Keenogbane, Co. Monaghan

SUPPORTING INFORMATION FOR DEROGATION APPLICATION

Fiach Ecology

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1 Introduction

1.1 Project Background

This report is provided as an explanation as to why the derogation 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. The derogation application relates to a proposed development of a derelict farmhouse and associated outbuildings in Keenogbane, Co. Monaghan.

Fiach Ecology was commissioned by Sinead and Daniel Brennan to undertake an Ecological Impact Assessment in response to a Further Information (F. I.) request from Monaghan County Council regarding permission for a development at Keenogbane, Co. Monaghan. This assessment consisted of a suite of detailed desktop assessments and field surveys to evaluate the flora, habitats and fauna in the receiving environment. This included multi-season surveys of birds, bats and other mammals, as well as habitat and botanical studies of the proposed development site. The development consists of renovation, building and demolition works on an existing farmhouse and outbuildings (Figure 1), hereafter known as 'the Site'.

1.2 Site context and description

The Site, which covers ca. 0.86 hectares, consists of three buildings including an old, derelict farmhouse, an intact stone barn with attached dairy and the remains of an old stone shed on a farm outside the town of Ballybay, Co. Monaghan. The broader Site consists of an area of heavily managed semi-natural/semi-improved grassland, consistent with Fossitt code GS4 (*wet grassland*) but also showing signs of GA1 (*improved agricultural grassland*). The surrounding area is rural in character. There is one proposed NHA within 5km of the Site, the Dromore Lakes. There are no SPA's, SAC's or NHA's within 5 km of the Site. The closest watercourse is a small unnamed lake and stream, which are directly adjacent to the property on its northeast border and are part of the Dromore river sub-catchment.

The surveys carried out in 2025 found four species of bats (common pipistrelle, soprano pipistrelle, Daubenton's and brown long-eared bats) using the area as a foraging ground, primarily soprano pipistrelles, with limited observations of the other 3 species. The application site does not contain any Annex I habitats, or rare or protected plant species. No Third schedule Invasive Plant Species were recorded at the Site. No breeding or resting places of protected non-volant mammal species were recorded within the application site.

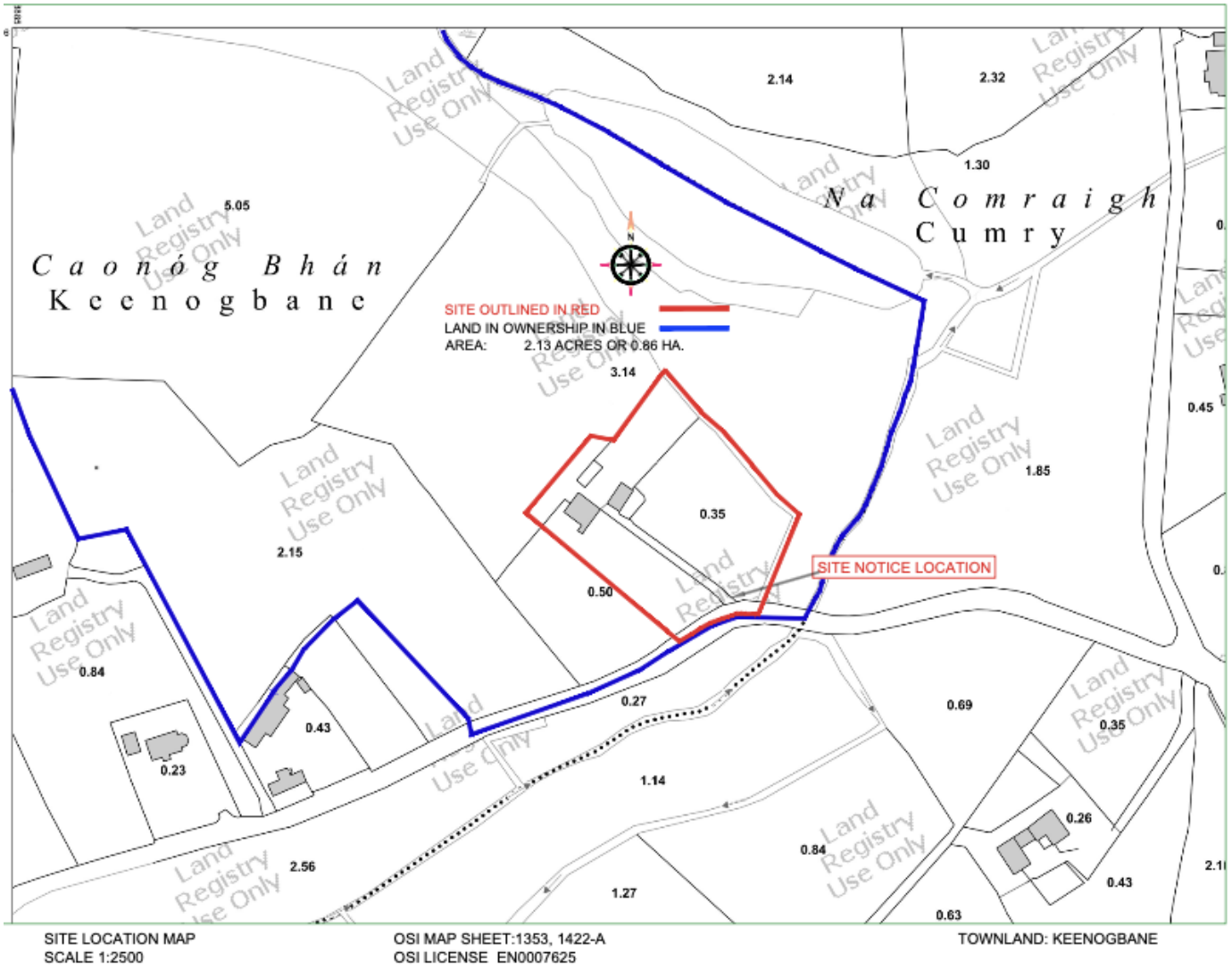

Figure 1. Map of proposed development. The Site is outlined in red.

2 Methods

2.1 Desktop review

The National Biodiversity Data Centre (NBDC, accessed May 2025) was examined with respect to the proposed Site. All records within the 10km hectad (map reference H61) containing the Site were obtained.

2.2 Field Survey Methods

Two ecological walkover surveys were conducted for the proposed development site on the 16th of April and 17th of June, 2025. A focus was placed on identifying key ecological receptors (KERs) for the site such as locally important habitats or rare, threatened or protected species as well as any instances of invasives species within the receiving environment. This assessment evaluated the potential ecological value of the area and established the ecological baseline which can help to avoid or minimise impacts. A number of bat specific surveys were carried out which are discussed in more detail below.

Table 1. Summary of surveys carried out at the Site in Keenogbane, Co. Monaghan, and associated metadata. Ecologists: SS (Shane Somers), MF (Mícheál Fitzgerald), CM (Caroline McKeon), DM (David Miley).

Survey Type	Date	Survey Times	Ecologists	Notes
Prelim. bat roost	16/4/2025		SS	Conducted with sufficient daylight prior to emergence survey
Bat emergence	16/4/2025	20:15 - 22:10 (sunset=20:33)	SS, MF	Dry throughout; temperature approx. 6° C; 75% cloud cover
Bat activity	16/4/2025	22:13 - 23:43	SS, MF	Dry throughout; temperature approx. 6° C; 75% cloud cover
Bat emergence	17-18/6/2025	21:45- 00:05 (sunset=22:03)	SS, CM, DM	Dry throughout; no wind; 14°C at beginning of survey dropping to 10°C by the end; 20% cloud cover
Bat activity	18/6/2025	00:05-01:03	SS, DM	Dry throughout; no wind; 10°C; 20% cloud cover

2.2.1 Preliminary Bat Roost Assessment

For the bat assessment, all trees and structures within the site boundaries were examined for their potential to provide bat roosting habitat - this involved looking for visible evidence of bat presence and identifying suitable roosting features such as damaged limbs, hollows, decay cavities, and other structural openings. Other nearby structures including trees and buildings were examined for potential roost features (PRFs). The area was assessed for roosting, foraging and commuting potential.

An internal search of the building was conducted by Dr. Shane Somers under derogation licence DER-BAT-2025-244. The internal walls of the building were searched for bat faeces, while ceilings and walls were scanned for signs of bats roosting including faeces, urine or oil staining, or dropped insect remains. Only a partial search could be made because of the structural instability of the floors and ceiling which meant the surveyor could not access the attic space fully and only a portion of the attic space could be observed.

2.2.2 Bat emergence survey

Two bat emergence surveys were undertaken. On the 16th of April 2025, two surveyors conducted a bat emergence survey on the house. These were undertaken with the surveyors using an Echo Meter Touch 2 Bat Detector and a BatBox Duet. These surveys commenced 15 minutes before sunset and continued until two hours post sunset in line with the Collins (2023) guidelines. On the 17th-18th of June 2025, 3 surveyors conducted an emergence survey on the barn and house (Figure 2). The first emergence survey was undertaken by Dr. Shane Somers and Mícheál Fitzgerald who both have extensive experience surveying bats and wildlife more broadly. The second survey was undertaken by Dr. Shane Somers, Dr. Caroline McKeon and David Miley, professional ecologists with many years of experience.

2.2.3 Bat activity survey

Night-time bat walkover surveys were used to determine bat activity around the Site. These activity surveys began immediately after the emergence surveys and continued for 1-1.5 hours. These surveys consisted of surveyors walking loops of the property with an Echo Meter Touch bat detector (Wildlife Acoustics) which recorded all potential echolocation calls with a time stamped sound file. Bat activity was also recorded during the emergence surveys. The combined emergence and activity surveys lasted 3-3.5 hours as recommended in the Collins (2023) guidelines[1]. Visual observations of bat behaviour were made where possible. The sound files were subsequently reviewed by the surveyor using Kaleidoscope Pro (v. 5.7.0) to determine which were genuine records of bat activity and which were misidentified environmental noise such as traffic, as well as verifying bat species IDs. The overall bat activity at the site was then assessed using these data.

[1] Collins, J. (ed.) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn). The Bat Conservation Trust London. ISBN-13 978-1-872745-96-1

3 Results

3.1 Desktop results

Six species of bat were recorded in the area according to the National Biodiversity Data Centre database (Table 2). All of the Irish bat species are protected under the Wildlife Act 1976 (as amended) and under the EU Habitats Directive. All of the bat species are listed on Annex IV of the Directive. Bats and their roost spaces are protected.

Table 2. Bat species records from NBDC, hectad H61. Accessed May 2025.

Species name	Record count	Date of last record
Brown Long-eared Bat (Plecotus auritus)	3	18/08/2006
Daubenton's Bat (Myotis daubentonii)	7	06/07/2018
Leislers Bat (Nyctalus leisleri)	18	24/07/2019
Natterer's Bat (Myotis nattereri)	5	02/07/2022
Pipistrelle (Pipistrellus pipistrellus sensu lato)	9	22/08/2015
Soprano Pipistrelle (Pipistrellus pygmaeus)	36	11/09/2022

Figure 2. Map of surveyor locations, sightlines and key structures. The red box outlines the original farm house. The blue box outlines the stone barn. Yellow annotations show bat emergence surveyor locations and sightlines during first bat survey. Orange annotations show additional surveyor location (surveying barn) and additional sightlines, for second bat survey. The two white circles show the approximate location of the two ash trees which were identified as having cavities that could host bats.

3.2 Preliminary Bat Roost Assessment

Both the house and stone barn have several Potential Roost Features (PRFs), illustrated in the figures below (Figure 3, Figure 4, Figure 5 and Figure 6). The house has a number of entry points into the attic space via slipped roof slates at the west end of the house, alongside the chimney where the flashing has been removed or fallen and via cracks in the brick and mortar. Internal searches of the house returned no evidence of bats using the house, i.e. no bat faeces visible on internal walls, though only a partial internal inspection of the attic space could be completed due to the structural instability of the floors making further investigation dangerous. Some views of the attic were possible via fallen ceiling timbers and the open access hole for the attic, so it was possible to obtain a general sense of the suitability of the attic as a roost. The attic was not insulated, had no signs of bats, contained cobwebs throughout but the cobwebs were not overly extensive.

Figure 3. Loose slates on the N and S side of the roof.

Figure 4. Cracks in masonry and render creating cavities and potential access points to interior of house.

The barn consists of two stories; the lower story consists of a series of unconnected rooms accessed via external doorways (Figure 5). The upper story (the loft) is a single open chamber with an uninsulated slate roof. The lower story contains some nooks and crannies that could potentially host low numbers of bats or opportunistic individuals (Figure 6). The loft does not contain any PRFs, though could serve as a foraging space or as a rain shelter for bats foraging outside.

Figure 5. External view of stone barn from courtyard.

Figure 6. Interior photos of the lower and upper stories of the barn, respectively.

Two mature ash trees with cavities were identified in the treelines running NE-SW, between the house and the reed bed (Figure 2). These cavities could host bat roosts, though they were quite low, <3m from ground level, somewhat limiting their suitability.

The overall site may provide foraging habitat for bats with good connectivity to the surrounding habitat via the surrounding treelines, hedges and watercourses.

3.3 Bat Emergence Survey

A Soprano pipistrelle was observed emerging from the house during the first emergence survey. Specifically the bat emerged from the SE facing wall from a gap in the brickwork just below the soffit (see righthand photo, Figure 4). While there was a lot of bat activity around the house for the rest of the survey no other bats were observed entering or exiting the house at that time. During the second emergence survey a Soprano pipistrelle was observed re-entering the house at the SW gable end, climbing through a hole under the ridge tile (righthand photo, Figure 3).

3.4 Bat Activity Survey

On the first survey, the bat activity began at 20:53, 20 minutes after sunset, when an unidentified pipistrelle flew across the courtyard. Both common (*Pipistrellus pipistrellus*) and soprano (*Pipistrellus pygmaeus)* pipistrelles, as well as Daubenton's bats (*Myotis daubentonii*), were detected throughout the night with activity peaking between 22:00-22:29 (Table 3).

Table 3. Combined bat activity from emergence and activity surveys, during first bat survey.

Species	**20:30-20:59**	**21:00-21:29**	**21:30-21:59**	**22:00-22:29**	**22:30-22:59**	**23:00-23:29**	**23:30-23:59**
Daubenton's			2	3	3	3	1
Unknown pipistrelle	1						

Common pipistrelle					1		
Soprano pipistrelle	1	2		5	2		
Grand Total	**2**	**2**	**2**	**8**	**6**	**3**	**1**

On the second survey, the bat activity began at 22:29, 26 minutes after sunset, when a soprano pipistrelle appeared flying along the south wall of the house. Both common and soprano pipistrelles, as well as brown long eared bats (*Plecotus auritus*), were detected throughout the night with activity peaking between 22:30-22:59 (Table 4). A soprano pipistrelle was observed entering the open loft space in the barn to forage (not to roost).

Table 4. Combined bat activity from emergence and activity surveys, during second bat survey.

Species	**22:00-22:29**	**22:30-22:59**	**23:00-23:29**	**23:30-23:59**	**00:00-00:29**	**00:30-00:59**
Common pipistrelle				1		
Soprano pipistrelle	1	46	29	8	3	1
Brown long-eared				2		
Grand Total	**1**	**46**	**29**	**11**	**3**	**1**

4 Evidence to support Derogation Tests

4.1 Test 1 – Reason for Derogation

This derogation is sought on the basis that a bat roost on site will be destroyed or removed as a result of the proposed works. A derogation is hence sought due to the '*overriding public interest, including those of social or economic nature*'. Given the housing shortage affecting Ireland at this time providing housing is of high public interest. As is outlined below, the actions granted by the derogation are not expected to harm the conservation interest of the species in question.

4.2 Test 2 – Absence of Alternative solutions

4.2.1 Do-nothing scenario

If nothing is done the structure will fall into further disrepair. This is not a satisfactory alternative as the existing roost potential of the structure will diminish and eventually be lost entirely, while the structure is not currently habitable for humans either. Given the current state of the structure this process is likely to take a short number of years. In addition to the inevitable loss of the roost, doing nothing will also prevent the structure being used as a house, depriving the local area of the economic benefit that building works will bring as well as the social benefit of providing for local housing need.

4.2.2 Refurbish or repurpose the existing structure

The structure of the building, particularly the roof and internal collapsed chimney, has deteriorated to such an extent that simply refurbishing the structure is impossible without disturbing or destroying the existing roost, so this is not a viable alternative.

4.2.3 Derogation granted

If the derogation is granted that would enable demolition and refurbishment of the building in question, allowing the building to be converted into a habitable residence and adding to local housing supply. While a minor summer roost will be removed, additional roosting habitat will be added nearby through the erection of specially designed bat roost boxes resulting in no net loss of roosting habitat for the species affected.

4.3 Test 3 – Impact of a Derogation on Conservation Status

The bat roost in question is a minor summer day roost for a very small number of individuals of a common bat species, the Soprano pipistrelle. Only one individual bat was observed entering the roost during the each of the surveys, so it is estimated that very low numbers of individuals use this roost. The conservation status of the affected species is 'Least Concern' nationally. Given their current conservation status and that the roost is not a maternity roost or a hibernacula, the very low numbers involved, the availability of alternative roosts in the surrounding area- population level impacts of the proposed development are highly unlikely. As outlined in the mitigation section below, species specific bat boxes will also be erected on site to provide additional roosting opportunities for pipistrelles. The actions permitted by a derogation licence to allow works at the Keenogbane site will not be detrimental to the maintenance of bat populations 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.

5 Ecological Constraints and Mitigation Recommendations

This section details the ecological considerations and constraints that should be considered with regards to bats when designing and carrying out the project. The following recommendations are made based on the information now known for the site based on the Ecological Impact Assessment.

5.1 Potential Ecological Constraints and Impacts

Four species of bats (common pipistrelle, soprano pipistrelle, Daubenton's and brown long-eared bats) were observed using the area as a foraging ground, primarily soprano pipistrelles, with limited observations of the other 3 species. Foraging activity was particularly concentrated in the area immediately around the house, and there is evidence that either an individual or low numbers of soprano pipistrelles are roosting in the roof of the house with only a single individual observed entering or exiting per night. As large numbers of pipistrelles were not observed entering/exiting the house this suggests this is a summer roost, likely for males, and not a maternity roost, which would

contain a greater number of individuals (between 20-1000 individuals[2] would be expected in a maternity roost). Given the amount of cobwebbing inside the attic it is not anticipated that the attic is used by roof void dwelling bats, i.e Daubenton's or brown long-eared bats, who favour open cavities and would therefore prevent the formation of cobwebs in a space they were using. As the area contains a lot of similar habitat the proposed development is unlikely to have a significant negative impact on bats' foraging habitat. The primary concern therefore is the use of the house as a roost for soprano pipistrelles. Due to the relatively small size of the overall structure, the lack of internal insulation and the level of structural decay (including gaps in windows and doors, large gaps in the roof slates and missing chimney flashing) the house is not likely to maintain a consistent temperature in the winter and so is not considered to be a hibernaculum. In other words, bats are very unlikely to roost here in the winter season. Appropriate mitigation is described in the section below.

5.2 Mitigation Recommendations

5.2.1 Seasonal restriction and roost replacement

Given the use of the house as a summer roost and its unsuitability as a hibernaculum, any works on the roof should be constrained to the winter period (November to late March) when the roost is not active, to ensure that the roosting bats have left the roost and will not be directly impacted during the works. Additionally, an artificial bat roost box which is suitable for soprano pipistrelles, e.g. the Eco Kent Bat Box or Elisa Bat Box available from NHBS[3], should be placed on a mature tree, at least 3 meters above the ground, in a sheltered area exposed to the sun for part of the day (usually south, south-east or south-west) and away from artificial light sources. More detailed information on box placement can be obtained from the NHBS website[4]. Install the bat box during winter, before the bats emerge from hibernation, to provide substitute roosting space for those that will no longer be able to access the house roost due to the development. This is a suitable mitigation measure for a bat roost of low conservation importance (i.e. individual bats, or small numbers, of common species) in accordance with Marnell et al. (2022)[5] which states the mitigation requirement is "*Flexibility over provision of bat boxes, access to new buildings etc. No conditions about timing or monitoring*".

5.2.2 Maintain foraging habitat and corridors

The viability of the Site as a foraging and breeding ground can be maintained by the avoiding the removal of any mature trees and shrubs unless absolutely necessary. Where trees and shrubs have to be removed a similar number of native trees or shrubs should be planted elsewhere on the Site, preferably increasing the connectivity of the Site by planting in or alongside existing treelines or hedgerows.

5.2.3 Lighting

As the Site provides foraging habitat for bats, during the construction phase, lighting should be angled down and turned off when the site is not being used by workers to avoid

[2] Collins, J. (ed.) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn). The Bat Conservation Trust London. ISBN-13 978-1-872745-96-1

[3] https://www.nhbs.com/search?q=soprano+pipistrelle+bat+box

[4] https://www.nhbs.com/blog/buyers-guide-bat-boxes

[5] Marnell et al. (2022). Bat mitigation guidelines for Ireland (v. 2). National Parks and Wildlife Service.

interfering with bats foraging at the site. Permanent external lighting fixtures should be operated in a manner that limits negative effects on bats, by restricting their use after sunset when they are not required and by orientating the them towards the ground. Further guidance on lighting is available from Bat Conservation Ireland[6]. Furthermore, the removal of trees and shrubs should be avoided where possible, and any trees or shrubs removed should be replaced through additional planting of native species elsewhere on the Site. Two mature ash trees, in the treelines running between the house and the reedbed, were identified as having cavities that would be suitable for roosting bats. These trees should be maintained, and if it is necessary to remove them the cavities should be inspected by a suitability qualified ecologist with an endoscope to ensure they do not contain bats.

5.3 Monitoring impacts of Derogations

A suitably qualified ecologist will confirm the correct erection of the artificial bat roost boxes. This will be confirmed prior to the end of the hibernation season, i.e. before March 2026, in order to ensure suitable roosting alternatives are present before bats emerge from hibernation. A follow up visit will be conducted by a suitably qualified ecologist following the completion of all external building work to ensure that trees and shrubs have been maintained where possible and replacement planting taken place if necessary. Box occupancy will also be checked during this visit but non-occupancy does not indicate a failure of mitigation. The attending ecologist will report on their findings to the NPWS within three months of the completion of the proposed works. The success of the proposed strategy will be measured by the provision of alternative roosting sites and the maintenance of beneficial habitat features on the Site during and after construction.

6 Conclusions

The application relates the specific impacts on bats and their roosts arising from the proposed development at Keenogbane, Ballybay, Co. Monaghan. Measures have been provided to reduce potential impacts on bats as far as possible during the work. The strategy outlined in this report includes restricting the roof works which may affect the bat roost to the winter season (November to March), when bats are not expected to occupy the structure (i.e. the roost is inactive), providing alternative roosting sites to replace the loss of roosting space and maintaining the beneficial habitat features such as mature trees and hedgerows on site. Considering the size of the roost identified (only a single individual confirmed using the roost), and the current status of the species identified as roosting on site as ‘Least Concern’, their widespread distribution in Ireland, it can be concluded that following the implementation measures outlined above, the proposed development will not be detrimental to the maintenance of the local bat population at a favourable conservation status in their natural range.

[6] https://www.batconservationireland.org/wpcontent/uploads/2013/09/BCIrelandGuidelines_Lighting.pdf

7 Validity

7.1 Survey limitations

Weather conditions were colder than optimal during the first bat survey which may have resulted in lower bat activity on the night. However, bats were still active and multiple species were recorded suggesting a good picture of the overall site use was obtained.

Due to the structural instability of the house not all areas could be accessed during the internal bat roost search. Specifically, the attic could not be accessed as the timbers supporting it and the floor underneath were quite rotten and therefore could not support a surveyor. Therefore, a second emergence survey was undertaken to increase the confidence that the roost was not a maternity roost so this is not thought to undermine the assessment.

A minor limitation is identified in that the winter hibernacula assessment was accomplished by using the roosts characteristics rather than through a winter confirmation survey. However, given the evidence outlined above, i.e. the lack of thermal insulation and the state of dereliction of the structure causing the house to be unable to maintain a consistent temperature, this is not deemed to be a significant drawback to the overall assessment.

7.2 Author competency

The assessment and report were undertaken by Shane Somers PhD MSc BA.

Dr. Shane Somers – is a professional ecologist, operating on a range of projects across Ireland. Shane has a PhD in ornithology from University College Cork, with extensive experience in a variety of ecological assessments, specialising in bird, bat and habitat surveys and assessments. Shane has experience undertaking fieldwork and technical assessments for developments such as largescale windfarms, solar farms, recreation facilities, greenways, residential and parks projects. His clients range from government agencies such as Failte Ireland and Local Authorities to private sector clients focused on renewable developments. Shane has worked on a variety of ornithological research and conservation projects which allowed him to develop strong fieldcraft and species ID skills. Shane is a skilled botanist and competent in most general ecological walkover survey skills. He is familiar with the key legislations and directives in Ireland such as the Habitats and Birds Directives, Irish Wildlife Act, Floral Protection Order, Schedule III invasive species etc.

8 References

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