MPH – Proposed Student Accommodation Briefing Note

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Introduction

This briefing note summarises the findings of the bat surveys that took place in 2024 at Coolagh Road, Co. Galway (Grid Ref: M 29862 2722). It is intended that the derogation licence will accompany a planning application for a proposed student accommodation development. An Ecological Impact Assessment (EcIA) is being prepared as part of the overall planning pack.

The bat habitat appraisal was undertaken on the 26th February 2024. Manual activity surveys were undertaken in May and June 2024 by MKO Ecologists Laura McEntegart (BSc.), Nathan Finn (BSc., MSc.), Fiona Killeen (BSc.), Rachel Minogue (BSc.), Tom Peters (BSc.) and Charlie Meehan (B.A., MSc.). They were assisted by student ecologist Cormac Roberts. All MKO staff have the relevant qualifications to carry out the surveys they were required to do. Roost inspections and static surveys and analysis were completed by Laura McEntegart.

This note was prepared by Laura McEntegart who has over 3 years' experience in ecological assessment and has designed, organised and undertaken numerous bat surveys and related impact assessments in full accordance with the most relevant and applicable guidance. Laura has attended numerous training courses on bat survey and assessment including Bat Conservation Ireland bat; Bat Handling Course, (CIEEM) Bats: Assessing the Impact of Development on Bats, Mitigation & Enhancement, and use of bat call analysis software and data management (Wildlife Acoustics).

Methodology

Roost Survey

A search for roosts was undertaken within the proposed site. The aim was to determine the presence of roosting bats and the need for further survey work or mitigation. A walkover was carried out and the structures were assessed for their potential to support roosting bats. This comprised a detailed inspection of the exterior and interior to look for evidence of bat use, including live and dead specimens, droppings, feeding remains, urine splashes, fur oil staining and noises.

The exteriors of the three structures were inspected first from ground level, with the aid of binoculars. A systematic search of all accessible internal and external areas was undertaken by a licensed bat ecologist.

Dusk Emergence Survey

A dusk emergence survey was undertaken during the evening of the 1st May 2024 and 4th June 2024. Four surveyors were present on both emergence surveys. The aim of this survey was to identify bat species using the site and to gather any information on bat behaviour and important features used by bats. The activity survey focused on the three-story house, bungalow and derelict stone structure that are proposed to be demolished. Bat activity was also monitored throughout the proposed site.

Surveyors were equipped with active full spectrum bat detectors, Batlogger M (Elekon AG, Lucerne, Switzerland. Surveyors were positioned surrounding the three buildings with a clear view of the entire structures and associated linear features and habitats. Where possible, species identification was made in the field and any other relevant information was also noted, e.g. numbers, behaviour, features used, etc.

The dusk survey commenced 15 minutes before sunset and was completed within 2 hours after sunset. Conditions were suitable for bat survey with no wind, dry, cloudless and mild weather (Table 1).

Table 1 Bat Activity survey effort

Date	Surveyors	Type	Sunrise/Sunset	Weather
01st May 2024	Laura McEntegart, Nathan Finn, Fiona Killeen, and Rachel Minogue	Roost Emergence	21:06	11 - 15˚C, Dry, Calm
04th June 2024	Laura McEntegart, Charlie Meehan, Tom Peters and Cormac Roberts	Roost Emergence	21:57	8 - 12˚C, Dry, Calm

Survey design and effort was created in accordance with the most current best practice guidelines for surveying bats (Collins, 2023). Bats use different roosts, commuting routes and foraging areas throughout their annual life cycle and depending on the availability of insect prey. Therefore, all surveys are subject to seasonal and meteorological constraints.

May and June are within the optimum survey period for bat activity surveys (Collins, 2023). No limitations associated with access or weather conditions were recorded during the surveys.

Static Detectors Surveys

Two full spectrum SM4 bat detectors (Wildlife Acoustics, Maynard, MA, USA), were deployed during static surveys to record bat activity for a 19 night period. The detectors were deployed on 1st May 2024 and collected on 20th May 2024. The two locations of static detectors were selected to represent a range of habitats present within the site, including favourable bat habitats.

Settings used were those recommended by the manufacturer for bats, with minor adjustments in gain settings and band pass filters to reduce background noise when recording. Detectors were set to record from 30 minutes before sunset until 30 minutes after sunrise. The Song Meter automatically adjusts sunset and sunrise times using the Solar Calculation Method when provided with GPS coordinates.

All recordings were later analysed using bat call analysis software Kaleidoscope Pro v.5.4.8 (Wildlife Acoustics, MA, USA). The aim of this was to identify, to a species or genus level, what bats were present at the proposed development site. Bat species were identified using established call parameters, to create site-specific custom classifiers. All identified calls were also manually verified.

Individual bats of the same species cannot be distinguished by their echolocation alone. Thus, 'bat passes' was used as a measure of activity (Collins, 2023). A bat pass was defined as a recording of an individual species/species group's echolocation containing at least two echolocation pulses and of maximum 15s duration. All bat passes recorded in the course of this study follow these criteria, allowing comparison.

Results

Roost Survey

The daytime inspection surveys were carried out on 26th February 2024. The proposed development site includes two houses, a three-story house with large garden and a bungalow with a small shed located to the back that functions as both a utility and boiler room. A third structure, a derelict stone shed, is located west of these buildings and a green field consisting of scrub and limestone pavement is located to the north of the buildings. The bungalow and its garden are surrounded by stone wall, with a mature treeline growing between the two residential properties. This provides connectivity with surrounding habitats.

External and internal inspections were performed on all structures, which are proposed to be demolished. Limited roosting suitability was found. No potential for hibernacula was identified and no potential access points for lesser horseshoe bats were identified. Table 2 provides the inspection results.

Table 2 Inspection Result Summary 26th February 2024

Building	IG	*Section*	Notes	Suitability	Survey Results	Plates
Three story house; *Internal Sections*	M 29900 27218	Attic Section A	No access points found. Potential behind plastic sheeting.	Low	A small number of bat droppings found - not recent.	Plates 1 and 2
		Attic Section B	No access points found.	Low	A small number of bat droppings found beside the attic entrance – not recent.	Plates 3 and 4
		Attic Section C	No access points found. Holes in the felt allowed access to Attic Section D.	None	No evidence of bats.	n/a
		Attic Section D	No access points found.	None	No evidence of bats.	n/a
Three story house; *External Sections*	M 29900 27218	Roof	One hole found in South facing facia board, otherwise in perfect condition.	Low	No evidence of bats.	n/a
		A - House Exterior	Stone cladding under front door with small cavity. Small crevice in stone wall and mortar	Low	No evidence of bats.	Plate 5 and 6
		B - Garage	Well-sealed garage located in lower level of property, small cracks visible	Negligible	No evidence of bats.	n/a

			above garage door, which a bat could access.			
		C - Boiler Room	No access points found. Grill on door vent impeding access.	None	No evidence of bats.	n/a
Bungalow	M 29886 27180	Single Open Attic	Gutters and roof with three small gaps, east facing front of house and western aspect. Potential access through gap in slate	Low	A Small number of bat droppings – not recent	Plate 7 and 8
		External shed	Gaps and crevices, large amount of cobwebs present.	Negligible	No evidence of bats	n/a
Stone Building Ruins	M29879 27117	Building ruins to the west of the two main buildings.	Many crevices in stone wall and mortar. Area is surrounded by rough scrub and grassland	Low	Endoscoped. No evidence of bats but suitable for use.	Plate 9 and 10

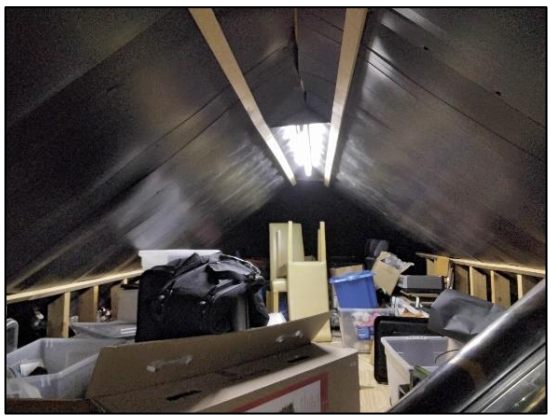

Plate 1 Three storey House: Attic storage area with plastic sealed ceiling and felt.

Plate 2 Three storey House: Small number of bat droppings found throughout the attic space.

Plate 3 Three storey House: *Attic space* Section B *and water tank* – not accessed.

Plate 4 Three storey House: Bat dropping found at the attic entrance.

Plate 5 Three storey House: Front porch with air vent allowing light into the roof space.

Plate 6 Three storey House: Small hole and crevice to the rear external wall.

Plate 7 Bungalow for demolition with single attic space and two chimneys.

Plate 8 Southern aspect soffit with one hole.

Plate 9 Stone House ruins in 2024 and conifer treeline to the west.

Plate 10 Stone House ruins in 2009, with no linear features present (source Google maps)

The trees surrounding the site, were of a size and age such that they provided no potential to support roosting bats. Tree species within the site were comprised largely of willow and sycamore species. No evidence of roosting bats was found during the tree and stone wall inspection carried out.

Manual Surveys

A presence/absence survey was undertaken in the form of a dusk emergence survey on the evenings of the 1st May and 4th June 2024. Surveyors were positioned to achieve the best coverage of the three structures on the site to monitor potential access points and stone walls. Table 3 summarises survey results.

Table 3 Manual activity surveys at PRFs.

PRF Structure	Survey Date	Results
Three Story House	01/05/2024 04/06/2024	One roost identified; a single Soprano pipistrelle bat recorded emerging from hole in facia board 04/06/2024.
Bungalow	01/05/2024 04/06/2024	No roost identified. Bats recorded crossing road to toward the conifer treeline to commute to scrub.
Stone ruins to the West	01/05/2024 04/06/2024	No roost identified. Bats using conifer trees and stone building to commute past.

Bat Activity Survey 1st May 2024

No bats were observed emerging from any structure. Bats were recorded commuting from across the road past the three structures toward the limestone pavement, scrub and treelines south of the site to a foraging habitat. Bats were also recorded foraging over the stone ruins, and the treeline south of the three-story house. Soprano pipistrelle, common pipistrelles, Leisler's bat and brown long-eared bats were observed. A small number of bats were recorded foraging along the treeline, and hedgerow located in the garden of the three-story house, positioned between the two residential structures.

Bat Activity Survey 4th June 2024

One bat was observed emerging from the hole in the facia board on the three-story house. A small number of bats were recorded commuting across the road past the three structures and foraging over the treeline and scrub. Bats were also recorded foraging on the treeline south of the three-story house. Soprano pipistrelle, common pipistrelles and Leisler's bat were observed.

Static Detectors Surveys

In total 5,715 bat passes were recorded. Analysis of the detector recordings positively identified seven bats to species level with *Myotis* genus also present. Soprano pipistrelle (*Pipistrellus pygmaeus*) made up the vast majority of the activity recorded within the site (n=3,976) followed by Leisler's bats *(Nyctalus leisleri*) (n=733) and common pipistrelle (n=672). Brown long-eared bats (n=110) and Nathusius' pipistrelles (n=177) and were less frequently recorded, followed by *and Myotis* spp. (n=22). 25no. instances of lesser horseshoe bat (*Rhinolophus hipposideros*) were recorded at the site.

The Site is located within the current known range for these species (Article 17). Plate 11 shows total bat species composition recorded at the site. Species composition was similar at both detectors, with bats commuting past, with feeding calls also shown. The lesser horseshoe passes were recorded at both locations commuting past early in the night, and past the detector a few hours later.

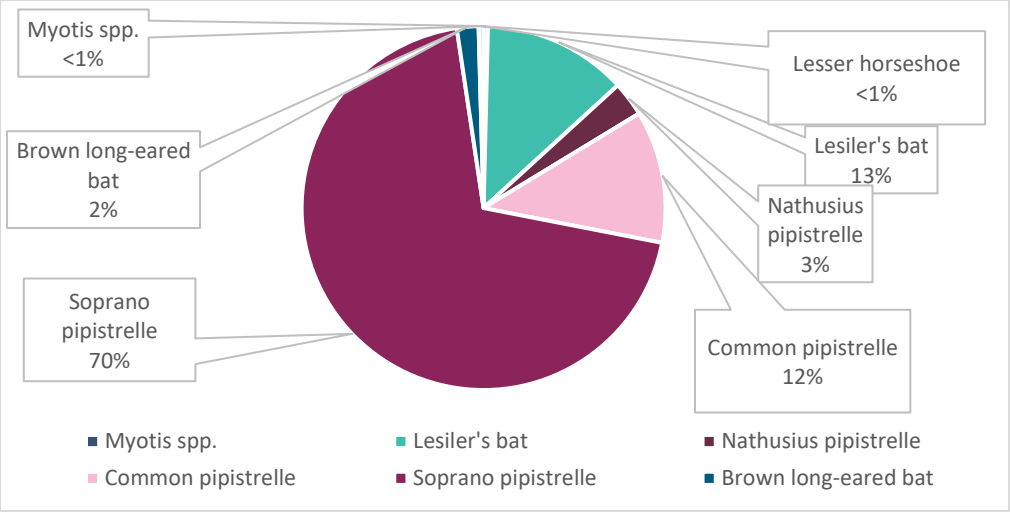

Plate 11 Total bat species composition.

Summary of Results and Overall Findings:

- 1no. soprano pipistrelle bat emerging from the three-story house (likely in facia board).
- Seven bat species and the *Myotis spp.* genus were recorded commuting and foraging across the site during the bat surveys carried out in May and June 2024, including soprano pipistrelle, common pipistrelle, Leisler's bat, brown long-eared bat, Nathusius' pipistrelle, *Myotis spp.,* and lesser horseshoe bat.
- The three buildings surveyed have the potential to support bat roosts during the activity season. However, very limited evidence was identified during the surveys. No evidence of hibernacula were identified. Small accumulations of old droppings were found within the two residential structures. However, no fresh droppings or dropping accumulations indicative of large active roosts were found.
- No suitable access points into the structures for use by lesser horseshoe bats were identified.

Recommendations in relation to Bats

- As a bat roost was identified within the three-storey structure, a bat derogation licence must be obtained from NPWS prior to works commencing to account for the destruction of a roost during demolition works. On a highly precautionary basis, although no evidence of active roosting was identified, as small amounts of old droppings were identified in the bungalow, this is also included in the licence application.
- Prior to the commencement of any demolition works, a suitably qualified ecologist will provide a toolbox talk to site staff to make them aware of the ecological sensitivities of the site and ensure that they are fully briefed in relation to any bat constraints.
- A pre-commencement survey will be carried out by a licenced ecologist, to identify any potential changes in the baseline since these surveys were undertaken in June 2024. This will include the inspection of all structures proposed for demolition.
- Demolition works will be undertaken at an appropriate time of year, as agreed with a suitably licenced ecologist.
- The lighting plan for the operational phase of the proposed development will be designed with consideration of the following guidelines: Bat Conservation Ireland guidelines; Bat Conservation Ireland (Bats and Lighting: Guidance Notes for Planners, Engineers, Architects and Developers, BCI, 2010) and the Bat Conservation Trust (Guidance Note 08/23 Bats and Artificial Lighting at Night (BCT, 2023), to minimise light spillage, thus reducing any potential disturbance to bats.
- Landscaping plans favourable to bats will be designed and involve the retention and enhancement of linear features and/or woodland habitats, where possible.

- Alternative roost sites will be provided to compensate for the loss of roosting habitat. Bat boxes will be erected within the site following best practice guidelines (Marnell *et al.,* 2022; NRA 2006). A minimum of 4no. woodcrete bat boxes are recommended for installation. Bat boxes should have a southerly orientation and be positioned at least 3m from the ground, away from artificial lighting from the operational phase of the development. They should be placed adjacent to vegetation features such as treelines and hedgerows to ensure they are close to existing flight paths and can avoid wide open spaces (Collins, 2023). Final bat box locations will be agreed in consultation with a licenced Ecologist. Integrated bat boxes can be considered in the construction of the residential development.
- At least one no. bat box will be placed onsite before works commence to allow for relocation of bats potentially found during the works. A Schwegler 2FN Woodcrete bat box, or similar, is recommended for this purpose.