



Greena Ecological Consultancy

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Bat activity surveys at Walnut Tree House

Background

An exterior assessment survey was previously carried out of this building by Greena rating the building to have moderate bat roost potential. Due to this and being a listed building, two bat activity surveys were completed in May and June 2023.

Methods

This bat activity survey was carried out by Rachel Denness assisted with up to three SpyCamera CCTV 1080HD with built in infrared illumination. The cameras were used with a time-synchronized EcoObs Batcorder bat detectors containing recorders.

The manufacturer's specifications of the high-definition cameras lists its range for both, colour (daytime, dusk) and black&white (post-dusk to complete darkness) during infrared illumination as 100ft (30.48metres). The cameras are fitted with a varifocal (adjustable) 2.8-12mm lens covering the field view from very wide (up to 100 degrees) to narrow and zoomed in. The setting is manual, and a maximum possible view of the surveyed structure is always ensured prior to the start of the survey. The smart IR technology enables the cameras to automatically adjust the intensity of the infrared lighting based on the distance objects are located from the camera (wide dynamic range enhancement). The recording from each night is subsequently viewed by an experienced licensed bat ecologist with the possibility to rewind and view segments repeatedly, providing much higher accuracy of the assessment than the traditional in-field survey method alone.

All elevations of the building were observed on the surveys.

Results

Survey 1 – 24th May 2023

The survey started at 20:46 and ended at 22:23. Sunset was at 21:08. Weather conditions on the survey were very suitable for bats to be active and complied with BCT Survey Guidelines on seasonal timings and weather suitability.

	Temp (°C)	Cloud (%)	Rainfall	Wind (MPH)
Start	15	0	10	0
End	15	0	10	0

West elevation

Bat detector Results –

Time	Species
21:38	1x 55P
21:50	1x 55P, 1x 45P
21:59	1x Noc
22:03	4x Noc
22:05	1x 55P
22:07	1x 45P
22:10	1x 45P

55P – Soprano Pipistrelle, 45P – Common Pipistrelle, Noc - Noctule

Video Results –

Time	Notes
21:38	1x in front of camera
21:50	1x flying over house
21:59	1x flying S – N
22:05	1x flying N – S

No bats emerged

South and East Elevation

Bat detector Results –

Time	Species
21:31	1x 45P
21:32 – 21:36	4x 55P
21:40	1x 45P
21:41	1x 45P, 1x 55P
21:47	1x 55P
21:51	1x Sert
22:00	1x 55P
22:00 – 22:01	16x Sert
22:07	1x 45P
22:08	2x Noc, 1x 45P
22:11	1x 45P
22:14	1x 55P

45P – Common Pipistrelle, 55P – soprano Pipistrelle, Sert – Serotine, Noc - Noctule

Video Results.

Time	Notes
21:59	1x flying E – W
22:00	1x flying E – W
22:09	1x flying E – W
22:11	1x flying in front of camera

No bats emerged

Survey 2 – 15th June 2023

The survey started at 20:58 and ended at 22:45. Sunset was at 21:27. Weather conditions on the survey were optimal for bats to be active and complied with BCT Survey Guidelines on seasonal timings and weather suitability.

	Temp (°C)	Cloud (%)	Rain	Wind (MPH)
Start	23	20	0	4
End	21	5	0	4

West Elevation

Bat detector Results –

Time	Species
22:24	1x Noc
22:28	1x Noc

Noc - Noctule

Video Results

No bats emerged.

South and East Elevation

Bat detector Results –

Time	Species
22:05 – 22:10	14x 55P
22:12	1x 55P
22:16	1x 55P
22:18	1x 55P
22:24 – 22:27	11x Noc

55P – Soprano Pipistrelle, Noc - Noctule

Video Results –

Time	Notes
22:06	<ul style="list-style-type: none">- 1x flying S – E- 1x feeding around SE elevation.- 1x flying N - S
22:09	1x flying N – S
22:11	1x flying W – E
22:16	1x flying in front of camera

No bats emerged.

East Elevation

Bat detector Results –

Time	Species
22:10	1x Sert
22:24 – 22:28	9x Noc
22:33	4x Noc

Sert – Serotine, Noc - Noctule

Video Results –

Time	Species
22:24	1x flying SW - NE

No bats emerged.

CONCLUSIONS

In conclusion no bats were seen to emerge from the building during these surveys, though because a small no. of Pipistrelle bat droppings were previously found in the attic in January 2023 the building must be considered to be a day roost for individual Pipistrelle bats.

Because the proposed works would disturb some of the roof a bat licence (very likely a low impact one) is required to go ahead with the works.

The following would be required:

- Obtain full planning
- Analyse bat droppings to establish species
- Architect provide plan with bat provision included in new section
- Obtain relevant type of bat licence
- Put up one bat box in garden of house
- ECW during roof disturbance works
- Licence report

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