southern scientific services ltd.

# Supporting document for application for Derogation License to Disturb a Common and Soprano Pipistrelle bat breeding or resting place. (With particular reference to Section 10 and Sections 11.1 - 11.4)

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| **Requested For:** | **Kevin Flannery** |
| **Prepared By:** | **Colette Murray BSc MSc**<br>**Southern Scientific Services Ltd** |
| **Our Reference:** | **25P-022** |

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| **Report Prepared By** | Colette Murray |  |
| **Report Reviewed By** | Kate Handel |  |
| **Issue Date:** | 23/05/2025 | |
| **Comment:** | Final Report | |
| **Revision:** | 00 | |

4park business centre|farranfore|county kerry |ireland |telephone+353 66 9763588 fax +353 66 9763589

email: info@southernscientificireland.com

Registered in Ireland No. 323196 VAT Reg. No. IE 6343196

**Contents**

## 1. Introduction

This document is being submitted in support of the **Application for a Derogation Licence under the European Communities (Birds and Natural Habitats) Regulations 2011 - 2022 - No 54 (SI No 477 of 2011).** It has been prepared by Colette Murray ecologist of Southern Scientific Services Ltd.

This derogation license application is for the potential disturbance of a Common and Soprano pipistrelle bat roost (EU Habitats Directive Annex IV species) as provided for by Article 16 of the Habitats Directive. Ireland's nine species of bats are all Red data listed and receive protection through the Wildlife Act (1976 & 2000) and Annex IV of the EU Habitats Directive, under which it is an offence to intentionally disturb, kill or injure a bat or disturb its resting place. Any works that have the potential to interfere with bats and especially their roosts, may only be carried out under a derogation license 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 proposed works being the renovation and extension of an old derelict house in Mountcollins, Abbeyfeale, County Limerick as part of planning application 24/60693 (see figure 1 below).

This report has been compiled in response to sections 10 and 11 of the derogation license application form and includes the following information:

1. The reason why this application qualifies under regulation 54(2)(A-E) of the European Communities (Birds and Natural Habitats) Regulations.
2. Why the derogation license sought is the only available option for works and that no suitable alternative exists as per regulation 54 of the European Communities (Birds and Natural Habitats) Regulations.
3. Evidence that the actions permitted by the derogation license will not be detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range as is required under Section 54(2) of the European Communities (Birds and Natural Habitats) Regulations.
4. Details of any mitigation measures planned for the species affected by the derogation at the location, along with evidence that such mitigation has been successful elsewhere.
5. As much information as possible to allow a decision to be made on this application.

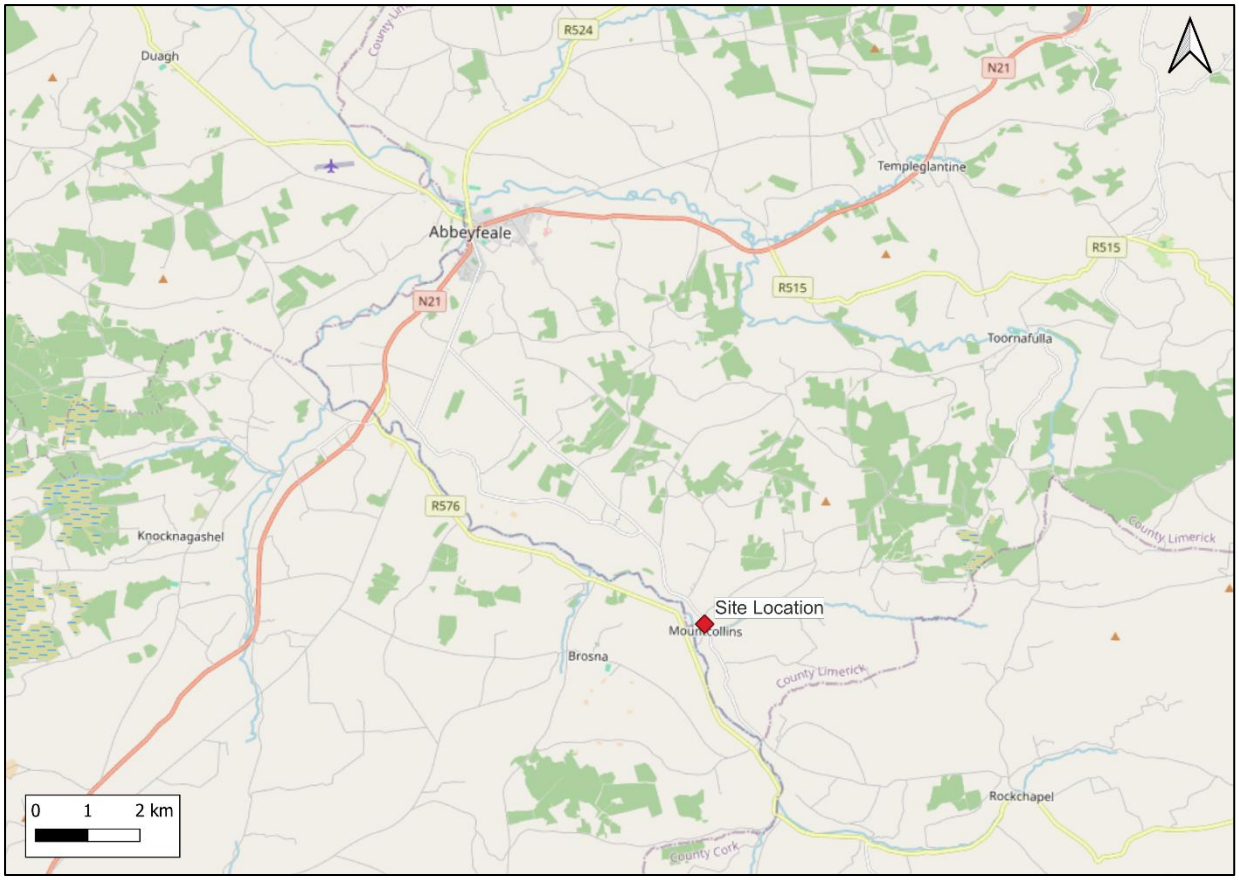


*Figure 1: Proposed Site location in Mountcollins, Abbeyfeale, County Limerick.*

## 2. Background

Brian Carey of Carey Architects, acting on behalf of Kevin Flannery applied to Limerick City County Council (LCCC), for planning permission to renovate and extend an old derelict house at Mountcollins, Abbeyfeale, County Limerick (Planning Registration number: 24/60693). In response to this application LCCC issued a Further Information Request (FIR) dated the 3rd of September 2024, requesting that a Bat Survey be prepared and submitted to LCCC in relation to the proposed development to establish the presence or absence of bat roosts within the building. Southern Scientific Services Ltd were therefore commissioned to carry out this Bat Survey and accompanying report.

## 3. Site Description

The proposed development site ("site") is located in Mountcollins village approximately 9 km southeast of Abbeyfeale in County Limerick. The site is situated in a central location in the village, facing the church.

It comprises an existing derelict property with an artificially surfaced yard space to the rear. The residential property is unoccupied and appears to have been vacant for some time (see photos in Appendix II).

The site is bounded to the north and south by adjacent residential and commercial properties. The site is bounded to the east by a local road and church. To the west, the site is bounded by mature hedgerow and followed by agricultural grassland. Other surrounding habitat types include improved and semi-improved grasslands, hedgerows, treelines, dwelling house, commercial properties and local roads. The River Feale flows north approximately 200 m west of the site. The Caher River, a tributary of the Feale, flows west approximately 80 m south of the site. The watercourses overlap with the Lower River Shannon SAC and the Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA.

## 4. Methodology

An ecological desktop assessment was undertaken on the 12th of May 2025. The aim of this was to investigate existing documentation and data containing information on previous bat sightings, protected sites for bat species, and the Bat Habitat Suitability Index. Information was sourced from several online sources which included:

- National Parks and Wildlife Service Maps & Databases (www.npws.ie).
- National Biodiversity Data Centre (https://maps.biodiversityireland.ie).
- Bat Habitat Suitability Index Maps(Lundy et al., 2011);
- Arial photography and 1:50000 mapping.

The Bat Habitat Suitability Index provides maps that detail the suitability of habitats in Ireland for bats. It helps to predict where bat species might occur (Lundy et al., 2011). The maps are constructed using 5km grid squares from the OSI National Grid and these grid squares are given a Bat Habitat Suitability Index. The index for this is seen below with green least suitable and red most suitable.

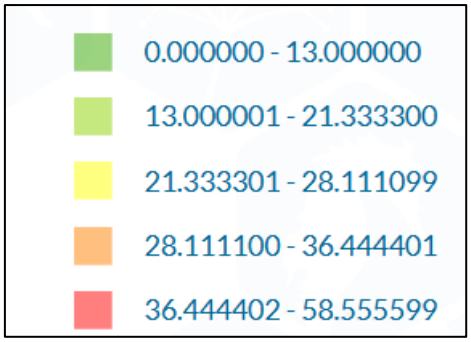


*Figure 2: Bat Habitat Suitability Index*

The area around the proposed development in Mountcollins, County Limerick has an overall Bat Suitability Index of 24.33 for all bat species. This score indicates a moderate suitability for bats in the general area. The area was considered most favourable for Brown long-eared bat (*Plecotus auritus*) and Common pipistrelle (*Pipistrellus pipistrellus*) and least favourable for Nathusius's pipistrelle (*Pipistrellus nathusii*). The Habitat Suitability Indices score for each of these species is shown below:

*Table 1: Bat habitat suitability index.*

| Common Name | Scientific Name | Habitat Suitability Index |
|---|---|---|
| Soprano pipistrelle | *Pipistrellus pygmaeus* | 32 |
| Brown long-eared bat | *Plecotus auritus* | 39 |
| Common pipistrelle | *Pipistrellus pipistrellus* | 37 |
| Lesser horseshoe bat | *Rhinolophus hipposideros* | 18 |
| Lesser noctule | *Nyctalus leisleri* | 28 |
| Whiskered bat | *Myotis mystacinus* | 20 |
| Daubenton's bat | *Myotis daubentonii* | 20 |
| Nathusius's pipistrelle | *Pipistrellus nathusii* | 1 |
| Natterer's bat | *Myotis nattereri* | 24 |

In addition, records from the National Biodiversity Data Centre were assessed for the 1km & 2km grid square that contains the site. This search revealed that the following bats were recorded within the 2km grid square; Common Pipistrelle (*Pipistrellus pipistrellus*), Daubenton's Bat (*Myotis daubentonii*), Lesser Noctule (*Nyctalus leisleri*), Soprano Pipistrelle (*Pipistrellus pygmaeus*).

This project is not located within any SAC's, SPA's or PNHA's. It is however located approximately 80 m north of the Lower River Shannon SAC and 150 m north of the Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA. The Lesser Horseshoe Bat is not listed as a Qualifying Interest for the Lower River Shannon SAC.

The Landscape Conservation for Irish Bats dataset was accessed via the online National Biodiversity Data Centre live mapping interface on the 22nd of May 2025 (https://maps.biodiversityireland.ie/Map) to obtain background information on the suitability of the area for all of the Irish bat species.

## *4.2 Field Survey*

The basic methodology was that described by Kelleher & Marnell (2006) and Collins (2023). The survey was comprised of 2 parts; a preliminary roost assessment and a dusk emergency survey. The survey was carried on the 13th of May 2025 to establish the presence of absence of bat roosts within the building intended for renovation and extension. Weather conditions on the day were warm and dry with little to no wind. These conditions are considered optimum for bat surveys. May is considered an optimal month to carry out emergence surveys.

### 4.2.1 Preliminary roost assessment

A PRA is a detailed inspection of the exterior and interior of a structure to look for features that bats could use for entry/exit and roosting and to search for signs of bats. The aim of this survey is to determine the actual or potential presence of bats and the need for further survey and/or mitigation. Evidence of bats might include live or dead specimens, bat droppings, urine splashes, fur-oil staining and/or squeaking noises.`

### 4.2.2 Dusk Emergence survey

The purpose of this surveys is to determine whether any bat species were roosting in the building proposed to be renovated and extended. This involved the deployment of surveyors to observe, listen for and record bats in flight. Surveyors should be in position 15 minutes before sunset and remain in position for 1.5 to 2 hours after sunset. During this time surveyors will record bat numbers, species and activity type. Elekon Batlogger M bat detectors were used to detect bat passes throughout the survey. It should be noted that 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. Data collected was analysed using Kaleidoscope Pro acoustics software. All auto ID recordings were manually checked and amended if necessary.

## 5. Results

### 5.1 Preliminary roost assessment

The building was inspected for signs and/or presence of roosting bats. The rear and front external walls contained multiple cracks, indicating possible entry/exit points. No cracks were noted on the external walls either side (north and south). No ivy was present on the walls. There was no evidence of droppings, urine or droppings and no live or dead bats were observed.

### 5.2 Dusk Emergence survey

The dusk emergence survey commenced at 9.15 pm on the 13th of May 2025 and concluded at 11 pm, 1.5 hours after sunset (9.30pm). At approximately 9.45 pm, 6 pipistrelle bats (Common and Soprano) were observed exiting the rear of the building from a single location just below the roof (Figure 3), indicating the presence of a roost.


*Figure 3 Location of roost roost/exit point at the rear of the building.*

Figure 4 shows that the most commonly detected species were the Common and Soprano pipistrelles followed by Leisler's and Natterer's bats. Daubenton's, Brown long-eared and Whiskered bats were

detected in low numbers. Bat activity began once the roosting pipistrelles emerged at 9.45pm. They were observed flying in circles at the rear of the building before moving away from the area. Other bat species were not recorded until after 10 pm and were detected in both the rear the front of the building. Approximately 350 bat passes were recorded for each handheld detector during the 1 hour and 45 minute survey. Lesser Horseshoe bats were not detected during the survey. These findings were confirmed through desktop analysis of sound files using Kaleidoscope Pro software.

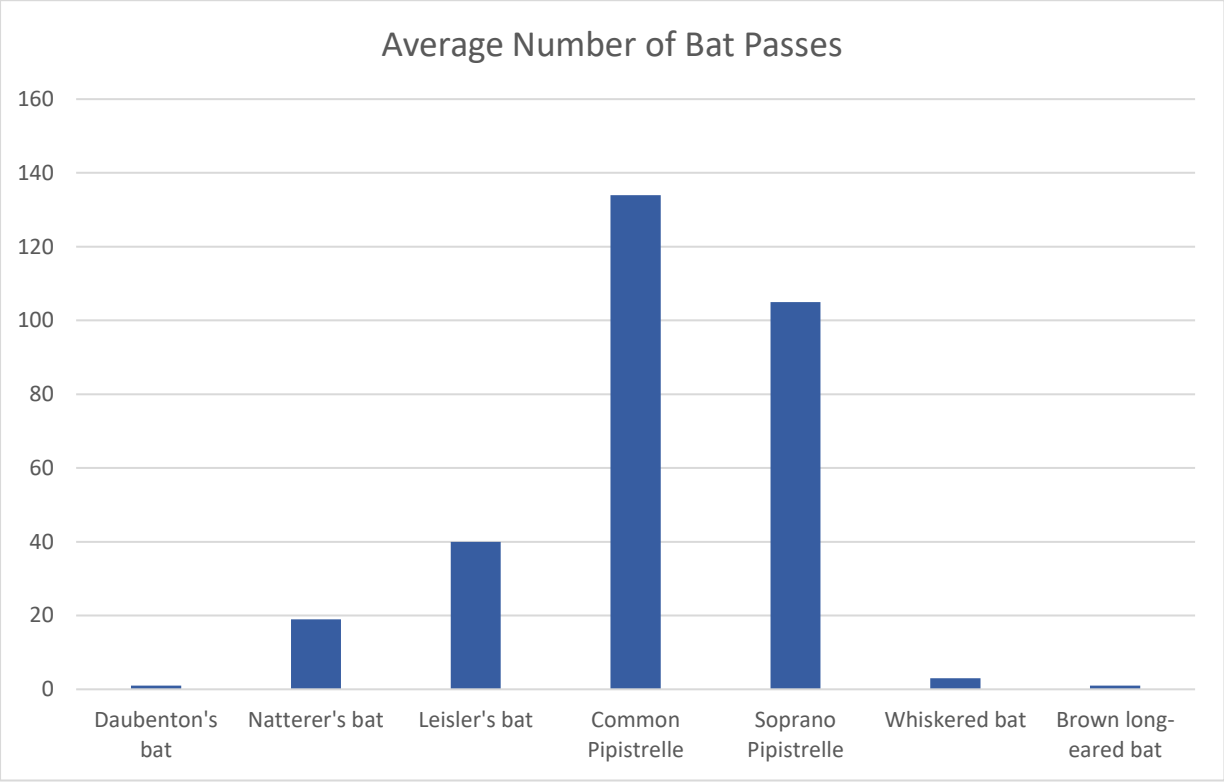


*Figure 4 Average Number of bat passes detected during the emergence survey.*

## 6. Response to Question 10 - Derogation Licence Application Form

***Question 10****: Please tick which reason below explains How this Application Qualifies under Regulation 54(2)(A-E) of the European Communities (Birds and Natural Habitats) Regulations:*

| | |
|---|---|
| **a.** | In the interests of protecting wild flora and fauna and conserving natural habitats |
| **b.** | To prevent serious damage, in particular to crops, livestock, forests, fisheries and water and other types of property |
| **c.** | In the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment |
| **d.** | For the purpose of research and education, of re-populating and re-introducing these species and for the breeding operations necessary for these purposes, including artificial propagation of plants |
| **e.** | To allow, under strictly supervised conditions, on a selective basis and to a limited extent, the taking or keeping of certain specimens of the species to the extent specified therein, which are referred to in the First Schedule |

***Answer: c -*** *In the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment*

Brian Carey of Carey Architects, acting on behalf of Kevin Flannery applied to Limerick City County Council (LCCC), for planning permission to renovate and extend an old derelict house at Mountcollins, Abbeyfeale, County Limerick (Planning Registration number: 24/60693). In response to this application LCCC issued a Further Information Request (FIR) dated the 3rd of September 2024, requesting that a Bat Survey be prepared and submitted to LCCC in relation to the proposed development to establish the presence or absence of bat roosts within the building. Southern Scientific Services Ltd were therefore commissioned to carry out this Bat Survey and accompanying report.

The subsequent survey determined the presence of a Common and Soprano Pipistrelle day/satellite roost within the building. Any works that have the potential to interfere with bats and especially their roosts, may only be carried out under a derogation license 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). In order to adequately renovate and extend the building, thereby creating a habitable residence, it will be necessary to remove the current roost space. However, the mitigation measures proposed as part of this derogation license application have been designed to ensure that no Common or Soprano Pipistrelle bats will be injured or disturbed as a result of these works and that sufficient replacement roosting habitat will be provided in the form of bat boxes to ensure the local population as a whole will not be affected by this development.

## 7. Response to Question 11 - Derogation Licence Application Form

***Question 11*** *has four sections to be addressed, namely 11.1 to 1.4:*

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| **11.1** | Explanation as to why the derogation licence sought is the only available option for works and no suitable alternative exists as per Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations. |
| **11.2** | Evidence that actions permitted by a derogation licence will not be detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range as is required under Section 54(2) of the European Communities (Birds and Natural Habitats) Regulations. |
| **11.3** | Details of any mitigation measures planned for the species affected by the derogation at the location, along with evidence that such mitigation has been successful elsewhere. |
| **11.4** | As much information as possible to allow a decision to be made on this application. |

### *Question 11.1*

*Explanation as to why the derogation licence sought is the only available option for works and no suitable alternative exists as per Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations.*

This derogation licence has been sought to allow renovation of a derelict building where a day/satellite roost for Common and Soprano Pipistrelle bats has been confirmed as present. Any works that have the potential to interfere with bats and especially their roosts, may only be carried out under a derogation license 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). Several alternative options to derogation were considered and their viability assessed:

*1. Leave the building as it currently is.*

This option was considered as a potentially suitable short-term option. The building is not currently in use, a number of windows are boarded up, but there are several open windows and small openings present on all faces of the building. The roof of the building is currently intact. If the building is left to remain in its current state it is likely that it will fall into a state of further dereliction, and its suitability as a bat roost location would be significantly reduced. While this option is considered a suitable solution in the short term, it is deemed that it is not viable as a long term alternative to the proposed project as it will result in loss of roost habitat and the continued loss of a habitable building.

*2. Retain roosts within the building during renovation*

This option was considered as a way to minimise impact on bats. As mentioned, a day/satellite roost for Common and Soprano Pipistrelle bats was detected during the bat activity survey on the 13th May 2024, with approximately 6 individual bats observed exiting the building.

Modification of the building, and consequently, the roost characteristics can lead to roosts becoming unsuitable for bats and ultimately being abandoned (Reason and Wray, 2023). If the modifications lead to abandonment, the implications for local bat populations would be the same as for roost loss. If the roost is not abandoned, it may support fewer bats, or their winter survival rate, or reproductive success may be reduced.

While it is possible to retain specific sections of the building as potential roost locations, it is unlikely that renovation and extension can occur whilst still retaining all current features of the current roost. This is deemed a sub-optimal solution as increased disturbance from anthropogenic sources during both the construction and operational phases of development will most likely result in the project site being avoided by bats for use as a roost location.

*3. Renovate the building with suitable bat mitigation*

The final option considered for the project is to renovate the building whilst adhering to mitigation recommended as part of the bat activity survey carried out in May 2025. This involves the installation of bat boxes on the wall at the rear of the newly renovated building. These bat boxes are to be optimised for use by Common and Soprano Pipistrelle bats and NPWS will be consulted as to the most effective type and design of bat box to be used. Additionally, bat friendly lighting will be installed both internally and externally to avoid disturbance to all bat species in the locality. Commuting and foraging habitat will be retained on site. It is also a requirement that works do not commence until bats have moved to their winter hibernation site an emergence survey has been carried out by an ecologist who will confirm their absence. These measures are best practice guidelines (Reason & Wray 2023).

The building is currently in a derelict state. The proposed renovation works will allow the building to once again be habitable and the recommended mitigation will ensure no adverse impact on bat populations in the area. As a result this derogation license is the only available option to allow these works to take place and no suitable alternative exists.

## *Question 11.2*

*Evidence that actions permitted by a derogation licence will not be detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range as is required under Section 54(2) of the European Communities (Birds and Natural Habitats) Regulations.*

The following are the most pertinent reasons in respect of Question 11.2:

- The actions permitted by this derogation license are designed to ensure that no individual bats will be injured or disturbed.
- Works will be carried out when a suitably qualified ecologist has carried out an emergence survey and has determined that the bats have vacated the building.
- Bat boxes will be provided as a replacement roosting habitat.
- In addition, the retention of vegetation, as well as restrictions relating to artificial lighting, will ensure the immediate surrounding area continues to be optimum for bat activity.

Therefore, the maintenance of the local bat populations is not expected to be effected by these works.

***Question 11.3***

*Details of any mitigation measures planned for the species affected by the derogation at the location, along with evidence that such mitigation has been successful elsewhere.*

Given the presence of a roost on site, it is recommended that the following mitigation be implemented.

| Subject of Mitigation Measures | Measure | How the measure will avoid/prevent/reduce impacts | Confidence in the likely success of the measure | Timescale for Implementation | Monitoring requirements |
|---|---|---|---|---|---|
| Roosting bats. | Works on the building are not to take place between March 31st and September 30th. | There are Common and Soprano pipistrelle bats roosting in the building. Bats can be found roosting in summer roosts between this time period. Working outside of this timeframe will allow the bats to have left the building and moved to a winter hibernation roost. | Measures prescribed by Bat Conservation Trust, 2023, the National Parks and Wildlife Service (NPWS) and as best practice and are proven technologies/methods. | Measures will take place in advance of, during and to the end of the construction phase. | The contractor will be responsible for the regular maintenance of these controls. The effectiveness of these controls will be regularly monitored by a suitably qualified ecologist. |
| Roosting bats. | A derogation license will be required in order to carry out works on the building. | As this building is a confirmed roost of an Annex IV species a derogation license will be required from National Parks and Wildlife Services (NPWS) to allow works to take place on the building. | Required by Law. | This license is to be applied for and received prior to any works on the building commencing. | The works are to be supervised by a suitably qualified bat ecologist. On completion of the works a report is to be submitted to NPWS detailing results of works and the success of applied mitigation |

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| | | | | | measures. This is to be done by a suitably qualified ecologist. |
| Roosting bats. | A bat emergence survey is to be carried out prior to works on the building commencing. | This is to ensure that the bats have left the roost so that no bats will be harmed or disturbed by these works. | Measures prescribed by Bat Conservation Trust, 2023, the National Parks and Wildlife Service (NPWS) and as best practice and are proven technologies/methods. | Prior to works commencing. | This is to be carried out by a suitably qualified ecologist. |
| Roosting bats. | Bat boxes are to be installed on the rear of the newly renovated building (facing west). These bat boxes are to be optimised for use by Common and Soprano pipistrelle bats in consultation with an ecologist and/or NPWS. | This will provide roosting for Common and Soprano pipistrelle bats that had previously been roosting within the building. | Measures prescribed by Bat Conservation Trust, 2023, the National Parks and Wildlife Service (NPWS) and as best practice and are proven technologies/methods. | These boxes are to be installed following the completion of works. | These boxes and their positioning on the building are to be approved by a suitably qualified ecologist. |
| Bat flight paths | Retain the hedgerows and treelines bordering the site. | Retention will preserve existing commuting and foraging routes and further reduce disturbance to foraging habitat west of the site. | Measures prescribed by Bat Conservation Trust, 2023, the National Parks and Wildlife Service (NPWS) and as best practice and are proven technologies/methods. | Measures will take place in advance of the construction phase and will continue during the operational phase. | These control measures will be implemented and regularly inspected by the Environmental Officer. The contractor will be responsible for the regular maintenance of these controls. The effectiveness of these controls will be |

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| | | | | | regularly monitored by the project Ecologist and the Environmental Officer. |
| Lighting | - Light should only be erected where it is needed, illuminated during the period it will be used, and at the level that enhance visibility.<br><br>- 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. Light sources should feature peak wavelengths higher | The proposed development will result in an increase of introduced light to the site both during construction and once operational. Bat species are sensitive to light pollution and so the implementation of these mitigation measures will ensure there is no negative impacts of light pollution on the population of Bat species. | Measures prescribed by Bat Conservation Trust, 2023, the National Parks and Wildlife Service (NPWS) and as best practice and are proven technologies/methods. | Measures will be in place during the design phase from the commencement of the construction phase and will continue during the operational phase. | These control measures will be implemented and regularly inspected by the Contractor/Environmental Officer. The contractor will be responsible for the regular maintenance of these controls. The effectiveness of these controls will be regularly monitored by the project Ecologist and the Environmental Officer. |

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| | than 550 nm to avoid the component of light most disturbing to bats.<br><br>- Use the lowest levels of lighting permitted for health and safety.<br><br>- Direct light away from the SAC and hedgerow/treeline bordering the site, where possible.<br><br>- Internal luminaires can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill.<br><br>- Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges.<br><br>- Low level lighting less than 1 m should be used (including columns) as it is the higher projecting | | | | |

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| | lighting that is of concern, so the traditional high level street lighting is to be avoided.<br><br>- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered.<br><br>- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.<br><br>- Where appropriate, external security lighting should be set on motion sensors and set to as short as possible a timer (1-2 minutes approximately) as the risk assessment will allow.<br><br>- Reduce light spill so that light reaches only areas needing illumination. Shielding | | | | |

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| | or cutting light can be achieved through the design of the luminaire or with accessories, such as hoods, cowls, louvres and shields to direct the light.<br><br>- From May to September inclusive construction works are not to take place from dusk to dawn. Artificial lighting is to be kept to an absolute minimum during this time.<br><br>- Limit the times that lights are on to provide some dark periods for wildlife. | | | | |

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***Question 11.4***

*As much information as possible to allow a decision to be made on this application.*

Southern Scientific Services Ltd was commissioned by Kevin Flannery to undertake a Bat Survey to determine if bats roosts are present within the building for which renovation and extension is intended.

The preliminary roost assessment revealed that although no signs of bats were present, there were several possible entry/exit points within the external walls, warranting the need for a dusk emergence survey. The dusk emergence revealed the present of a small roost of Common and Soprano pipistrelles (6 individuals). Given the small number of individuals, it is likely a day roost or satellite roost. Seven of the nine Irish bat species were detected during the survey, indicating that this area holds Site to Local level importance for bat species according to the UK Bat Mitigation Guidelines.

The mitigation provided in Section 7 will ensure that bat populations in the area are not adversely impacted as a result of the proposed development.

It is the opinion of the author that this report, in conjunction with the corresponding application for Derogation Licence under the European Communities (Birds and Natural Habitats) Regulations 2011-2021 and Bat Survey Report dated 23/05/2025, together contain sufficient information to allow a decision to be made on this application.

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## 8. References


Bat Conservation Trust (BCT) (2023). Guidance note GN08/23 Bats and Artificial Lighting at Night.

Collins, J. (ed) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines, (4th Edition). The Bat Conservation Trust, London.

Marnell, F., Kelleher, C. & Mullen, E., 2022. *Marnell, F., Kelleher, C. & Mullen, E. (2022) Bat mitigation guidelines for Ireland V2. Irish Wildlife Manuals, No. 134.*. Ireland: National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, Ireland.

Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for development affecting bats. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.

Roche, N., Langton, S. and Aughney T. (2012) Car-based bat monitoring in Ireland 2003-2011. *Irish Wildlife Manuals,* No. 60. National Parks and Wildlife Service, Department of the Arts, Heritage and the Gaeltacht, Ireland.

Roche, N.et al., 2024. *Irish Bat Monitoring Schemes: Annual Report for 2023*. Ireland: www.batconservationireland.org.


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**Appendix I Drawings and Plans**

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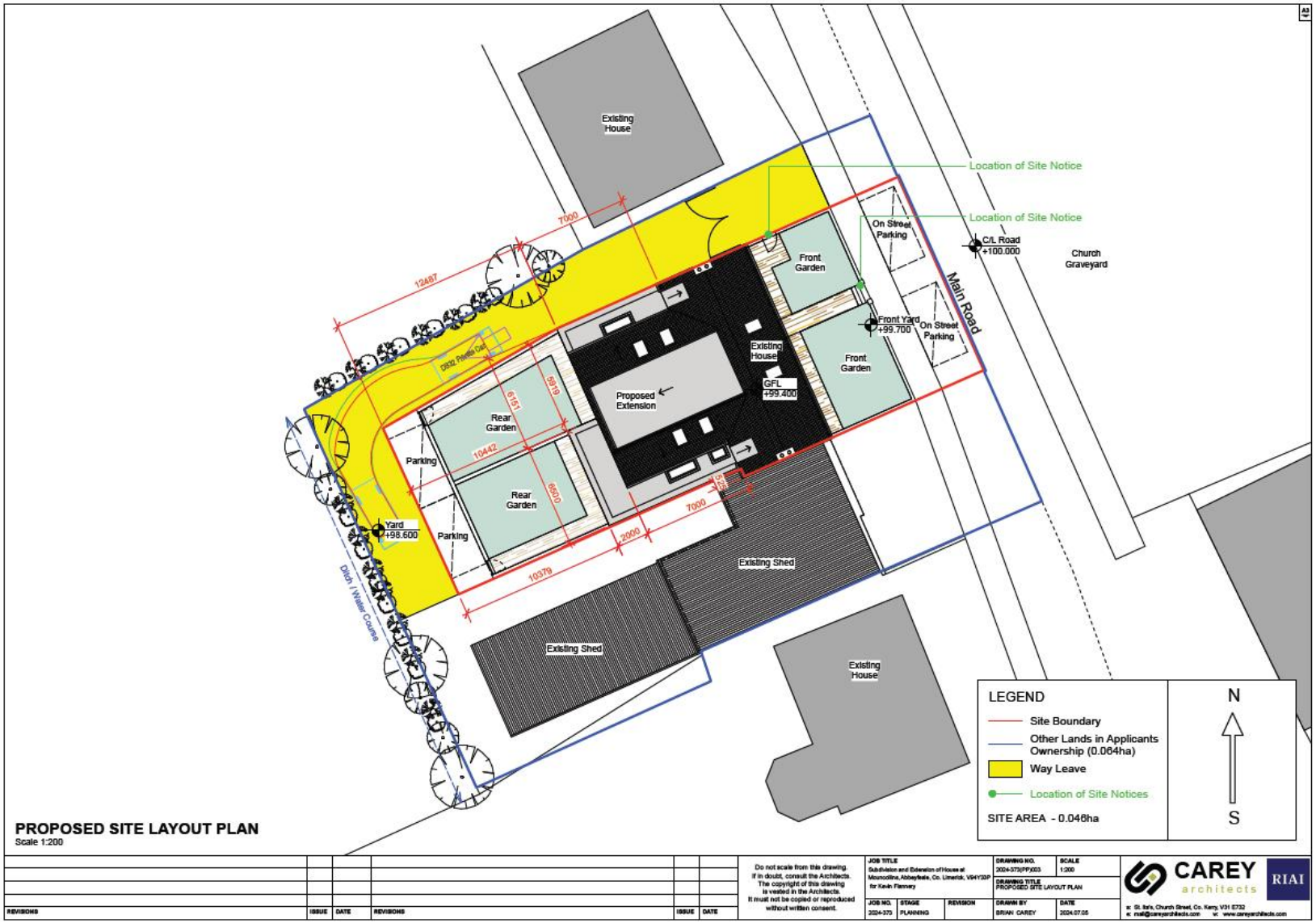
Existing House
Location of Site Notice
Location of Site Notice
On Street Parking
C/L Road +100.000
Church Graveyard
Front Garden
Main Road
Front Yard +99.700
On Street Parking
Existing House
GFL +99.400
Front Garden
Proposed Extension
Rear Garden
Parking
Rear Garden
Parking
Yard +98.600
Existing Shed
Existing Shed
Existing House
Ditch / Water Course
7000
12487
5919
6151
10442
6600
7000
2000
10379
LEGEND
Site Boundary
Other Lands in Applicants Ownership (0.064ha)
Way Leave
Location of Site Notices
SITE AREA - 0.046ha
N
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PROPOSED SITE LAYOUT PLAN
Scale 1:200
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DATE
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DATE
Do not scale from this drawing. If in doubt, consult the Architects. The copyright of this drawing is vested in the Architects. It must not be copied or reproduced without written consent.
JOB TITLE
Subdivision and Extension of House at Mouncollins, Abbeyfeale, Co. Limerick, V94Y32P for Kevin Flannery
DRAWING NO.
2024-373(PP)03
SCALE
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DRAWING TITLE
PROPOSED SITE LAYOUT PLAN
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STAGE
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REVISION
DRAWN BY
BRIAN CAREY
DATE
2024.07.05
CAREY
architects
RIAI

*Plate 1 Proposed Site Layout*

DRAFT

## Appendix I Site Photos

*Plate 2 Front of the building.*

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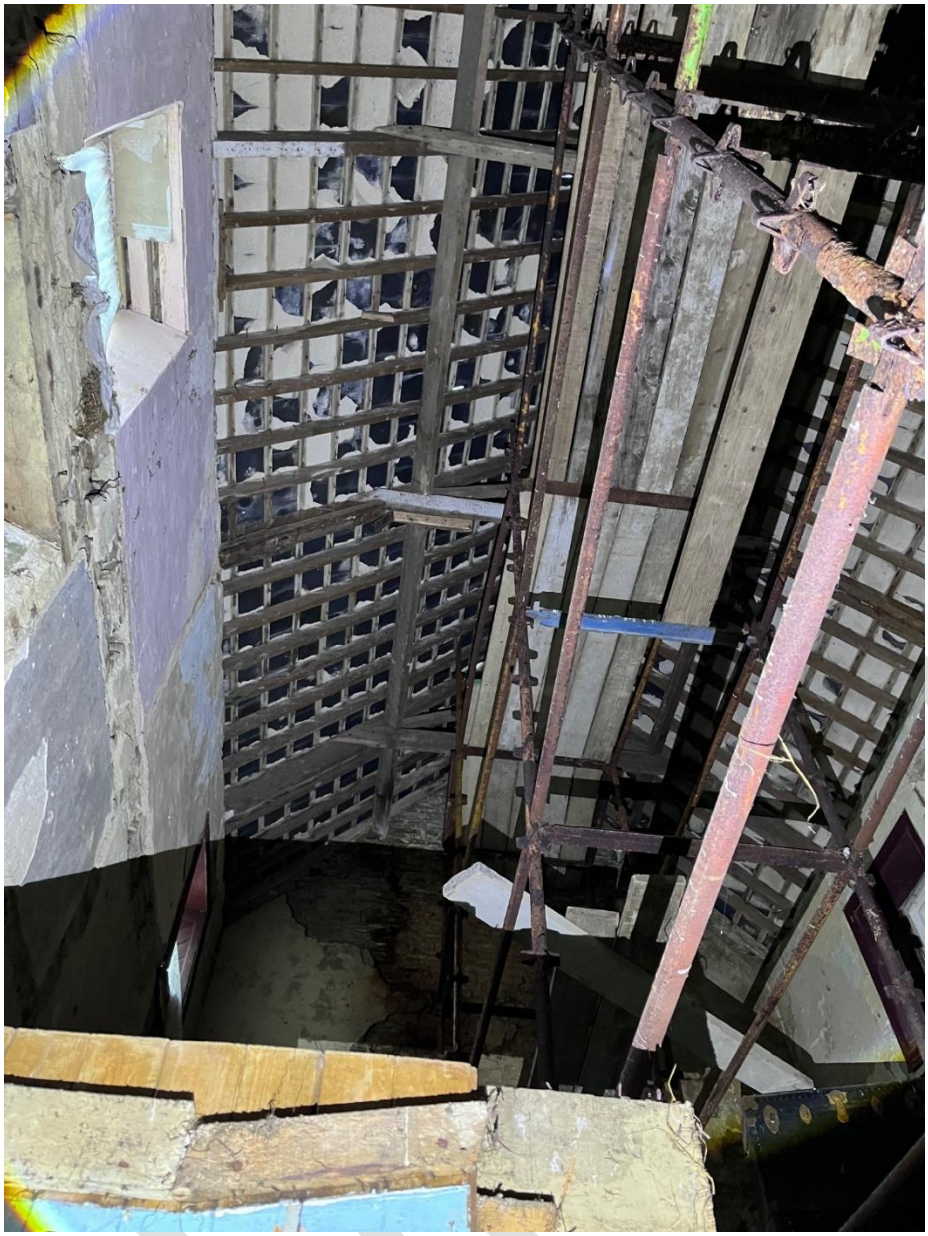

*Plate 3 Internal view of the roof.*

*Plate 4 Rear of the building.*

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*Plate 5 Southern end of building.*

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*Plate 6 Western end of building.*

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