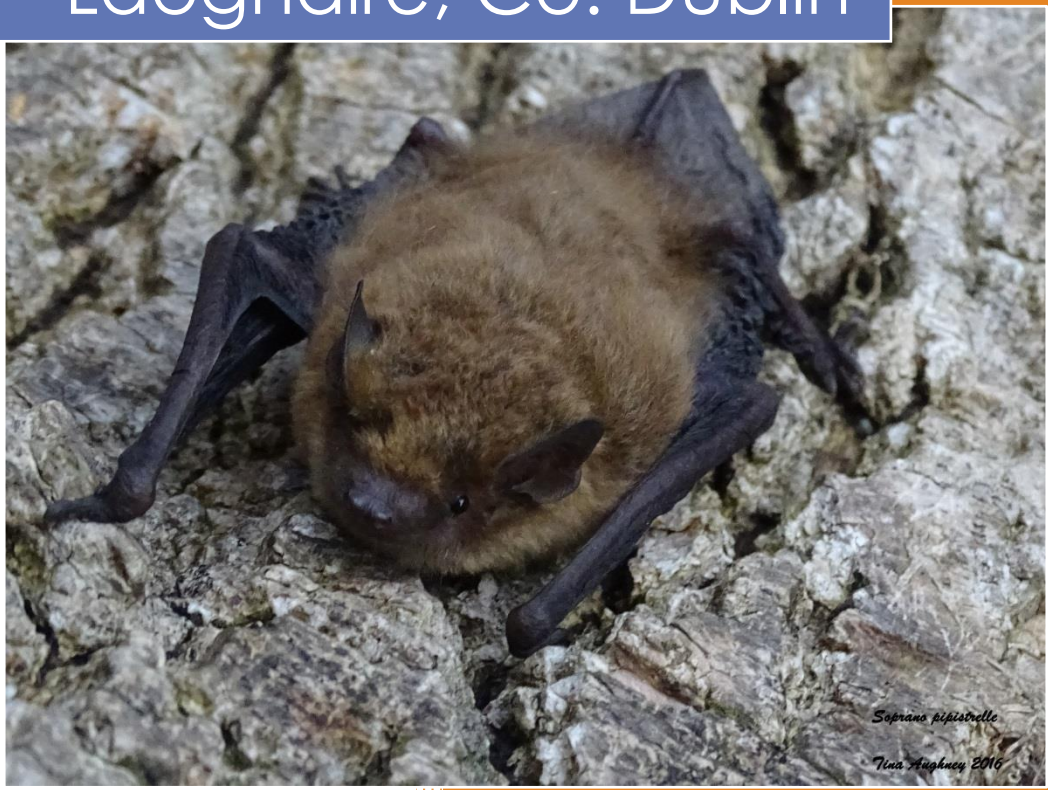
2025

Bat Survey: Boylan Centre, Dun Laoghaire, Co. Dublin



Bat Eco Services Limited

Bat Eco Services Limited, Ulex House, Drumheel, Lisduff, Virginia, Co. Cavan. A82 XW62.

Licensed Bat Specialist: Dr Tina Aughney (tina@batecoservices.com, 086 4049468)
NPWS licence C17/2023 (Licence to handle bats, expires 23rd January 2026);
NPWS licence 017/2025 (Licence to photograph/film bats, expires 31st December 2025);
NPWS licence DER/BAT 2025-171 (Survey licence, expires 31st December 2025).

Statement of Authority: Dr Aughney has worked as a Bat Specialist since 2000 and has undertaken extensive survey work for all Irish bat species including large scale development projects, road schemes, residential developments, wind farm developments and smaller projects in relation to building renovation or habitat enhancement. She was a monitoring co-ordinator and trainer for Bat Conservation Ireland for 20 years. She is a co-author of the 2014 publication *Irish Bats in the 21st Century.* This book received the 2015 CIEEM award for Information Sharing. Dr Aughney is a contributing author for the Atlas of Mammals in Ireland 2010-2015. She is a trained bat handler, bat ringer and radio-telemetry project manager. She is a member of the Nathusius' Pipistrelle Working Group and the Cavan Bat Group.

All analysis and reporting is completed by Dr Tina Aughney. Data collected and surveying is completed with the assistance of trained field assistants. Mr. Shaun Boyle (Field Assistant) NPWS licence DER/BAT 2025-172 (Survey licence, expires 31st December 2025). Ms. Eva Boyle (Field Assistant) NPWS licence DER/BAT 2025-173 (Survey licence, expires 31st December 2025). Both field assistants have received in-house training to undertake all elements of bat surveying according to Collins (2023).

Client: Dún Laoghaire-Rathdown County Council.

Project Name & Location: Boylan Centre, Dún Laoghaire, Co. Dublin

Report Revision History

Date of Issue	Draft Number	Issued To (process of issuing)
14th May 2025	Draft 1	Dún Laoghaire-Rathdown County Council (by email)

Purpose

This document has been prepared as a Report for Dún Laoghaire-Rathdown County Council. Only the most up to-date report should be consulted. All previous drafts/reports are deemed redundant in relation to the named site. Bat Eco Service accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

Carbon Footprint Policy

It is the policy of Bat Eco Services to provide documentation digitally in order to reduce carbon footprint. Printing of reports etc. is avoided, where possible.

Record Submission Policy

It is the policy of Bat Eco Services to submit all bat records to the NBDC database one year post-surveying. This is to ensure that a high level bat and mammal databases are available for future desktop reviews. This action will be automatically undertaken unless otherwise requested, where there is genuine justification.

Citation: Bat Eco Services (2025) Boylan Centre, Dún Laoghaire, Co. Dublin – Winter Bat Assessment. Unpublished report prepared for Dún Laoghaire-Rathdown County Council.

Contents

1. Introduction

Bat Eco Services was commissioned by Dún Laoghaire-Rathdown County Council to undertake a bat survey of the Boylan Centre, Dún Laoghaire, Co. Dublin.

The objective of the bat surveys was to document any bat usage evidence of the buildings and to inform survey requirements during the bat activity season. Bat Eco Services designed a bat survey approach, principally, with reference to Marnell *et al.* (2022) and Collins (2023).

1.1 Relevant Legislation & Bat Species Status

All Irish bat species are protected under the Wildlife Act (1976) and Wildlife Amendment Acts (2000 and 2010). Also, the EC Directive on The Conservation of Natural habitats and of Wild Fauna and Flora (Habitats Directive 1992), seeks to protect rare species, including bats, and their habitats and requires that appropriate monitoring of populations be undertaken. All Irish bats are listed in Annex IV of the Habitats Directive and the lesser horseshoe bat *Rhinolophus hipposideros* is further listed under Annex II. Across Europe, they are further protected under the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1982), which, 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. The Irish government has ratified both these conventions.

Also, under existing legislation, the destruction, alteration or evacuation of a known bat roost is an offence. The most recent guidance document is “Guidance document on the strict protection of animal species of Community interest un the Habitats Directive (Brussels, 12.10.2021 C(2021) 7391 final”.

Regulation 51(2) of the 2011 Regulations provides –

(“(2) Notwithstanding any consent, statutory or otherwise, given to a person by a public authority or held by a person, except in accordance with a licence granted by the Minister under *Regulation 54,* a person who in respect of the species referred to in *Part 1* of the *First Schedule*—
(*a*) deliberately captures or kills any specimen of these species in the wild, (*b*) deliberately disturbs these species particularly during the period of breeding, rearing, hibernation and migration,
(*c*) deliberately takes or destroys eggs of those species from the wild,
(*d*) damages or destroys a breeding site or resting place of such an animal, or
(*e*) keeps, transports, sells, exchanges, offers for sale or offers for exchange any specimen of these species taken in the wild, other than those taken legally as referred to in Article 12(2) of the Habitats Directive, shall be guilty of an offence.”

The grant of planning permission does not permit the commission of any of the above acts or render the requirement for a derogation licence unnecessary in respect of any of those acts.

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).

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 vesper bats and all vespertilionid bats have a tragus (cartilaginous structure inside the pinna of the ear). Vesper bats are distributed

throughout the island. Nathusius' pipistrelle *Pipistrellus nathusii* is a recent addition while the Brandt's bat has only been recorded once to-date (Only record confirmed by DNA testing, all other records has not been genetically confirmed). The ninth resident species is the lesser horseshoe bat *Rhinolophus hipposideros*, which belongs to the Rhinolophidea and has a complex nose leaf structure on the face, distinguishing it from the vesper bats. This species' current distribution is confined to the western seaboard counties of Mayo, Galway, Clare, Limerick, Kerry and Cork. The eleventh bat species, the greater horseshoe bat, was only recorded for the first time in February 2013 in County Wexford and is therefore considered to be a vagrant species. 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).

The following species list (Table 1) identifies the range of bat species (resident and vagrant) whose presence has been confirmed in Ireland along with their current status. According to the Bat Conservation Ireland databases, all nine resident bat species have been recorded in Co. Limerick.

Table 1a: Status of the Irish bat fauna (Marnell *et al.*, 2019 & NPWS, 2022).

Species: Common Name	Irish Status	European Status	Global Status
Resident Bat Species ^			
Daubenton's bat *Myotis daubentonii*	Least Concern	Least Concern	Least Concern
Whiskered bat *Myotis mystacinus*	Least Concern	Least Concern	Least Concern
Natterer's bat *Myotis nattereri*	Least Concern	Least Concern	Least Concern
Leisler's bat *Nyctalus leisleri*	Least Concern	Least Concern	Least Concern
Nathusius' pipistrelle *Pipistrellus nathusii*	Least Concern	Least Concern	Least Concern
Common pipistrelle *Pipistrellus pipistrellus*	Least Concern	Least Concern	Least Concern
Soprano pipistrelle *Pipistrellus pygmaeus*	Least Concern	Least Concern	Least Concern
Brown long-eared bat *Plecotus auritus*	Least Concern	Least Concern	Least Concern
Lesser horseshoe bat *Rhinolophus hipposideros*	Inadequate	Least Concern	Least Concern
Possible Vagrants ^			
Brandt's bat Myotis brandtii	Data deficient	Least Concern	Least Concern
Greater horseshoe bat *Rhinolophus ferrumequinum*	Data deficient	Near threatened	Near threatened

^ Roche *et al.,* 2014

1.1.1 NPWS Article 17 Reporting

NPWS (2019) provides details on the conservation status for each of Ireland's bat species along with distribution maps (See appendices for such maps). The following table summarises the conclusions of Article 17 assessment of conservation status at the end of the most recent reporting period. Additional information for each of the bat species provides some clarifying notes in relation to the

conservation status conclusions. Such information, where appropriate to the current project, will be drawn on in the project assessment section.

Table 1b: NPWS Article 17 Conservation Status of Irish Bat Species (Adapted from NPWS, 2022).

	Range	Population	Habitat	Future Prospects	Conservation Status Assessment	Conservation Status Trend
Lesser horseshoe bat	Inadequate	Favourable	Inadequate	Inadequate	Inadequate	Deteriorating
Common pipistrelle	Favourable	Favourable	Favourable	Favourable	Favourable	Improving
Soprano pipistrelle	Favourable	Favourable	Favourable	Favourable	Favourable	Improving
Nathusius' pipistrelle	Unknown	Unknown	Favourable	Unknown	Unknown	Not applicable
Natterer's bat	Favourable	Favourable	Favourable	Favourable	Favourable	Stable
Daubenton's bat	Favourable	Favourable	Favourable	Favourable	Favourable	Improving
Whiskered bat	Favourable	Favourable	Favourable	Favourable	Favourable	Improving
Brown long-eared bat	Favourable	Favourable	Favourable	Favourable	Favourable	Improving
Leisler's bat	Favourable	Favourable	Favourable	Favourable	Favourable	Improving

1.1.2 Irish Bat Monitoring Programme – Population Trends

The Irish Bat Monitoring Programme provides information on monitoring schemes managed by Bat Conservation Ireland:

- Car-Based Bat Monitoring (All Ireland) – monitors common pipistrelle, soprano pipistrelle, Leisler's bats with limited information for Nathusius' pipistrelle and *Myotis* species.
- All Ireland Daubenton's Bat Waterway Monitoring
- Brown Long-eared Bat Roost Monitoring
- Lesser Horseshoe Bat Monitoring

This provides population trend data for seven bat species: common pipistrelle, soprano pipistrelle, Leisler's bat, Nathusius' pipistrelle, Daubenton'bat, brown long-eared bat and lesser horseshoe bat (some limited data for *Myotis* species). There is currently no systematic monitoring surveys for Natterer's bat and whiskered bat. Annual reporting is undertaken and the most recent report (Aughney *et al.,* 2023) is referenced for this report. In summary, the population trends for each bat species are as follows:

- Trends of the three common bat species (common pipistrelle, soprano pipistrelle and Leisler's bat) continued to increase in 2022, although the yearly estimates of common pipistrelle levelled out a little. Confidence intervals of these three bat species were all above their baseline indices indicating they each show a significantly increasing trend.
- Nathusius' pipistrelle trends are still unclear due to low encounter rates but decreased a little in 2022 compared to previous years.
- The yearly estimate for the *Myotis* spp. group steadied out a little but overall the smoothed trend for this group is still well below the baseline.
- Daubenton's bat numbers trend line appears to be fairly steady from year to year with error bars consistently encompassing the baseline.
- Brown long-eared bat shows a fluctuating trend around the baseline and is considered to be currently stable.
- Lesser horseshoe bat continue to increase in 2022 for the summer counts while low winter counts caused a slight downward trend in 2022. But overall, this species has increased over the last 20 years of monitoring.

1.1.3 Assessment Parameters

Different parameters are considered for the overall assessment of the potential impact(s) of a proposed development on local bat populations. The overall impacts of the proposed project on local bat populations is assessed using the following criteria:

- Impact Quality using the parameters Positive, Neutral or Negative Impact (based on EPA, 2017)

Table 1c: Criteria for assessing impact quality based on EPA, 2017,

Quality of Effect	Criteria
Positive	A change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Negative	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).

- Impact Significance of potential impact parameters on specific bat species in relation to particular elements (e.g. roosting sites, foraging area and commuting routes) are assessed with reference to the following:
    - Table 4 of Marnell *et al.* (2022) (Figure 1a);
    - the known ecology and distribution of the bat species in Ireland;
    - bat survey results including type of roosts (if any recorded), pattern of bat usage of the survey area, level of bat activity recorded etc.
    - and bat specialist experience.

- Impact Significance of the proposed development on local bat populations maybe determine, where applicable, using the parameters listed in Table 2c (based on EPA, 2017).

Table 1d: Criteria for assessing significance of effects based on EPA, 2017,

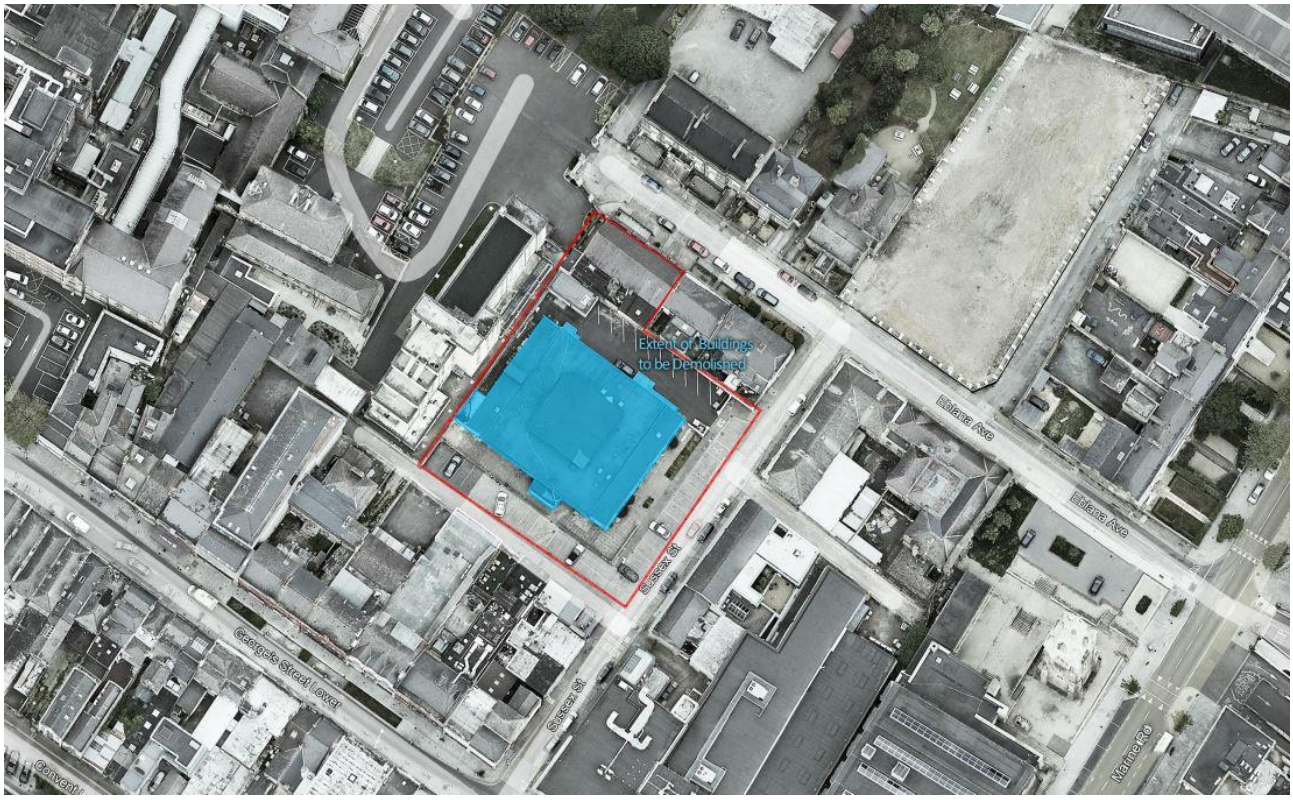
Significance of Effects	Definition
Imperceptible	An effect capable of measurement but without significant consequences.
Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Profound	An effect which obliterates sensitive characteristics

The following terms will be used, where possible and applicable, when quantifying the duration of the potential effects (selected from EPA, 2017):

- Temporary – effects lasting less than a year
- Short-term – effects lasting 1 to 7 years
- Medium term – effects lasting 7 to 15 years
- Long term – effects lasting 15 to 60 years
- Permanent – effects lasting over 60 years
- Reversible – effects that can be undone, for example through remediation or restoration.

1.2 Project Location

The Boylan Centre is located in Dun Laoghaire, Co. Dublin and the county council propose demolition of the existing vacant single storey structure.



2. Survey Methodology

2.1 Guidance Document

This report will draw on guidelines already available in Europe and will use the following documents:

- Collins, J. (Editor) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). Bat Conservation Trust, London
- Marnell, F., Kelleher, C. & Mullen, E. (2022) Bat mitigation guidelines for Ireland v2. Irish Wildlife Manuals, No. 134. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland (Version 1: Kelleher & Marnell, 2006).

Collins (2023) was the principal document used to provide guidance in relation to bat survey effort required. Marnell *et al.* (2022) is referred to for guidance in relation to survey guidance (timing and survey design), derogation licences and mitigation measures.

2.2 Desktop Review

2.2.1 Bat Conservation Ireland Database

Bat Conservation Ireland acts as the central depository for bat records for the Republic of Ireland. Its' bat database is comprised of >100,000 bat records. The database primarily contains bat records from the following datasets:

- Irish Bat Monitoring Programme
- BATLAS 2020 & 2010
- Ad Hoc Bat Records submitted by ecologist bat groups etc.

The Bat Conservation Ireland database was accessed on 14th May 2025 to collated bat records for a 1km radius of the proposed development site (O2425528615).

An important caveat to note is that the BCIreland dataset is dependent on bat records being regularly submitted to BCIreland and/or NBDC. Therefore the absence of information does not necessarily imply that there are no bats or bat roosts present in the search area.

2.2.2 Bat Conservation Landscape Favourability

Bat Conservation Ireland (BCIreland) produced a landscape conservation guide for Irish bat species using their database of species records collated during the 2000 – 2009 survey seasons. An analysis of the habitat and landscape associations of all bat species deemed resident in Ireland was undertaken and reported in Lundy *et al*. (2011). This model was queried on 14th May 2025.

The geographical area suitable for individual species was used to identify the core favourable areas of each species. This was produced as a GIS layer for local authorities and planners in order to provide a guide for the consideration of bat conservation. The island is divided into 5km squares and the landscape favourability (expressed as a percentage, the higher the value, the greater the favourability) of each 5km square for each species of bat was modelled. A caveat is attached to the model: the model is based on records held on the Bat Conservation Ireland database, while core areas have been identified, areas outside the core area should not be discounted as unimportant as bats are a landscape species and can travel many kilometres between roosts and foraging areas nightly and seasonally. This model was used as part of the desktop study for this report.

2.3 Daytime Inspection

The centre was inspected to determine its bat roosting potential, document any evidence of bat usage and to determine the number of surveys required. The table below is generally used to assess the bat roosting potential of a structure, which is completed during the daytime. This assessment was undertaken on 1st May 2025.

Table 2a: Building Bat Roost Classification System & Survey Effort (Adapted from Collins, 2023 and Marnell *et al.*, 2022).

Suitability Category	Description (examples of criteria)	Survey Effort (Timings)
Negligible	Building have no potential as a roost site Urban setting, heavily disturbed, building material unsuitable, building in poor condition etc.	No surveys required
Low	Building has a low potential as a roost site. No evidence of bat usage (e.g. droppings)	One dusk emergence survey
Moderate	Building with some suitable voids / crevices for roosting bats Some evidence of bat usage Suitable foraging and commuting habitat present	At least one survey in May to August, minimum of two dusk emergence surveys
High	Building with many features deemed suitable for roosting bats Evidence of bat usage Largely undisturbed setting, rural, suitable foraging and commuting habitat, suitable roof void and building material	At least two surveys in May to August, with a minimum of three surveys

Buildings that may provide a roosting space for bats were inspected during the daytime for evidence of bat usage. Evidence of bat usage is in the form of actual bats (visible or audible), bat droppings, urine staining, grease marks (oily secretions from glands present on stonework) and claw marks. In addition, the presence of bat fly pupae (bat parasite) also indicate that bat usage of a crevice, for example, has occurred in the past. Inspections (external and, where possible, internal) were undertaken visually with the aid of a strong torch beam (LED Lenser P14.2) and endoscope (General DC5660A Wet / Dry Scope).

2.4 Night-time Surveys

The following handheld bat detectors were used:

- Surveyor 1: Anabat Walkabout Full Spectrum Bat Detector
- Surveyor 2: Elekon Bat Logger M2 Full Spectrum Bat Detector

A Night Vision Aids (NVA) was used to support dusk surveys. The following NVA was used:

- A Guide TrackIR Pro25 thermal imagery scope

2.4.1 Dusk Bat Survey

Dusk surveys of the centre were completed on the 8th and 12th May 2025. The surveys started 15 minutes prior to sunset and were undertaken for 2 hours of surveying. Surveys were completed during mild and dry weather conditions.

Preparation for dusk survey started approximately 60 minutes prior to sunset and the following actions were undertaken:

- Re-inspection of building to be surveyed to determine surveyor and filming locations (external and internal (where possible) inspections).
- Internal inspection of building (applicable only to derelict structures and agricultural buildings) to document any visible bats or audible noises (bats are more audible prior to dusk activity).
- Positioning of filming equipment and surveyor.
- Completion of dusk survey.
- Post surveys, a repeat internal inspection of the surveyed building was undertaken (only applicable only to derelict structures and agricultural buildings) to document any visible bats within the structure.

All audio files recorded by full spectrum bat detectors were analysed using Wildlife Acoustics Kaleidoscope Pro and validation of bat records was completed by the principal bat surveyor prior to mapping. This data was then entered onto an Excel file for mapping.

All filming was watched post surveys and any emerging bats were noted and compared to audio recordings also recorded by surveyors.

2.4.2 Static Surveillance

Static bat surveys involved leaving a static bat detector unit (with ultrasonic microphone) in a specific location, set to record for a specified period of time (i.e. a bat detector is left in the field, there is no observer present and bats which pass near enough to the monitoring unit are recorded and their calls are stored for analysis post surveying). The bat detector was effectively used as a bat activity data logger. This results in a far greater sampling effort over a shorter period of time and increases the opportunity to record less common bat species as the units are set to continuously record ultrasonic noise, when triggered, from 30 minutes for sunset to 30 minutes after sunrise. Bat detectors with ultrasonic microphones were used as the ultrasonic calls produced by bats cannot be heard by human hearing.

The microphone of the unit was positioned horizontally to reduce potential damage from rain. The static units deployed use Real Time recording as a technique to record bat echolocation calls and using specific software, the recorded calls are identified. It is these sonograms (2-d sound pictures) that are digitally stored on the SD card (or micro SD cards depending on the model) and downloaded for analysis. These results are depicted on a graph showing the number of bat passes per species per night. Each bat pass does not correlate to an individual bat 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 is one individual bat. On the other hand, Leisler's bats tend to travel through an area quickly and therefore an individual sequence or bat pass is more likely to be indicative of individual bats.

Recordings were analysed using Wildlife Acoustics Kaleidoscope Pro. Manual validation was undertaken by the principal bat specialist and the following rules were followed:

- Validation that the auto-id function was checked for at least 20% of *Pipistrellus* spp. and Leisler's bat calls apart from Nathusius' pipistrelle calls.
- All Nathusius' pipistrelles calls were manually verified. The reasoning for this is due to frequently misidentification of low 40kHz calls, by auto-id tools, as this species, which may in fact be low frequency common pipistrelle calls.
- All brown long-eared bat calls were manually verified. The reasoning for this due to frequently misidentification of social calls of *Pipistrellus* spp. frequently identified as this bat species.

- Manual verification of *Myotis* spp., where possible, to species level in order to increase the accuracy of the dataset. Where such calls cannot be identified to species level, they are reported as *Myotis* spp.
- Manual validation was undertaken for all “Unidentified” calls and for approximately 20% proportion of “Noise” calls.

Each audio file was noted as a bat pass to indicate level of bat activity for each species recorded. This was expressed as the average number of bat passes per survey night (no. of nights was the total number successful nights of deployment).

The following static unit model were deployed during this static bat detector survey:

Table 2b: Static Bat Detectors deployed during Static Bat Detector Surveys.

Static Unit Code	Bat Detector Type	Recording Function	Microphone
SM Mini Bat 2 Units	Wildlife Acoustics SongMeter Mini Bat 2 FS	Passive Full Spectrum	SMM-U2

Static surveillance consisted of three static units, one deployed inside the building and the remaining deployed outside the centre. One unit was originally deployed on the flat roof of an adjacent building (known as the Soup Kitchen) but for security reasons, it was removed after one night of recording.

- 1st to 7th May 2025 (1-6 nights)

3. Bat Survey Results

3.1 Desktop Review

3.1.1 Bat Conservation Ireland Database

A total of ten geo-referenced bat records were available for the 1km search area. The number of records for each of the bat species is listed in the table below and this includes ten bat detector records for two species of bat.

Table 3a: Bat Records (Source: Bat Conservation Ireland).

Bat species	No. of records		Bat species	No. of records	
	Roost	Detector		Roost	Detector
Common pipistrelle	0	2	Soprano pipistrelle	0	0
Nathusius' pipistrelle	0	0	Leisler's bat	0	8
Daubenton's bat	0	0	Whiskered bat	0	0
Brown long-eared bat	0	0	Natterer's bat	0	0
Pipistrelle spp	0	0	Myotis spp	0	0

3.1.2 Bat Conservation Landscape Favourability

The BCIreland Landscape Favourability Model (Lundy *et al.,* 2011) was investigated as part of this desktop review. The island of Ireland is divided into 5km squares and the darker the shading of the square, the higher favourability of the 5km square for bats. The favourability of the square is represented by a percentage for each bat species, with higher values representing higher level of favourability. The square within which the cottage is located has a Moderate favourability for bats.

Table 3b: Percentage Landscape Favourability for each 5km for Irish bat species (Lundy *et al.,* 2011).

Square No.	All bat spp.	SP	CP	Nath Pip	Leis	BLE	Daub	Natt	Whis
1	22.2%	38%	36%	16%	38%	29%	9%	15%	19%

Note: SP = soprano pipistrelle, CP = common pipistrelle, Nath Pip = Nathusius' pipistrelle, Leis = Leisler's bat, BLE = brown long-eared bat, Daub = Daubenton's bat, Natt = Natterer's bat, Whis = whiskered bat.

Figure 1: Bat Conservation Ireland Landscape Favourability Model for 5km square (Source: Bat Conservation Ireland Landscape Model). Survey site is marked by Dark Blue Square.

3.2 Daytime Inspection

The Boylan Centre is currently vacant. There was no evidence of bats within accessible internal spaces or on external walls. This is a highly urban setting and therefore it was deemed that the building has a Low potential for roosting bats.

3.3 Night-time Surveys

3.3.1 Dusk Surveys

A dusk survey was completed on 8th May 2025 (weather conditions: 13oC, clear sky, calm and dry) coupled with a thermal imagery camera for filming. No bats were recorded emerging from the centre and this was confirmed by the thermal imagery filming. No bats were recorded during the survey period.

A dusk survey was completed on 12th May 2025 (weather conditions: 12oC, clear sky, calm and dry). No bats were recorded during the survey period. Therefore it is deemed that there are no bats roosting in the Boylan Centre.

3.3.2 Static Surveillance

The static unit inside the building did not record any bat activity. This confirms the survey results of the dusk survey. The static units located outside the building recorded one species of bat: common pipistrelle.

A total of 5 common pipistrelle bat passes was recorded on the static unit left in place for six nights of surveillance: two passes on the 5th May (from 22:32 hrs – which is 80 minutes after sunset and therefore a recording of an individual commuting through the area) and three pass on the 7th May (first call at 23:07 hrs, again indicating a recording of an individual commuting through the survey area). Therefore it is deemed that the bat passes were of commuting individuals and not of roosting bats.

4. Site Evaluation

The survey site was surveyed according to Collins (2023). One bat species was recorded: common pipistrelle. No bats were recorded roosting in the centre but bats were recorded commuting within the survey area. The overall level of bat activity was deemed to be low. Common pipistrelle is one three most common bat species in Ireland and this species was recorded in a low level of bat activity. The survey results indicate that the survey site is not an important area for local bat populations.

Common pipistrelle

- Common pipistrelle is an Annex IV bat species under the EU Habitats Directive. The status of this bat species is listed as Least Concern. The national common pipistrelle population is considered to be significantly increasing (Aughney *et al.,* 2021).
- The modelled Core Area for common pipistrelle is a relatively large area that covers much of the island of Ireland (56,485km^2). The Bat Conservation Ireland Irish Landscape Model indicated that the common pipistrelle selects areas with broadleaf woodland, riparian habitats and low density urbanization (<30%) (Roche *et al.,* 2014).

The overall trend for the national population of common pipistrelle in Article 17 reporting (NPWS, 2019) is as follows:

- Range = Favourable
- Population = Favourable
- Habitat for species = Favourable
- Overall Assessment of Conservation Status = Favourable
- Overall trend in Conservation Status = Improving

The Boylan Centre is not a bat roost and therefore the removal of this structure will no impact on local bat populations.

5. Conservation Measures

As there are no bats roosting in the Boylan Centre there is no requirement for bat mitigation measures during the removal of this building. However, as bats were briefly recorded, it is recommended that Bat Conservation Measures are considered.

The most important measures relate to lighting and landscaping to ensure that there is appropriate lighting and, where possible, commuting/foraging habitat present post works.

5.1 Outdoor Lighting

Bats are light sensitive bats species, hence their nocturnal activities. Luminaire design is extremely important to achieve an appropriate lighting regime. Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The following should be considered when choosing luminaires. This is taken from the most recent BCT Lighting Guidelines (BCT, 2023). It is important that the client checks that any outdoor lighting meets the following guidelines:

Where lighting is deemed necessary, the following are required:

- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp-cut-off, lower intensity, good colour rendition and dimming capability,
- A warm white light source (2700 Kelvin or lower) should be adopted to reduce blue light component of luminaires. A 2700 Kelvin luminaire appears as a warm yellow due to the reduction in the stark blue light associated with higher Kelvin values (e.g. 4000 Kelvins). The “warmer” the light, the less of an impact on nocturnal wildlife. The progression of LED technology means that the majority of luminaires are available at 2700 Kelvins and lower. Therefore, it is recommended that such luminaires are standard for “biodiversity areas” and as LED technology develops, 2200 Kelvins may become more commonly available in future years.
- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Internal luminaires, in relation to buildings within the proposed development area, can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill. This is particularly important for Building 1 and Building 2 of the proposed development site as these are located adjacent to the Riparian Zone.
- Waymarking inground markers (low output with cowls or similar to minimised upward light spill) to delineate path edges, if required, for pedestrian zones within the proposed development area should be used.
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards.
- Only luminaires with a negligible or zero Upward Light Ration, and with good optical control, should be considered.
- Luminaires should always be mounted horizontally, with no light output above 90^{o} and/or no upward tilt.
- Where appropriate, external security light should be set on motion sensors and set to as short a possible a timer as the risk assessment will allow (e.g. 1-2 minute timer).

- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

Any external lighting for the proposed development should strictly follow the above guidelines and these should be strictly implemented during construction and operation phase of the proposed development.

5.2 Landscaping

It is recommended that that any landscape planting plant only Irish native tree and shrub species.

6. Survey Conclusions

The survey site was surveyed according to Collins (2023). A total of five bat species were recorded: Daubenton's bat, brown long-eared bat, Leisler's bat, common pipistrelle and soprano pipistrelle. No bats were recorded roosting in the cottage but the bats recorded were commuting and foraging within the survey area. The overall level of bat activity was deemed to be low. Three of these bat species (common pipistrelle, Leisler's bat and soprano pipistrelle) are the three most common bat species in Ireland. All other bat species are less common.

The Boylan Centre is currently vacant. There was no evidence of bats within accessible internal spaces or on external walls. This is a highly urban setting and therefore it was deemed that the building has a Low potential for roosting bats.

As there are no bats roosting in the centre there is no requirement for bat mitigation measures during the removal of this building. However, as bats were recorded commuting in the survey area, it is recommended that Bat Conservation Measures are recommended.

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