

Derogation Licence – Supporting Information

Former Shannon Shamrock Hotel, Bunratty, Co. Clare

Prepared for the Attention of the Licensing Unit of NPWS



December 2024

Introduction

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 at the former Shannon Shamrock Hotel, at Bunratty Co. Clare.

Crescent House Ltd. intends to seek planning permission for development comprising the regeneration of an existing brownfield site at the site of the former hotel. A seven year planning permission is sought to demolish the existing hotel and ancillary outbuildings and to provide for the phased delivery of a mixed use development including provision of: (a) 67 no. residential units comprising 20 no. 2 bed houses and 47 no. 3 bed houses; (b) 1 no. convenience retail store of 470sqm (net) floor area; (c) 6 no. retail / office units including 4 no. units of 167sqm (net) floor area and 2 no. retail / office units of 231sqm (net) floor area intended to accommodate Class 1 & Class 2 Uses; (d) a bat house; and (e) all ancillary site development works including (i) car & bicycle parking; (ii) bin storage; (iii) signage; (iv) 2 no. ESB sub-stations; and (v) public lighting.

The condition and nature of the existing hotel is not compatible with the proposed mixed use development. It will be necessary to demolish the existing structures on site to facilitate the planned development. Ecology Ireland Wildlife Consultants Ltd. carried out 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 mammals (including bats) and habitat and botanical studies of the proposed development site.

A 'plan-led' approach to development is being adopted at the site with reference to the Bunratty Settlement Plan *"The site of the former Shannon Shamrock Hotel and Conference Facility is designated as a key Opportunity Site (OP1) for new Mixed Use development and to facilitate any future expansion /renovation/ redevelopment of the existing premises/site. The site is centrally located within walking distance of all the attractions in the village. The opportunity exists to establish a mix of uses which consolidate Bunratty and support its tourism function"*.

Site location

The proposed development site of c. 2.9 ha is located adjacent to Bunratty Castle and Folk Park, west of the Owenogarney River estuary just upstream of the confluence with the River Shannon (Figure 1). The proposed development site is part of a larger masterplan area of c. 3.8 hectares.

There are a number of structures present within the application site including the former hotel and associated facilities. Planning permission was previously granted (17/253) for partial demolition and refurbishment of the hotel facilities at this site. Previous surveys at this site recorded the usage of the derelict hotel by bats. A derogation licence was sought and was issued in 2017 (DER 2017-133) in relation to the works that were proposed at the site at that time. The permitted works did not proceed and this alternative development plan was developed by the applicant.

Surveys carried out in 2024 have confirmed the usage of the structure by several bat species, including Lesser Horseshoe Bat. The application site does not contain any Annex I habitats, or rare or protected plant species. Similarly, no Third Schedule Invasive Plant Species were recorded at the site. No breeding or resting places of protected non-volant mammal species were recorded from within the application site. There are no water features of note on site. The proposed development has been subject to Ecological Impact Assessment and a Natura Impact Statement has been prepared in support of the Appropriate Assessment process. The NIS has objectively concluded that the proposed development will not adversely affect the integrity of any Natura 2000 site and there is no reasonable scientific doubt in relation to this conclusion.

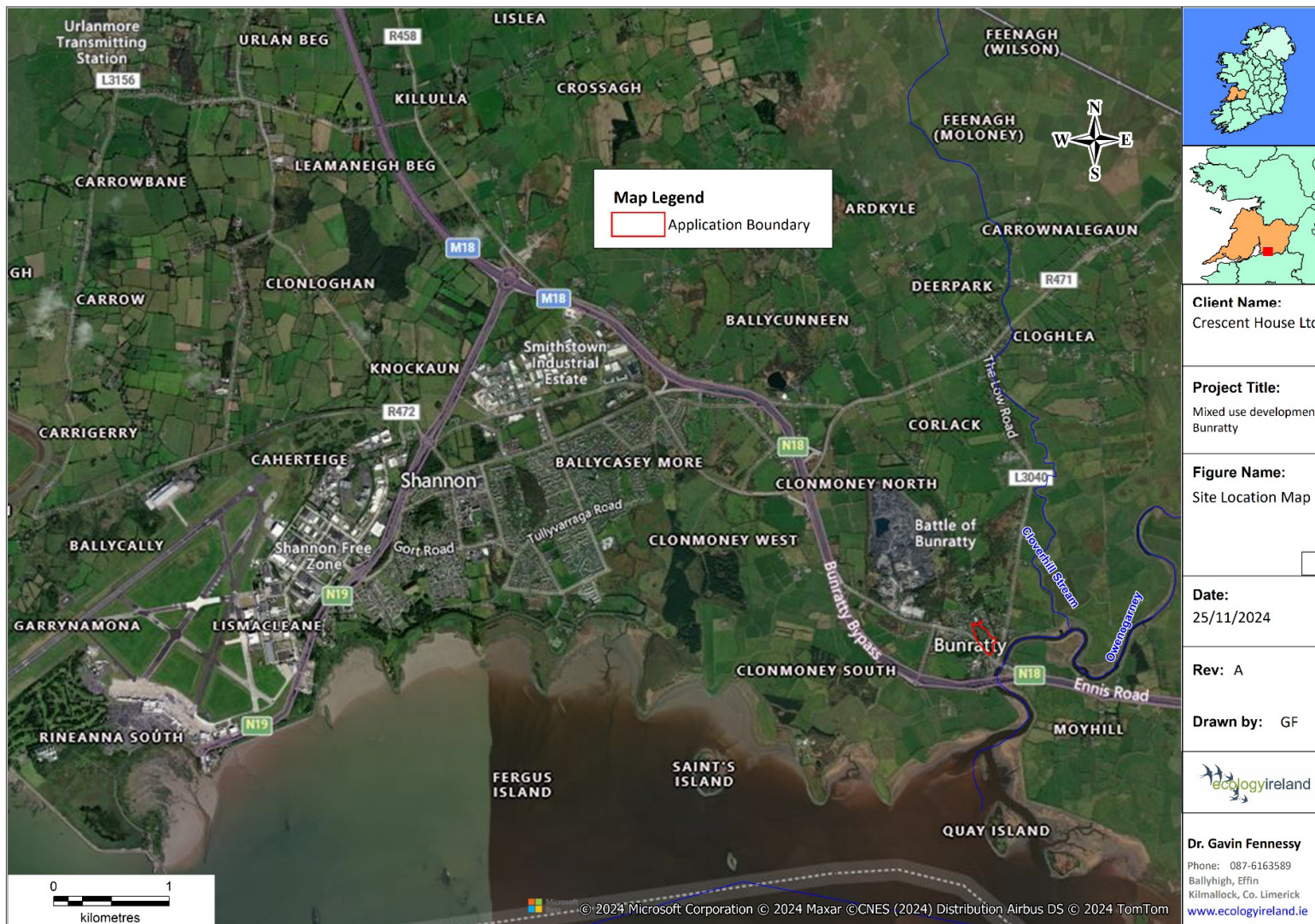


Figure 1. Site location map.

Results of Bat Surveys

The application site was visited by a team of specialist ecologists throughout 2024 (Table 1). Bat surveys were undertaken by Dr. Gavin Fennessy and Marie Kearns who both hold roost inspection licences and have many years of experience in conducting bat surveys.

The structures on site are large and in increasingly derelict condition. The former hotel has been damaged by anti-social behaviour and the ravages of the weather. The hotel is divided into a two-storey section to the north of the site and a long low single-storey section which has a sloped felt roof. The structure is in poor condition, particularly the single-storey section with broken windows and rotting timbers. Potential access and egress points for bats are numerous. Given the size and nature of the structure it was determined that active emergence surveys would be unlikely to be effective in recording departing or returning bats.

A survey strategy was developed to include repeated detailed building inspections (using thermal imager) and deployment of multiple passive detectors across the site and adjoining areas. Ten sampling locations were chosen with passive detectors (Wildlife Acoustics SM4BAT, SM4Mini) deployed for prolonged periods both inside and outside of the structures on site (Table 2; Figure 2).

Table 1. Summary of field surveys carried out at the site in Bunnratty, Co. Clare.

Date	Ecologist(s)	Surveys undertaken
12/06/2024	GF	Building inspection for bats, Deployment of Bat detectors, Breeding Bird walkover transects
22/06/2024	GF	Building inspection for bats, Deployment/collection of Bat detectors, Breeding Bird walkover transects, Non-volant mammal walkover
20/07/2024	GF	Use of thermal imager to survey building for roosting bats, Deployment/collection of bat detectors and trail cameras. Non-volant mammal survey, casual recording other taxa
23/08/2024	MK & FMA	Building survey for roosting bats, deployment/collection of cameras and bat detectors, casual recording other taxa.
20/09/2024	COC & MK	Habitat and botanical survey, Deployment/collection of bat detectors and collection of trail cameras, Building survey for roosting bats
25/10/2024	GF	Winter bird walkover transects, Deployment/collection of trail cameras and checks of building for roosting bats
09/11/2024	GF	Ground-level tree assessment for bat roost potential, deployment/collection of bat detectors, mammal walkover
14/11/2024	GF	Winter bird walkover transects, Collection of passive bat detectors, Ground-level tree assessment for bat roost potential

Ecologist: GF (Gavin Fennessy) MK (Marie Kearns), FMA (Fiona-May Aylward), COC (Cian O’Ceallaigh).

Table 2 Passive detector deployment details.

Detector number	Location	Dates active
BD1	Beside road	12 June - 22 June; 20 July - 07 August; 20 September - 01 October; 25 October - 14 November
BD2	Inside Conference Centre	12 June - 20 July
BD3	Inside single storey	12 June - 22 June; 22 June - 22 July; 23 August - 20 September; 20 September - 25 October; 25 October - 14 November
BD4	Rear of Conference centre	20 July - 07 August; 23 August - 15 September
BD5	Fence at front of hotel	20 July - 27 July; 25 October - 09 November
BD6	Upstairs in 2-storey	20 July - 09 August; 23 August - 20 September; 20 September - 25 October; 25 October - 14 November
BD7	Ground-floor in 2-storey	20 July - 14 August; 20 September - 25 October; 25 October - 14 November
BD8	Downstairs in Gym	23 August - 14 November
BD9	Shed beside Conference centre	20 July - 15 August
BD10	Fence at rear of hotel	22 June - 08 July; 20 July - 30 July

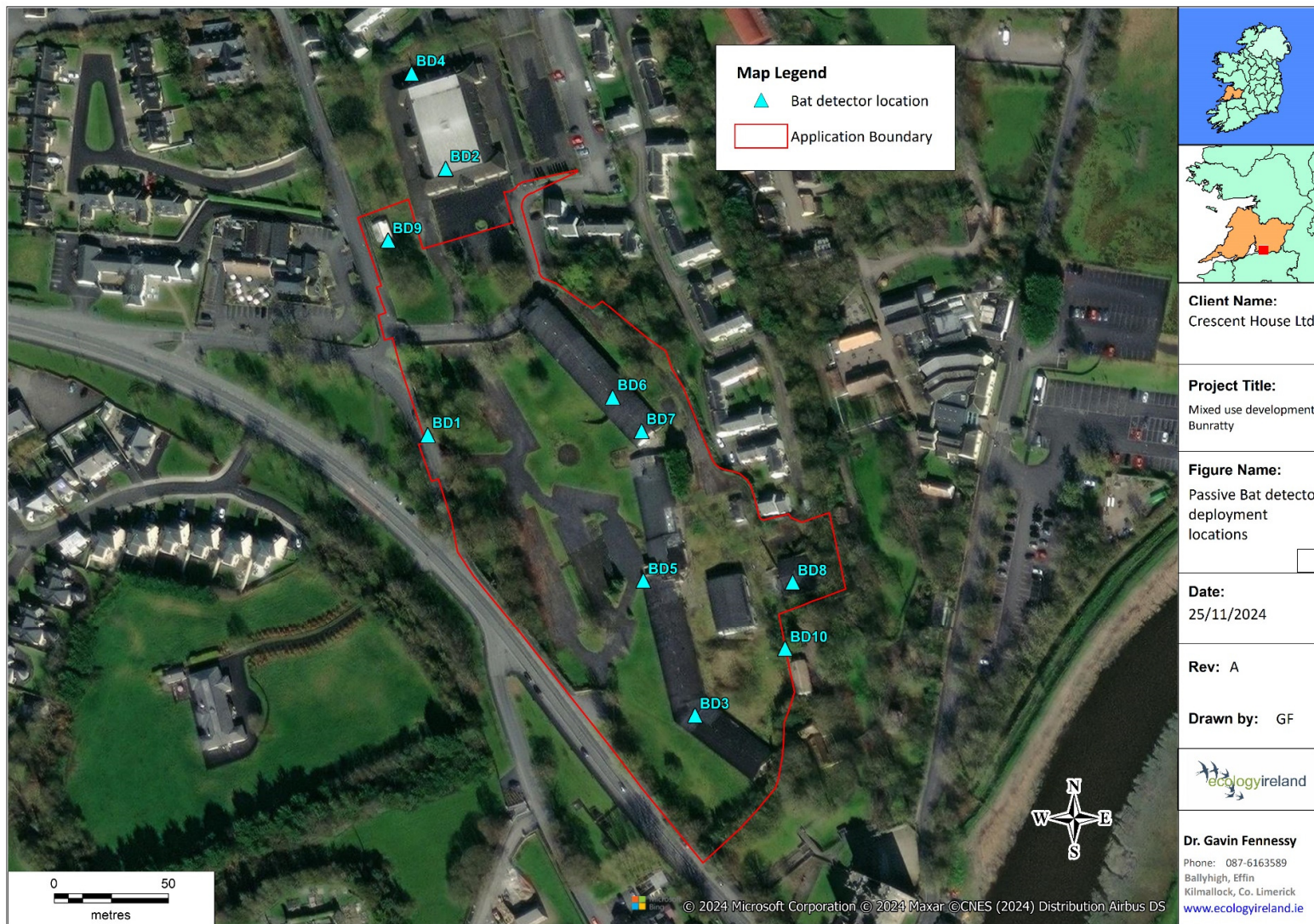


Figure 2. Deployment locations of Passive Bat Detectors, 2024.

Desktop Study

The NBDC database only holds a record of one bat species within the 2km grid square (R46k) that overlaps the development site: Leisler's Bat, *Nyctalus leisleri*. Within the 10km Grid Square that encompasses the site a total of 7 bat taxa have been recorded: Brown Long-eared Bat, *Plecotus auritus*, Daubenton's Bat, *Myotis daubentonii*, Leisler's Bat, Lesser Horseshoe Bat, *Rhinolophus hipposideros*, Natterer's Bat, *Myotis nattereri*, Pipistrelle species, *Pipistrellus* sp. and Soprano Pipistrelle, *Pipistrellus pygmaeus*.

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, with Lesser Horseshoe Bats also listed on Annex II. Bats and their roost spaces are protected.

The Model of Bat Landscapes (Lundy *et al.* 2011) suggests that the 10km Grid Square in which the application site is located is part of a landscape that has a relatively high resource value for bats in general (41.78; see Roche *et al.* 2014).

As part of the previous planning application for the partial demolition and refurbishment of the property (17/253) a survey of the usage of the structure was conditioned (Condition 3). The survey was subsequently carried out by McCarthy Keville O'Sullivan (MKOS) in September 2017. The poor and deteriorating condition of the building was noted. Most bat signs and activity was recorded in the two-storey section of the hotel with droppings, feeding signs and a few dead bats recorded towards the northern end of the hotel structure. Emergence and return surveys confirmed the presence of c. 14 Pipistrelle species using this part of the structure as a day roost. While Lesser Horseshoe Bats were recorded at dusk and again at dawn, no evidence of the usage of the structure by Lesser Horseshoe Bats was found. It was felt that the building was too bright inside to be suitable for roosting Lesser Horseshoe Bats. Some bat droppings, not identified to species, were recorded in the single-storey section of the hotel. Figure 3 is taken from the compliance report prepared by MKOS (2017) to illustrate the location of bat signs and sightings at the hotel site. A derogation licence (DER/2017-133) was subsequently sought and granted for proposed demolition and refurbishment works. These works ultimately were not completed and the structure remained in a derelict state.

Contemporary bat surveys carried out at adjoining sites were also considered. Surveys were undertaken in 2019 by Doherty Environmental Consulting Ltd. as part of a successful planning application for a residential development south of the current application site (19/939; ABP Case No: 309278). That survey recorded a variety of species with activity generally dominated by Soprano Pipistrelle. Leisler's Bat, Common Pipistrelle and Brown Long-eared Bat were also recorded at multiple sampling locations. Lesser Horseshoe Bat was recorded on a handful of occasions and at only one of the static recording locations. There is a live planning application (24/60514) for further Phase 2 development at the site at Bunratty West. The application was accompanied by a new bat survey report prepared by Minogue Environmental Consulting Ltd. which confirmed the presence of foraging and commuting Soprano pipistrelle, Common Pipistrelle, Leisler's Bat, Lesser Horseshoe Bat, Brown Long-eared Bats and *Myotis* sp. including a recording of a Daubenton's Bat. Lesser Horseshoe Bat was only recorded on three occasions during the static deployment in August 2024.

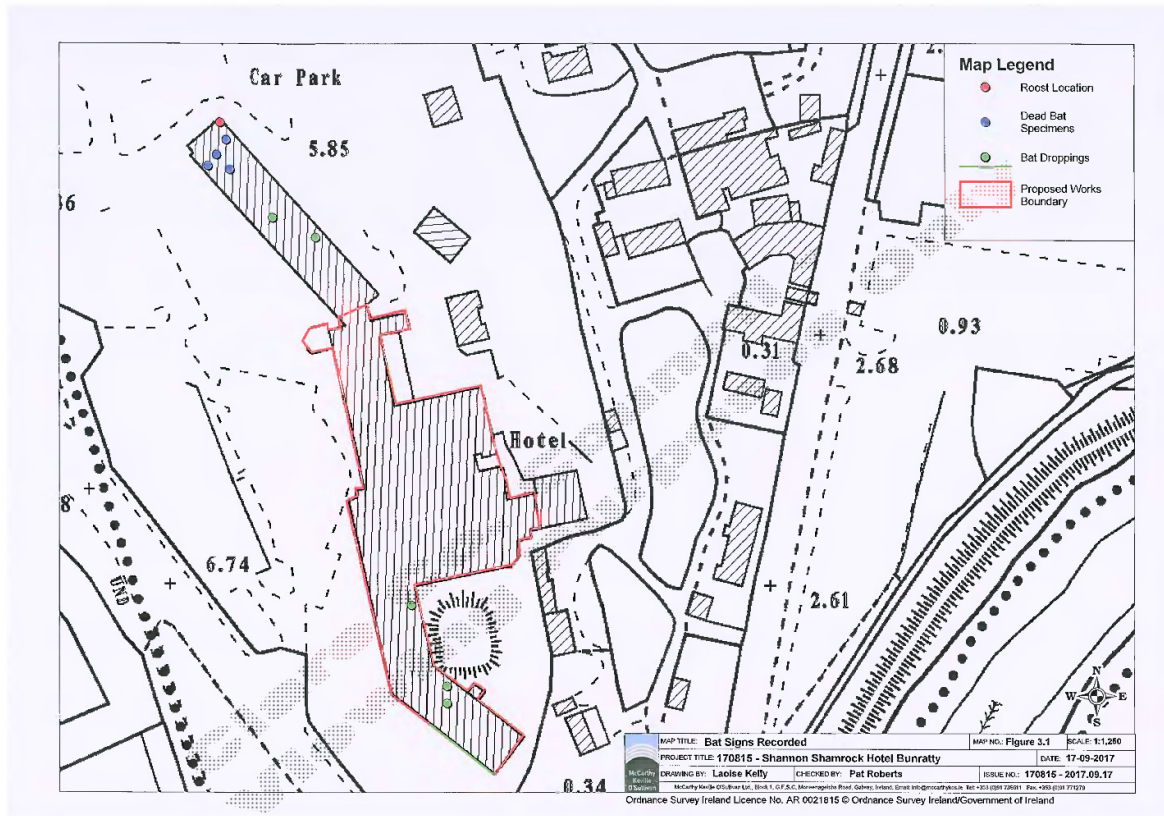


Figure 3 Locations of bat signs at the site in September 2017 (from MKOS 2017).

Bat surveys were undertaken as part of the EIAR prepared as part of a proposed development at Bunratty Folk Park (19/365). A total of 39 structures were subject to internal and external examination for evidence of roosting bats. Eight confirmed bat roosts were identified within the proposed development site, i.e. the hay shed, the northern outbuilding of the Bunratty House Barn and Talbot collection, north Clare farmhouse, the vertical mill, the horizontal mill, P. McNamara & Sons bar/hotel, Bunratty House and Ardcroney Church. In the case of the former five buildings, the identified roosts were that of Lesser Horseshoe Bat. The concentration of Lesser Horseshoe Bat roosts within the park is significant, as well as the diversity of species recorded during the surveys in 2018. Both Natterer's Bat and Whiskered Bat, *Myotis mystacinus* were present.

Field Survey

Given that the derelict hotel structure had previously had signs of being used by roosting bats, it was decided to carry out detailed building inspections and long-term multi-season deployment of passive detectors at multiple locations within and outside of the structures at the site (Figure 2). It was clear that the building had deteriorated further in the period from 2017 to 2024 as a detailed photographic record accompanied the bat report from that time. The single-storey felt-roofed southern portion of the hotel had many broken windows and rotten and damaged roof timbers and perforated felt, with internal fittings and furnishings missing. To combat anti-social behaviour, windows had been boarded up and heras fencing had been fitted across entrances to the structure. This served to create darker areas within the derelict hotel more attractive to bat species that are particularly sensitive to light-spill.

A number of trees identified proposed to be removed to facilitate the proposed development were subject to a ground-level assessment of Potential Roost Features (PRFs; Collins, 2016).

Building inspections identified bat droppings within the two-storey and single-storey sections of the derelict hotel. No signs or sightings of bats were recorded in any of the other structures present on site.

The interior of the two-storey part of the hotel building has degraded because of disuse and anti-social activity. Pipework along the main corridor on the ground floor has been ripped up, as has pipework in the walls between bedrooms. Other signs of damage/decay are immediately apparent, with encroaching vegetation particularly where windows/doors are broken. Mold and damp are prevalent on the ground-floor and floor damage, wall damage, door damage, ceiling damage, broken white-ware etc. are widespread (Plate 1). The stairwell to the first floor is relatively bright due to light-spill from large windows. Very limited signs of bats were recorded on the ground-floor, with very few droppings and feeding signs observed across repeated building surveys.

Signs of bat activity were recorded throughout the first floor of the two-storey section of the hotel building including butterfly/moth wings, droppings and a single bat carcass in a bedroom on the first floor (Plate 2). Activity was more obvious within darker rooms where the windows were boarded up or blocked by furniture and within the adjoining bathrooms. Suitable roosting sites were located throughout the first-floor of the building in the form of gutted utility spaces in the walls, dark bathrooms, ceiling cavities, and even within stored furniture. Lesser Horseshoe Bats were recorded in small numbers roosting at several locations in the first floor of the hotel from July to September (Plate 3).



Plate 1 The interior of the two-storey section of the hotel with damage and prevailing damp conditions.



Plate 2 Bat droppings and remains from within two-storey section of hotel.



Plate 3 Lesser Horseshoe Bats were typically found roosting singly, or in very small groups.

Several Lesser Horseshoe Bats were observed within the two-storey section during building inspections from June to September 2024. A peak count estimate of 20-30 Lesser Horseshoe Bats were recorded across all of the hotel structure on July 20th 2024. On other occasions, the peak count estimate ranged from 5-15 individuals overall, with these spread between the two-storey and single-storey sections of the hotel. In general, the Lesser Horseshoe Bats present were roosting individually or in small groups (Plate 4). There was no indication that there was a maternity roost at the site and the activity appeared to be typical of a satellite non-breeding colony.



Plate 4. Three Lesser Horseshoe Bats roosting in a first-floor bathroom, August 2024.

The single storey section of the hotel (to the south) has been more thoroughly gutted, with large gaps in the walls blocked by fencing, bare block, concrete floors and the ceiling has been gutted to the rafters in most places (Plate 5). There was a peak count of 12 Lesser Horseshoe Bats made using this section of the building on September 20th 2024. Earlier visits had counted between 6 and 9 individuals present. On October 25th 2024 a peak count of about 6 roosting Lesser Horseshoe Bats was recorded. Subsequent visits in November (9th & 11th) did not record any roosting bats.



Plate 5 Parts of the single-storey section of the hotel were in very poor condition.

Hand-held detectors carried during the building inspections confirmed that bats that became active during the visits were confirmed to be Lesser Horseshoe Bats. Although, no other roosting bats were observed directly the hotel buildings have considerable potential for both day and night roosting bats. Passive detectors were deployed at a total of 10 locations at and in the vicinity of the site (Figure 2) from June to November 2024. Full analysis of the recorded calls from each detector and deployment period is provided in Appendix A.

Bat activity was detected at 8 of the 10 deployment locations. No bat calls were recorded from a detector deployed from within the Conference Centre (BD2) north of the application site. No evidence of the presence of bats was found within that structure during the building inspections. The second location where no bat activity was recorded was from within the former Gym building (BD8) and once again no bat droppings or feeding signs were noted in this structure during the building inspections. The bat taxa detected at each sampling location is summarised in Table 3 below.

The taxa recorded by the passive detectors were Common Pipistrelle, Soprano Pipistrelle, Leisler's Bat, Daubenton's Bat, Lesser Horseshoe Bat, Brown Long-eared Bat and an unidentified *Myotis* sp. There were three passive detectors deployed within the derelict hotel for much of the survey period. Similar

species diversity was recorded at all three of these locations, with Common and Soprano Pipistrelle, Leisler's Bat and Lesser Horseshoe Bat identified at all three of the sampling locations. A single *Myotis* sp. registration was identified at BD3 within the single storey section of the hotel. This recording was faint and may have not been of a calling bat from within the structure.

Table 3 Bat taxa recorded (x) at each of the sampling locations.

Common Name	Scientific Name	BD1	BD2	BD3	BD4	BD5	BD6	BD7	BD8	BD9	BD10
Brown Long-eared Bat	<i>Plecotus auritus</i>	x			x	x				x	x
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	x		x	x	x	x	x		x	x
Daubenton's Bat	<i>Myotis daubentonii</i>	x									
Leisler's Bat	<i>Nyctalus leisleri</i>	x		x	x	x	x	x		x	x
Lesser Horseshoe Bat	<i>Rhinolophus hipposideros</i>			x		x	x	x			x
<i>Myotis</i> sp.	<i>Myotis</i> sp.	x		x	x	x				x	x
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	x		x	x	x	x	x		x	x

As outlined in Appendix A, the analysis of the deployments within the hotel structure revealed that there was regular Lesser Horseshoe Bat activity over the summer period. The highest rate of registrations was from the first-floor of the two-storey section of the hotel in the late August to mid-September period. A mean number of registrations of c. 109 registrations per night of Lesser Horseshoe Bats was recorded at this location during this period. There were few registrations of other species with Common Pipistrelle (11 registrations total) and Leisler's Bat (5 registrations) recorded across 103 nights of active deployment. Consistent, but low numbers of registrations of Soprano Pipistrelle were detected at this location. It is likely given the timing and consistency of activity noted for Soprano Pipistrelle that there is a small number of these bats roosting in the structure.

Downstairs in the two-storey portion of the hotel (BD7) there was far lower levels of bat activity detected. This was consistent with the distribution of sightings and signs made during the building inspections. Small numbers of registrations were made of Lesser Horseshoe Bat (131 registrations across 80 nights), Leisler's Bat (15 registrations), Soprano Pipistrelle (13 registrations) and Common Pipistrelle (5 registrations).

The passive detector deployed in the single storey section of the hotel (BD3) was active for a total of 123 nights. There was regular if relatively low levels of activity recorded of Lesser Horseshoe Bat and

Soprano Pipistrelle throughout the period of deployment at this location. Very low and occasional activity of Common Pipistrelle and Leisler's Bat was also noted. Examining the timings of activity relative to dusk and dawn it appeared likely that Leisler's Bat and Common Pipistrelle were entering the structure during the night with sporadic occurrence and activity patterns. The activity of both Soprano Pipistrelle and Lesser Horseshoe Bat indicated the presence of a day roost within the structure.

The pattern of activity at each of the internal deployment locations from the nights of September 20th to November 13th is shown in Figure 4 (upstairs in two-storey section), Figure 5 (downstairs in two-storey section) and Figure 6 (single-storey section). Lesser Horseshoe Bat activity dropped markedly throughout October and into November 2024. Some regular Pipistrelle activity persisted in the single-storey section of the hotel into October but very little activity was detected here from late October onwards (Figure 6). The weather throughout the period was relatively mild.

At the five external deployment locations where bat activity was detected, Lesser Horseshoe Bat was only recorded at BD5 (near the single-storey section front wall) and BD10 (on a fence at the rear of the hotel bordering Bunratty Folk Park). No Lesser Horseshoe Bats were recorded at locations close to the public road or street-lighting. In contrast, there was strong activity of Pipistrelle species, particularly Common Pipistrelle at BD1 (beside the public road at west of site). Leisler's Bat were recorded relatively frequently at this location. Strong activity of Soprano Pipistrelle and Leisler's Bat was recorded at the rear of the Conference Centre, north of the application site (BD4).

At BD10, at the rear of the hotel, southeast of the application site Lesser Horseshoe Bat activity was detected. The area is relatively dark with mature trees and good vegetative cover. It may also indicate that bats commuting to and from the roost within the hotel building are more inclined to head towards the wooded areas and known roosts within Bunratty Castle and Folk Park than towards the L3126 and N18.

All bat species occurring in Ireland are legally protected under the Irish Wildlife Acts (1976 and as amended). Under this protection, it is an offence to hunt or interfere with or destroy their breeding or resting places (unless under statutory licence/permission). Irish bat species listed are also listed on Annex IV of the EU Habitats Directive, with Lesser Horseshoe Bats listed on Annex II and Annex IV.

Consultation & Derogation

Once it was confirmed that the hotel structure was being used by Lesser Horseshoe Bat the local NPWS District Conservation Officer, Mr. David Lyons was informed. The site was visited by Mr. Lyons, along with local wildlife ranger Mr. Jamie Durrant on October 25th 2024. They met with Dr. Fennessy and representatives of the applicant. The data collected to that point was discussed. Mr. Lyons provided an overview of the conservation status of Lesser Horseshoe Bat and the legal requirement to obtain a Derogation Licence from the Licensing Unit of NPWS ahead of any grant of planning from Clare County Council. The intention of the applicant to provide alternate roosting space for bats as part of the planning proposal was discussed.

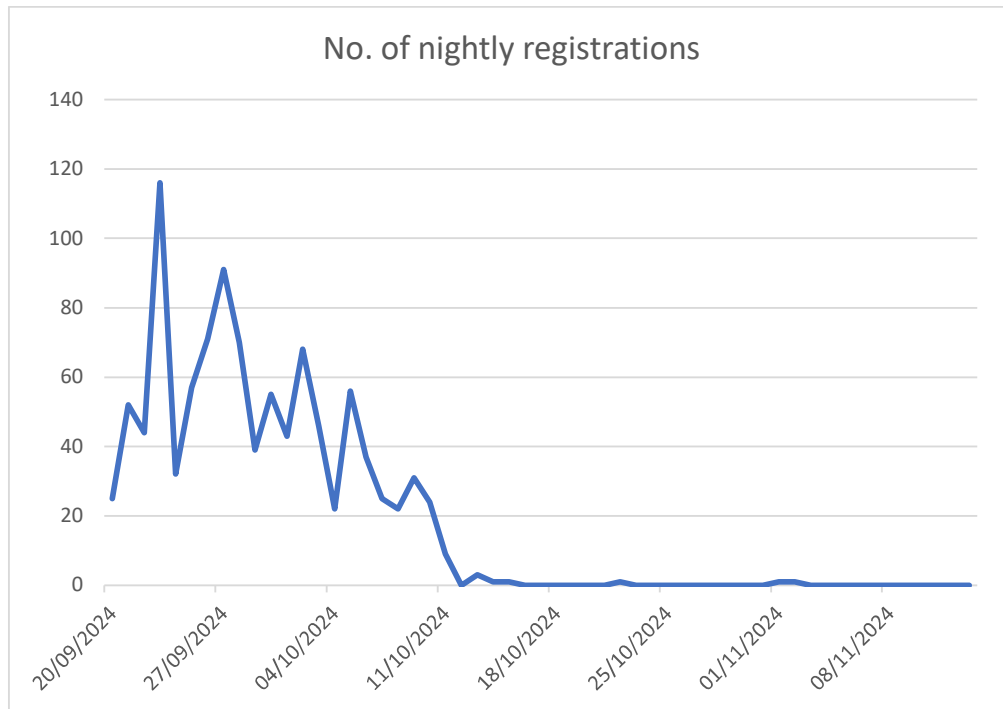


Figure 4. Number of Lesser-horseshoe Bat registrations per night at BD6 (upstairs in two-storey section).

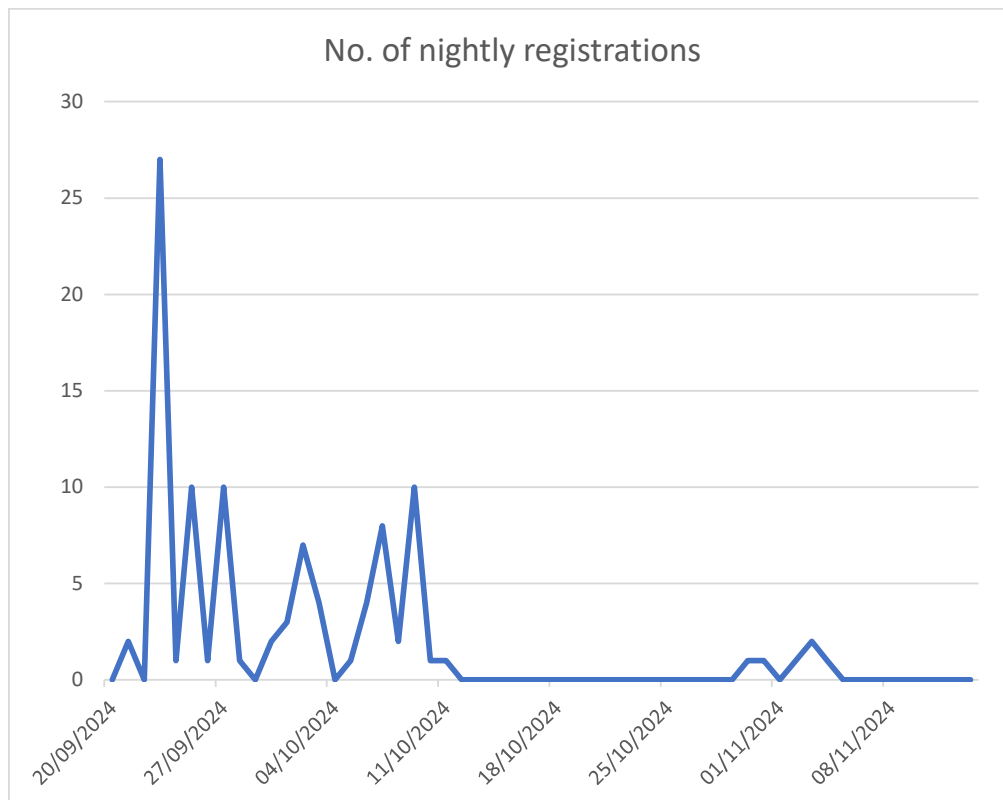


Figure 5. Number of Lesser-horseshoe Bat registrations per night at BD7 (downstairs in two-storey section).

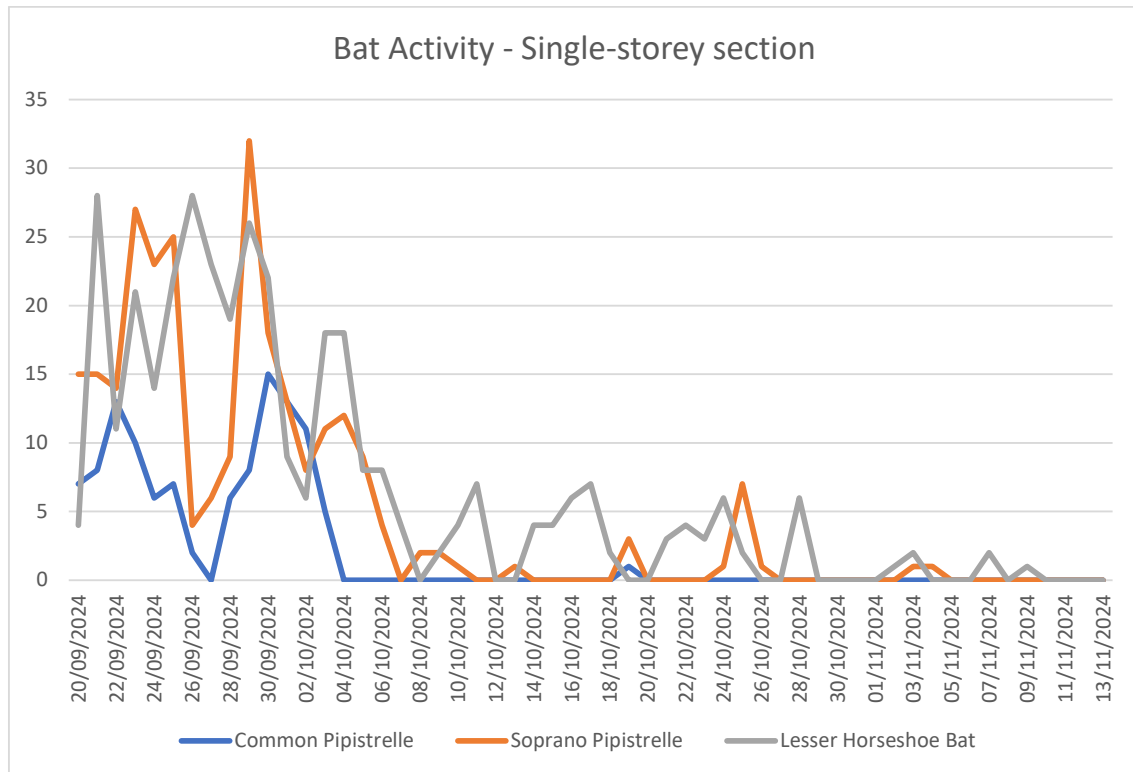


Figure 6. Bat activity per night in the single-storey section of the hotel.

Consideration of Alternatives

The NPWS Application Form for a Derogation License includes the checklist below of information to be included with applications;

Report Checklist: Please append a detailed report to support this application and ensure that it contains the following information:

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.	<input checked="" type="checkbox"/>
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.	<input checked="" type="checkbox"/>
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.	<input checked="" type="checkbox"/>
11.4	As much information as possible to allow a decision to be made on this application.	<input checked="" type="checkbox"/>

As set out in Stage 3 of the Guidance on the Strict Protection of Certain Animal and Plant Species under the Habitats Directive in Ireland (NPWS 2021) we considered the alternatives available. Annex IV species are present and therefore the potential to avoid such impacts, in every way possible needs to be considered. As stated in Stage 3 of Guidance on the Strict Protection of Certain Animal and Plant Species under the Habitats Directive in Ireland (NPWS 2021) “A satisfactory solution is one which addresses the situation faced by the project proponent while protecting the species at the same time.”

Section 11.1 of NPWS Application Form - Consideration of available options and alternatives.

Alternative Option 1. ‘Do nothing’ scenario. In the absence of a plan for the derelict hotel it would predictably fall into further disrepair. This is not a satisfactory alternative. The roost potential of the site would diminish and eventually be lost and given the current state of much of the structure this process is likely to take a short number of years.

Alternative Option 2. Try to refurbish or repurpose the existing structure. This was examined as an option and indeed was a preferred option for the site back in 2017. However, in the interim the building has deteriorated to an extent that it would not be considered feasible to refurbish the structure. There is no way to refurbish a building in this condition without also destroying/disturbing the bat roosts that currently exist there, so this is also not a viable alternative. This is not a satisfactory alternative, as the majority of the materials in the building are rotten and damaged and unsuitable for habitation.

Neither of these available alternatives are in any way satisfactory and it is clear that the proposed approach (detailed in the Mitigation section) is the best available option for the long-term viability of a roost at the site in question.

Section 11.2 of NPWS Application Form

The bat roosts in question are minor summer day roosts of Lesser Horseshoe Bat and a small number of Pipistrelles. Given that the roosts are not maternity roosts, the relatively low numbers involved, and an availability of alternative roosting sites in the locality, population-level impacts of the proposed development are highly unlikely. As outlined in the mitigation section below a purpose-built bat house will be constructed and several bat roost boxes will be erected at the site. The bat house along with bat boxes, minimised lighting will be effective in facilitating bats to continue to roost at the site. The actions permitted by a derogation license to allow works at the Bunratty 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.

Section 11.3 of NPWS Application Form: Bat Mitigation Measures

In the hierarchy of bat roost conservation significance, and proportionate mitigation, presented in the latest Bat Mitigation Guidelines for Ireland (Marnell, Kelleher & Mullen 2022), a minor day roost of low numbers of bats is at the mid- to lower end of conservation significance, as shown in Plate 1 below from those guidelines.

Low	Roost status	Mitigation/compensation requirement (depending on impact)
Conservation significance ↓ High	Feeding perches of common/rarer species	Flexibility over provision of bat-boxes, access to new buildings etc. No conditions about timing or monitoring
	Individual bats of common species	
	Small numbers of common species. Not a maternity site	Provision of new roost facilities where possible. Need not be exactly like-for-like, but should be suitable, based on species' requirements. Minimal timing constraints or monitoring requirements
	Small numbers of rarer species. Not a maternity site	
	Feeding perches of Annex II species	
	Hibernation sites for small numbers of common/rarer species	Timing constraints. More or less like-for-like replacement. Bats not to be left without a roost and must be given time to find the replacement. Monitoring for 2 years preferred.
	Maternity sites of common species	Timing constraints. Like-for-like replacement as a minimum. No destruction of former roost until replacement completed and usage demonstrated. Monitoring for at least 2 years.
	Maternity sites of rarer species	
	Significant hibernation sites for rarer/rarest species or all species assemblages	Oppose interference with existing roosts or seek improved roost provision. Timing constraints. No destruction of former roost until replacement completed and significant usage demonstrated. Monitoring for as long as possible.
	Sites meeting SAC guidelines	
Maternity sites of rarest species		

Plate 1. Guidelines for Proportionate Mitigation.

Mitigation Approach

The results of the survey along with the results of surveys from other sites in this area confirms that there is a number of roosts present in the area that support Lesser Horseshoe Bat. It is also likely that small numbers of *Pipistrelle* sp. may roost within the structure, at least on occasion and this is consistent with the previous survey of the former Shannon Shamrock Hotel.

An approach has been developed to minimise the potential effects of the proposed development on roosting, foraging and commuting bats.

- A bat house suitable for roosting Lesser Horseshoe Bats will be constructed at the site (Figure 7). The outline design shown has been informed by discussions with Dr. Kate McAney, Dr. Isobel Abbott and Tom O'Donnell.
 - This bat house will be constructed in Phase 1 of the development under the supervision of the project ecologist.
 - A passive detector will be deployed within the structure and activity within and outside of the structure will be monitored.
 - The structure will be accessed by a locked door. Access will be strictly controlled with keys held by the project ecologist and with access also provided to NPWS.
 - The area will not be illuminated – the lighting design has been developed to minimise light-spill in this area (see below).
 - Supplemental planting around the area in which the bat house will be constructed will include species valuable to bats, e.g. Oak, Spindle and Ivy and with associated woodland species e.g. Pine, Hazel, Holly, Dogwood and Guelder Rose to support pollinators and to improve the corridor for commuting and foraging bats.
 - No demolition of structures will proceed until it is conclusively established that Lesser Horseshoe Bats have found and investigated the structure. This will include either recordings of the bats from inside the structure, direct sightings of roost occupancy, or droppings inside the structure confirmed by DNA analysis.
 - Even in the event that usage of the bat house is confirmed the demolition will not commence until it is established through building inspections and analysis of passive detector recordings that the level of activity of Lesser Horseshoe Bats and any other species present has dropped to extremely low levels. It is anticipated that based on the results of the surveys in 2024 that the activity levels could drop to acceptable levels anytime from early October, but that significant inter-annual variation is likely depending on prevailing weather conditions. Demolition will not commence until October at the earliest and only then when the project ecologist is satisfied that very few, if any, bats remain within the structure.
 - The bat specialist will provide a toolbox talk to the demolition staff and will attend the site on a weekly basis during the demolition phase. The bat specialist will be on call throughout the demolition phase and will provide advice and support to the project team throughout.

- Roof-tiles and felt will be carefully removed and if bats are discovered at any stage in the work, work in the affected area will be immediately stood down and the project ecologist will attend the site to provide advice. If appropriate the local NPWS will be contacted and appropriate actions agreed.
- As a precaution the design of lighting on the inner site area will follow the Bat Conservation Trust in partnership with the Institution for Lighting Professionals (ILP) Best Practice Guidance (BTC & ILP, 2018) on considering the impact on bats when designing lighting schemes. The following best practice measures will be included in the lighting design:
 - Incorporate specialist bollard or low-level downward directional luminaires; Where low-level downward directional luminaires are not appropriate, installation of luminaires with warm white spectrum LEDs (<2700 Kelvin) to reduce blue light, with peak wavelengths higher than 550nm will be included.
 - Mounted luminaires will not tilt upward, with an upward light ratio of 0% and with good optical control;
 - Incorporate cowls to lighting throughout the proposed development site to spill away from the site boundaries;
 - Maximise the separation distance between light mast locations and vegetated features at the boundary of the site.
- A selection of 20 bat boxes will be erected within the application site, including winter roost/hibernation boxes. These boxes will be selected and erected under the supervision of the project ecologist. These boxes will be erected ahead of any tree felling or demolition of structures.
- Prior to felling, the small number of trees that are proposed to be felled to facilitate the development, will be subject to an updated ground-level inspection with any trees with moderate-high Potential Roost Features, climbed and inspected by appropriately trained staff under the supervision of a bat specialist. In the event that roosting bats are discovered the tree(s) in question will not be felled until a derogation licence is sought and granted.
- The usage of the bat house will be monitored throughout the demolition phase and into the first-year post construction. A report will be prepared and submitted for the information of the local authority and NPWS.
- The bat boxes will be inspected, cleaned and maintained on an annual basis by a suitably qualified ecologist.
- All conditions of the derogation licence will be fully implemented.

Likelihood of Success of Mitigation

The recommended mitigation approach is based on best practice guidance and professional experience of ourselves and our colleagues working in bat conservation in Ireland. In-built in these measures is a requirement to monitor and report on the efficacy of the measures and no demolition works may progress without evidence of roost usage/occupancy by Lesser Horseshoe Bat as described above.

Conclusion

It is clear that there are a number of roosts of Lesser Horseshoe Bats in the immediate area around the former Shannon Shamrock Hotel. The derelict hotel has deteriorated substantially in recent years and has been subject to vandalism and anti-social behaviour. When surveyed in 2017 (MKOS) there were a small number of roosting Pipistrelles recorded using the building. By 2024 Lesser Horseshoe Bats had begun to use the building in small numbers.

It is proposed to demolish the hotel and develop the site for housing and retail. The original building is in a derelict and increasingly dangerous condition and without intervention it will continue to deteriorate. The structure is not secure and is accessed by several potential predators of bats, Pine Marten, *Martes martes*, Domestic Cat, *Felis catus*, Brown Rat, *Rattus norvegicus* and Fox, *Vulpes vulpes*.

The design of the landscaping and lighting plan have both been informed by the need to be sensitive to the occurrence in the area of several bat species. The phasing of the project recognises the need to provide an alternate roost for Lesser Horseshoe Bats and to establish that the bats have found and investigated the structure well in advance of the commencement of demolition of the former hotel. A project ecologist will be appointed to ensure the full implementation of the mitigation strategy and to continue to provide advice and support to the project team throughout the delivery of the development.



Plate 7. Proposed location and design of bat house.

Appendix A

Results of Bat Sonogram Analysis

Bat Detector 1 (BD1)

Species	BD1 (i) - 10 nights	BD1 (ii) - 18 nights	BD1 (iii) - 11 nights	BD1 (iv) - 20 nights
Brown Long-eared Bat		1	4	2
Common Pipistrelle	12	1713	1254	61
Daubenton's Bat		3		
Leisler's Bat	387	547	61	135
Lesser Horseshoe Bat				
<i>Myotis</i> sp.	2	3		6
Soprano Pipistrelle	36	299	1380	63

Bat Detector 2 (BD2)

Species	BD2 - 38 nights
Brown Long-eared Bat	
Common Pipistrelle	
Daubenton's Bat	
Leisler's Bat	
Lesser Horseshoe Bat	
<i>Myotis</i> sp.	
Soprano Pipistrelle	

Bat Detector 3 (BD3)

Species	BD3 (i) - 10 nights	BD3 (ii) - 30 nights	BD3 (iii) - 28 nights	BD3 (iv) - 35 nights	BD3 (v) - 20 nights
Brown Long-eared Bat					
Common Pipistrelle	14	107	37	111	
Daubenton's Bat					
Leisler's Bat	4	2	1		
Lesser Horseshoe Bat	37	140	170	340	15
<i>Myotis</i> sp.		1			
Soprano Pipistrelle	89	253	289	245	10

Bat Detector 4 (BD4)

Species	BD4 (i) - 18 nights	BD4 (ii) - 23 nights
Brown Long-eared Bat	2	6
Common Pipistrelle	265	185
Daubenton's Bat		
Leisler's Bat	789	683
Lesser Horseshoe Bat		
<i>Myotis</i> sp.	3	4
Soprano Pipistrelle	1666	859

Bat Detector 5 (BD5)

Species	BD5 (i) - 7 nights	BD5 (ii) - 15 nights
Brown Long-eared Bat	2	
Common Pipistrelle	33	2
Daubenton's Bat		
Leisler's Bat	229	4
Lesser Horseshoe Bat	19	6
<i>Myotis</i> sp.	1	1
Soprano Pipistrelle	86	11

Bat Detector 6 (BD6)

Species	BD6 (i) - 20 nights	BD6 (ii) - 28 nights	BD6 (iii) - 35 nights	BD6 (iv) - 20 nights
Brown Long-eared Bat				
Common Pipistrelle	5	4	2	
Daubenton's Bat				
Leisler's Bat	1	2	1	1
Lesser Horseshoe Bat	1134	3057	1041	2
<i>Myotis</i> sp.				
Soprano Pipistrelle	53	68	16	7

Bat Detector 7 (BD7)

Species	BD7 (i) - 25 nights	BD7 (ii) - 35 nights	BD7 (iii) - 20 nights
Brown Long-eared Bat			
Common Pipistrelle		5	
Daubenton's Bat			
Leisler's Bat		1	14
Lesser Horseshoe Bat	27	98	6
<i>Myotis</i> sp.			
Soprano Pipistrelle	7	5	1

Bat Detector 8 (BD8)

Species	BD8 - 84 nights
Brown Long-eared Bat	
Common Pipistrelle	
Daubenton's Bat	
Leisler's Bat	
Lesser Horseshoe Bat	
<i>Myotis</i> sp.	
Soprano Pipistrelle	

Bat Detector 9 (BD9)

Species	BD9 - 27 nights
Brown Long-eared Bat	3
Common Pipistrelle	837
Daubenton's Bat	
Leisler's Bat	384
Lesser Horseshoe Bat	
<i>Myotis</i> sp.	4
Soprano Pipistrelle	499

Bat Detector 10 (BD10)

Species	BD10 (i) - 16 nights	BD10 (ii) - 10 nights
Brown Long-eared Bat	2	
Common Pipistrelle	19	24
Daubenton's Bat		
Leisler's Bat	211	137
Lesser Horseshoe Bat	5	11
<i>Myotis</i> sp.	3	
Soprano Pipistrelle	165	388