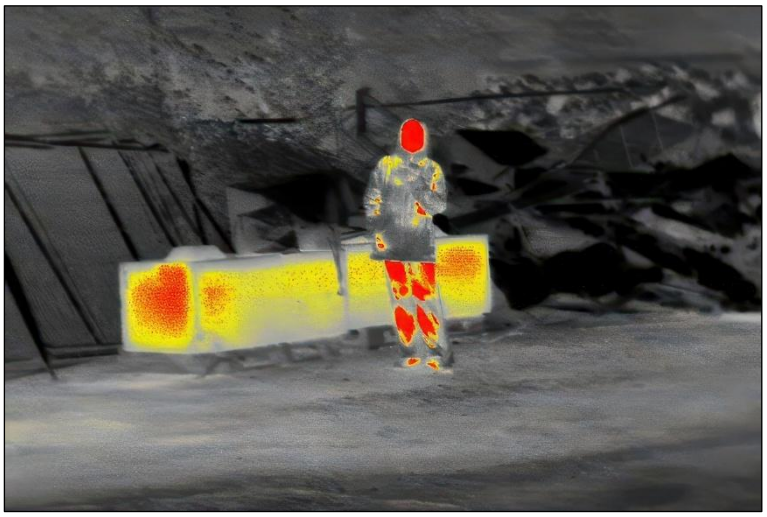

Plate 13 Thermal image of one of the ecologists during the survey.

Plate 14 Front of St. Joseph's house at dusk.

Plate 15 Common Pipistrelles were recorded foraging around these trees. Note how this area is also affected by lighting, but was one of the darker areas of the site.

Plate 16 Building was monitored using static detectors, handheld detectors, and thermal scopes.

Plate 17 Building was monitored using static detectors, handheld detectors, and thermal scopes.

Plate 18 Much of the site was affected by light spill communing from outside the site.

Plate 19 Floodlight in the adjoining Silverpark GAA grounds was causing excessive and unnecessary light spill at the site entrance.

Plate 20 Structure on the roof of St. Josephs's house – this looks like bat tile, and could be used by bats.

Plate 21 Thermal image of a Fox recorded on the site during the survey.

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