# BRIEFING NOTE

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| Project Reference | 220255 |
| Date | 10.09.2024 |
| Subject | Phase 2 Bat Survey at Belvedere House |
| Authors | Laura McEntegart (BSc.), Aoife Joyce (BSc., MSc.) |

MKO was commissioned by 7L Architects on behalf of Westmeath County to undertake bat surveys at Belvedere House, Co. Westmeath (Grid Ref: N 41954 47645). The project will consist of raking and repointing of external stonework, 1st floor internal structural works and window/door repairs and redecoration. A description of the Phase 2 works is provided below.

Surveys were previously carried out at the site in August 2022, February, May and October 2023 and May 2024, and included roost inspections, dusk and dawn emergence and re-entry surveys, and site supervision. It was established that bats were using the structure for roosting and the necessary derogation licence and appropriate mitigation measures were implemented for Phase 1 works.

Additional surveys were carried out in August 2024 to inform Phase 2 works and included a daytime inspection and bat activity survey of the structure. The main objective of the surveys was to assess the site for any new potential roosts since the previous surveys carried out and to gather information on the existing roosting bats. The bat surveys were designed to establish the nature, scale and locations of potential bat activity on site and involved an extensive interior and exterior inspection of the building.

This briefing note is intended to provide the required supporting information alongside a Derogation Licence application for Westmeath County Council to carry out works on Belvedere House for Phase 2.

## Project Description

The proposed works in Phase 2 at Belvedere House will include:

- Strengthening of 1st floor structure - a steel beam and support hidden by an elevated floor section will be installed in front of the 1st floor southern and northern windows.
- Repairs and redecoration to windows and doors on the structure – front and sides.
- Raking and repointing the external stonework – front and sides.

Further details are included in the accompanying Conservation Method Statement.

# Statement of Authority

MKO employs a bat unit within its Ecology team, dedicated to scoping, carrying out, and reporting on bat surveys, as well as producing impact assessments in relation to bats. MKO ecologists have relevant academic qualifications and are qualified in undertaking surveys to the levels required. MKO's Ecology team holds an open bat derogation licence from NPWS (DER-BAT-2024-54). The licence is intended for professionals carrying out surveys with the potential to disturb roosting bats (i.e. roost inspections).

Survey scoping was prepared by Aoife Joyce. Building inspections were carried out by Aoife Joyce (B.Sc., M.Sc.), and Sara Fissolo (B.Sc.). Graduate Ecologist Ciara Hackett (BSc.) assisted with the dusk emergence survey. This note was prepared by Laura McEntegart (BSc.), was reviewed by Aoife.

*Table 1 Project team qualifications and training*

| Staff | Role | Qualifications and Training |
|---|---|---|
| Aoife Joyce (B.Sc., M.Sc.) | Project Director | B.Sc. (Hons) Environmental Science, University of Galway, Ireland.<br>M.Sc. (Hons) Agribioscience, University of Galway, Ireland.<br><br>Advanced Bat Survey Techniques – Trapping, biometrics, handling (BCI), Bat Impacts and Mitigation (CIEEM), Bat Tree Roost Identification and Endoscope Training (BCI), Bats in Heritage Structures (BCI), Bats and Lighting (BCI), Kaleidoscope Pro Analysis (Wildlife Acoustics). |
| Sara Fissolo (B.Sc.) | Project Ecologist | B.Sc. (Hons) Ecology and Environmental Biology, University College Cork, Ireland.<br><br>Advanced Bat Survey Techniques (BCI), Bat Impacts and Mitigation (CIEEM), Bats in Heritage Structures (BCI), Bat Care (BCT), Bats and Lighting (BCI), Kaleidoscope Pro Analysis (Wildlife Acoustics). |
| Laura McEntegart (B.Sc.) | Ecologist | B.Sc. (Hons) Botany and Plant Science, National university of Ireland, Galway<br><br>Bat Handling Training Course (BCI), Bats: Assessing the Impact of Development on Bats, Mitigation & Enhancement - (CIEEM), Kaleidoscope Pro Analysis (Wildlife Acoustics). Endoscope Training (Internal), Emergence and Re-Entry Surveys (Internal) Structure & Tree Inspection (Internal), Manual Transect Survey (Internal), Bat Habitat Appraisal (Internal). |

# Methodology

### Roost Survey

A daytime search for evidence of roosting bats was undertaken in August 2024. 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 structure was assessed for 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 exterior of the structure was inspected first from ground level, with the aid of binoculars. A systematic search of all accessible internal and external areas was undertaken by licensed bat ecologists.

### Dusk Emergence Survey

A dusk emergence survey was undertaken during the evening of the 28th August 2024 by three surveyors. 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 included the front and side elevations where works are proposed with particular focus on the existing soprano pipistrelle roost. Surveyors were equipped with active full spectrum bat detectors, Batlogger M (Elekon AG, Lucerne, Switzerland) and thermal scope. Surveyors were

positioned surrounding the building with a clear view of the works areas. 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 surveys with no wind, dry, cloudless and mild weather. August is within the optimum survey period for bat activity surveys (Collins, 2023). No limitations associated with access or weather conditions were recorded during the survey.

# Results

## 2022 and 2023 Roost Inspection and Bat Activity Survey

Evidence of bat use in the form of feeding remains and scattered droppings was found within the roof, first floor and ground floor. No bats were observed roosting in the roof spaces during the surveys. However, two old bat carcasses were noted in one attic and a dead pipistrelle bat was found behind a shutter on the first floor. Live pipistrelle bats were noted on the ground floor interior, close to the exterior roosting location in the crevice above the southern bay window suggesting bats were entering the house from the external roost on occasion.

In total, 20 - 25 bats were observed emerging from the structure. Species confirmed included pipistrelle species (both Soprano- and Common pipistrelle). A winter hibernation survey recorded an individual Myotis species inside one of the northern vaults.

## 2024 Roost Inspection and Bat Activity Survey

A total of 70 bats were recorded emerging from the crevice above the ground floor southwestern bay window. Species consisted of predominantly Soprano pipistrelle with some Common pipistrelle also present. Additionally, 15no. bat carcasses (10no. male, 5no. female pipistrelles) were identified in the building interior since the surveys carried out the previous year. Seven were identified in the ground floor room, five identified in first floor room and two identified in central hallway. Following a thorough inspection, it was not evident where exactly the bats were entering the building; however, small gaps are present under skirting boards and floorboards. It's clear that bats are roosting behind a cavity in panelling along the southern bay window at ground level (audible during daytime). There may also be access to the first floor within this cavity. No other roosts or evidence of roosting bats were identified.

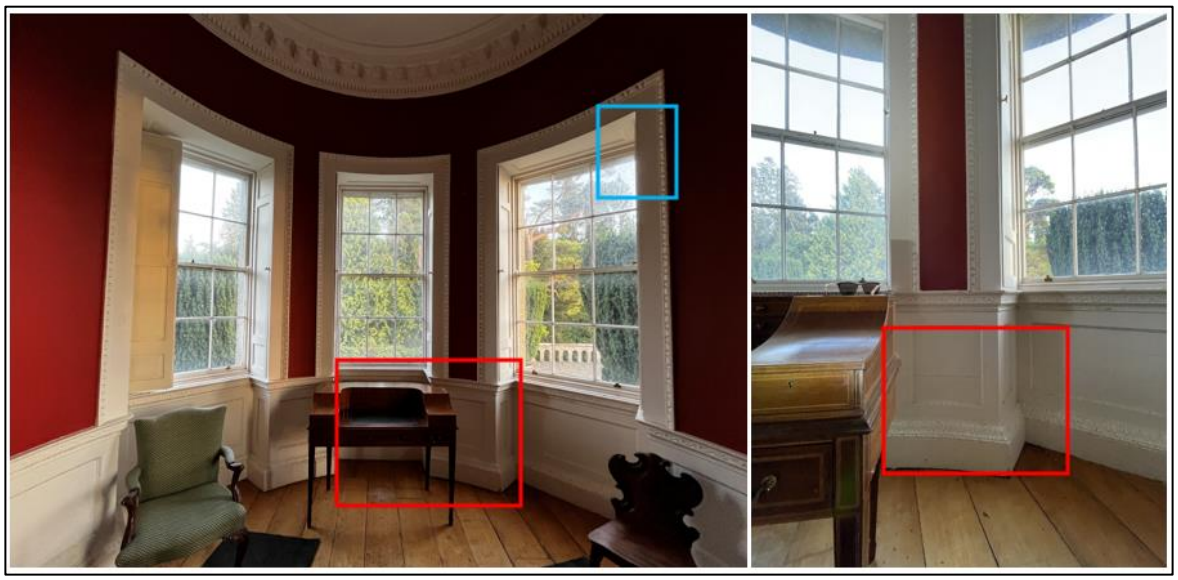

*Plate 1 Ground floor – south-west bay area. Bats audible within the panel marked (red). Exterior roost entrance (blue).*

*Plate 2 Evidence of bats accessing 1st floor interior potentially through floor gaps/panelling.*

*Plate 3 Bats recorded emerging from window crevice.*

## Summary of Results and Overall Findings:

- A large pipistrelle roost (70+ individuals), comprised predominantly of soprano pipistrelle bats with occasional common pipistrelle, was recorded during the survey. The large number of bats suggests the presence of a maternity roost.
- 15no. total carcasses identified in interior of building. 7no. identified in ground floor room, 5no. identified in first floor room and 2no. identified in central hallway.
- No evidence of bat use was recorded on northern bay or front façade.

### *Recommendations*

- *A derogation licence will be obtained from the National Parks and Wildlife Service for the works to be carried out.*
- *Works will be undertaken outside the main bat maternity period (May - August). Phase 2 works are proposed to take place between September 2024 and April 2025 to avoid the main bat activity period.*
- *In the interim, as interior access points are still unconfirmed, in order to allow bats to escape from the building, a window on the ground and first floor have been left open slightly to allow for exiting.*
- *The identified roost entrance on the southern bay window and wall cavity will be retained throughout the works. Access by bats to the interior of the structure will be identified and restricted to ensure bats can no longer get trapped inside with no exit.*
- *Prior to the commencement of 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.*
- *On a precautionary basis, a pre-commencement survey will be carried out to ensure there are no bats present within the works area. Should roosting bats or evidence of roosting be identified, these areas will be retained and avoided during the works.*
- *Any internal works on the southern bay panelling will be supervised by a licenced ecologist to ensure the internal roost cavity remains intact during the works and bats can return.*

Provided the works are carried out in accordance with the above recommendations, significant impacts on bats are not anticipated.