

Bat Emergence Survey

Project: Proposed Replacement Dwelling

Address: Ashlea Farm, Bradley Lane,
Threapwood, Alton, ST10 4DQ

Client: MR J TIDESWELL

Status	Issued
Date:	26/09/2024
Issue to:	Mr J Tideswell / HCS File 24_387
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Position:	Ecologist
Authors Signature:	
Approved by:	Natalie Hewitt BA(Hons) BArch(Hons) RIBA
Position:	Director
Approval Signature:	

Context

Hewitt&Carr Services (HCS) was commissioned by MR J TIDESWELL to produce a bat emergence survey to assist in a proposal for a replacement dwelling at Ashlea Farm, Bradley Lane, Threapwood, Alton, ST10 4DQ (Grid reference: SK 04954 42059)

The site is located between Cheadle and Alton on the western edge of the Churnet river valley. The area is composed primarily of mixed woodland, grazing pastures and cropland with multiple small ponds. The site itself is situated on the southern edge of a farmyard featuring a large shed.

The record search conducted within the previous bat scoping survey of the site found that there were no bat records within a 1km search area.

The bat scoping survey concluded that the site contains good foraging habitat for bats and potential for roosting exists on the northwestern corner of the building's roof. At least 2 surveys will be required to determine presence or absence of roosting bats on the site with at least one survey within the optimal survey season.

This emergence survey opted for 3 surveys between 17/07/24 and 16/08/24 due to the ideal habitat in the area.

Figure 1.

Proposed surveyor locations for the emergence surveys on-site



A: DaisyBank House | 17-19 Leek Road | Cheddle | ST10 1JE
T: 01538 711777
E: hello@hc-services.uk
W: www.hc-services.uk

Legend

-  Surveyor Position
-  Site Boundary

Google Satellite

Client : MR J. TIDESWELL

Project : PROPOSED REPLACEMENT
DWELLING

Title : SURVEYOR POSITION

Date : 24/09/2024

Project No. Drawing No.
24_387 01

Rev :

Figure 2.

Linear habitat in context to site



A: DaisyBank House | 17-19 Leek Road | Cheadle | ST10 1JE
T: 01538 711777
E: hello@hc-services.uk
W: www.hc-services.uk

Legend

-  Tree Lines
-  Site Boundary
-  Google Satellite

Client : MR J. TIDESWELL

Project : PROPOSED REPLACEMENT
DWELLING

Title : LINEAR HABITATS

Date : 24/09/2024

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Methodology

Surveys were conducted in adherence to the good practice guidelines for Professional Ecologists by the Bat Conservation Trust. The PRF was designated as medium suitability for roosting bats. Therefore at least two surveys are required for the feature. This survey effort consisted of 3 dusk surveys to deduce if roosting bats were present within the structure. The surveys were conducted when nighttime air temperature was at least 9 degrees Celsius from July to August.

Survey Objectives:

1. Ascertain presence or likely absence of bat roosts within the PRFs of the structure.
2. If present, determine the species present on site along with the size and roost function.
3. Evaluate the importance of the structure for bats to satisfy legal and planning policy requirements where appropriate.

Apparatus:

- Echometer Touch 2
- Tablet

Survey Position:

The surveys were conducted in a fixed position in clear line of sight of the PRF at the northwest corner of the building. From here, the surveyor was also between the PRF and foraging habitats of any bats that exited the PRF with treelines, a pond and grassland behind the surveyor. This should maximise detection of roosting bats exiting the PRF and identification of the species. (Grid ref: SK 04941 42066)

Survey 1 Data

Figure 3.

Survey 1 – survey sheet.

Bat Survey Sheet					
Site Name: Ashlea Farm	Survey Number: 1	24_387	Start Time: 21:09	Weather: Clear	Temp (C): 18
Structure: B1	Date: 17/07/24		End Time: 23:24	Weather: Cloudy	Temp (C): 16
Time	Species	Activity	Notes		
21:31	NOCT	FORAGING	BETWEEN CONIFERS AND BUILDING NORTH TO SOUTH		
21:46	BLE	HNS			
21:54	C.PIP	FORAGING	FROM SOUTH TREELINE OVER ROOF WEST TO EAST AND BACK DOWN TREELINE		
21:54	C.PIP	HNS			
21:56	C.PIP	FORAGING	LAPS WEST SIDE OF BUILDING YARD		
21:59	C.PIP	FORAGING	OVERHEAD TO CONIFER AND BACK		
22:01	C.PIP	FORAGING	FROM TREELINE TO CHIMNEYS AND BACK		
22:02	C.PIP	HNS			
22:03	C.PIP	FORAGING	FROM CONIFERS TO WEST SIDE OF BUILDING AND BACK		
22:04	C.PIP	FORAGING	FROM CONIFERS TO WEST SIDE OF BUILDING AND BACK		
22:06	C.PIP	FORAGING	FROM CONIFERS TO WEST SIDE OF BUILDING AND BACK		
22:07	C.PIP	COMMUTE	FLYING NORTH OVER FARMYARD		
22:07	C.PIP	FORAGING	LAPS OF WEST SIDE OF BUILDING		
22:09	C.PIP	HNS			
22:09	C.PIP	FORAGING	FROM CONIFERS TO OVERHEAD AND OVER ROOF TO EAST		
22:13	C.PIP	FORAGING	WEST SIDE OF BUILDING		
22:14	C.PIP	HNS			
22:14	C.PIP	COMMUTE	SOUTH TO NORTH		
22:15	C.PIP	COMMUTE	FLYING SOUTHWEST OVERHEAD		
22:15	C.PIP	HNS			
22:17	C.PIP	FORAGING	CIRCLING BUILDING HEADING BACK SOUTH		
22:23	BLE	HNS			
22:34	C.PIP	HNS			
22:42	C.PIP	HNS			
22:44	C.PIP	HNS			
22:44	BLE	FORAGING	WEST FIELD BEHIND		
22:45	C.PIP	FORAGING	WEST SIDE OF BUILDING		
22:46	BLE	FORAGING	WEST FIELD BEHIND		
22:48	C.PIP	HNS			
22:50	C.PIP	HNS			
22:51	BLE	HNS			
22:52	S.PIP	HNS			
22:55	C.PIP	HNS			
22:57	C.PIP	COMMUTE	BEHIND FLYING NORTHEAST TO FARMYARD		
22:59	C.PIP	HNS			
23:00	C.PIP	HNS			
23:04	C.PIP	HNS			
23:05	NOCT	HNS			
23:05	C.PIP	COMMUTE	FLYING NORTH OVER FARMYARD		
23:06	C.PIP	FORAGING	CIRCLING BUILDING HEADING BACK SOUTH		
23:06	C.PIP	HNS			
23:07	C.PIP	HNS			
23:12	C.PIP	HNS			
23:12	C.PIP	HNS			
23:15	C.PIP	HNS			
23:19	C.PIP	HNS			
23:23	MYOT	FORAGING	UP AND DOWN CONIFER LINE		

Figure 4.

Survey 1 activity level

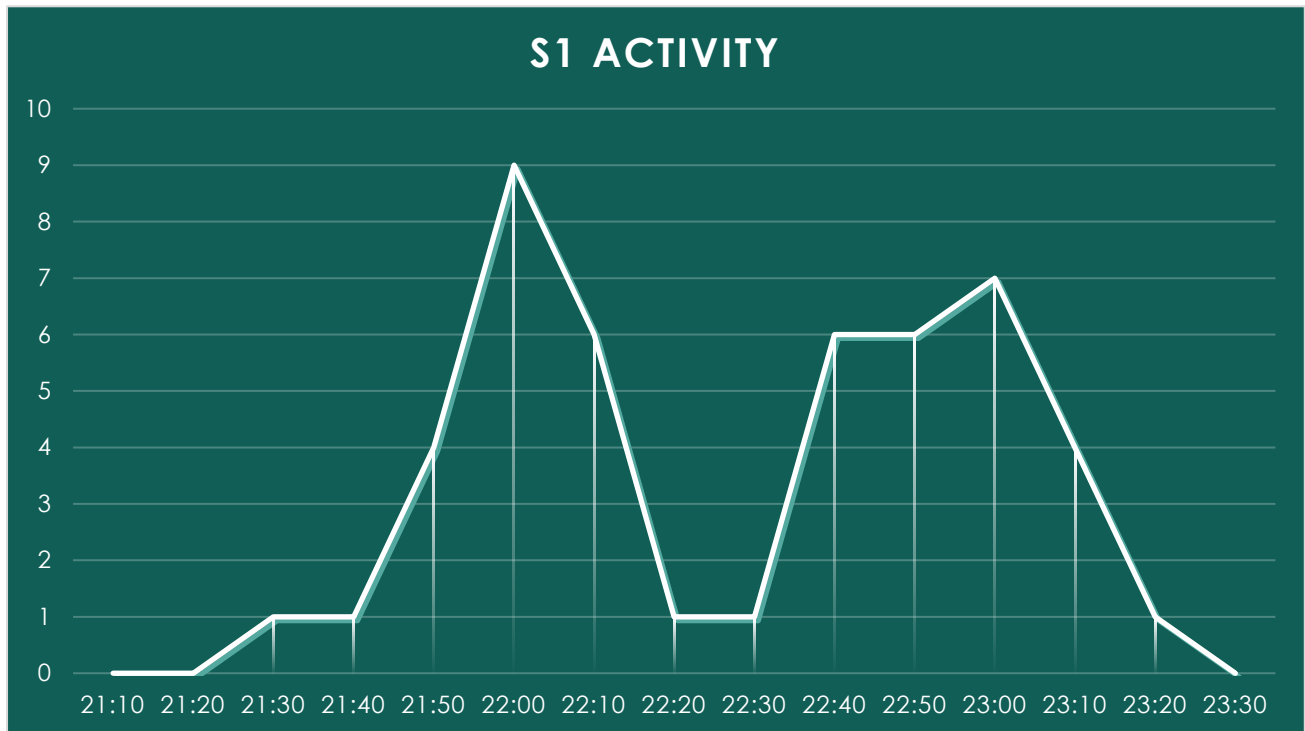
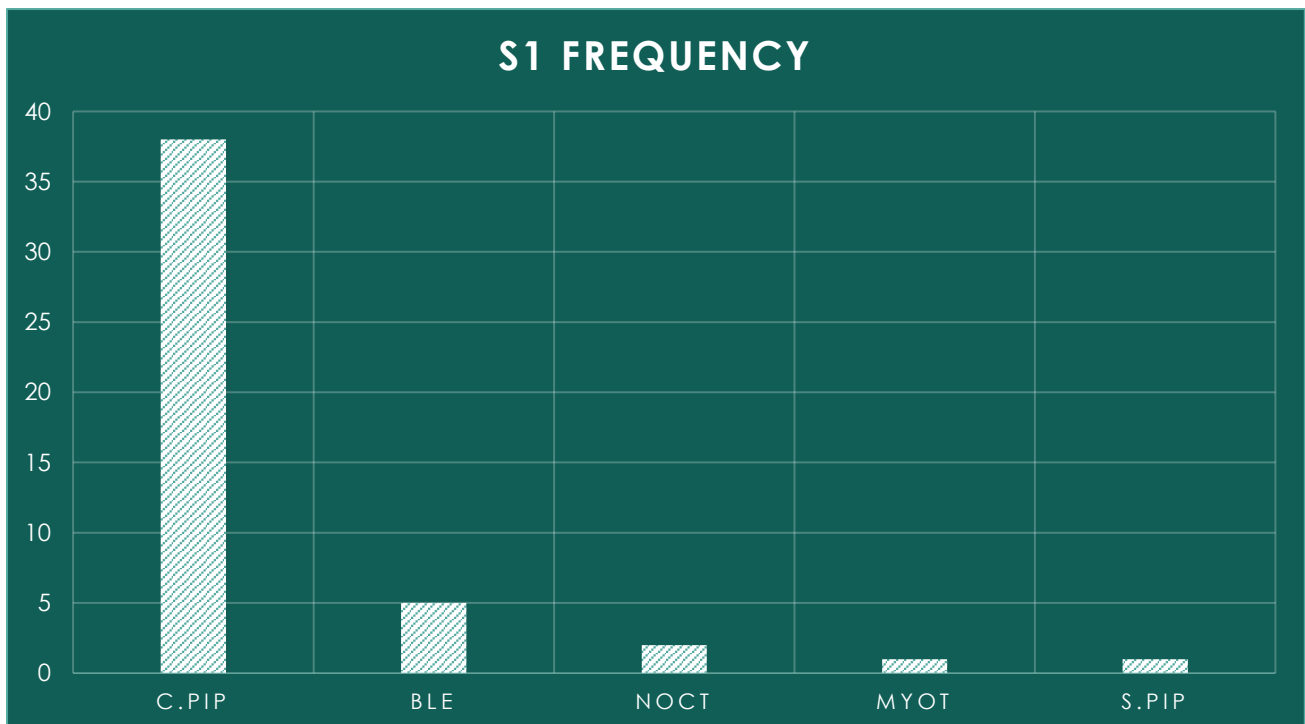


Figure 5.

Survey 1 species frequency



Survey 2 Data

Figure 6.

Survey 2 – survey sheet.

Bat Survey Sheet					
Site Name: Ashlea Farm	Survey Number: 2	24_387	Start Time: 20:21	Weather: Clear	Temp (C): 18
Structure: B1	Date: 14/08/24		End Time: 22:36	Weather: Clear	Temp (C): 15
Time	Species	Activity	Notes		
21:04	C.PIP	HNS			
21:06	C.PIP	HNS			
21:07	NOCT	HNS			
21:07	C.PIP	HNS			
21:08	C.PIP	HNS			
21:09	C.PIP	HNS			
21:09	C.PIP	FORAGE	FROM CONIFERS TO CIRCLE HOUSE AND SOUTH DOWN TREELINE		
21:10	BLE	HNS			
21:10	C.PIP	HNS			
21:11	C.PIP	FORAGE	FROM CONIFERS TO CIRCLE HOUSE AND SOUTH DOWN TREELINE		
21:12	C.PIP	FORAGE	FROM CONIFERS TO CIRCLE HOUSE AND SOUTH DOWN TREELINE		
21:12	C.PIP	SOCIAL	2 CHASING OVER ROOF WEST TO EAST		
21:13	C.PIP	FORAGE	FROM SOUTH TREELINE TO MID ROOF AND BACK		
21:14	C.PIP	FORAGE	FROM SOUTH TREELINE TO MID ROOF AND BACK		
21:15	C.PIP	FORAGE	FROM SOUTH TREELINE TO MID ROOF AND BACK		
21:16	C.PIP	FORAGE	FROM SOUTH TREELINE TO MID ROOF AND BACK		
21:18	C.PIP	FORAGE	FROM SOUTH TREELINE TO MID ROOF AND BACK		
21:20	C.PIP	HNS			
21:22	C.PIP	HNS			
21:23	C.PIP	FORAGE	OVER NORTHERN FARMYARD		
21:24	C.PIP	FORAGE	NORTHERN FARMYARD TO OVERHEAD AND BACK		
21:25	C.PIP	HNS			
21:25	C.PIP	SOCIAL	2 CHASING OVER ROOF FROM EAST TO WEST		
21:27	C.PIP	HNS			
21:29	C.PIP	FORAGE	NORTHERN FARMYARD TO OVERHEAD AND BACK		
21:30	C.PIP	FORAGE	NORTHERN FARMYARD TO OVERHEAD AND BACK		
21:32	C.PIP	HNS			
21:33	C.PIP	FORAGE	NORTHERN FARMYARD TO OVERHEAD AND BACK		
21:34	C.PIP	HNS			
21:36	C.PIP	HNS			
21:38	C.PIP	HNS			
21:39	C.PIP	HNS			
21:40	C.PIP	HNS			
21:42	S.PIP	COMMUTE	WEST TO EAST OVER NORTH YARD		
21:44	C.PIP	HNS			
21:46	C.PIP	HNS			
21:47	C.PIP	HNS			
21:50	C.PIP	HNS			
21:51	C.PIP	HNS			
21:52	C.PIP	HNS			
21:55	C.PIP	FORAGE	FROM CONIFER LINE TO WEST SIDE OF BUILDING AND BACK		
22:03	C.PIP	HNS			
22:08	C.PIP	HNS			
22:17	NOCT	COMMUTE	NORTH TO SOUTH		
22:28	C.PIP	HNS			

Figure 7.

Survey 2 activity level

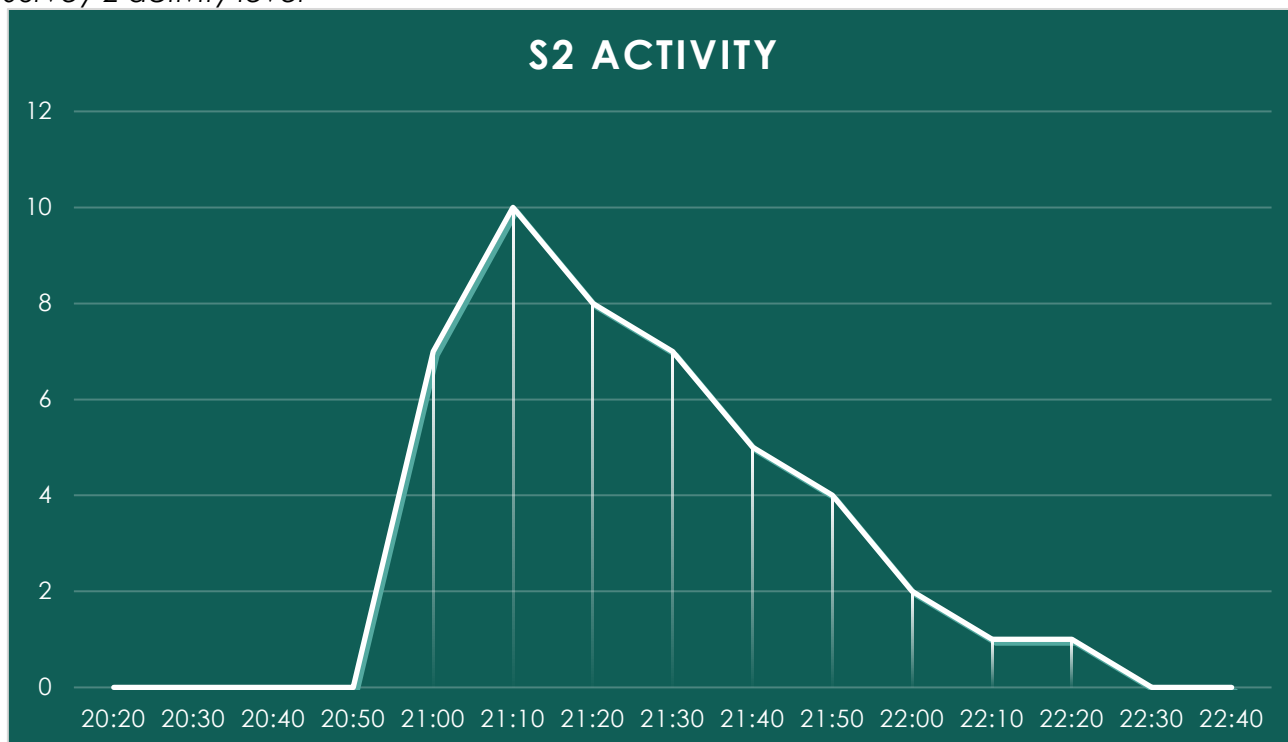
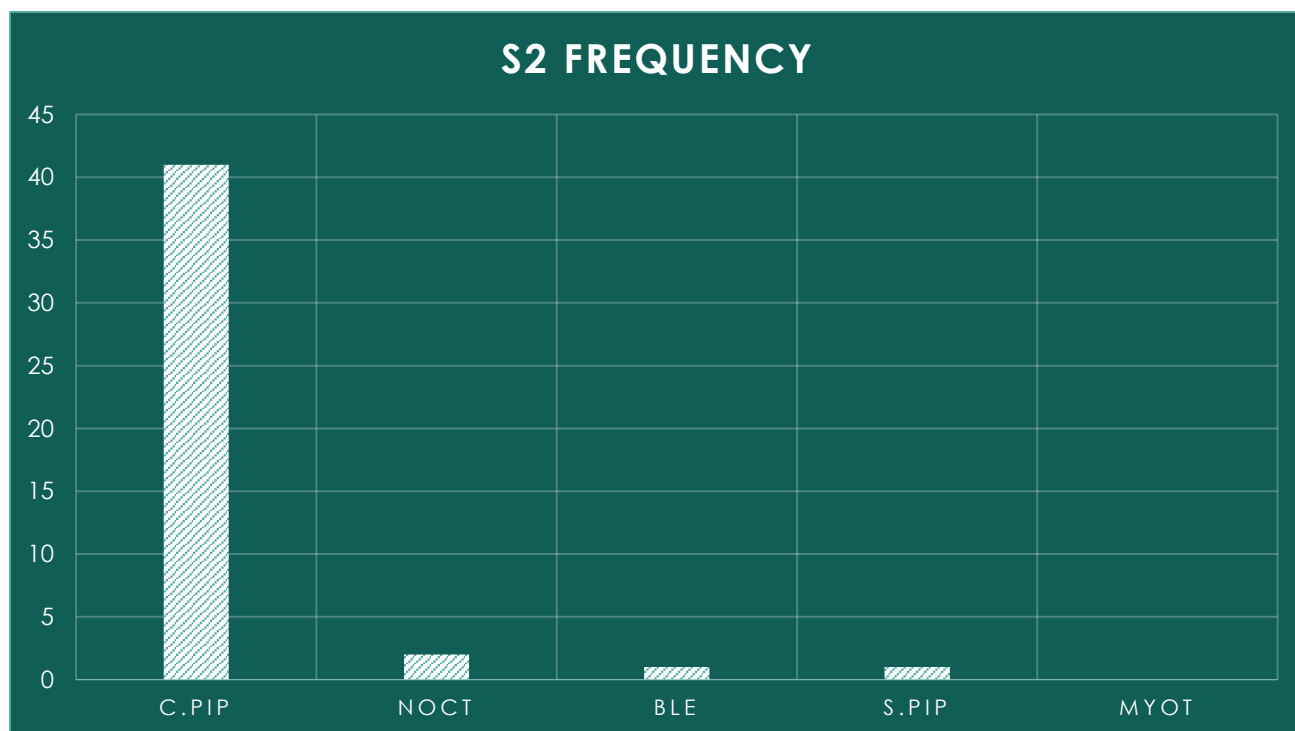


Figure 8.

Survey 2 species frequency



Survey 3 Data

Figure 9.

Survey 3 – survey sheet.

Bat Survey Sheet					
Name: Ashlea Farm	Survey Number: 3	24_387	Start Time: 20:17	Weather: Clear	Temp (C): 16
Structure: B1	Date: 16/08/24		End Time: 22:32	Weather: Clear	Temp (C): 12
Time	Species	Activity	Notes		
20:58	C.PIP	HNS			
21:01	C.PIP	FORAGE	ALONG TREELINE SOUTH		
21:03	C.PIP	FORAGE	ALONG TREELINE NORTH		
21:04	C.PIP	FORAGE	ALONG TREELINE		
21:05	C.PIP	FORAGE	AROUND SOUTH OF B1 OVER MIDDLE OF ROOF TO THE EAST		
21:06	C.PIP	FORAGE	FROM SOUTH TREELINE TO NORTH YARD		
21:07	C.PIP	FORAGE	FROM SOUTH TREELINE TO NORTH YARD		
21:08	C.PIP	FORAGE	NORTH YARD TO CONIFER ALONG WEST SIDE OF B1		
21:08	C.PIP	FORAGE	CONIFER LINE TO WEST SIDE OF B1 OVER CHIMNEY AND BACK SOUTH		
21:09	C.PIP	FORAGE	CONIFER LINE TO WEST SIDE OF B1 OVER CHIMNEY AND BACK SOUTH		
21:10	C.PIP	FORAGE	CONIFER LINE TO WEST SIDE OF B1 OVER CHIMNEY AND BACK SOUTH		
21:12	C.PIP	FORAGE	CONIFER LINE TO WEST SIDE OF B1 OVER CHIMNEY AND BACK SOUTH		
21:12	C.PIP	FORAGE	CONIFER LINE TO WEST SIDE OF B1 OVER CHIMNEY AND BACK SOUTH		
21:13	C.PIP	FORAGE	CONIFER LINE TO WEST SIDE OF B1 OVER CHIMNEY AND BACK SOUTH		
21:13	C.PIP	FORAGE	OVER MID ROOF FROM EAST TO ALONG CONIFER LINE		
21:13	C.PIP	FORAGE	FROM CONIFERLINE TO WEST OF B1 AND OVER ROOF TO EAST		
21:14	C.PIP	HNS			
21:18	C.PIP	FORAGE	FROM SOUTH TREELINE TO AROUND B1 CHIMNEY AND BACK		
21:19	C.PIP	FORAGE	FROM SOUTH TREELINE TO AROUND B1 CHIMNEY AND BACK		
21:24	C.PIP	FORAGE	FROM SOUTH TREELINE TO AROUND B1 CHIMNEY AND BACK		
21:24	C.PIP	FORAGE	FROM SOUTH TREELINE TO AROUND B1 CHIMNEY AND BACK		
21:26	C.PIP	COMMUTE	NORTH YARD TO WEST FIELD		
21:30	C.PIP	HNS			
21:38	C.PIP	COMMUTE	SOUTH TO NORTH YARD		
21:39	NOCT	COMMUTE	WEST TO EAST		
21:44	C.PIP	HNS			
21:50	C.PIP	HNS			
21:51	C.PIP	HNS			
22:02	C.PIP	HNS			
22:04	C.PIP	HNS			
22:07	C.PIP	HNS			
22:10	C.PIP	HNS			
22:11	C.PIP	FORAGE	CONIFER LINE TO WEST SIDE OF B1 OVER CHIMNEY AND BACK SOUTH		
22:16	C.PIP	HNS			

Figure 10.

Survey 3 activity level.

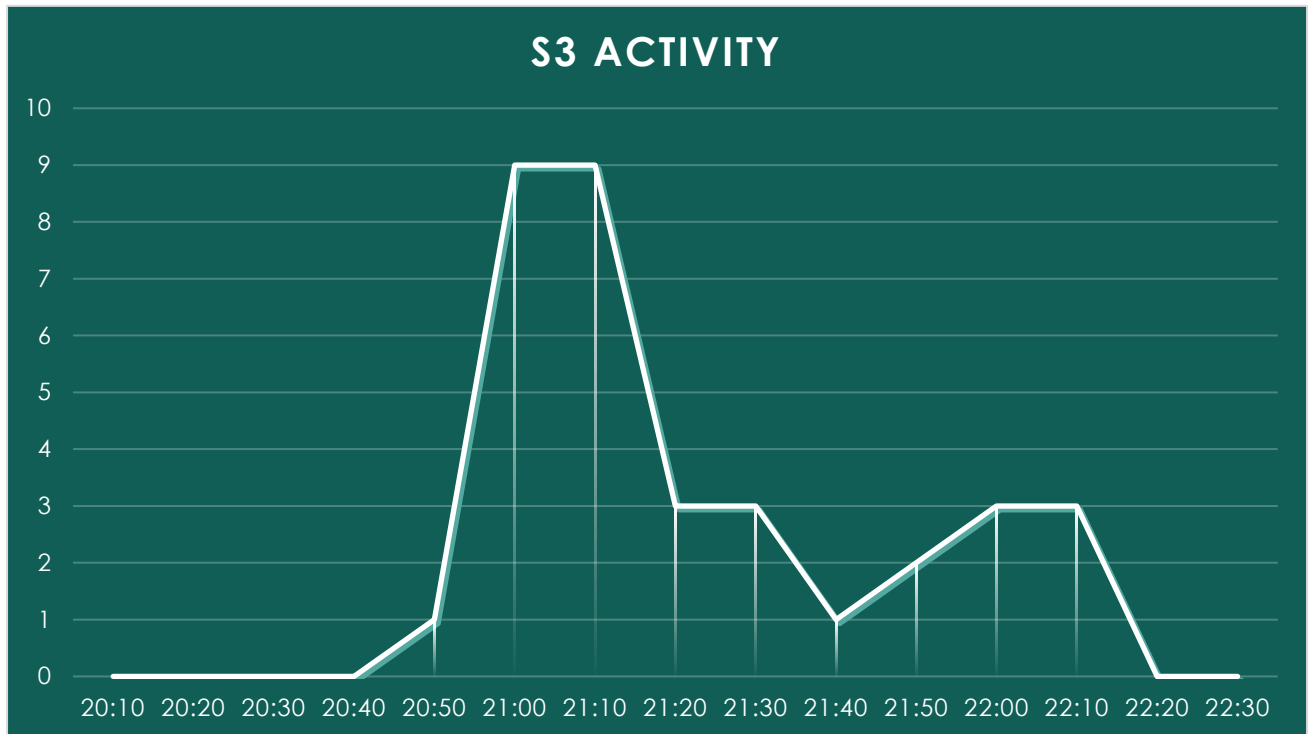
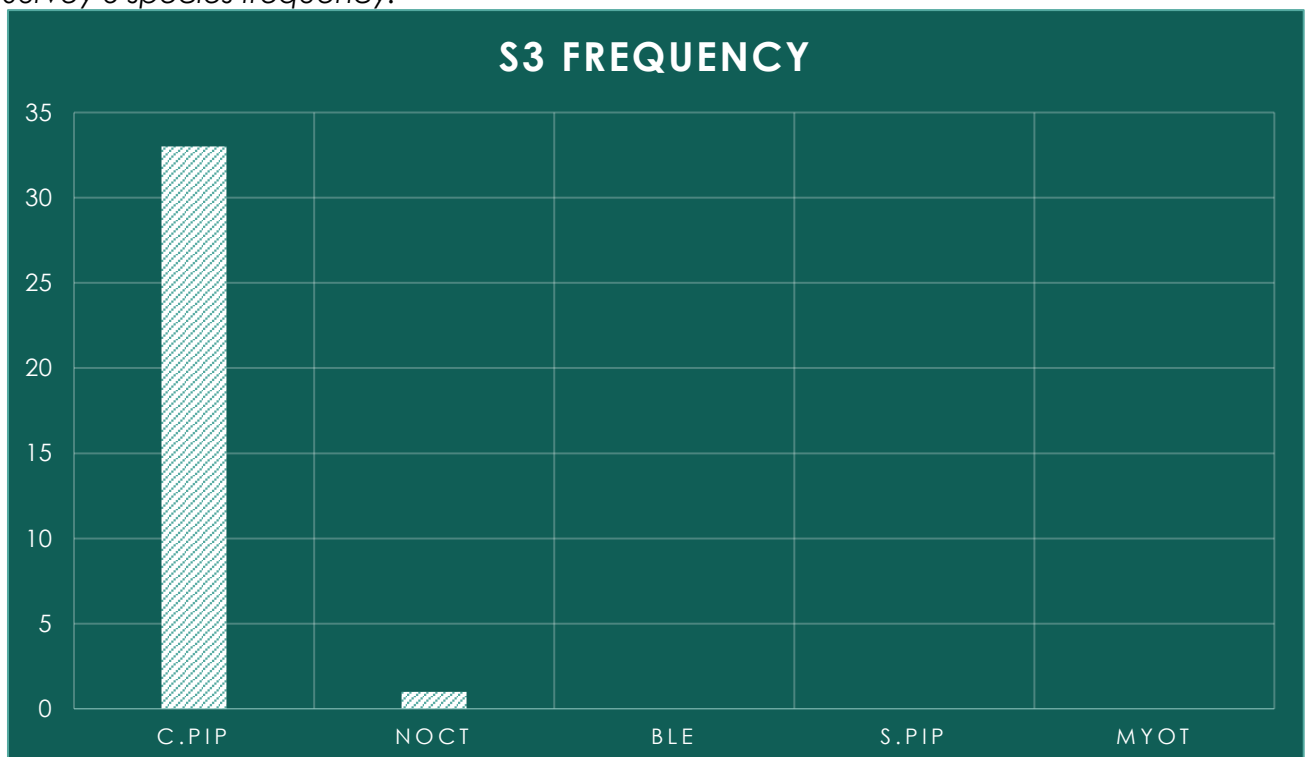


Figure 11.

Survey 3 species frequency.



Average Data

Figure 12.
Average activity levels across 3 surveys

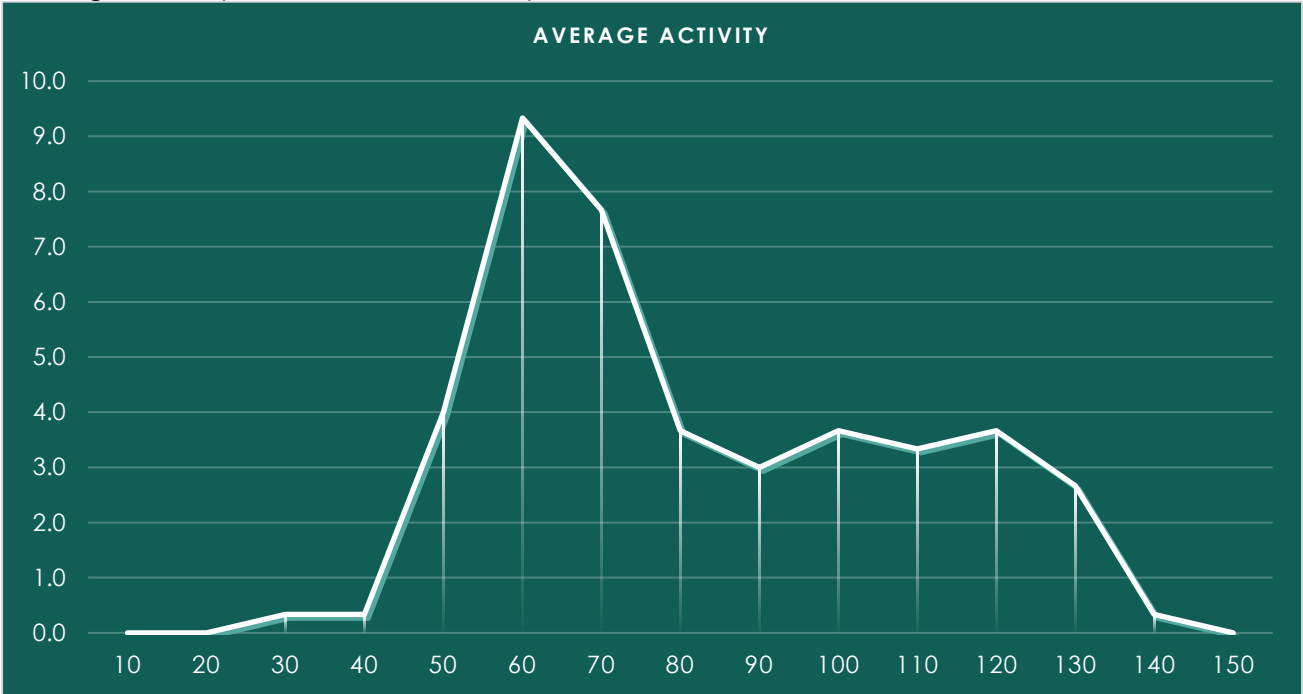


Figure 13.
Average species frequency across 3 surveys

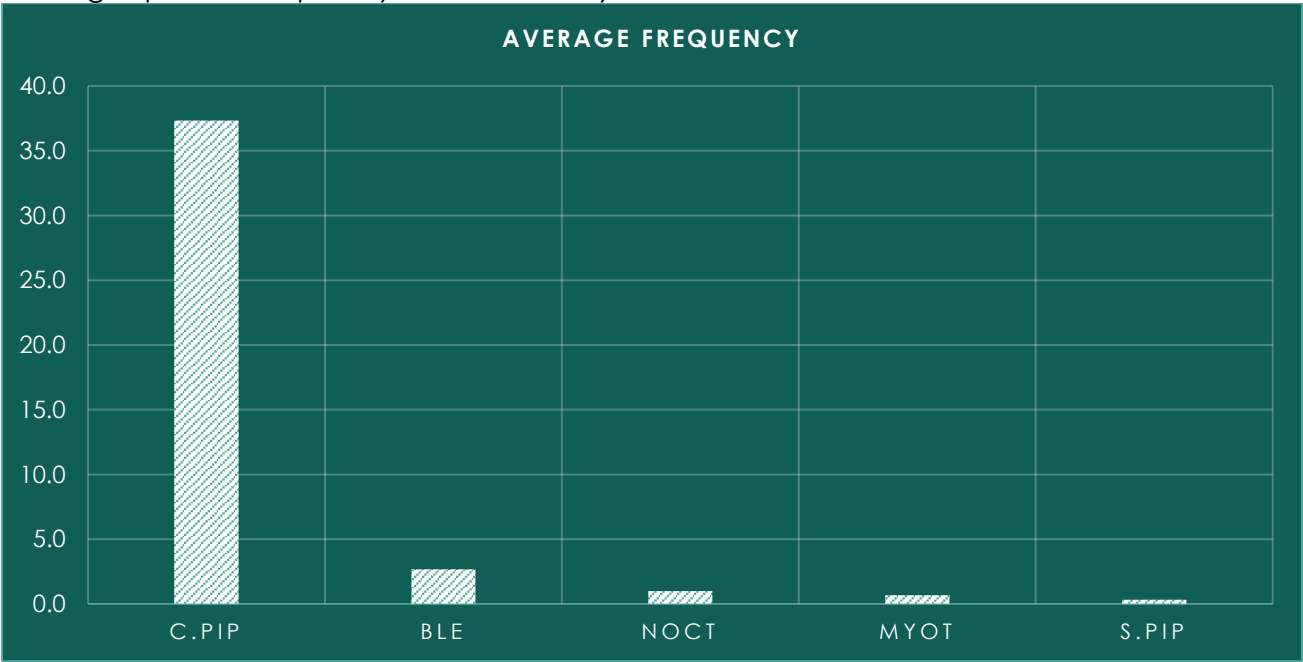
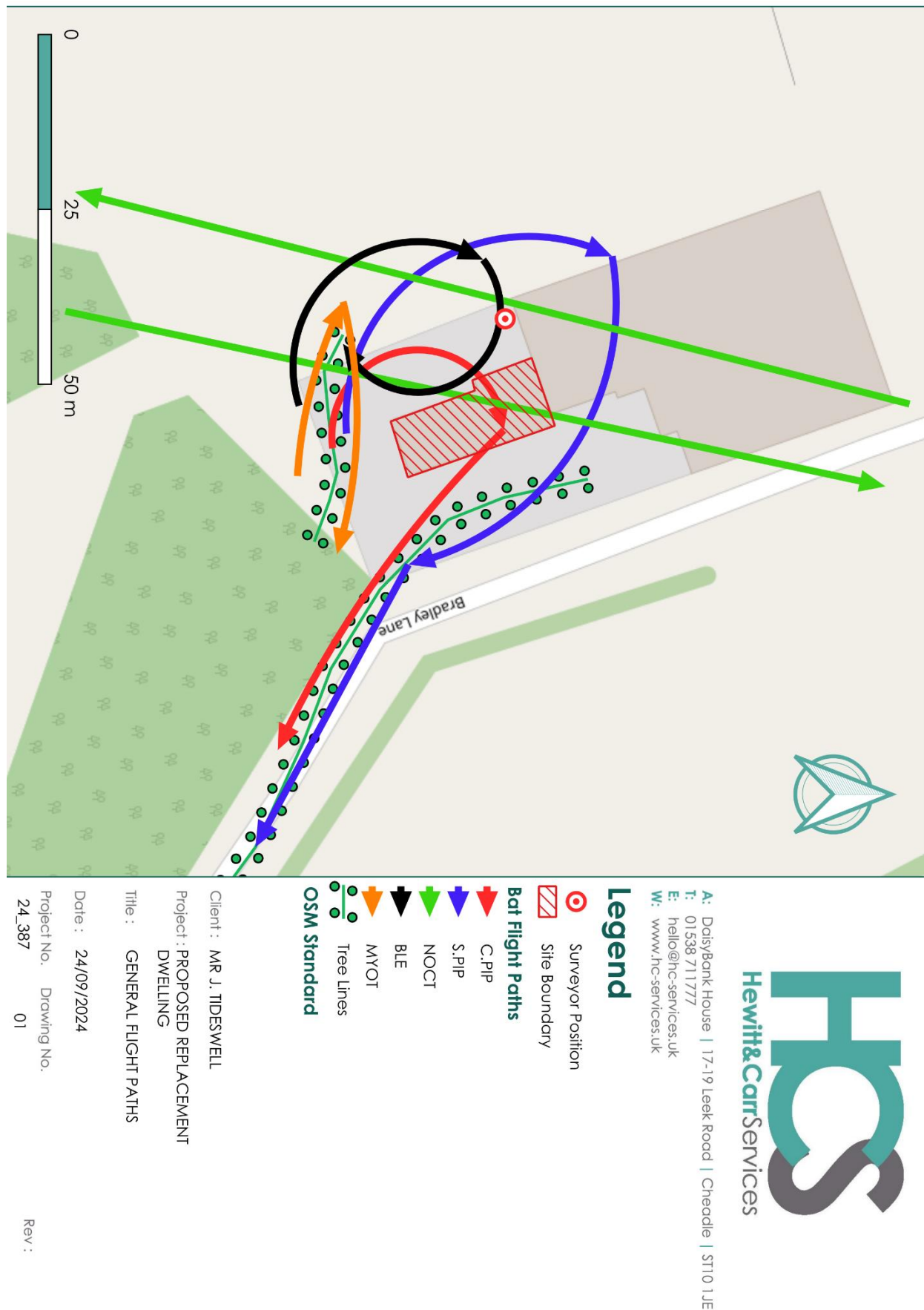


Figure 14.

Map of general flight paths across three surveys



Survey Data Analysis

No bats were recorded exiting or entering the structure through the PRF across all three surveys.

However, bat activity surrounding the structure was high across the surveys, peaking in activity rapidly, indicating a roost may be near to the site. The average peak activity time was approximately 50 minutes after sunset. Survey 1 and 3 also had resurgences in activity levels 2 hours after sunset.

The dominant species using the site are common pipistrelles with an average 37 recordings per survey.

The general flight paths of common pipistrelles originate from the treeline bordering Bradley Lane to the south of the site and cross over the surveyed structures roof and return south along the treeline. The farmyard creates a gap in this treeline and therefore, the bat activity for common pipistrelle observed in this area is likely the boundary of the species foraging extent. Social activity was also observed from common pipistrelles along this flight path with common pipistrelles seen chasing each other along the flight path.

The line of conifers to the south of the building is also an important area of bat activity with myotis species and brown long eared bats foraging this treeline.

Noctules were also recorded commuting over the site between the southwestern grasslands and the northeastern woodlands.

Survey Constraints

No constraints were encountered during these surveys.

Conclusion & Recommendations

At the time of these surveys, no bats were seen entering or exiting the building through the PRF. However, the high bat activity in the immediate area surrounding the building is significant and the development of the building may disturb the foraging activities of bats during construction. This can be mitigated by keeping nighttime lighting to a minimum and all lights that are essential at night should only face directly down onto the area required to illuminate. The rapid increase in bat activity on the site also suggests a nearby roost. Consequently, it will be beneficial to bats for the installation of a bat box in a region of the site that will not be disturbed during development. The treeline along Bradley Lane south of the site would provide a suitable location for bat boxes.