

## *Greena Ecological Consultancy*

---

Stonehaven ~ Witham Friary ~ Somerset ~ BA11 5HH  
Tel 01749 850993 ~ Mobile 077487 42475 ~ Email [geoffbillington@btconnect.com](mailto:geoffbillington@btconnect.com)

Robyn Sparkes  
Building Surveyor  
National Trust  
Bristol Consultancy Hub  
Leigh Court  
BS8 3RA  
31-07-23

### **Bat activity surveys at Dyrham House**

#### **Background**

Interior and exterior assessment survey was previously carried out of this building by Geoff Billington from Greena Ecological Consultancy in January & December 2023. Limited signs of bats were found in both of the attics.

Due to concerns of LPA ecologists on conclusions/impacts of a fire door so two bat activity surveys were completed.

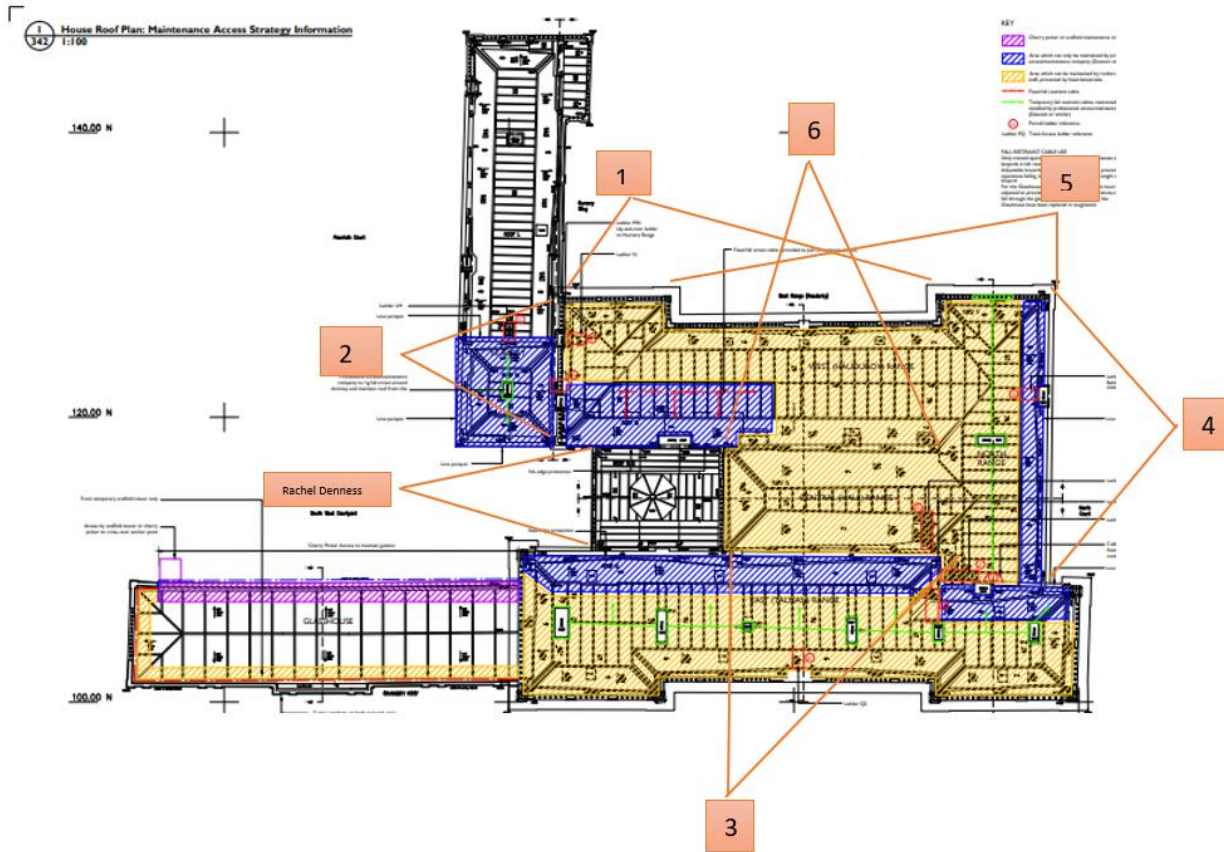
#### **Methods**

This bat activity survey was carried out by Rachel Denness assisted with up to six 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.

A plan is provided below of the equipment locations.



## Results

6<sup>th</sup> June 2023

The survey started at 20:21 and ended at 23:00. Sunset was at 21:21. Weather conditions on the survey were 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	13	90	0	11
End	12	100	0	9

### Equipment Set 1

#### Bat Detector Results –

Time	Species
22:24	4x Noc
22:24 – 22:25	2x Sert

*Noc – Noctule, Sert – Serotine*

#### Video Results –

Time	Notes
22:24	1x flying W - E

No bats were observed emerging

## Equipment Set 2

### Bat Detector Results –

Time	Species
22:12	1x 45P
22:25	1x Sert
22:34	3x 45P

45P – Common Pipistrelle, Sert – Serotine

### Video Results –

Time	Species
22:25	1x flying W – E over roof

No bats were observed emerging

## Equipment Set 3

### Bat Detector Results –

Time	Species
21:34	1x 45P
21:39	1x 45P
22:22	3x 45P
22:24	3x 45P, 3x Noc, 1x Sert

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

### Video Results –

No bats were observed emerging

## Equipment Set 4

### Bat Detector Results –

Time	Species
21:28	2x 55P
21:35	1x 45P
21:37	1x 45P
21:38	1x 55P
21:48	1x 55P
21:49 – 21:52	6x Sert
21:50	1x 55P
21:58	1x55P
21:51	1x 45P
22:14	1x 45P
22:15	1x 55P
22:20 – 22:26	18x 45P
22:24 – 22:25	4x Noc
22:29	2x Noc
22:30 – 22:31	5x 45P
22:32	2x Sert
22:40 – 22:41	2x Sert
22:44 – 22:48	19x 45P
22:48 – 22:49	3x Sert

45P – Common Pipistrelle, Sert – Serotine, 55P – Soprano Pipistrelle

### Video Results -

Time	Notes
21:52	1x flying W – E
21:58	1x flying W – E
21:58	1x flying W – E
22:14	1x flying E – W

22:14	1x flying E – W
22:15	1x flying S
22:15	1x flying SW
22:15	1x flying E – W
22:20	1x flying N – S
22:21	1x flying W – E
22:23	1x flying S – SW
22:24	1x flying W – N
22:25	1x flying E – W
22:25	1x flying N – S
22:26	1x flying NE - SW
22:30	1x flying S - E
22:31	1x flying NE – SW
22:46	1x flying NE – SW
22:47	1x flying S – W
22:48	1x flying W - E

No bats were observed emerging

### Equipment Set 5

#### Bat detector Results –

Time	Species
22:16	1x 45P
22:24	1x Noc, 1x Sert
22:26	5x Noc
22:29	5x Noc

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

#### Video Results –

No bats were observed emerging

### Equipment Set 6

#### Bat detector Results –

Time	Species
21:35	1x 45P
22:24	2x Noc, 1x Sert

#### Video Results –

Time	Notes
21:36	1x flying S – W
22:24	1x flying E

No bats were observed emerging

### Rachel Denness' notes west side

Time	Species	Notes
21:35	1x 55P	Flying N
22:02	1x 55P	Heard
22:06	1x 55P, 1x Sert	Heard
22:07	1x 55P, 1x 55P	Circling
22:10	1x 55P	Heard
22:12	1x 45P, 1x 55P	Circling in front of building
22:13	1x 55P	Flying S – N over the building
22:15	1x 55P	Heard
22:17	1x 45P	Heard
22:20	1x 55P	Heard

55P – Soprano Pipistrelle, 45P – Common Pipistrelle, Sert - Serotine

The Common and Soprano pipistrelle bats circling in front of the building point to likely use by this species.

**17<sup>th</sup> July 2023**

The survey started at 20:00 and ended at 23:00. Sunset was at 21:18. 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	40	0	9
End	15	30	0	6

**Equipment Set 1**

*Bat Detector Results –*

Time	Species
<b>22:13</b>	6x Noc

*Noc - Noctule*

*Video Results –*

No bats were observed emerging

**Equipment Set 2**

*Bat Detector Results –*

Time	Species
<b>22:12</b>	5x Noc

*Noc - Noctule*

*Video Results –*

No bats were observed emerging

**Equipment Set 3**

*Bat Detector Results –*

Time	Species
<b>21:57</b>	1x 45P
<b>22:13 – 22:14</b>	2x 45P

*45P – Common Pipistrelle*

*Video Results –*

No bats were observed emerging

**Equipment Set 4**

*Bat Detector Results –*

Time	Species
<b>21:37</b>	1x 55P
<b>21:42</b>	3x Sert
<b>21:53</b>	1x Sert
<b>22:02</b>	5x 45P
<b>22:05</b>	5x 45P
<b>22:23</b>	1x Myt
<b>22:27 – 22:28</b>	6x 45P
<b>22:30</b>	1x 45P
<b>22:34</b>	1x Myt
<b>22:35</b>	4x 45P

<b>22:37</b>	1x Noc
<b>22:38</b>	1x 45P

*55P – Soprano Pipistrelle, Sert – Serotine, Myt – Myotis, Noc – Noctule, 45P – Common Pipistrelle*

*Video Results –*

No bats were observed emerging

**Equipment Set 5**

*Bat Detector Results –* No bat calls recorded.

*Video Results –*

No bats were observed emerging

**Equipment Set 6**

*Bat Detector Results –* No bat calls recorded.

*Video Results –*

No bats were observed emerging

**Rachel Denness' Notes**

<b>Time</b>	<b>Species</b>	<b>Notes</b>
<b>21:38</b>	1x 45P	Flying E - W
<b>21:48</b>	1x 45P	Flying S
<b>22:12</b>	1x Noc	Flying N – S
<b>22:15</b>	1x 45P	Heard
<b>22:18</b>	1x 45P	Heard

*45P – Common Pipistrelle, Noc - Noctule*

No bats were observed emerging

**CONCLUSIONS**

No bats were seen to emerge from the building (so none present) on both surveys. The Common and Soprano pipistrelle bats circling in front of the building point to likely use by this species combined with limited signs of Pipistrelle bats in the attics overall conclusion attics are only occasional day roosts for individual Common & Soprano bats.

Same conclusion unchanged as reached in January 2023 to go ahead and complete fire door works in winter between November & March.

Bat licensed ECW inspect before works start to ensure no bats roosting close to works area.

Works do not require a licence (complying with above timings) as bat flight and crawl routes will be maintained between attics.

Geoff Billington

