



56	Crack Willow			-Loose bark	Low
57	Poplar			Loose bark	Low



58	Lime Pedunculate Oak	 A photograph of a tall, slender tree with bare branches, likely a pedunculate oak, standing in a grassy field under an overcast sky.	 A close-up photograph of the bark of a tree, showing a rough, textured surface with a prominent vertical crack and a small, circular hole, indicating rot.	-Loose bark -One rot hole	Low
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59	Pedunculate Oak			-One rot hole	Moderate
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60	Non-native oak		-One rot hole	Negligible
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61	Common Ash			-Three rot holes -One woodpecker hole	Moderate
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62	London plane				-One small rot hole	Low
63	London plane				-Loose and flaking bark -One rot hole	Low



64	Sycamore				-One bird box	Low
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Tree Climbing Inspection – Results

Tree ref.	Species	PRF no.	PRF description	Limitations?	Cavity dimensions (cm) – width, depth, height (up) & height (down)	Field Signs	Height above ground (m)	Aspect	Evidence of bats	Day / transitional roost potential	Maternity roost potential	Hibernation roost potential	Overall roost potential
Arb T12	Horse chestnut	1	Split branch producing flaking bark	None	Not suitable		13-15	SW	N/A	Moderate	Low	Low	Moderate
		2	Tear out on small branch off main stem	None	10 x 10 x 0 x 30		20	N	None				
		3	Rot hole in large dying lateral branch	None	30 x 30 x 0 x 60		14	NW	None				
		4	Tear out in main stem	None	10 x 15 x 20 x 0		15	NW	None				
		5	Tear out in main stem	None	5 x 5 x 0 x 10		10	NW	None				
		6	Tear out in main stem	None	10 x 10 x 0 x 15		8	N	None				
		7	Tear out in main stem	None	6 x 15 x 40 x 0		5.5-6	W	None				
Arb G9.17	Small - leaved lime	1	Tree areas of damaged bark	None	Not suitable		5-7	S & SW	N/A	Moderate	Low	Low	Moderate
		2	Knot hole	None	Not suitable		5.5	N	N/A				
		3	Wood-pecker holes	None	Not suitable		3-5	N	N/A				



Tree ref.	Species	PRF no.	PRF description	Limitations?	Cavity dimensions (cm) – width, depth, height (up) & height (down)	Field Signs	Height above ground (m)	Aspect	Evidence of bats	Day / transitional roost potential	Maternity roost potential	Hibernation roost potential	Overall roost potential
		4	Two knot holes in lateral branch	PRF's not checked as tree considered unsafe to climb due to significant rot at base. Tree in leaf so not possible to fully check for additional PRF in canopy	Not known		10	E	N/A				
		5	Potential rot / cavities in main stem		Not known		8-16	All	N/A				
Arb G9.10	Oak (dead)	1	Cavity at top of trunk	None	Not suitable		5	N/A	N/A	Moderate	Moderate	Low	Moderate
		2	Wood-pecker hole	None	7 x 20 x 0 x 40		5.5	E	None				
		3	Six wood-pecker holes	None	Not suitable		6.5	E & W	N/A				
		4	Rot hole	None	Not suitable		5	W	N/A				
		5	Loose bark	None	Some suitable crevices		1.5-6	All	None				
Arb G9.7	Oak (dead)	1	Cavity between dead wood and loose bark on much of trunk	Tree inspected from ladder only as not considered safe to climb. This is considered to be a	Not known		3.5-8	N/A	N/A	Moderate	Low	Low	Moderate



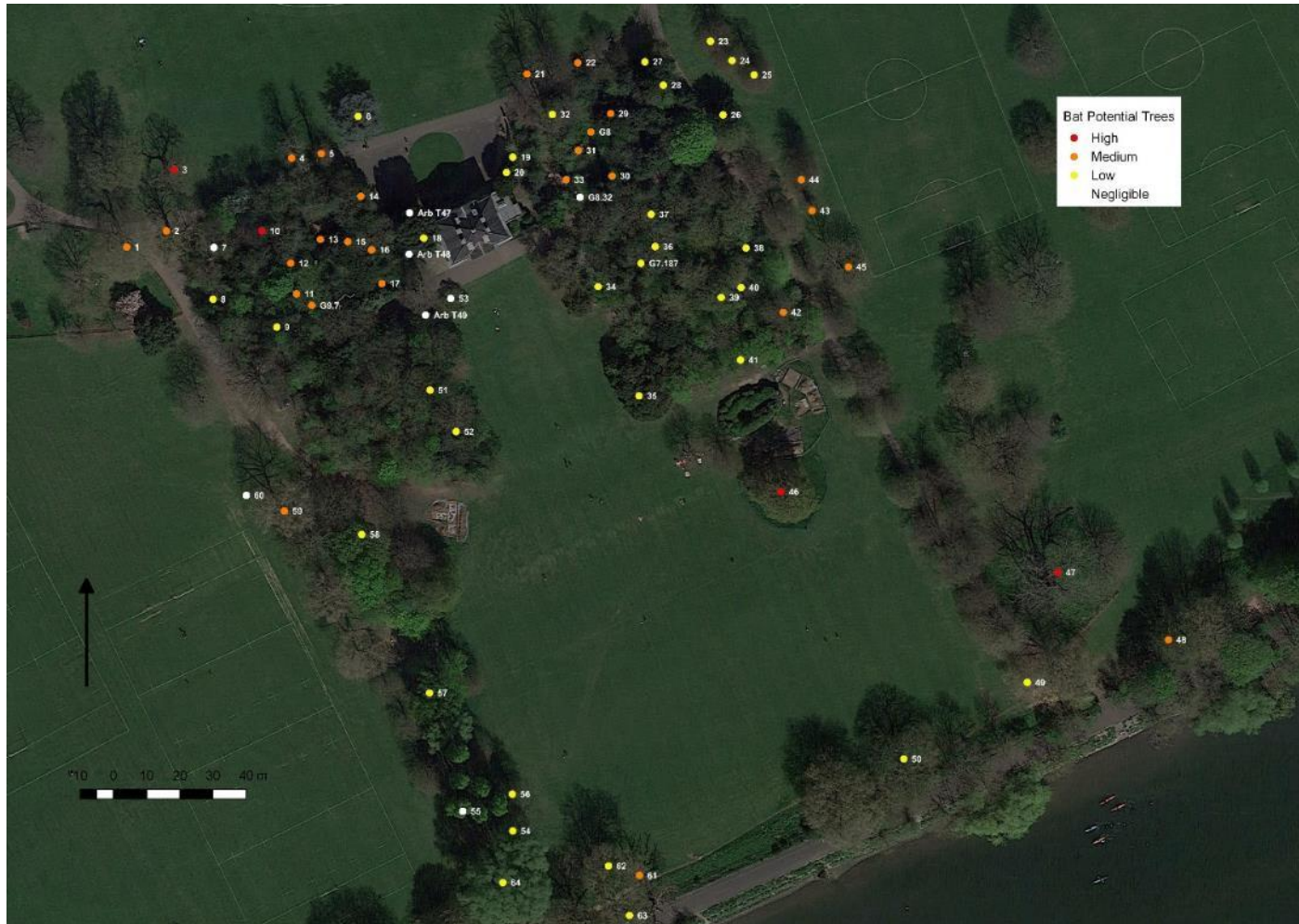
Tree ref.	Species	PRF no.	PRF description	Limitations?	Cavity dimensions (cm) – width, depth, height (up) & height (down)	Field Signs	Height above ground (m)	Aspect	Evidence of bats	Day / transitional roost potential	Maternity roost potential	Hibernation roost potential	Overall roost potential
				significant limitation as it was not possible to check gaps under loose bark or check for PRF above ladder level due to dense foliage of from adjacent trees.									
Arb G8.31	Cherry (dead)	N/A		Tree not located – which is suspected to have been removed or fallen over since ground-level survey was undertaken.									
Arb G8.53	Sycamore (dying)	1	Ivy	None	Not suitable		0-6	All	N/A	Moderate	Low	Low	Moderate



Tree ref.	Species	PRF no.	PRF description	Limitations?	Cavity dimensions (cm) - width, depth, height (up) & height (down)	Field Signs	Height above ground (m)	Aspect	Evidence of bats	Day / transitional roost potential	Maternity roost potential	Hibernation roost potential	Overall roost potential
		2	Loose bark	None	Some suitable crevices		1-4	All	None				
		3	Cavity in main stem	None	4 x 10 x 80 x 0		2	SE	None				
		4	Knot hole in main stem	None	Not suitable		3	E	N/A				
		5	Split in main stem	None	10 x 15 x 0 x 10		5	N	None				



12. APPENDIX 4 – BAT POTENTIAL TREE PLANS







13. APPENDIX 5 - BAT BUILDINGS & TREES DETECTOR SURVEY RESULTS

2016:

Weather:

Weather conditions for each detector survey are provided in the table below:

Building	Survey type and time of dusk/dawn	Survey Date	Weather
Coach House	Dusk – 18:58	22/09/16	Max temp. 17°C, Min temp. 16°C, dry, mild, 9mph wind, 75% humidity, 3/8 cloud cover
Marble Hill House	Dusk – 18:49	26/09/2016	Max temp. 14°C, Min temp. 11°C, dry, still to light breeze, 1/8 cloud cover
Grotto & Ice House	Dusk – 18:47	27/09/2016	19°C, dry, 9mph south westerly wind, 85% humidity, 8/8 cloud cover

Results:

Results are summarised below for each surveyor during each survey.

Single Dusk Detector Survey of the Coach House building - Dusk 22nd September 2016

Surveyor position A - on the north east side of the building

Time	Species detected	Comments
19:12	Pipistrelle sp.	Unseen, very faint. Not detected on the recorder. 14 minutes after sunset.
19:12	Pipistrelle sp.	Unseen, foraging to the north of the surveyor. Not detected on the recorder. 14 minutes after sunset.
19:16	Soprano pipistrelle	Unseen, foraging to the north of the surveyor. Then seen, foraging low down and flying from east to west, and around the corner of the building. 18 minutes after sunset.
19:23	Soprano pipistrelle	Seen, foraging low down and flying from east to west, and around the corner of the building.
19:24	Soprano pipistrelle	Seen, with constant foraging with social calls along the front of the ivy covered building and around the northern corner until 19:29.
19:29	Common pipistrelle	Seen, commuting from the north side of the building towards the park. 31 minutes after sunset.
19:30	Common pipistrelle	Unseen.
19:31	Common pipistrelle	Seen, foraging from the north side of the building towards the park.
19:32	Soprano pipistrelle	Seen, with constant foraging and social calls along the front of the ivy

Time	Species detected	Comments
		covered building and around the northern corner and also overhead of the surveyor until 19:39.
19:36	Common pipistrelle	Unseen.
19:40	Soprano pipistrelle	Unseen, social calls.
19:41	Soprano pipistrelle	Seen, flying back and forth overhead between the surveyor and the northern woodland.
19:41	Common pipistrelle	Seen, flying back and forth overhead between the surveyor and the northern woodland.
19:42	Soprano pipistrelle	Seen, flying back and forth overhead between the surveyor and the northern woodland with some social calls.
19:43	Soprano pipistrelle	Unseen, constant foraging with some social calls until 19:49.
19:44	<i>Nyctalus</i> sp.	Unseen. 46 minutes after sunset.
19:45	Common pipistrelle	Unseen.
19:50	Common pipistrelle	Unseen, 1 pass.
19:51	Common pipistrelle	Unseen, 1 pass.
19:52	Soprano pipistrelle	Unseen, foraging with social calls until 20:00.
20:00	Common pipistrelle	Unseen, brief with some social calls.
20:00	Soprano pipistrelle	Unseen, foraging.
20:02	Common pipistrelle	Unseen, intermittent foraging passes until 20:06.
20:07	Soprano pipistrelle	Unseen, foraging close by until 20:09.
20:11	Common pipistrelle	Unseen, 1 pass.
20:11	Soprano pipistrelle	Unseen, 1 pass.
20:16	Soprano pipistrelle	Unseen, intermittent activity until 20:18.
20:19	Common pipistrelle	Unseen, 1 pass.
20:22	Common pipistrelle	Unseen, foraging close by.
20:24	Soprano pipistrelle	Unseen, intermittent foraging activity with some social calls until 20:27.

Surveyor position B - on the south west corner of the coach house.

Time	Species detected	Comments
19:21	Pipistrelle sp.	2 single social calls picked up on recorder. 23 minutes after sunset.
19:25	Soprano pipistrelle	Bat observed not heard, circling opposite east elevation of building. 27 minutes after sunset.

Time	Species detected	Comments
19:26	Soprano pipistrelle	Bat observed around south elevation of house; flying west to east along south elevation. Social calls also detected.
19:27	Common pipistrelle	Flying west to east through trees opposite south elevation of building. 29 minutes after sunset.
19:29	Common pipistrelle	Observed flying around south end of courtyard (due west of building).
19:31	Soprano pipistrelle	Bat observed not heard, circling opposite east elevation of building. Social calls also detected.
19:33	Soprano pipistrelle	Bat observed flying over south west corner of building, flying due north east.
19:35	Soprano pipistrelle	Bat observed flying east to west over south side of building.
19:37	Common pipistrelle	Bat observed circling in courtyard (due west of building) before flying due east along south elevation of building.
19:39	Soprano pipistrelle	Bat observed circling in courtyard (due west of building).
19:41	Common pipistrelle	Bat observed flying due north east, flying around south and east elevations of the building. Foraging behavior then heard not seen. Social calls also detected.
19:44	Soprano pipistrelle	Bat observed flying north east to south west, then foraging behavior heard not seen. Social calls also detected.
19:45	Soprano pipistrelle & Common pipistrelle	Bat observed around south elevation of house; flying east to west along south elevation. Both pipistrelle species detected.
19:46	Common pipistrelle	Bat observed not heard, circling opposite east elevation of building. Some social calls also detected.
19:47	Common pipistrelle	Heard not seen. Single call detected.
19:50	Soprano pipistrelle	Not observed, picked up on recorder.
19:51	Common pipistrelle	Bat observed flying north west to south east.
19:55	Unidentified bat species.	Heard not seen, 1 pass. Not picked up on recorder. 57 minutes after sunset.
19:58	Soprano pipistrelle	Not observed, picked up on recorder.
20:00	Pipistrelle sp.	Heard not seen, 1 pass. Not picked up on recorder.
20:03	Soprano pipistrelle	Heard not seen, 2 passes. Not picked up on recorder.
20:04	Common pipistrelle	Heard not seen.
20:05	Soprano pipistrelle	Heard not seen, 1 pass.
20:11	Soprano pipistrelle	Bat observed flying north east to south west. Social calls also detected.
20:12	Common pipistrelle & Soprano pipistrelle	Heard not seen, multiple passes. Social calls also detected.
20:13	Pipistrelle sp.	Bat observed around south elevation of house; flying east to west along

Time	Species detected	Comments
		south elevation. Not picked up on recorder.
20:15	Soprano pipistrelle	Not observed, picked up on recorder.
20:19	Common pipistrelle	Heard not seen, 1 pass.
20:20	Soprano pipistrelle	Not observed, picked up on recorder.
20:22	Soprano pipistrelle	Heard not seen, 1 pass. Social calls also detected.
20:23	Soprano pipistrelle	Heard not seen, foraging. Social calls also detected.
20:24	Soprano pipistrelle	Bat observed foraging around courtyard (due west of building).
20:26	Soprano pipistrelle	Heard not seen, foraging, multiple passes.
20:27	Common pipistrelle & Soprano pipistrelle	Heard not seen, 1 pass. Both pipistrelle species detected.

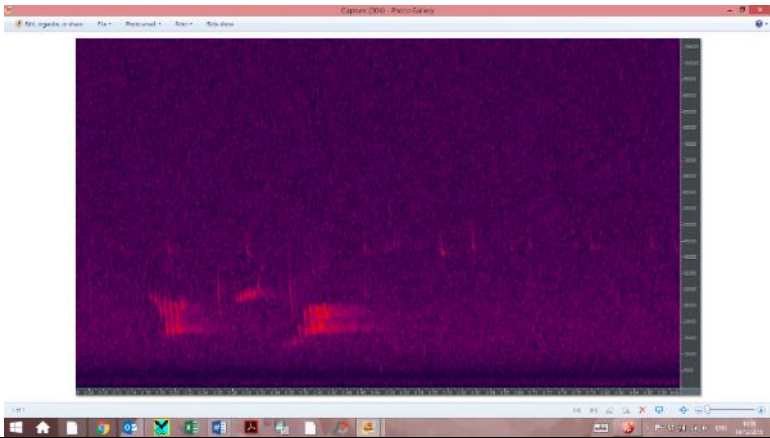
Surveyor position C - on the northern portion of the western face of the coach house building

Time	Species detected	Comments
18:59	Soprano pipistrelle	Seen, flying to the north in front of the building at ridge height whilst still very light; no emergence observed. 1 minute after sunset.
19:09	Soprano pipistrelle	Seen, flying from the north to the west, north of the building. 11 minutes after sunset.
19:10	Soprano pipistrelle	Seen, foraging around the glade to the north of the building.
19:12	Soprano pipistrelle	Seen, foraging around the glade to the north of the building.
19:13	Soprano pipistrelle	Seen, foraging around the glade to the north of the building.
19:14	Soprano pipistrelle	Seen, flying south in front of the building.
19:15	Soprano pipistrelle	Seen, flying north in front of the building.
19:17	Soprano pipistrelle	Seen, flying north in front of the building.
19:23	Soprano pipistrelle	Heard but not seen.
19:25	Soprano pipistrelle	Heard but not seen.
19:26	Soprano pipistrelle	Heard, initially unseen and then seen, flying south over the building.
19:28	Nathusius' pipistrelle	Seen, foraging around the glade to the north and in circuits in front of the building. 30 minutes after sunset.
19:29	Soprano pipistrelle	Heard but not seen.
19:30	Soprano pipistrelle	Seen, flying across the building towards the glade to the north with some social calls.

Time	Species detected	Comments
19:31	Soprano pipistrelle	Heard but not seen, foraging.
19:36	Soprano pipistrelle x 1 pipistrelle sp. x 1	2 bats seen flying across the building to the north.
19:37	Soprano pipistrelle	Heard but not seen.
19:39	Soprano pipistrelle x 2	Heard but not seen.
19:40	Soprano pipistrelle	Heard but not seen, some social calls.
19:42	Soprano pipistrelle	Heard, initially unseen and then seen, flying north west from over the building.
19:44	<i>Nyctalus sp.</i> (Probably Leisler's)	Heard but not seen. 46 minutes after sunset.
19:45	Soprano pipistrelle	Heard but not seen.
19:46	Common pipistrelle	Heard but not seen. 48 minutes after sunset.
19:49	Soprano pipistrelle	Heard but not seen, with some social calls.
19:50	Common pipistrelle	Heard but not seen, foraging.
19:54	Soprano pipistrelle	Heard but not seen.
19:55	Soprano pipistrelle x 2	Heard but not seen.
19:57	Soprano pipistrelle	Heard but not seen, with some social calls.
19:59	Common pipistrelle	Heard but not seen, with some social calls.
20:00	Soprano pipistrelle	Heard but not seen.
20:04	Common pipistrelle	Heard but not seen.
20:07	Soprano pipistrelle	Heard but not seen, with some social calls.
20:07	Common pipistrelle	Heard but not seen.
20:16	Soprano pipistrelle	Heard but not seen.
20:17	Soprano pipistrelle	Heard but not seen.
20:18	Soprano pipistrelle	Heard but not seen, with some social calls.
20:24	Soprano pipistrelle	Heard but not seen, with some social calls.

Surveyor position D - on the south east corner of the building

Time	Species detected	Comments
19:17	Soprano pipistrelle	Observed flying from bell tower due south east. 19 minutes after sunset.
19:23	Soprano pipistrelle	Heard not seen, brief.
19:25	Soprano pipistrelle	Observed foraging in to east elevation of coach house and circling above roof.
19:26	Common pipistrelle	Heard not seen, foraging and social calls. 28 minutes after sunset.
19:27	Soprano pipistrelle	Observed flying from west, circling over coach house roof and flying due east. Then heard not seen for 2 minutes.
19:30	Soprano pipistrelle	Heard not seen, brief, social calling.
19:31	Common pipistrelle	Heard not seen, brief, social calling.
19:31	Soprano pipistrelle	Observed flying from west, circling over coach house roof and flying due east.
19:32	Soprano pipistrelle	Heard not seen, foraging.
19:32	Common pipistrelle	Heard not seen, foraging.
19:33	Soprano pipistrelle	Observed flying from west, circling over coach house roof and flying due east. Then heard not seen for 2 minutes.
19:35	Soprano pipistrelle	Observed flying due north west over coach house roof. Then continuous heard not seen for 2 minutes.
19:37	Common pipistrelle	Heard not seen.
19:38	Soprano pipistrelle	Heard not seen, some social calling. Continuous for 4 minutes.
19:43	Common pipistrelle	Heard not seen.
19:43	Soprano pipistrelle	Heard not seen. Social calling.
19:44	Common pipistrelle	Heard not seen.
19:44	1x Soprano pipistrelle and 1x Common pipistrelle	Heard not seen. Social calling.
19:44	Nathusius' pipistrelle	Heard, not seen. Echolocation calls and also one characteristic

Time	Species detected	Comments
		Nathusius' pipistrelle advertisement call. 46 minutes after sunset. 
19:44	<i>Nyctalus sp.</i> (Probably Leisler's)	Heard not seen. 46 minutes after sunset.
19:45	Soprano pipistrelle	Heard not seen, some social calling. Continuous for 2 minutes.
19:47	Common pipistrelle	Heard not seen, social calling.
19:48	Soprano pipistrelle	Heard not seen.
19:49	Common pipistrelle	Heard not seen.
19:49	Soprano pipistrelle	Heard not seen.
19:50	Nathusius' Pipistrelle	Heard not seen, brief.
19:50	Common pipistrelle	Heard not seen.
19:51	Common pipistrelle	Heard not seen.
19:51	Soprano pipistrelle	Heard not seen, some social calling. Continuous for 11 minutes.
20:02	Common pipistrelle	Heard not seen. Continuous for 4 minutes.
20:06	Soprano pipistrelle	Heard not seen, some social calling. Continuous for 13 minutes.
20:22	Common pipistrelle	Heard not seen.
20:23	Soprano pipistrelle	Heard not seen, some social calling. Continuous for 5 minutes.

Surveyor position E - to the north of the coach house building

Time	Species detected	Comments
18:59	Soprano pipistrelle	Not observed, detected on recorder. 1 minute after sunset.
19:08	Soprano pipistrelle	Not observed, detected for 3 continuous minutes. 10 minutes after sunset.

Time	Species detected	Comments
19:11	Soprano pipistrelle	One bat seen flying over the ridge of the building from the south west towards the north east. Continuously detected for 3 minutes.
19:16	Soprano pipistrelle	One bat seen flying from the west then around the northern chimney stack.
19:17	Soprano pipistrelle	One bat seen flying towards the north west, first appearing at the building ridge.
19:24	Soprano pipistrelle	One bat seen flying over the building from the west to the east.
19:24	Soprano pipistrelle	One bat seen flying over the ridge of the building towards the north
19:26	Soprano pipistrelle	One bat seen flying a circuit around the northern end of the building.
19:26	Soprano pipistrelle	Two bats seen flying circuits over the northern half of the building before flying towards the east.
19:27	Soprano pipistrelle	One bat seen flying a circuit over the northern end of the building before flying towards the east.
19:28	Soprano pipistrelle	One bat seen flying around the northern side of the building and then flying towards the eastern side of the building.
19:28	Soprano pipistrelle & Nathusius' pipistrelle	Two bats seen foraging in front of the eastern side of the building. 30 minutes after sunset.
19:29	Nathusius' pipistrelle	Unseen. 31 minutes after sunset.
19:31	Soprano pipistrelle	One bat seen flying from over the building ridge towards the north.
19:31	Soprano pipistrelle & Common pipistrelle	Two bats seen flying around in front of the eastern side of the building. 33 minutes after sunset.
19:33	Soprano pipistrelle	One bat seen flying low to the ground from the western side of the building towards the eastern side.
19:34	Soprano pipistrelle	One bat seen flying from the western side of the building towards the eastern side.
19:35	Soprano pipistrelle	One bat seen flying low to the ground from the western side of the building towards the eastern side. Social calls also detected.
19:36	Soprano pipistrelle	One bat seen flying over the top of the building towards the north.
19:36	Soprano pipistrelle	One bat seen flying low to the ground from the western side of the building towards the eastern side.
19:37	Soprano pipistrelle	One bat seen flying from the western side of the building towards the eastern side.
19:37	Soprano pipistrelle	One bat seen flying from the western side of the building towards the eastern side.
19:39	Soprano pipistrelle	Not observed, detected on recorder continuously for 2 minutes.
19:42	Soprano pipistrelle	One bat seen, flying over the building from west to east.
19:43	Soprano pipistrelle	One bat seen flying from the eastern side of the building towards the western side. Picked up on detector continuously for 6 minutes.

Time	Species detected	Comments
19:44	<i>Nyctalus</i> sp.	Not observed, detected on recorder. 46 minutes after sunset.
19:49	Soprano pipistrelle	One bat seen briefly, close to the camera. Social calling.
19:50	Nathusius' pipistrelle	Not observed, detected on recorder. 52 minutes after sunset.
19:52	Soprano pipistrelle	Not observed, detected on recorder. Social calls also detected. Continuous for 9 minutes.
19:59	Nathusius' pipistrelle	Not observed, detected on recorder.
19:59	Soprano pipistrelle	Not observed, detected on recorder.
20:06	Soprano pipistrelle	Not observed, detected on recorder. Social calls also detected. Continuous for 3 minutes.
20:16	Soprano pipistrelle	Not observed, detected on recorder. Social calls also detected. Continuous for 2 minutes.
20:24	Soprano pipistrelle	Not observed, detected on recorder. Social calls also detected. Continuous for 6 minutes.

Surveyor position F - positioned on the southern portion of the western edge of the coach house building

Time	Species detected	Comments
19:28	Pipistrelle sp.	Seen flying from west towards the building, then over the building and to the south. 30 minutes after sunset.
19:31	Soprano pipistrelle	Seen, flying from west towards the building, then over the building and to the north.
19:32	Soprano pipistrelle	Seen, flying from behind surveyor B, over the building between chimney and bell tower and off to the north-west.
19:34	Pipistrelle sp.	Seen, making circuits high above the ridge height of the building. 36 minutes after sunset.

Single Dusk Detector Survey of the Marble Hill building - Dusk 26th September 2016

Surveyor position A - a context view of the south elevation of the building.

Time	Species detected	Comments
19:09	Soprano pipistrelle	Heard but not seen. 20 minutes after sunset.
19:16	Pipistrelle sp.	Heard but not seen. Not detected on recorder. 27 minutes after sunset.
19:19	Soprano pipistrelle	Seen, foraging in front of the building.
19:20	Soprano pipistrelle	Heard but not seen, foraging.
19:21	Soprano pipistrelle	Seen, foraging in front of the building.
19:23	Soprano pipistrelle	Heard but not seen.
19:25	Soprano pipistrelle	Heard but not seen, foraging with some social calls.

Time	Species detected	Comments
19:26	Soprano pipistrelle	Unobserved. Detected on recorder.
19:28	Soprano pipistrelle	Heard but not seen, foraging with some social calls until 19:32.
19:33	Soprano pipistrelle	Heard but not seen, foraging.
19:34	Soprano pipistrelle	Heard but not seen.
19:35	Common pipistrelle	Unobserved. Detected on recorder. 48 minutes after sunset.
19:38	Common pipistrelle	Heard but not seen.
19:46	Soprano pipistrelle	Heard but not seen.
19:52	Pipistrelle sp.	Heard but not seen. Not detected on recorder.
19:54	Soprano pipistrelle	Heard but not seen.
19:57	Pipistrelle sp.	Heard but not seen. Not detected on recorder.

Surveyor position B - on the south west corner of the building, with a close view of south and west elevations.

Time	Species detected	Comments
19:11	Soprano pipistrelle	Heard not seen, brief. 22 minutes after sunset.
19:14	Soprano pipistrelle	2 individuals heard, 1 seen flying east to south west along south elevation of building at building-height. Social calling.
19:15	Soprano pipistrelle	Multiple individuals heard, 1 seen flying east to south west along south elevation of building at building-height.
19:15	Soprano pipistrelle	1 individual observed flying due north east along south elevation of building at building height.
19:16	Soprano pipistrelle	2 individuals heard not seen.
19:16	Soprano pipistrelle	1 individual seen flying east to south west along south elevation of building at building-height.
19:16	Soprano pipistrelle	2 individuals seen circling cherry tree located opposite the west elevation of the building.
19:17	Common pipistrelle	Observed flying east to south west along south elevation of building at building-height. 28 minutes after sunset.
19:19	Soprano pipistrelle	Observed circling opposite west elevation of building, returning due north.
19:19	Soprano pipistrelle	Observed flying along the south elevation of the building at building-height and returning due south west.
19:20	Soprano pipistrelle	Observed flying due north east along south elevation of building at building-height.
19:20	Soprano pipistrelle	Observed flying due north east along south elevation of building at building-height.
19:20	Soprano pipistrelle	Heard not seen.

Time	Species detected	Comments
19:20	Soprano pipistrelle	Observed flying along the south elevation of the building at building-height and returning due north east.
19:21	Soprano pipistrelle	Observed flying along the south elevation of the building at building-height and returning due north east.
19:22	Soprano pipistrelle	Observed circling opposite west elevation of building, returning due north.
19:23	Soprano pipistrelle	Observed circling opposite west elevation of building, returning due north.
19:24	Soprano pipistrelle	Observed circling opposite west elevation of building, returning due north.
19:24	Soprano pipistrelle	Heard not seen.
19:25	Common pipistrelle	Heard not seen, foraging.
19:25	Soprano pipistrelle	Heard not seen, foraging. Continuous for 3 minutes. Social calling.
19:29	Soprano pipistrelle	Observed foraging over surveyor position.
19:32	Soprano pipistrelle	2 individuals heard, 1 seen foraging. Continuous for 4 minutes.
19:36	Soprano pipistrelle	Observed circling opposite west elevation of building, returning due south.
19:38	Soprano pipistrelle	Observed circling opposite west elevation of building, returning due south.
19:39	Common pipistrelle & Soprano pipistrelle	2 individuals heard not seen.
19:42	Soprano pipistrelle	2 individuals heard not seen.
19:45	Soprano pipistrelle	2 individuals heard not seen, social calling.
19:46	Soprano pipistrelle	2 individuals heard not seen. Social calling.
19:48	Soprano pipistrelle	Heard not seen, continuous for 4 minutes.
19:52	Common pipistrelle	2 individuals, heard not seen, foraging. Some social calling.
19:52	Soprano pipistrelle	Heard not seen, foraging and social calls. Continuous for 7 minutes.
19:59	Soprano pipistrelle	2 individuals heard not seen. Continuous for 3 minutes.
20:09	Soprano pipistrelle	Heard not seen, foraging. Continuous for 10 minutes (until end of survey).

Surveyor position C - a context view of the north elevation of the building.

Time	Species detected	Comments
19:11	Pipistrelle sp.	Bat observed commuting at building-height, north east to south west, along north elevation of main house. 22 minutes after sunset.
19:15	Common pipistrelle	Bat observed commuting at building-height, south west to north east, along north elevation of main house. 26 minutes after sunset.
19:24	Pipistrelle sp.	Heard not seen, 2 passes. Not picked up on recorder. 35 minutes after sunset.
19:27	Common pipistrelle	Heard not seen, 1 pass, faint. Not picked up on recorder.
19:28	Common pipistrelle	Heard not seen, 1 pass, faint. Not picked up on recorder.
19:29	Pipistrelle sp.	Heard not seen, 1 pass, faint. Not picked up on recorder.
19:40	Soprano pipistrelle	Heard not seen, 1 pass, very faint.
19:51	Common pipistrelle	Heard not seen, 1 pass.
19:55	Soprano pipistrelle	Heard not seen, 1 pass, faint.
20:01	Possible long-eared bat species	Heard not seen, 1 pass, faint. 1 hour 12 minutes after sunset.

Surveyor position D - on the north-western corner of the building, with a close view of the north and west elevations.

Time	Species detected	Comments
19:11	Soprano pipistrelle	Heard not seen, brief, 22 minutes after sunset.
19:15	Soprano pipistrelle	Heard not seen, foraging and social calls.
19:17	Soprano pipistrelle	Heard not seen, foraging and social calls.
19:17	Common pipistrelle	Heard not seen, foraging. 28 minutes after sunset.
19:24	Common pipistrelle	Observed flying along north elevation of building before turning around north corner of building onto east elevation.
19:25	Nathusius' pipistrelle	Heard not seen, brief. 36 minutes after sunset
19:26	Soprano pipistrelle	Heard not seen, brief, social calls.
19:32	Soprano pipistrelle	Heard not seen, brief, social calls.
19:35	Soprano pipistrelle	Heard not seen, brief.
19:39	Nathusius pipistrelle & Soprano pipistrelle	Heard not seen, brief.
19:41	Soprano pipistrelle	Heard not seen, brief.

Time	Species detected	Comments
19:43	Nathusius' pipistrelle	Heard not seen, brief.
19:47	Soprano pipistrelle	Heard not seen, brief, social calls.
19:51	Soprano pipistrelle	Heard not seen, brief, social calls
19:56	Soprano pipistrelle	Heard not seen, brief.
19:59	Soprano pipistrelle	Heard not seen, brief.
20:23	Common pipistrelle	Heard not seen, brief.

Surveyor position E - a view of the eastern façade of Marble Hill House

Time	Species detected	Comments
19:17	Unidentified (small-sized / pipistrelle-sized) bat species	Seen flying from north to south and around the corner of the building in a south-western direction at second floor level; no emergence. 28 minutes after sunset.
19:19	As above	Seen flying from behind the building towards the south-east; no emergence.
19:19	As above	Seen flying from behind the building towards the south-east; no emergence.
19:20	As above	Seen flying from behind the building towards the south; no emergence.
19:28	As above	Seen flying from north to south away from the building; no emergence.
19:31	As above	Seen flying from behind camera towards the north; no emergence.

Single Dusk Detector Survey of the Grotto - Dusk 27th September 2016

Surveyor position A – direct view of the front of Grotto entrance

Time	Species detected	Comments
19:00	Soprano pipistrelle	Heard not seen. 13 minutes after sunset.
19:03	Pipistrelle sp.	Heard not seen. Not picked up on recorder. 16 minutes after sunset.
19:05	Pipistrelle sp.	Observed foraging above shrubbery above grotto. Then heard not seen foraging for 5 minutes. Not picked up on recorder.
19:10	Soprano pipistrelle	Observed foraging above shrubbery above grotto.
19:11	Soprano pipistrelle	Observed foraging above grotto. Then heard not seen foraging for 7 minutes.
19:18	Soprano pipistrelle	Observed foraging above shrubbery above grotto. Then heard not seen foraging for 4 minutes.
19:19	Common pipistrelle	Not observed, 1 pass picked up on detector, social calling. 32 minutes after sunset.
19:22	Soprano pipistrelle	Observed foraging above shrubbery above grotto. Then heard not seen foraging for 4 minutes.

Time	Species detected	Comments
19:26	Common pipistrelle	Observed foraging above shrubbery above grotto. Then heard not seen foraging for 4 minutes.
19:30	Common pipistrelle	Observed foraging above shrubbery above grotto. Then heard not seen foraging for 2 minutes.
19:32	Common pipistrelle	Heard not seen, 2 individuals foraging. Then 1 individual heard foraging continuously for 5 minutes.
19:37	Common pipistrelle	Heard not seen, 2 individuals foraging and social calling.
19:38	Common pipistrelle	Observed foraging above shrubbery above grotto. Continuous for 5 minutes.
19:45	Probable Nathusius' pipistrelle & Common pipistrelle	Heard not seen, 2 individuals foraging. 58 minutes after sunset.
19:47	Common pipistrelle & Soprano pipistrelle	Heard not seen, foraging and social calling. Continuous for 10 minutes.
20:00	Common pipistrelle	Heard not seen, foraging. Continuous for 4 minutes.
20:09	Pipistrelle sp.	Heard not seen, foraging.
20:11	Soprano pipistrelle	Not observed, picked up on recorder. Continuous for 2 minutes.

Single Dusk Detector Survey of the Ice House - Dusk 27th September 2016

Surveyor position A – direct view of the front of the Ice House Entrance

Time	Species detected	Comments
19:04	Common pipistrelle	Heard not seen, brief. Not picked up on recorder. 17 minutes after sunset.
19:08	Soprano pipistrelle	Heard not seen, brief, social call. 21 minutes after sunset.
19:08	Common pipistrelle	Heard not seen, brief.
19:11	Soprano pipistrelle	Heard not seen, social calling. Continuous for 3 minutes.
19:14	Common pipistrelle	Heard not seen, foraging and social calling. Continuous for 3 minutes.
19:45	Unidentified bat species	Heard not seen, brief. Not picked up on recorder. 58 minutes after sunset.

Static Bat (Swarming) Activity Survey Results

Ice House – 21st to 27th September 2016 – no bat activity

Grotto – 21st to 27th September 2016 – no bat activity

2017:

Weather:

Weather conditions for each detector survey are provided in the table below:

Building / tree ref. no.	Survey type and time of dusk/dawn	Survey Date	Weather
Buildings B3 – <i>Ticket Office</i>	Dusk – 21:19	15/06/2017	Max. temp. 18°C, min. temp. 15°C, dry, mild, 13mph, 2/8 cloud cover
Building B4 – <i>Disused Toilets</i>	Dawn – 04:44	16/06/2017	Max. temp. 13°C, min. temp. 11°C, dry, 83% humidity, 8 mph wind, 0/8 cloud
G9.7 – Pedunculate Oak	Dusk – 21:14	13/07/2017	Max. temp. 21°C, min temp. 19°C, 51% humidity, 6/8 cloud, very light breeze.
G8.31 [FOA T31] – Dead Cherry	Dusk – 21:14	13/07/2017	Max. temp 20°C, dry, 53% humidity, wind 8mph, 8/8 cloud cover.
G8.53 – Dead Sycamore	Dusk – 21:14	13/07/2017	Max. temp 20°C, dry, 53% humidity, wind 8mph, 8/8 cloud cover.
G9.17 [FOA T10] – Mature Lime	Dawn – 05:04	14/07/2017	Max. temp 16°C , dry, 7/8 cloud cover.
Arb T12 – Mature Horse Chestnut	Dawn – 05:04	14/07/2017	Max. temp. 16°C, dry, 80% humidity, wind SW 6mph.
G9.10 [FOA T13] – Mature dead tree	Dawn – 05:04	14/07/2017	Max. temp. 16°C, Min. temp. 15°C, dry, slight breeze, 74% humidity.
G8.53 – Dead Sycamore	Dusk – 21:01	25/07/2017	Max. temp. 21°C, Min. temp. 18°C, dry, 1/8 cloud cover, slight breeze, 74% humidity.
Building B1 – Coach house	Dawn – 05:17	26/07/2017	Max. temp. 15°C, min. temp. 11°C, damp, 93% humidity, 3 mph wind, 0/8 cloud

Building / tree ref. no.	Survey type and time of dusk/dawn	Survey Date	Weather
G9.17 [FOA T10] – Mature Lime	Dusk – 20:47	03/08/2017	Max. temp. 18°C, Min. temp. 17°C, dry, 7/8 cloud cover, 13mph wind, 74% humidity.
Arb T12 – Mature Horse Chestnut	Dusk – 20:47	03/08/2017	Max. temp. 18°C, Min. temp. 17°C, dry, 8/8 cloud cover, 14mph SW wind, 74% humidity.
G9.10 [FOA T13] – Mature dead tree	Dusk – 20:47	03/08/2017	Max. temp. 18°C, Min. temp. 17°C, dry, 7/8 cloud cover, 13mph wind, 74% humidity.
G9.7 – Pedunculate Oak	Dawn – 05:29	04/08/2017	Max. temp. 16°C, Min. temp. 15°C, dry, 8/8 cloud cover, 9mph SW wind, 82% humidity.
G8.31 [FOA T31] – Dead Cherry	Dawn – 05:29	04/08/2017	Max. temp. 16°C, Min. temp. 15°C, dry, 8/8 cloud cover, 9mph SW wind, 83% humidity.
G9.17 [FOA T10] & G9.10 [FOA T13]	Dusk – 20:19	17/07/2017	Max. temp. 19.5°C, min. temp. 18°C, dry, 73% humidity, 10mph wind, 2/8 cloud cover
Arb T12 – Mature Horse Chestnut	Dusk – 19:18	14/09/2017	Max. temp. 15°C, min. temp. 11°C, dry, 75% humidity, 10mph NW wind, 2/8 cloud cover

Results:

Results are summarised below for each structure and for each surveyor during each survey.

Dusk Detector Survey of site building (B3 Ticket Office): 15th June 2017

Survey position A was positioned on the south-west face of the ticket office (B3), in front of the wall and gatehouse entrance.

Time	Species detected	Comments
21:36	Pipistrelle sp.	Observed, passing over field from south-east, across, continuing north. Not recorded by Anabat. 17 minutes after sunset.
21:41	Common pipistrelle	Brief echolocation, unseen.
21:43	Common pipistrelle	Brief echolocation, unseen.
21:46	Common pipistrelle	Observed passing from north side & continued over grass, south-east. Detected by Anabat,

Time	Species detected	Comments
21:47	Soprano pipistrelle	Observed, passing back from south-east along path inside of tree, continued north. Not recorded by Anabat. 28 minutes after sunset.
21:48	Soprano pipistrelle	Observed, passing from north side & continued south-east over grass. Detected by Anabat.
21:49	<i>Nyctalus</i> sp.	Observed, travelling from behind south-east, high foraging above me & circled & continued back south-east. Detected by Anabat. 30 minutes after sunset.
21:50	Soprano pipistrelle	Repeat of 21:47 soprano activity.
21:50	<i>Nyctalus</i> sp.	Same observed flight pattern as at 21:49.
21:51	Soprano pipistrelle	Observed passing over the centre of field, east of building. Detected by Anabat.
21:51	Soprano pipistrelle	Observed passing from east side over my head continuing south-west. Detected by Anabat.
21:52	<i>Nyctalus</i> sp.	Same observed flight pattern as at 21:49. Detected by Anabat.
21:52	Common pipistrelle x2	Observed, commuting along path from the south, to the north. Detected by Anabat.
21:53	<i>Nyctalus</i> sp.	Repeat of 21:51. Detected by Anabat.
21:54	<i>Nyctalus</i> sp.	Unseen, unheard. Detected by Anabat.
21:54	Soprano pipistrelle	Unseen, unheard. Detected by Anabat.
21:56	Soprano pipistrelle	Unseen, unheard. Detected by Anabat.
21:57	Common pipistrelle	Unseen, unheard. Detected by Anabat.
21:57	Soprano pipistrelle	Unseen, unheard. Detected by Anabat.
22:00	<i>Nyctalus</i> sp	Brief echolocation, unseen.
22:01	<i>Nyctalus</i> sp	Observed passing from behind south-east & headed north-east. Detected by Anabat.
22:02	Soprano pipistrelle	Unseen, unheard. Detected by Anabat.
22:03	Soprano pipistrelle	Observed passing from east & over my head, continued south-west. Detected by Anabat.
22:03	Common pipistrelle	Unseen, unheard. Detected by Anabat.
22:04	Common pipistrelle	Observed passing across field from north to south-east. Detected by Anabat.
22:15	Common pipistrelle	Brief echolocation, unseen.
22:07	Noctule	Unseen, unheard. Detected by Anabat.
22:15	Common pipistrelle	Unseen, unheard. Detected by Anabat.
22:18	Soprano pipistrelle	Observed passing from north-east over my head towards south-west towards the gatehouse (B2) and behind. Detected by Anabat.
22:22	Soprano pipistrelle	Repeat of 22:19
22:23	Common pipistrelle	Observed passing high from south-east & headed North across grass. Detected by Anabat.

Time	Species detected	Comments
22:26	Common pipistrelle	Repeat of 22:19
22:31	Common pipistrelle	Brief echolocation, unseen.
22:37	Common pipistrelle	Observed travelling from north-east circled over tree then continued across front of building (B3) Detected by Anabat.
22:45	Possible <i>Myotis</i> or long-eared species	Very brief echolocation, unseen. Not recorded. 1 hour and 26 minutes after sunset.

Survey position B was positioned on the east side, under a mature lime tree, with a view of the office entrance (east-face) and north-face of B3.

Time	Species detected	Comments
21:37	Noctule	Faint on 45khz, Brief echolocation, unseen. 18 minutes after sunset.
21:41	Common pipistrelle	Faint, brief echolocation, unseen. 22 minutes after sunset.
21:43	Common pipistrelle	Brief echolocation, unseen
21:46	Soprano pipistrelle	Brief echolocation, unseen. 24 minutes after sunset.
21:47	Soprano pipistrelle	Brief echolocation, unseen
21:48	Soprano pipistrelle	Brief echolocation, unseen.
21:49	<i>Nyctalus</i> sp.	Brief echolocation, social call?
21:50	Soprano pipistrelle	Brief echolocation, social call?
21:50	<i>Nyctalus</i> sp	Unseen, unheard. Detected by Anabat.
21:51	Soprano pipistrelle	Brief echolocation, unseen
21:51	Common pipistrelle	Observed travelling from the south-east, banked 180' back towards the south-east.
21:52	Soprano pipistrelle	Brief, unseen,
21:52	<i>Nyctalus</i> sp	Unseen, unheard. Detected by Anabat.
21:52	Pipistrelle sp. X2	Observed travelling from the south, one pip chasing the other across the footpath passing B3, heading north through the tree line.
21:54	<i>Nyctalus</i> sp.	Observed, south-west of surveyor's position. 3x pips travelling from the west, feeding high (10m) in the mature tree canopy, in a figure 8 foraging path.
21:55	Soprano pipistrelle	Brief feeding buzz, unseen.
21:55	<i>Nyctalus</i> sp	Unseen, unheard. Detected by Anabat.
21:56	Soprano pipistrelle	Brief feeding buzz, unseen.
21:57	Common pipistrelle	Observed passing briefly in the distance about 10m high.
21:58	Soprano pipistrelle	Unseen, unheard. Detected by Anabat.

Time	Species detected	Comments
21:59	Soprano pipistrelle.	Observed flying from the south-east towards the north-west over towards the outbuilding. Detected by Anabat
21:59	Soprano pipistrelle.	Like 21:51, pip travelled from the south-west banked right at B3, heading towards the south-east at about 8-10m high. Detected by Anabat
22:01	? <i>Nyctalus</i> sp	Unseen, unheard. Detected by Anabat.
22:02	Common pipistrelle	Brief feeding buzz, unseen.
22:03	Soprano pipistrelle	Bat appeared to hit or enter the south façade of B3. (No video evidence) Call detected by Anabat.
22:03	Common pipistrelle	Observed, foraging from the gatehouse (B2) to the west, towards B3 to the north-east. Detected by Anabat
22:05	Common pipistrelle	Observed, repetitive foraging path between gatehouse (B2) and mature trees to the south-east. Detected by Anabat
22:06	Soprano pipistrelle	Fainter than previous recent calls,
22:07	<i>Nyctalus</i> sp	Unseen, unheard. Detected by Anabat.
22:11	Common pipistrelle	Brief feeding buzz, unseen.
22:13	Soprano pipistrelle	Seen foraging from the west, near the outbuilding over B3 and banking 180' towards the south-west and gatehouse (B2). Detected by Anabat.
22:14	Common pipistrelle	Unseen, unheard. Detected by Anabat.
22:15	Common pipistrelle	Observed, foraging from the gatehouse (B2) with steep maneuvers to the south of surveyor's position and back towards B2. Detected by Anabat.
22:17	Soprano pipistrelle	Brief feeding buzz, unseen
22:19	Soprano pipistrelle	Brief feeding buzz, unseen
22:22	Soprano pipistrelle	Brief feeding buzz, unseen
22:22	Soprano pipistrelle	Observed, very brief to the south-west of B3.
22:23	Common pipistrelle	Brief echolocation, unseen.
22:26	Common pipistrelle	Brief echolocation, unseen
22:25	Soprano pipistrelle	Brief echolocation, unseen
22:27	Soprano pipistrelle	Observed, a repeat of 22:15
22:32	Soprano pipistrelle	Brief feeding buzz, unseen.
22:33	Soprano pipistrelle	Observed, a repeat of 22:27
22:34	Common pipistrelle	Brief echolocation, unseen.
22:37	Common pipistrelle	Observed, travelling from the south-east in a north-west direction, between B3 and B2. Detected by Anabat.
22:47	Pipistrelle sp.	Brief echolocation, unseen.

Dawn Detector Survey of site building (Disused Toilets): 16th June 2017

Survey position A was positioned on the west side of the disused toilets (B4), within the woodland and a view of the west elevations of the disused toilets.

Time	Species detected	Comments
04:16	Noctule	Unseen. Detected by Anabat. 28 minutes before sunrise.
04:18	Soprano pipistrelle	Unseen, brief echolocation, sounded distant above understory canopy. 26 minutes before sunrise.

Survey position B was positioned on the east side of the disused toilets, with a view of the east and north elevations of the disused toilets.

Time	Species detected	Comments
04:00	Soprano pipistrelle	Brief echolocation, appeared to come from above the canopy of the woodland.
04:08	Soprano pipistrelle	Quiet echolocation, similar to previous record.
04:11	Soprano pipistrelle	Same at 04:08.
04:14	Soprano pipistrelle	Quiet, but almost constant chatter in the background from the Bat-box duet.
04:18	Soprano pipistrelle	Observed, high in the tree canopy, flying straight from south to north. 26 minutes before sunrise.

Dusk Detector Survey of site trees (G9.7 and G9.10 [FOA T13]): 13th July 2017

Survey position A was positioned on the east face of the Pendulate oak tree (G9.7).

Time	Species detected	Comments
21:28	Unidentified bat species	Possible bat seen flying between trees from south east direction, no echolocation heard. Not recorded by Anabat. 14 minutes after sunset.
21:32	Pipistrelle sp.	Foraging around limb of G9.7/30 oak tree on east side. Not recorded by Anabat. 18 minutes after sunset.
21:33	Pipistrelle sp.	Observed flying east to west by dead tree, no echolocation. Not recorded by Anabat. 19 minutes after sunset.
21:35	Unidentified bat species	Observed flying by eastern limb of G9.7/30 oak tree limb and disappeared out of view. Not recorded by Anabat. 21 minutes after sunset.
21:40	Nyctalus sp.	Unseen pass, very brief echolocation heard. Possible noctule or leislers species detected by anabat. 26 minutes after sunset.
21:42	Pipistrelle sp.	Unseen pass. Not recorded by Anabat.
21:50	Soprano pipistrelle	Observed foraging and circling around branches of dead tree and continued west. 34 minutes after sunset.
21:54	Soprano pipistrelle	Unseen, foraging echolocation heard. Not recorded by Anabat.
21:58	Soprano Pipistrelle	Observed flying around tree branches. Not recorded by Anabat.

Time	Species detected	Comments
21:58	Soprano Pipistrelle	Unseen, distant feeding buzz heard, detected by Anabat.
22:02	Common and soprano pipistrelle	Unseen, foraging echolocation heard. Not recorded by Anabat.
22:06	Soprano pipistrelle & common pipistrelle	Observed foraging around tree branches. Common pipistrelle detected by Anabat.
22:07	Soprano pipistrelle	Observed foraging around tree branches. Possibly a 2 nd pipistrelle. Not recorded by Anabat.
22:10	Soprano pipistrelle	Unseen but heard foraging echolocation nearby – possibly two bats. Not recorded by Anabat.
22:12	Soprano pipistrelle	Unseen but heard foraging echolocation, continuous until 22:15. Not recorded by Anabat.
22:17	Soprano pipistrelle	Unseen, brief pass. Not recorded by Anabat.
22:19	Soprano pipistrelle	Unseen. Detected by Anabat.
22:22	Soprano pipistrelle	Unseen, foraging. Not recorded by Anabat.
22:24	Soprano pipistrelle	Unseen, foraging. Not recorded by Anabat.
22:25	Common pipistrelle.	Unseen. Detected by Anabat.
22:27	Soprano pipistrelle.	Unseen, foraging. Not recorded by Anabat.
22:32	Soprano pipistrelle	Unseen, pass. Not recorded by Anabat.
22:35	Soprano pipistrelle	Unseen, foraging. Not recorded by Anabat.
22:36	Common pipistrelle	Unseen. Detected by Anabat.
22:36	Soprano pipistrelle	Unseen. Detected by Anabat.
22:37	Pipistrelle	Unseen, distant pass. Not recorded by Anabat.
22:40	Soprano pipistrelle	Unseen. Not recorded by Anabat.
22:42	Soprano pipistrelle	Unseen, foraging. Not recorded by Anabat.

Survey position B was positioned on the north-west face of the dead cherry tree G8.31 [FOA T31]

Time	Species detected	Comments
21:34	Unidentified bat species	No echolocation heard, observed on the east side of the tree flying at canopy height of dead sycamore tree (G8). Not recorded by Anabat. 20 minutes after sunset.
21:40	Noctule	Unseen. Detected by Anabat. 30 minutes after sunset.

Time	Species detected	Comments
21:44	Unidentified (small-sized) bat species	Very brief echolocation, observed on the east side of the tree (near G8). Not recorded by Anabat. 30 minutes after sunset.
21:49	Pipistrelle sp.	Observed flying from the eastern direction of the house and continuing west over cherry tree. Not recorded by anabat. 35 minutes after sunset.
21:50	Soprano pipistrelle	Unseen, brief echolocation heard. Detected by anabat. 36 minutes after sunset.
21:53	pipistrelle	Unseen, brief echolocation heard. Not recorded by anabat.
21:58	Soprano pipistrelle	Observed foraging from the west direction of the house and continuing north over cherry tree. Detected by anabat.
22:00	Pipistrelle	Unseen, brief echolocation heard. Not recorded by anabat.
22:05	Common pipistrelle	Unseen, brief echolocation heard. Not recorded by anabat. 51 minutes after sunset.
22:06	Pipistrelle	Unseen, a very faint distant echolocation call heard. Common pipistrelle detected by anabat.
22:10	Pipistrelle	Unseen, brief echolocation heard. Car with headlights drove past to the south. Not recorded by anabat.
22:14	Soprano pipistrelle.	Unseen, brief echolocation. Not recorded by anabat.
22:18	Pipistrelle – 50khz	Unseen, brief echolocation. Not recorded by anabat.
22:19	x2 pipistrelle – 50kHz	Unseen, lots of social calls heard between two individual pipistrelles. Not recorded by anabat.
22:22	Soprano pipistrelle	Unseen, brief echolocation heard. Area being used as a regular foraging path. Not recorded by anabat.
22:25	Common pipistrelle	Unseen, brief echolocation heard. Detected by Anabat.
22:34	Common pipistrelle	Unseen, flying nearby for a long time. Not recorded by anabat.
22:35	Soprano pipistrelle	Briefly observed foraging from east to south west above canopy. Not recorded by anabat.
22:36	Pipistrelle	Seen very briefly passing north west to south east. Common pipistrelle detected by anabat.

Tree G8 – Dead Sycamore:

Dusk Detector Survey of site Tree G8.53, 13th July 2017.

Survey position A was positioned on the east side dead sycamore (G8.53) with a view of s-e-n face of the tree and canopy above

Time	Species detected	Comments
21:48	Pipistrelle sp.	Observed flying from the south in a northerly direction above tree-line. 32 minutes after sunset.
21:50	Pipistrelle sp.	Observed, from the south-east, flying north-west then banked 180° back towards the south-east.

Time	Species detected	Comments
21:53	Pipistrelle sp.	Observed flying from the west to the east below canopy.
22:05	Pipistrelle sp.	Observed flying past camera from the south to the north at head height.
22:07	Pipistrelle sp.	Observed from the east flying west over camera (surveyor).
22:20	Soprano pipistrelle.	Observed from the west flying east at tree-line height. Detected by Anabat. 1 hour 6 minutes after sunset.
22:21	Soprano pipistrelle.	Unseen, unheard. Detected by Anabat.
22:24	Common pipistrelle	Observed flying from the west to the east at middle canopy height. Detected by Anabat. 1 hour 10 minutes after sunset.
22:35	Pipistrelle sp.	Observed from the north over G8 to the south-west.

Dawn Detector Survey of site trees (G9.17 [FOA T10], G9.10 [FOA T13] and Arb. T12): 14th July 2017

Survey position A was positioned on the North-Face of the mature lime tree (G9.17 [FOA T10]).

Time	Species detected	Comments
03:58	Pipistrelle sp.	Unseen, a brief foraging echolocation heard. Not recorded by anabat. 1 hour 6 minutes before sunrise.
03:59	Pipistrelle sp.	Unseen, a brief echolocation heard. Not recorded by anabat.
04:00	Pipistrelle sp.	Unseen, a brief echolocation heard that sounded to be foraging in the understory. Not recorded by anabat.
04:01	Common pipistrelle	Unseen, a brief echolocation heard. Not recorded by anabat. 1 hour 3 minutes before sunrise.
04:02	Soprano pipistrelle	Unseen, a very brief echolocation heard. Not recorded by anabat. 1 hour 2 minutes before sunrise.
04:06	Pipistrelle sp.	Unseen, a very brief echolocation heard. Not recorded by anabat.
04:10	Unidentified bat species	Unseen, a very brief echolocation heard. Not recorded by anabat.
04:15	Pipistrelle sp.	Brief pass observed. Not recorded by anabat.
04:31	Unidentified bat species	Unseen, a very faint distant echolocation call heard. Not recorded by Anabat. 33 minutes before sunrise.
04:32	Pipistrelle sp.	Unseen, brief feeding buzz and distant echolocation heard. Detected by Anabat. 32 minutes before sunrise

Survey position B was positioned on the east facing side of Arb. T12.

Time	Species detected	Comments
03:49	Soprano pipistrelle	Unseen, brief pass and some feeding buzzes heard. Not recorded by anabat. 1 hour 15 minutes before sunrise.
03:40	Soprano pipistrelle	Unseen, brief pass as echolocation heard. Not recorded by anabat.
03:55	Soprano pipistrelle	Pass behind T12 commuting north along treeline. Not recorded by anabat.

Time	Species detected	Comments
03:56	Soprano pipistrelle	Returned from north of treeline foraging within open space and around treeline. Continued back north-east of treeline. Not recorded by anabat.
04:03	Soprano pipistrelle	Unseen, brief echolocation heard. Potential social calls detected by anabat.
04:07	Soprano pipistrelle	Observed, passing from north-west round and towards north. Not recorded by detector. Not recorded by anabat.
04:15	Soprano pipistrelle x2	Passed from east towards T12, circled around tree once foraging and then continued foraging along treeline on north east side. Not recorded by anabat.
04:18	Possible <i>Myotis</i> / long-eared bat species	Very brief echolocation. Circled trees on north east side of treeline before continuing in north direction away from the surveyed tree. Not recorded by anabat. 46 minutes before sunrise.
04:19	Soprano pipistrelle	Unseen, brief echolocation. Not recorded by anabat. 45 minutes before sunrise

Survey position C was positioned on the west facing side of the tree (G9.10 [FOA T13])

Time	Species detected	Comments
04:18	Soprano pipistrelle	Unheard and unseen. Detected by batlogger. Not recorded by Anabat. 48 minutes before sunrise.
04:23	Possible <i>Myotis</i> / long-eared bat species	Unheard and unseen. Detected by batlogger. Not recorded by Anabat. 41 minutes before sunrise
04:29	Soprano pipistrelle	Quiet and distant echolocation, unseen. Not recorded by Anabat.
04:32	Soprano pipistrelle	Unseen. Not recorded by Anabat.
04:34	Soprano pipistrelle	Unseen, quiet echolocation. Foraging within range until 04:37 however still unseen. Not recorded by Anabat. 30 minutes before sunrise.
04:39	Soprano pipistrelle	Quiet echolocation, unseen. Not recorded by Anabat. 25 minutes before sunrise.

Tree G8.53 - Dead Sycamore:

Dusk Detector Survey of site tree (G8.53): 25th July 2017

Survey position A was positioned on the east face of the Dead Sycamore (G8.53).

Time	Species detected	Comments
21:19	Pipistrelle sp.	Unseen, brief commute. 18 minutes after sunset.
21:23	Pipistrelle sp.	Observed foraging high, above canopy.
21:29	Common pipistrelle	Unseen, high forage. 28 minutes after sunset.

Time	Species detected	Comments
21:34	Common pipistrelle	Unseen, high forage.
21:40	Soprano pipistrelle	Unseen, high forage. 39 minutes after sunset.
21:45	Soprano pipistrelle	Unseen, brief forage.
21:52	Common pipistrelle	Unseen, brief forage.
21:57	Pipistrelle sp.	Unseen, brief
22:25	Pipistrelle sp.	Unseen, brief.

Dawn Detector Survey of the site buildings (B1 Coach House): 26th July 2017

Survey position A was positioned on the north facade of B1, with a view of the north elevations.

Time	Species detected	Comments
04:10	Pipistrelle sp.	Unseen, foraging 1 hour 7 minutes before sunrise.
04:12	Soprano pipistrelle	Unseen, foraging 1 hour 5 minutes before sunrise.
04:20	Pipistrelle sp.	Unseen, foraging
04:21	Common pipistrelle	Unseen, foraging 56 minutes before sunrise.
04:24	Pipistrelle sp.	Unseen, foraging
04:31	Pipistrelle sp.	Unseen, foraging
04:34	Soprano pipistrelle	Unseen, foraging
04:35	Soprano pipistrelle	Observed foraging over Coach house from north to south.
04:38	Soprano pipistrelle	Unseen, foraging
04:38	Pipistrelle sp.	Unseen, foraging
04:39	Pipistrelle sp.	Observed flying from the east to the north-west over garden.
04:41	Pipistrelle sp.	Observed foraging north-west of coach house, around T12 (horse chestnut)
04:46	Unidentified bat species	Unheard, observed commuting from east to west away from surveyed building B1. 31 minutes before sunrise. No recording
04:49	Soprano pipistrelle	Unseen, brief commute.
05:10	Pipistrelle sp.	Unseen, foraging. 7 minutes before sunrise.
05:12	Soprano pipistrelle	Unseen, foraging, 5 minutes before sunrise.

Survey position B was positioned to the east of B1, with a view of east elevations.

Time	Species detected	Comments
03:55	Pipistrelle sp.	Unseen, unheard. Detected by Anabat. 1 hour 22 minutes before sunrise.

Time	Species detected	Comments
03:57	Common pipistrelle	Unseen, unheard. Detected by Anabat. 1 hour 20 minutes before sunrise.
03:58	Soprano pipistrelle	Unseen, unheard. Detected by Anabat. 1 hour 19 minutes before sunrise.
03:59	Soprano pipistrelle	Unseen, unheard. Detected by Anabat.
04:01	Common pipistrelle	Unseen, unheard. Detected by Anabat.
04:04	Nyctalus sp.,	Unseen, unheard. Detected by Anabat. 1 hour 13 minutes before sunrise
04:05	Nyctalus sp.	Unseen, unheard. Detected by Anabat. 1 hour 12 minutes before sunrise.
04:07	<i>Myotis</i> sp. or long-eared species	Unseen, unheard. Detected by Anabat. 1 hour 10 minutes before sunrise.
04:08	Soprano pipistrelle	Unseen, unheard. Detected by Anabat.
04:09	Soprano pipistrelle	Unseen, unheard. Detected by Anabat. 1 hour 8 minutes before sunrise.

Survey position C was positioned to the south-east of B1, with a contextual view of the east & south elevations.

Time	Species detected	Comments
04:22	Unidentified bat species	Observed foraging from the west, to the south of B1. No recording
04:27	Unidentified bat species	Observed foraging from the west to the east, over the south of B1. No recording
04:29	Unidentified bat species	Observed foraging from the east banking left to the south of building. No recording
04:34	Unidentified bat species	Observed commuting from north to south at eave level height. No recording
04:37	Unidentified bat species	Observed commuting from north-east to south-west passed mature tree to the south. No recording
04:38	Unidentified bat species	Observed repeat pass as previous 04:37. No recording
04:41	Unidentified bat species	Observed foraging to the south, tight over lower roof, heading east towards surveyor position. No recording
04:41	Unidentified bat species	Observed flying from north to south over B2. No recording
04:45	Unidentified bat species	Observed commuting from the south-west to the north-east over B2. No recording
04:45	Unidentified bat species	Repeat observation as 04:41. No recording. 32 minutes before sunrise
04:46	Unidentified bat species	Repeat observation as 04:41. No recording. 31 minutes before sunrise

Survey position D was positioned on the south facade of B1, with a view of the south elevations.

Time	Species detected	Comments
04:15	Soprano pipistrelle	Unseen, brief. 1 hour 2 minutes before sunrise
04:25	Soprano pipistrelle	Unseen, brief.
04:27	Soprano pipistrelle	Unseen, brief.
04:29	Soprano pipistrelle	Unseen, brief.
04:35	Soprano pipistrelle	Unseen, brief.
04:37	Soprano pipistrelle	Unseen, brief.
04:40	Soprano pipistrelle	Observed flying from the east, over B1 roof towards Surveyor E's position.
04:42	Soprano pipistrelle	Observed flying from the north to the south, to the east of B1 across the front lawn.
04:48	Soprano pipistrelle	Unseen, brief.
04:50	Soprano pipistrelle	Unseen, brief. 27 minutes before sunrise.

Survey position E was positioned on the west facade of B1, with a view of the west elevations.

Time	Species detected	Comments
04:04	Soprano pipistrelle	Unseen, brief pass. 1 hour 13 minutes before sunrise.
04:04	<i>Myotis</i> sp. or long-eared species	Unseen, brief pass. 1 hour 13 minutes before sunrise.
04:08	Soprano pipistrelle	Unseen, brief foraging.
04:09	Common & Soprano pipistrelle (2 Bats)	Unseen, brief pass. 1 hour 8 minutes before sunrise.
04:10	Soprano pipistrelle	Unseen, distant & quiet foraging.
04:12	Common pipistrelle	Unseen, brief echolocation.
04:14	Soprano pipistrelle	Unseen, brief foraging.
04:19	Soprano pipistrelle	Unseen, brief pass.
04:27	Soprano pipistrelle	Unseen, brief pass.
04:29	Soprano pipistrelle	Unseen, brief pass.
04:33	Soprano pipistrelle	Unseen, brief pass.
04:37	Soprano pipistrelle	Unseen, brief pass.
04:44	Soprano pipistrelle	Unseen, very quiet & brief. 33 minutes before sunrise.

Time	Species detected	Comments
04:44	Soprano pipistrelle	Observed from south in trees and continued south-west
04:47	Soprano pipistrelle	Observed from the south-west tree and continued east, foraging.30 minutes before sunrise

Survey position F was positioned on the west facade of B1, with a view of the west elevations.

Time	Species detected	Comments
04:35	Bat	Observed flying front the south-east over B1 to the north-west. No calls recorded by Anabat.
04:41	Bat	Observed flying low to south of surveyor's position to the north-west of B1. No calls recorded by Anabat. 36 minutes before sunrise

Dusk Detector Survey of site trees (G9.17 [FOA T10], G9.10 [FOA T13] and Arb. T12): 3rd August 2017

Survey position A was positioned on the north face of the Mature dead tree (G9.10 [FOA T13])

Time	Species detected	Comments
20:36	Soprano pipistrelle	Observed flying around feature of broken branch on north side whilst setting up Anabat Express. Detected by Anabat. 11 minutes before sunset.
20:46	Soprano pipistrelle	Observed flying around Surveyor B's tree (T10) to the east. 1 minute before sunset.
20:55	Soprano pipistrelle	Observed flying quietly over to the east near Surveyor B. 8 minutes after sunset.
20:57	Soprano pipistrelle	Unheard, 2 or 3 bats observed circling in canopy of ash Detected by Anabat. 10 minutes after sunset
20:59	Soprano pipistrelle	Observed, flying in canopy. Detected by Anabat. 12 minutes after sunset.
21:11	Common pipistrelle	Unseen, foraging close. 24 minutes after sunset.
21:12	Common pipistrelle	Unseen, foraging.
21:13-21:14	Common pipistrelle	Unseen, continuing forage.
21:15 – 21:17	Common pipistrelle	Unseen, continual forage
21:22	Common pipistrelle	Unseen, continual forage, as before.
21:33	Common pipistrelle	Unseen, continual but reduced foraging activity than previous.
21:46	Unidentified bat species	Unseen, brief and quite call. 59 minutes after sunset.
21:50	Tawny Owl	<i>Above to the east of position, then move slightly more west. No bat activity during owl calls.</i>

Time	Species detected	Comments
21:59	Common pipistrelle	Unseen, foraging along north edge of section.
22:07	Nyctalus sp., possibly Leisler's	Unseen, Batlogger picked up sound. Detected by Anabat. 1 hour 12 minutes after sunset.
22:15	Nyctalus sp., possibly Leisler's	Unseen, recorded by anabat

Survey position B was positioned on the north face of the mature Lime tree (G9.17 [FOA T10])

Time	Species detected	Comments
20:40	Soprano pipistrelle	Unseen, brief echolocation. 7 minutes before sunset.
20:41-20:49	Soprano pipistrelle, initially a single bat, then 2-3 bats	Observed constantly foraging at about 20 feet high, fast feeding in figure of 8's & loops around T10, T12 and adjacent mature ash to the east of T1, including social calls. 8 minutes before sunset until 2 minutes after sunset
20:52	Soprano pipistrelle x2	Observed briefly foraging in canopy from east to west. 5 minutes after sunset.
20:53	Soprano pipistrelle	Observed briefly foraging in canopy from west to north. 6 minutes after sunset.
20:56-20:59	Soprano pipistrelle	Observed repeat forage of 20:49, for 3 minutes. 9 minutes to 12 minutes after sunset.
21:07	Soprano pipistrelle	Unseen, foraging high in canopy. 20 minutes after sunset.
21:11	Pipistrelle sp.	Unseen, brief forage. 24 minutes after sunset.
21:14	Soprano pipistrelle	Observed foraging from east to west.
21:14-21:21	Common pipistrelle	Unseen, intense foraging similar to soprano's, from 27 minutes after sunset.
21:21	Common pipistrelle / Soprano pipistrelle	Unseen, 2 calls coming through Batbox duet.
21:29	Common pipistrelle	Observed repeat forage as of 21:14-21:27
21:30	Pipistrelle sp.	Unseen, brief forage.
21:32	Common pipistrelle	Unseen, brief forage.
21:33	Pipistrelle sp.x2	Unseen, varying call frequencies.
21:37	Common pipistrelle	Unseen, constant foraging in canopy.
21:42	Common pipistrelle	Unseen, distant foraging.

Time	Species detected	Comments
21:49	Unidentified bat species	Unseen. 1 hour and 3 minutes after sunset.
21:59	Common pipistrelle	Unseen, high forage, constant.

Survey position C was positioned on the east face of the mature Horse Chestnut (Arb. T12)

Time	Species detected	Comments
20:39	Soprano pipistrelle	Observed flying over head towards trees on north-east from the west. Detected by Anabat. 8 minutes before sunset.
20:43	Pipistrelle sp.	Observed flying the repeat of 20:42. Detected by Anabat. 5 minutes before sunset
20:49	Soprano pipistrelle	Observed flying back from east trees, then continued west. Detected by Anabat, 2 minutes after sunset
20:49	Soprano pipistrelle	Observed passing by tree line from east to south, towards car park.
20:51	Soprano pipistrelle	Observed passing along tree line, foraging from west to east. Detected by Anabat.
20:55	Soprano pipistrelle	Observed foraging within tree line, from west to north-east & back foraging above canopy north to west. Detected by Anabat.
20:58	Soprano pipistrelle	Observed foraging around area along tree line & open grass. Detected by Anabat.
21:01	Common pipistrelle	Observed pass from the north-east of T12 and headed west. Detected by Anabat. 14 minutes after sunset.
21:01	Pipistrelle sp.	Observed around area, continuing north-east. Detected by Anabat.
21:02	Soprano pipistrelle	Unseen, unheard. Detected by Anabat.
21:03	Soprano pipistrelle	Observed circle foraging on west side & continued west. Detected by Anabat.
21:04	Common pipistrelle	Observed pass from east to west. Detected by Anabat.
21:06	Common pipistrelle/ Soprano pipistrelle	Observed pass from north-east side & continued west. Both detected by Anabat.
21:07	Pipistrelle sp.	No echolocation, observed foraging above canopy to the west.
21:07	Soprano pipistrelle	Observed pass from north-east side of tree & continued west. Detected by Anabat.
21:08	Nyctalus sp., probable Noctule	Unseen, distant quiet echolocation. Detected by Anabat. 21 minutes after sunset.
21:10	Soprano pipistrelle	Observed pass from west to east. Detected by Anabat.
21:11	Soprano pipistrelle x2	Observed socializing and circling high on east side of T12. Detected by Anabat.
21:11	Noctule	Unseen, pass with faint echolocation. Detected by Anabat.

Time	Species detected	Comments
21:12	Pipistrelle sp.	No echolocation, observed foraging in tree line.
21:13	Nyctalus sp., probable Noctule	Unseen, brief pass. Detected by Anabat.
21:13	Soprano pipistrelle	Observed foraging in trees. Detected by Anabat.
21:14	Soprano pipistrelle	Unseen, brief forage. Detected by Anabat.
21:15	Nyctalus sp., probable Noctule	Unseen, brief echolocation. Detected by Anabat.
21:16	Soprano pipistrelle	Observed pass from east to west along tree line. Detected by Anabat.
21:20	Nyctalus sp., probable Noctule	Unseen, brief forage. Detected by Anabat.
21:21	Pipistrelle sp.	Unseen, brief forage.
21:22	Soprano pipistrelle	Observed foraging along tree line west to north-east. Detected by Anabat.
21:24	Soprano pipistrelle	Observed pass from east to west. Detected by Anabat.
21:24	Pipistrelle sp.	Observed pass above canopy, heading east.
21:29	Soprano pipistrelle X2	Observed pass from north to south-east, foraging. Detected by Anabat.
21:42	Soprano pipistrelle x2	Observed pass overhead north to south, social call. Detected by Anabat.
21:45	Soprano pipistrelle	Observed foraging above tree line on north-east side.
21:54	Common pipistrelle	Observed foraging above tree line on north lot, circling in open space, with feeding buzzes. Detected by Anabat.
22:11	Common pipistrelle	Unseen, brief echolocation. Detected by Anabat.
21:12	Common pipistrelle	Observed foraging high around open area. Feeding buzzes, continually until 22:13. Detected by Anabat.

Dawn Detector Survey of site trees (G9.7 and G8.31 [FOA T31]): 4th August 2017

Survey position A was positioned on the south face of the Pendulate oak tree (G9.7).

Time	Species detected	Comments
04:07	Pipistrelle sp.	Unseen, brief pass.
04:08	Pipistrelle sp.	Unseen, brief foraging.
04:12	Pipistrelle sp.	Unseen, brief pass.
04:17	Pipistrelle sp.	Unseen, brief distant pass.
04:19	Pipistrelle sp.	Unseen, brief faint call.
04:22	Common pipistrelle.	Unseen, brief foraging.

Time	Species detected	Comments
04:33	Soprano pipistrelle	Unseen, brief pass.
04:36	Soprano pipistrelle	Unseen, brief foraging.
04:37	Common pipistrelle.	Unseen, brief foraging. Detected by Anabat. 52 minutes before sunrise.
04:38	Soprano pipistrelle	Unseen, brief foraging. Detected by Anabat.
04:39	Pipistrelle sp.	Unseen, brief pass.
04:42	Soprano pipistrelle	Unseen, brief and faint.
04:45	Soprano pipistrelle	Unseen, brief and faint.
04:46	Soprano pipistrelle	Unseen, brief and faint.
04:52	Soprano pipistrelle	Unseen, brief and faint.
04:53	Pipistrelle sp.	Unseen, brief and faint.
04:57	Pipistrelle sp.	Unseen, brief and faint.
04:58	Soprano pipistrelle	Unseen, brief and faint.
05:08	Pipistrelle sp.	Unseen, brief pass. 21 minutes before sunrise.
05:08	Soprano pipistrelle	Unseen, brief pass. 21 minutes before sunrise.
05:10	Soprano pipistrelle	Unseen, brief pass. 19 minutes before sunrise.
05:14	Soprano pipistrelle	Unseen, brief pass. 15 minutes before sunrise.

Survey position B was positioned on the west face of the dead cherry tree (G8.31 [FOA T31]).

Time	Species detected	Comments
04:03	Soprano pipistrelle	Unseen, brief forage and feeding buzz. Detected by Anabat.
04:04		Unseen, unheard. Detected by Anabat.
04:09	Soprano pipistrelle	Observed flying west to east between T31 adjacent tree, foraging at canopy height. Detected by Anabat.
04:14	Soprano pipistrelle	Observed foraging from south to north above canopy. Detected by Anabat.
04:18	Common pipistrelle	Observed foraging north to north-west at canopy height. Detected by Anabat.
04:22	Soprano pipistrelle	Observed foraging north-west to west, repeating twice at canopy height. Detected by Anabat..
04:25	Soprano pipistrelle	Observed foraging south-west to north at canopy height. Detected by Anabat.

Time	Species detected	Comments
04:33	Pipistrelle sp.	Unseen, brief forage.
04:36	Soprano pipistrelle	Unseen, unheard. Detected by Anabat.
04:37	Common pipistrelle	Observed foraging overhead to the east, after 30seconds, returning to the west. Detected by Anabat.
04:42	Soprano pipistrelle	Observed repeat flight of 04:22. Detected by Anabat.
04:43	Soprano pipistrelle.	Observed foraging north to south above canopy. Detected by Anabat.
04:44	Soprano pipistrelle.	Observed foraging from west to north, repeated once then headed north. Detected by Anabat.
04:56	Pipistrelle sp.	Unseen, faint foraging.
04:58	Soprano pipistrelle x2	Observed foraging above head, mid-canopy, in circles and loops across glade. Detected by Anabat.
04:59	Soprano pipistrelle x2	Unseen, unheard. Detected by Anabat.
04:59	Common pipistrelle	Unseen, unheard. Detected by Anabat. 30 minutes before sunrise.
05:02	Soprano pipistrelle	Observed foraging, repeat of 04:59. Detected by Anabat.
05:06	Soprano pipistrelle	Observed brief foraging from east to west, reverse of 04:09. Detected by Anabat.
05:06	Soprano pipistrelle	Observed briefly foraging, repeat of 04:18. Detected by Anabat.
05:08	Pipistrelle sp.	Observed behind T31 & G8, from the north to the east, faint call. 21 minutes before sunrise.
05:14	Soprano pipistrelle	Unseen, likely behind T31 & G8 as previous. Detected by Anabat. 15 minutes before sunrise.

Dusk Detector Survey of site trees (G9.17 [FOA T10]): 17th August 2017

Survey position A was positioned on the north face of Mature Lime (G9.17 [FOA T10]), at the base of the tree, with a view of the east, north & west elevations.

Time	Species detected	Comments
20:31	Soprano pipistrelle	Observed flying from ice house to the west of T10 at mid-canopy height. Detected by Anabat. 12 minutes after sunset
20:33	Soprano pipistrelle	Observed flying from the west, a quick circuit to the north of T10 and back west, at mid-canopy height. 14 minutes after sunset.
20:36	Pipistrelle sp.	Unseen, brief pass.
20:43	Soprano pipistrelle	Unseen, foraging behind surveyor's position to the north. Detected by Anabat.
20:44	Soprano pipistrelle	Unseen, foraging pass behind surveyor's position to the north. Detected by Anabat.
20:45	Soprano pipistrelle	Unseen, unheard. Detected by Anabat.

Time	Species detected	Comments
20:46	Soprano pipistrelle	Unseen, pipi pass behind surveyor's position. Detected by Anabat.
20:47	Soprano pipistrelle	Unseen, unheard. Detected by Anabat.
20:48	Common pipistrelle	Unseen, repeat foraging of 20:43. Detected by Anabat.
20:48	Soprano pipistrelle	Unseen, unheard. Detected by Anabat.
20:49	Soprano pipistrelle & Common pipistrelle	Unseen, repeat foraging of 20:43
20:51	Common pipistrelle	Unseen, unheard. Detected by Anabat.
20:53	Pipistrelle sp.	Unseen, bats foraging behind position.
21:05	Pipistrelle sp.	Unseen, continuous pipistrelle activity behind surveyor, along footpath on woodland edge.
21:08	Pipistrelle sp.	Unseen, brief pass
21:13-21:16	Soprano pipistrelle	Unseen, foraging pass along path behind surveyor's position, foraging stopped at 21:16

Survey position B was positioned on the north-east of Mature Lime (G9.17 [FOA T10]), with a view of the north & east high canopy.

Time	Species detected	Comments
20:24	Pipistrelle sp.	Unseen, brief pass. 5 minutes after sunset.
20:31	Pipistrelle sp.	Observed flying from the west near ice house to the north of T10, foraging east to west with feeding buzz, before returning west. 12 minutes after sunset.
20:36	Pipistrelle sp.	Observed flying from the west, commuting across field.
20:42	Soprano pipistrelle	Observed flying, repeat of 20:36.
20:43	Soprano pipistrelle.	Observed flying, repeat of 20:36. Detected by Anabat.
20:44	Soprano pipistrelle.	Observed foraging repetitively in front of surveyor's position, to the north of surveyor A, circling and figure of 8 movements along footpath adjacent to wood edge. Detected by Anabat.
20:45	Soprano pipistrelle.	Observed repeat foraging. . Detected by Anabat.
20:46	Soprano pipistrelle x2	Observed flying and communicating when close to each other in the air, before splitting off in opposite directions (east & west of surveyor position. Detected by Anabat.
20:48	Soprano pipistrelle	Observed repeat foraging. . Detected by Anabat.
20:47	Soprano pipistrelle	Observed repeat forage of 20:44. Detected by Anabat.
20:49	Common pipistrelle & Soprano pipistrelle	Observed 2 or 3 bats continuous foraging with feeding buzz along pathway, alternating forage lines. Detected by Anabat.

Time	Species detected	Comments
20:51	Common pipistrelle & Soprano pipistrelle	Observed continual foraging as above 20:48 Detected by Anabat.
21:02	Common pipistrelle x2	Observed continual foraging and feeding buzzes as above 20:48
21:06	Common pipistrelle & Soprano pipistrelle	Unseen, reduced foraging as above 20:48
21:10	Common pipistrelle	End of continual foraging.
21:11	Soprano pipistrelle	Unseen, brief & faint call.
21:13	Soprano pipistrelle	Observed flying east to west along path adjacent to woodland edge.
21:21	Common pipistrelle	Unseen brief pass.

Dusk Detector Survey of site tree Arb. Tree T12: 14th September 2017

Survey position A was positioned on the south east face of the mature horse chestnut (T12).

Time	Species detected	Comments
19:14	Soprano pipistrelle	Seen, coming from north behind T12, considered to have possibly emerged from the dead standing tree to north of T12 (4 minutes before sunset). Not detected by Anabat.
19:24	Soprano pipistrelle	Seen, opposite flight to previous bat (6 minutes after sunset). Not detected by Anabat.
19:26	Soprano pipistrelle	Unseen, Detected by Anabat. 8 minutes after sunset.
19:30	Soprano pipistrelle	Seen, foraging and feeding buzz, repeat of 19:24 and continued foraging above and around storage building to the east of T12 for 1 minute (12 minutes after sunset). Not detected by Anabat.
19:33	Soprano pipistrelle	Unseen, Detected by Anabat. 15 minutes after sunset.
19:34	Soprano pipistrelle	Unseen, Detected by Anabat. 16 minutes after sunset
19:34	Soprano pipistrelle	Unseen, Detected by Anabat. 16 minutes after sunset
19:36	Common pipistrelle	Seen, foraging and feeding buzz from north east of T12, then went south (18 minutes after sunset). Not detected by Anabat.
19:37	Bat/pipistrelle sp.	Seen, no echolocation heard or recorded – came from direction of the dead tree (19 minutes after sunset). Not detected by Anabat.
19:37	Pipistrelle sp. x2	Seen chasing each other and socializing west of T12 (19 minutes after sunset). Not detected by Anabat.
19:37	Soprano pipistrelle	Seen, repeat of 19:30 (19 minutes after sunset). Not detected by Anabat.
19:39	Common pipistrelle	Unseen, Detected by Anabat.

Time	Species detected	Comments
19:39	Common pipistrelle	Unseen, Detected by Anabat.
19:40	Soprano pipistrelle x2	Seen foraging and socializing south to east of T12. Not detected by Anabat.
19:42	Soprano pipistrelle	Seen, constant foraging in garden south of T12 for 3 minutes. Detected by Anabat.
19:42	Soprano pipistrelle	Unseen, Detected by Anabat.
19:42	Soprano pipistrelle	Unseen, Detected by Anabat.
19:44	Soprano pipistrelle	Unseen, Detected by Anabat, social calls too.
19:44	Soprano pipistrelle	Unseen, Detected by Anabat.
19:45	Soprano pipistrelle	Unseen, Detected by Anabat.
19:45	Soprano pipistrelle	Unseen, Detected by Anabat.
19:45	Soprano pipistrelle	Unseen, Detected by Anabat.
19:45	Soprano pipistrelle	Unseen, Detected by Anabat.
19:45	Soprano pipistrelle	Seen, constant foraging in garden south of T12. Detected by Anabat.
19:46	Soprano pipistrelle	Unseen, Detected by Anabat.
19:46	Soprano pipistrelle	Unseen, Detected by Anabat.
19:48	Common pipistrelle	Unseen, Detected by Anabat.
19:48	Common pipistrelle	Unseen, Detected by Anabat.
19:49	Common pipistrelle	Unseen, Detected by Anabat.
19:49	Common pipistrelle	Unseen, Detected by Anabat.
19:49	Common pipistrelle x2	Seen, foraging then chasing one off. Detected by Anabat.
19:49	Common pipistrelle	Seen, foraging and feeding buzz.
19:50	Common pipistrelle	Unseen, Detected by Anabat.
19:50	Common pipistrelle	Unseen, Detected by Anabat.
19:50	Common and Soprano pipistrelle	Unseen, Detected by Anabat.
19:50	Common and Soprano pipistrelle	Unseen, Detected by Anabat.
19:51	Soprano and Common pipistrelle	Seen, Common pipistrelle came back from north east to south west whilst soprano pipistrelle was foraging still. Detected by Anabat.

Time	Species detected	Comments
19:51	Soprano pipistrelle	Unseen, Detected by Anabat. Social calls also.
19:51	Soprano pipistrelle	Unseen, Detected by Anabat.
19:51	Soprano pipistrelle	Unseen, Detected by Anabat.
19:52	Soprano pipistrelle	Unseen, Detected by Anabat.
19:52	Soprano pipistrelle	Unseen, Detected by Anabat.
19:52	Soprano pipistrelle	Unseen, Detected by Anabat.
19:53	Soprano pipistrelle	Unseen, Detected by Anabat.
19:53	Soprano pipistrelle	Unseen, Detected by Anabat.
19:53	Common and Soprano pipistrelle	Unseen, Detected by Anabat.
19:54	Soprano pipistrelle	Seen, repeat forage of 19:42. Not detected by Anabat.
19:56	Soprano x2 and Common pipistrelle	Seen. Detected by Anabat.
19:57	Soprano pipistrelle	Unseen, Detected by Anabat.
19:57	Soprano pipistrelle	Unseen, Detected by Anabat.
19:58	Soprano pipistrelle	Unseen, Detected by Anabat and social calls.
19:58	Soprano pipistrelle	Unseen, Detected by Anabat.
19:58	Soprano pipistrelle	Unseen, Detected by Anabat.
19:58	Soprano pipistrelle	Unseen, Detected by Anabat.
19:58	Soprano pipistrelle	Unseen, Detected by Anabat.
19:59	Soprano pipistrelle	Unseen, Detected by Anabat.
19:59	Common pipistrelle	Unseen, Detected by Anabat.
19:59	Common pipistrelle	Unseen, Detected by Anabat.
19:59	Common pipistrelle	Unseen, Detected by Anabat and social calls.
20:00	Soprano pipistrelle	Unseen, Detected by Anabat.
20:01	Soprano pipistrelle	Unseen, Detected by Anabat.
20:02	Common pipistrelle	Seen, repeat of 19:45. Not detected by Anabat.
20:04	Common pipistrelle	Unseen, Detected by Anabat.

Time	Species detected	Comments
20:04	Common pipistrelle	Unseen, Detected by Anabat.
20:04	Common pipistrelle	Unseen, Detected by Anabat.
20:05	Common pipistrelle	Unseen, Detected by Anabat.
20:05	Common pipistrelle	Unseen, Detected by Anabat.
20:05	Common pipistrelle	Unseen, Detected by Anabat.
20:05	Common pipistrelle	Unseen, Detected by Anabat.
20:07	Common pipistrelle	Unseen, Detected by Anabat.
20:07	Common pipistrelle	Unseen, Detected by Anabat.
20:08	Common pipistrelle	Unseen, Repeat constant foraging. Detected by Anabat.
20:08	Common pipistrelle	Unseen, Detected by Anabat.
20:08	Common pipistrelle	Unseen, Detected by Anabat.
20:09	Common pipistrelle	Unseen, Detected by Anabat.
20:09	Common pipistrelle	Unseen, Detected by Anabat.
20:09	Common pipistrelle	Unseen, Detected by Anabat.
20:10	Noctule	Unseen. Not Detected by Anabat.
20:10	Common pipistrelle	Unseen, foraging. Detected by Anabat.
20:10	Common pipistrelle	Unseen, Detected by Anabat.
20:10	Common pipistrelle	Unseen, Detected by Anabat.
20:10	Soprano pipistrelle	Unseen, foraging. Not detected by Anabat.
20:11	Common pipistrelle	Unseen, Detected by Anabat.
20:11	Soprano pipistrelle	Unseen, Detected by Anabat.
20:12	Soprano pipistrelle	Unseen, Detected by Anabat.
20:12	Soprano pipistrelle	Unseen, Detected by Anabat.
20:12	Soprano and Common pipistrelle	Unseen, Detected by Anabat.
20:13	Common pipistrelle	Unseen, Detected by Anabat and social calls.
20:13	Soprano pipistrelle	Unseen, Detected by Anabat and social calls.

Time	Species detected	Comments
20:13	Soprano pipistrelle	Unseen, Detected by Anabat and social calls.
20:14	Soprano pipistrelle	Unseen, Detected by Anabat and social calls.
20:14	Common pipistrelle	Unseen, Detected by Anabat.
20:14	Common pipistrelle	Unseen, Detected by Anabat.
20:14	Common pipistrelle	Unseen, Detected by Anabat.
20:15	Soprano pipistrelle	Unseen, Detected by Anabat and social calls.
20:15	Soprano pipistrelle	Unseen, Detected by Anabat and social calls.
20:16	Soprano pipistrelle	Unseen, Detected by Anabat and social calls.
20:16	Common pipistrelle	Unseen, Detected by Anabat and social calls.
20:16	Common and soprano pipistrelle	Unseen, Detected by Anabat and social calls.
20:16	Soprano pipistrelle	Unseen, Detected by Anabat and social calls.
20:17	Soprano pipistrelle	Foraging, unseen, in garden. Detected by Anabat.
20:18	Soprano pipistrelle	Unseen, Detected by Anabat and social calls.
20:18	Soprano pipistrelle	Unseen, Detected by Anabat and social calls.
20:19	Soprano pipistrelle	Feeding buzz, foraging, unseen, brief. Detected by Anabat.
20:19	Soprano pipistrelle	Unseen, Detected by Anabat.
20:19	Soprano pipistrelle	Unseen, Detected by Anabat.
20:21	Soprano pipistrelle	Unseen, Detected by Anabat.
20:21	Soprano pipistrelle	Unseen, Detected by Anabat.
20:22	Soprano pipistrelle	Unseen, Detected by Anabat.
20:27	Soprano pipistrelle	Unseen, brief. Not Detected by Anabat.
20:29	Noctule	Unseen, brief. Not Detected by Anabat.
20:30	Noctule	Unseen. Detected by Anabat.
20:30	Soprano pipistrelle and noctule	Unseen, Detected by Anabat.
20:31	Soprano pipistrelle and noctule	Unseen, Detected by Anabat.
20:32	Soprano pipistrelle	Unseen, foraging. Detected by Anabat.

Time	Species detected	Comments
20:33	Soprano pipistrelle	Unseen, Detected by Anabat.
20:33	Soprano pipistrelle	Unseen, including Social calls Detected by Anabat.
20:34	Soprano pipistrelle	Unseen, including Social calls Detected by Anabat.
20:34	Soprano pipistrelle	Unseen, including Social calls Detected by Anabat.
20:35	Soprano pipistrelle	Unseen, including Social calls Detected by Anabat.
20:36	Soprano pipistrelle	Unseen, including Social calls Detected by Anabat.
20:37	Soprano pipistrelle	Unseen, including Social calls Detected by Anabat.
20:37	Soprano pipistrelle	Unseen, including Social calls Detected by Anabat.
20:37	Soprano pipistrelle	Unseen, including Social calls Detected by Anabat.
20:37	Soprano pipistrelle	Unseen, including Social calls Detected by Anabat.
20:37	Soprano pipistrelle	Unseen, including Social calls Detected by Anabat.
20:37	Soprano pipistrelle	Unseen, including Social calls Detected by Anabat.
20:38	Soprano pipistrelle	Unseen, Detected by Anabat.
20:41	Soprano pipistrelle	Unseen, Detected by Anabat.
20:49	Soprano pipistrelle	Unseen, Detected by Anabat.

Survey position B was positioned on the south east (in car park) of mature horse chestnut (T12).

Time	Species detected	Comments
19:14	Soprano pipistrelle	Seen, flying southwards – considered to be the same bat as observed by surveyor position A (i.e. possible emergence from a dead tree to the north of T12)
19:24	Soprano pipistrelle	Flying opposite to 19:14 bat.
19:31	Soprano pipistrelle	Flying across car park towards tree and off to the north east.
19:34	Soprano pipistrelle	Flying high over neighboring house, social calls also
19:36-7	Common pipistrelle	Flying around dead tree to north of T12.
19:37	Soprano pipistrelle	Flying from direction of the dead tree to north of T12.
19:39-40	Soprano pipistrelle	Seen, foraging around trees.
19:41	Pipistrelle sp.	Unseen, including social call
19:43-44	Soprano pipistrelle	Foraging high above tree.

Time	Species detected	Comments
19:46	Common pipistrelle	Foraging high above tree and around car park continuously.
19:49	Noctule	Brief, unseen.
19:49	Soprano pipistrelle	Unseen, foraging continuously.
19:51	Common and soprano pipistrelle	Foraging, unseen.
19:54	Soprano pipistrelle	Seen, foraging around tree, social calls.
19:57	Common pipistrelle	Seen, Multiple pipistrelles foraging around tree.
19:57	Serotine	Foraging, unseen.
19:58	Soprano pipistrelle	Foraging, unseen.
20:02	Common pipistrelle	Foraging, unseen.
20:03	Common and soprano pipistrelle	Multiple pipistrelles, foraging, unseen.
20:05	Common pipistrelle	Foraging, unseen.
20:07	Common and soprano pipistrelle	Multiple pipistrelles, foraging, unseen, continuous until 20:10. Social calls also.
20:11-14	Common and soprano pipistrelle	Foraging, unseen, social calls also
20:15-19	Soprano pipistrelle	Foraging, unseen, social calls also
20:27	Pipistrelle sp.	Brief, unseen
20:28 - 46	Soprano pipistrelle	Foraging, unseen, social calls also

2018:

Weather:

Weather conditions for each detector survey are provided in the table below:

Building	Survey type and time of dusk/dawn	Survey Date	Weather
Coach House - B1	Dusk – 21:11	16/07/18	Max temp. 23oC, Min temp. 20.7oC, dry, light to moderate gusting SW breeze, 4/8 high cloud cover to 5/8 high cloud cover at end, humidity 57% to 66% (bright evening)
Tree G8.53 – Dead sycamore	Dawn – 05:38	10/08/18	Max temp. 12°C, Min temp. 11°C, dry (rain earlier overnight), calm to very light breeze, 0/8 at start to 0/8 at end, humidity 89% to 93%

Results:

Detector Survey of the site buildings (B1 Coach House): Dusk 16th July 2018

Survey position A was positioned facing southern façade of coach house building

Time	Species detected	Comments
21:23	Soprano Pipistrelle	Observed flying from single storey building to west of coach house at 2m off ground and into park to the south
21:26	Soprano Pipistrelle	Brief, unseen
21:28	Soprano Pipistrelle	Brief, unseen
21:29	Soprano Pipistrelle	Brief, unseen
21:31	Soprano Pipistrelle	Brief, unseen
21:32	Soprano Pipistrelle	Brief, unseen
21:32	Serotine	Brief, unseen
21:33	Soprano Pipistrelle	Continuous foraging, unseen to 21:36
21:37	Soprano Pipistrelle	Observed flying from east of building round the south to the rear
21:38	Soprano Pipistrelle	Continuous foraging, unseen to 21:47
21:48	Common	Brief, unseen

Time	Species detected	Comments
	pipistrelle	
21:49	Soprano pipistrelle	Brief, unseen
21:52	Soprano pipistrelle	Brief, unseen
21:53	Soprano pipistrelle	Brief, unseen
21:55	Soprano pipistrelle	Observed flying from east to west and beyond the building to the rear
21:59	Common pipistrelle	Brief, unseen
22:00	Soprano pipistrelle	Continuous foraging, unseen to 22:05
22:06	Common pipistrelle	Brief, unseen
22:08	Soprano pipistrelle	Continuous foraging, unseen to 22:11
22:12	Common pipistrelle	Brief, unseen
22:15	Soprano pipistrelle	Brief, unseen
22:20	Common pipistrelle	Brief, unseen
22:24	Soprano pipistrelle	Brief, unseen
22:32	Soprano pipistrelle	Brief, unseen
22:33	Noctule	Brief, unseen

Survey position B: North elevation of the Coach house

Time	Species detected	Comments
21:28	Soprano pipistrelle	Social call and pass unseen, 16 minutes after sunset
21:31-33	Soprano pipistrelle	Couple of passes per minute unseen, 19-21 minutes after sunset.
21:33	Common pipistrelle & Soprano pipistrelle	Observed pass flying from the north of the coach house to the east and front of house, 21 minutes after sunset.
21:33-38	Soprano pipistrelle	Observed pass with several subsequent passes north of the coach house, 21-26 minutes after sunset

Time	Species detected	Comments
21:39	Soprano pipistrelle	Two passes observed in the northern garden of the coach house, 27 minutes after sunset.
21:39	Common pipistrelle & Soprano pipistrelle	Pass unseen, 27 minutes after sunset.
21:40	Common pipistrelle	Observed pass from the east to the north of the coach house, 28 minutes after sunset.
21:40	Common pipistrelle & Soprano pipistrelle	Observed pass north of the coach house, 28 minutes after sunset.
21:40	Soprano pipistrelle	Observed pass from the east to the north of the coach house, 28 minutes after sunset.
21:42	Common pipistrelle	Observed pass from the west of the coach house flying north., 30 minutes after sunset.
21:44-45	Soprano pipistrelle	Observed pass per minute over the roof of the coach house flying south to north 32-33 minutes after sunset.
21:46-48	Common pipistrelle	Several observed passes per minute unseen, 34-36 minutes after sunset.
21:49	Soprano pipistrelle	Pass unseen, 37 minutes after sunset.
21:51	Common pipistrelle	Three observed passes to the north and north east of the coach house, 39 minutes after sunset
21:52	Common pipistrelle & Soprano pipistrelle	Observed pass north of the coach house, 40 minutes after sunset.
21:52-53	Common pipistrelle	Several observed passes over the roof of the coach house and the northern section of the garden, 40-41 minutes after sunset.
21:53-54	Common pipistrelle & Soprano pipistrelle	Observed passes in the northern garden, 41-42 minutes after sunset.
21:54-57	Soprano pipistrelle	Occasional observed pass per minute, 42-45 minutes after sunset.

Time	Species detected	Comments
22:02	Common pipistrelle	Observed pass from east to west on the north side of the coach house, 50 minutes after sunset.
22:02	Soprano pipistrelle	Pass unseen, 50 minutes after sunset.
22:05	Pipistrelle sp.	Social call recorded, 53 minutes after sunset.
22:08	Soprano pipistrelle	Pass unseen, 56 minutes after sunset.
22:09	Common pipistrelle	Observed pass to the north-west of the coach house, 57 minutes after sunset.
22:10- 22:20	Soprano pipistrelle	Occasional brief observed pass per 5 minutes unseen, 58 minutes – 1 hour 18 minutes after sunset.
22:39	Common pipistrelle	Pass unseen, 1 hour 22 minutes after sunset.
22:47	Common pipistrelle	Pass unseen, 1 hour 35 minutes after sunset.

Survey position C: West elevation of toilets and north-west end of the Coach house

Time	Species detected	Comments
21:26	Soprano pipistrelle	Pass unseen, 14 minutes after sunset.
21:33	Common pipistrelle & Soprano pipistrelle	Observed pass flying south to north across coach house car park, 21 minutes after sunset.
21:35- 39	Soprano pipistrelle	Occasional pass unseen, 23-27 minutes after sunset
21:40	Common pipistrelle	Two passes observed flying from the north to the south, 28 minutes after sunset.
21:40- 41	Soprano pipistrelle	Two passes unseen, 28-29 minutes after sunset.
21:42	Common pipistrelle	Observed pass flying from south to north, 30 minutes after sunset.
21:44- 45	Soprano pipistrelle	Two passes unseen, 32-33 minutes after sunset.

Time	Species detected	Comments
21:47	Common pipistrelle	Two passes unseen, 35 minutes after sunset.
21:49	Soprano pipistrelle	Observed pass flying from west over surveyor towards the north-east, 37 minutes after sunset.
21:52	Soprano pipistrelle	Observed pass, flying west to east slightly north of surveyor's position., 40 minutes after sunset.
21:52-54	Common pipistrelle	Pass unseen per 2 minutes, 40-42 minutes after sunset
21:55	Soprano pipistrelle	Two passes unseen, 43 minutes after sunset.
21:55	Common pipistrelle	Two passes observed flying south to north and then back including an audible social call, 43 minutes after sunset.
21:56	Soprano pipistrelle	Two passes unseen, 44 minutes after sunset.
22:05	Pipistrelle sp.	Social call recorded, 53 minutes after sunset.
22:09	Common pipistrelle	Pass unseen, 57 minutes after sunset.
22:10-24	Soprano pipistrelle	Occasional pass every 5 minutes unseen, 58 minutes – 1 hour 12 minutes after sunset.

Surveyor position D - on the north east side of the building

Time	Species detected	Comments
21:28	Soprano pipistrelle	Brief, unseen
21:37	Soprano pipistrelle	Brief, unseen
21:38	Soprano pipistrelle	Brief, unseen
21:47	Common pipistrelle	Brief, unseen
21:52	Soprano pipistrelle	Brief, unseen
21:53	Common pipistrelle	Brief, unseen
21:54	Soprano pipistrelle	Brief, unseen
21:58	Common pipistrelle	Brief, unseen
22:02	Common pipistrelle	Brief, unseen

Time	Species detected	Comments
22:04	Soprano pipistrelle	Brief, unseen
22:05	Common pipistrelle	Brief, unseen
22:06	Soprano pipistrelle	Brief, unseen
22:06	Common pipistrelle	Brief, unseen
22:13	Common pipistrelle	Brief, unseen
22:17	Soprano pipistrelle	Brief, unseen
22:32	Soprano pipistrelle	Brief, unseen
22:33	Noctule	Brief, unseen
22:37	Common pipistrelle	Brief, unseen
22:39	Common pipistrelle	Brief, unseen
22:42	Common pipistrelle	Brief, unseen

Survey position E – observing the southern end of the western aspect of the coach house

Time	Species detected	Comments
21:25:36	Soprano pipistrelle	14 minutes after sunset, bat seen to fly S to N about eave level from the trees.
21:33:02	Soprano pipistrelle	Bat seen travelling W to E, came over the wall to rear of surveyor
21:33:28	Common and Soprano pipistrelle	Batlogger detected both species (Common first). One bat seen flying S to N below eave height across court yard.
21:34:54	Soprano pipistrelle	Foraging unseen.
21:35:15 & 21:35:19	Soprano pipistrelle	Foraging unseen
21:35	Pipistrelle sp.	Seen flying along the ridge from S to N and then descending into the court yard.
21:36	Soprano pipistrelle	Unseen, brief.
21:38	Soprano pipistrelle	Close pass, unseen.
21:39:00 & 21:39:15	Soprano pipistrelle	Close passes, unseen.
21:39:47	Common and Soprano pipistrelles	Seen flying close to each other N to S across the court yard.
21:41:32	Soprano pipistrelle	Brief pass, unseen.
21:41:56 & 21:41:58	Common pipistrelle	Passes, unseen.

Time	Species detected	Comments
21:43:54	Soprano pipistrelle	Brief pass, unseen.
21:44:50	Soprano pipistrelle	Seen flying from NW to S across the courtyard into the trees.
21:46:43 to 21:47:18	Common pipistrelle	Foraging above the surveyor's head.
21:48:50	Soprano pipistrelle	Unseen brief pass.
21:49:33	Soprano pipistrelle	Seen flying SE to NW across the courtyard.
21:51:58	Soprano pipistrelle	Pass, unseen.
21:53:55 & 58	Common pipistrelle	Seen foraging over the courtyard N to S, circling, then away.
21:54:45	Soprano pipistrelle	Unseen pass.
21:55:11, 21:55: 22 & 52	Soprano pipistrelle	Three passes unseen.
21:56	Soprano pipistrelle	Seen flying N to S along the wall to west of courtyard and away to SW.
22:00:22 & 31	Soprano pipistrelle	Two passes, unseen.
22:05	Pipistrelle sp.	Social call
22:09:09	Common pipistrelle	Two bats seen flying SW to NE across the courtyard.
22:10:34	Soprano pipistrelle	Seen flying N to S along the wall to west of courtyard, away to SW over the wall.
22:17:19	Soprano pipistrelle	Pass, unseen.
22:21:08	Common pipistrelle	Pass close by, unseen.
22:22:21	Soprano pipistrelle	Pass, unseen.
22:24:14	Soprano pipistrelle	Pass, unseen.
22:26:01	Common pipistrelle	Brief pass, unseen.

Survey position F - positioned viewing the southern section of the eastern (front) elevation of the Coach House

Time	Species detected	Comments
21:28	Soprano pipistrelle	Seen, flew from beyond the south end of the coach house, in a northwards direction above chimney top height, commuting type flight
21:28	Soprano pipistrelle	Unseen, brief
21:30	Soprano pipistrelle	Unseen, brief
21:33	Pipistrelle sp.	Unseen, brief

Time	Species detected	Comments
21:36	Soprano pipistrelle	Unseen, foraging
21:36	Soprano pipistrelle	Seen, not recorded, flew from direction of trees beyond south end of coach house, over the coach house in a north-west direction towards its rear yard area
21:37	Soprano pipistrelle	Seen, not recorded, emergence, first observed close to the coach house just below eave level at the central (front coach entrance) section of the eastern elevation of the coach house
21:37	Soprano pipistrelle	Seen, not recorded, emergence from coach house
21:37	Soprano pipistrelle	Seen, not recorded, emergence from coach house
21:55	Soprano pipistrelle	Seen, flew southwards along the front (eastern) elevation of the coach house and off beyond the coach house to the south-east
21:59	Common pipistrelle	Unseen, commuting
21:59	Common pipistrelle	Unseen, foraging
22:00	Common pipistrelle	Unseen
22:04	Soprano pipistrelle	Seen, direct commuting-type flight, flew in a southwards direction above the lawns to the front (east) of the coach house and beyond the coach house to the south
22:05	Common pipistrelle	Unseen
22:06	Soprano pipistrelle	Unseen and social call
22:06	Common pipistrelle	Seen, flew towards building and then over top of building and beyond the building towards its rear yard
22:06	Common pipistrelle	Unseen
22:13	Common pipistrelle	Seen, flew in a southwards direction above the lawns to the front (east) of the coach house and beyond the coach house to the south
22:17	Soprano pipistrelle	Seen as
22:21	Common pipistrelle	Unseen
22:22	Common pipistrelle	Unseen
22:33	<i>Nyctalus</i> sp.	Unseen
22:38	Common pipistrelle	Unseen
22:39	Common pipistrelle	Unseen
22:40	Common pipistrelle	Unseen

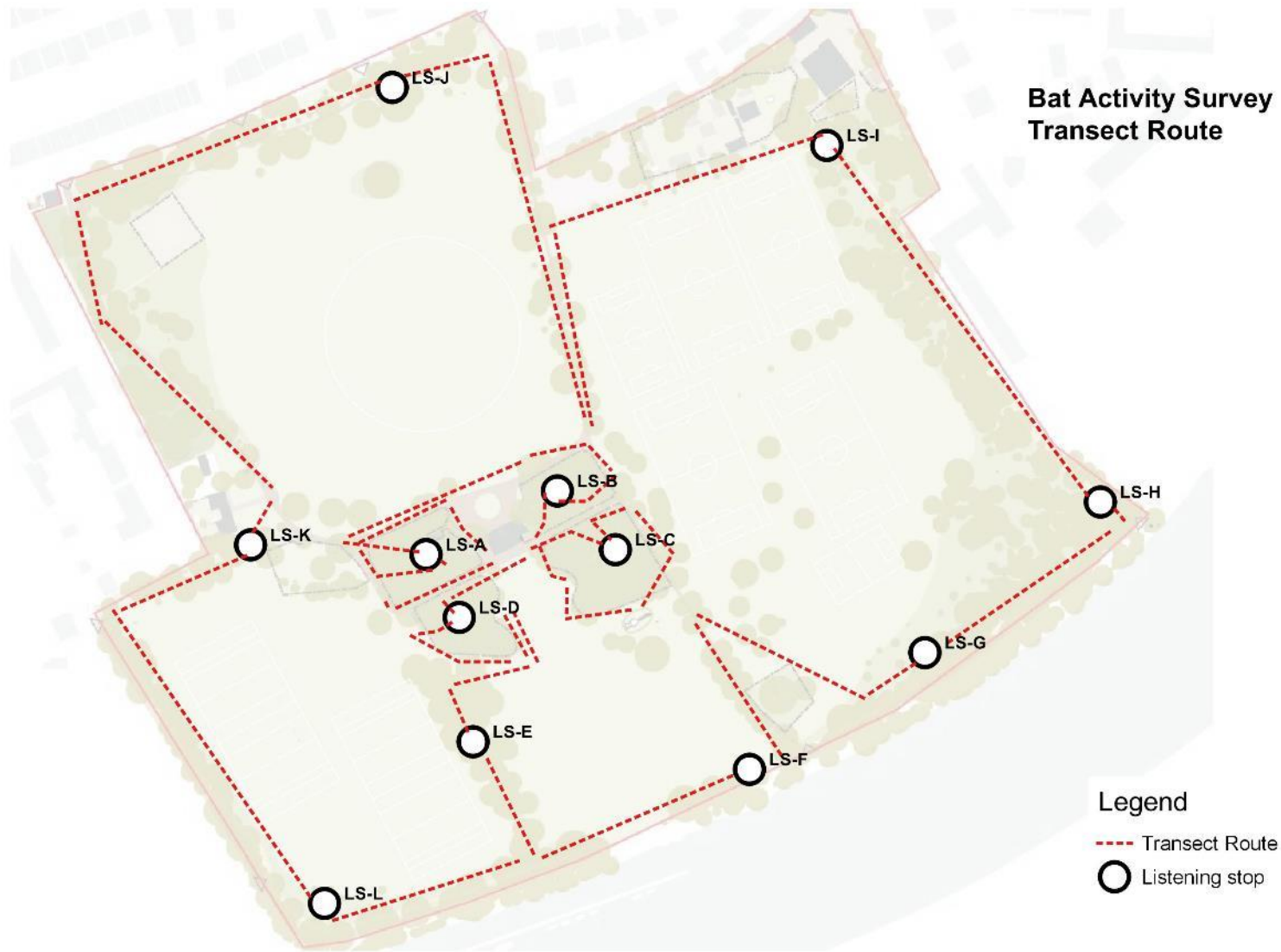
Detector Survey of the tree G8.53 – Dead sycamore: Dawn 10th August 2018

Survey position A – observing the eastern aspect of dying mature sycamore G8.53

Time	Species detected	Comments
04:47	Soprano pipistrelle	Very brief call, distant, unseen, not recorded by Batlogger.
		No other bat activity seen or heard for the rest of the survey.

Survey position B – no bat activity observed or detected

14. APPENDIX 6 – WALKING TRANSECT SURVEY ROUTE & RESULTS PLANS

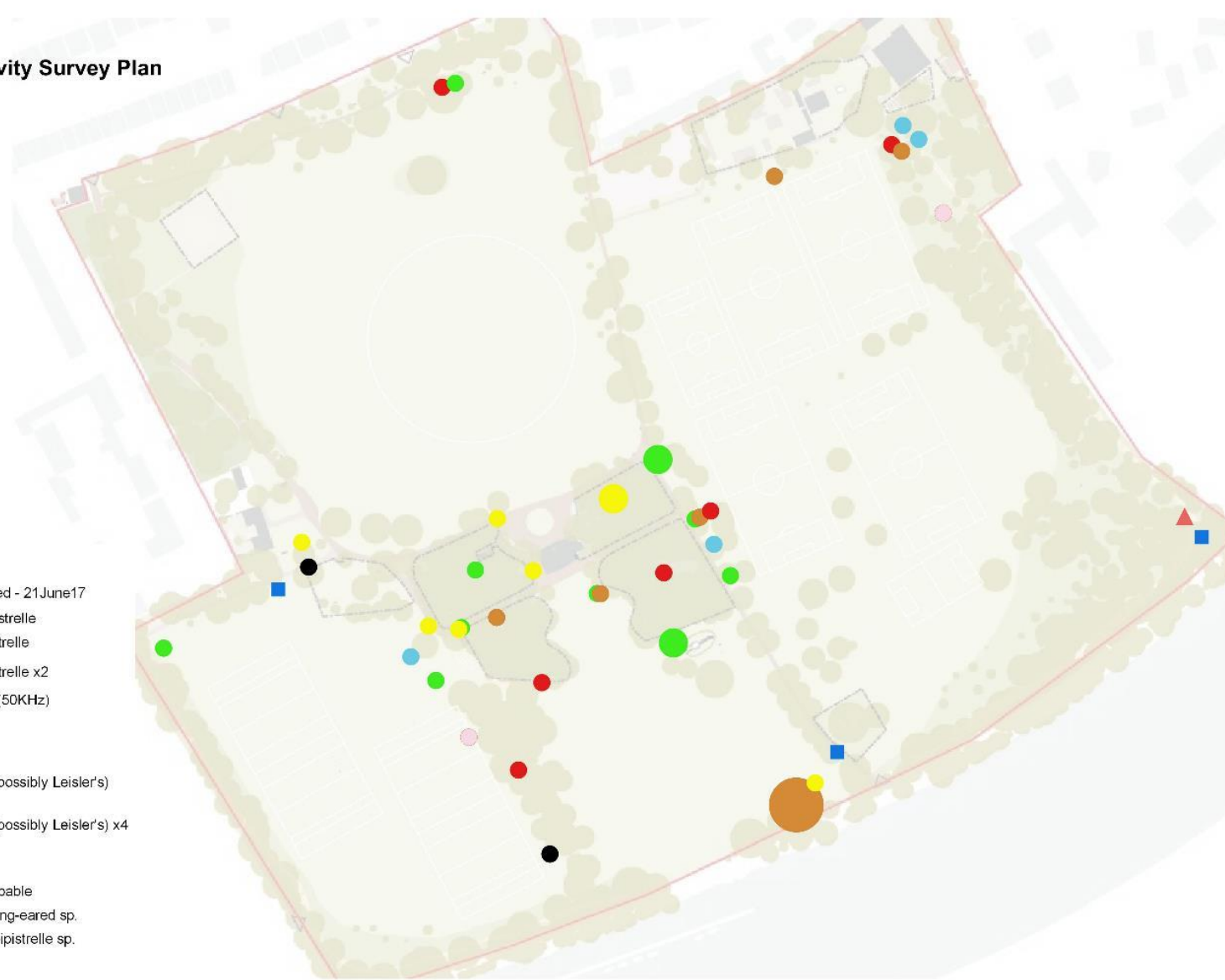


June Bat Activity Survey Plan

Legend

Bat Species Encountered - 21 June 17

- Common Pipistrelle
- Soprano pipistrelle
- Soprano pipistrelle x2
- Pipistrelle sp. (50KHz)
- Noctule
- Noctule x2
- Nyctalus sp. (possibly Leisler's)
- Nyctalus sp. (possibly Leisler's) x4
- Nyctalus sp.
- Serotine - probable
- ▲ Myotis sp./ Long-eared sp.
- Social Call - pipistrelle sp.

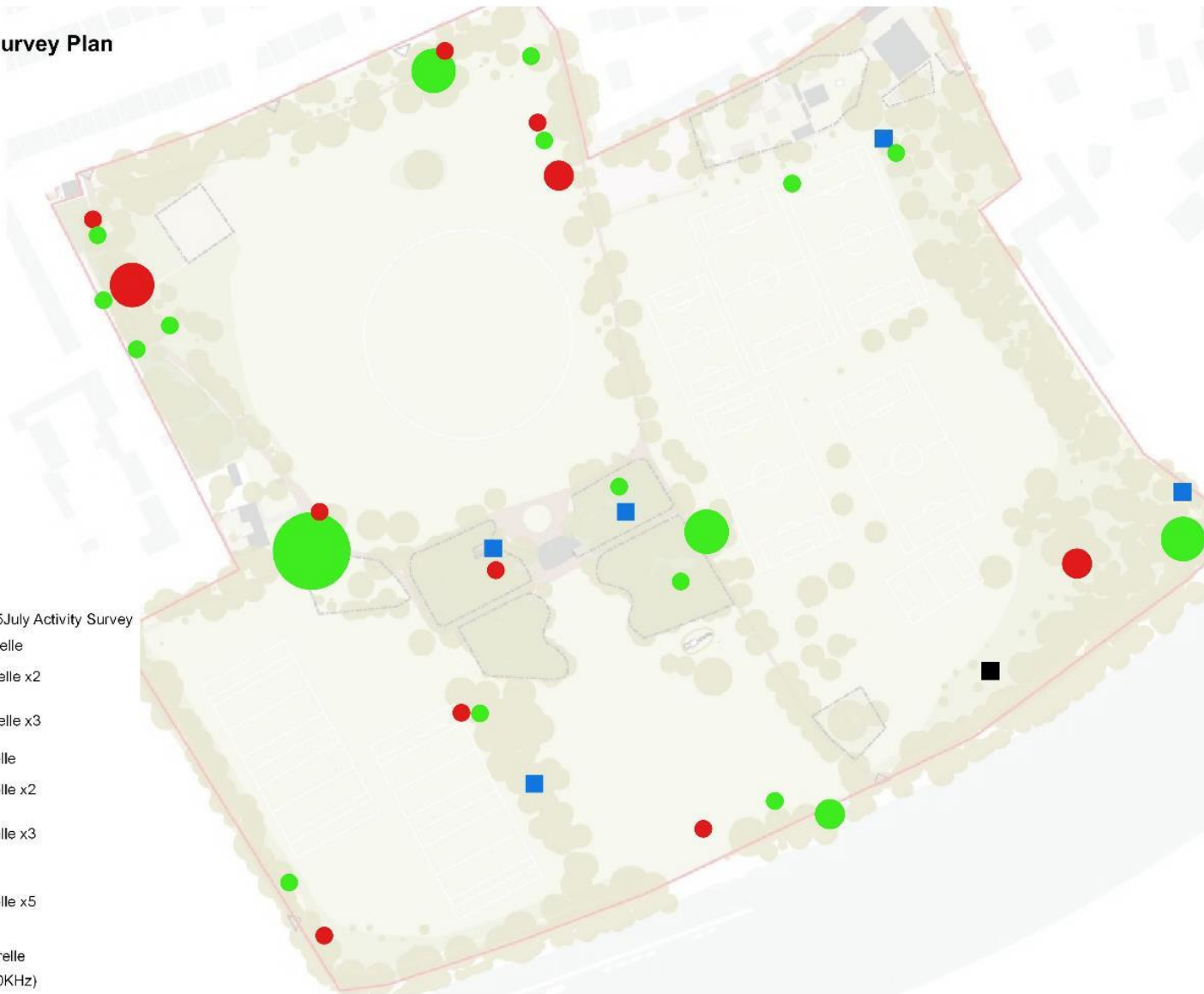


July Bat Activity Survey Plan

Legend

Bat Species encountered - 25 July Activity Survey

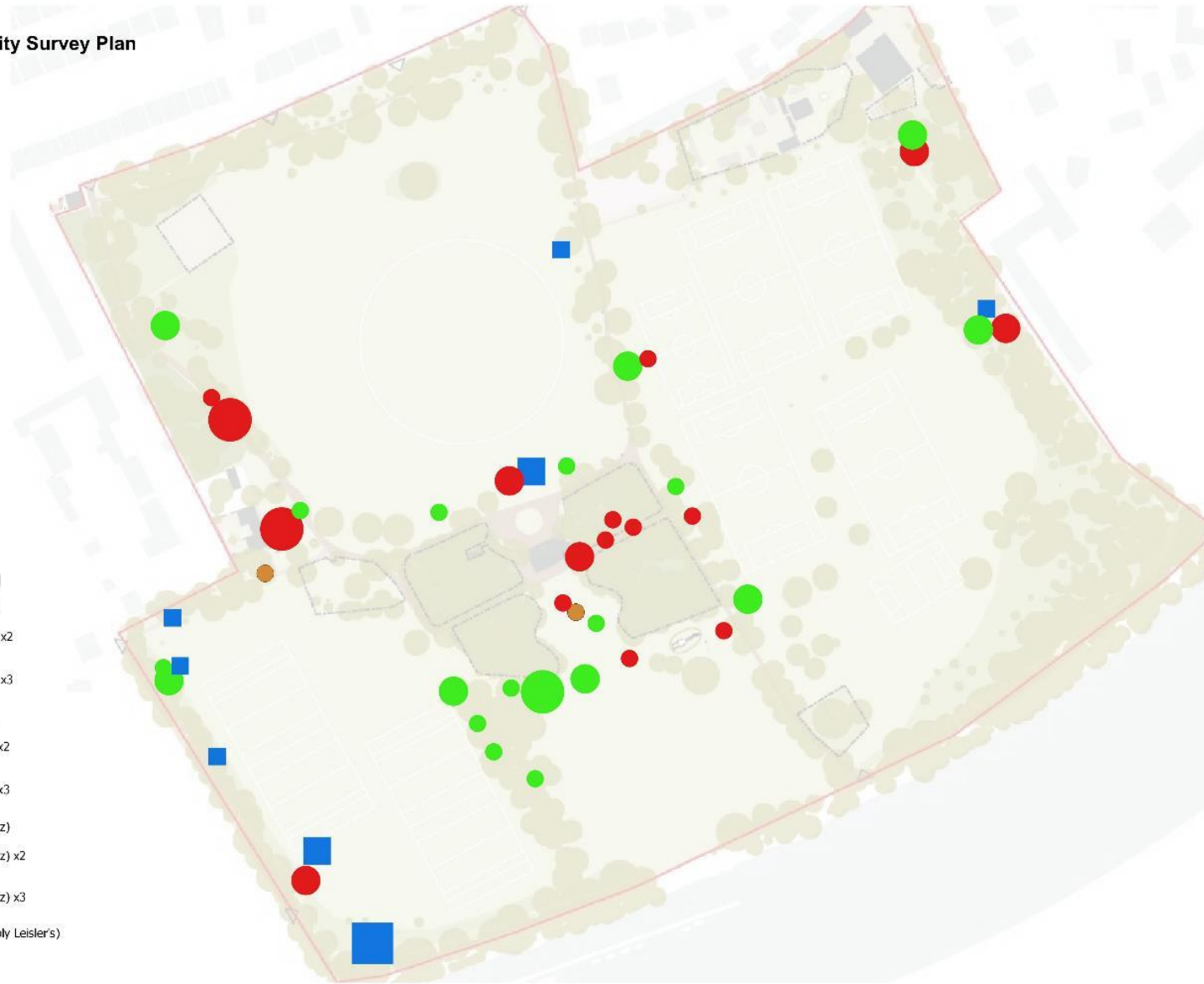
- Common Pipistrelle
- Common pipistrelle x2
- Common pipistrelle x3
- Soprano pipistrelle
- Soprano pipistrelle x2
- Soprano pipistrelle x3
- Soprano pipistrelle x5
- Nathusius pipistrelle
- Pipistrelle sp. (50KHz)



August Bat Activity Survey Plan

Legend

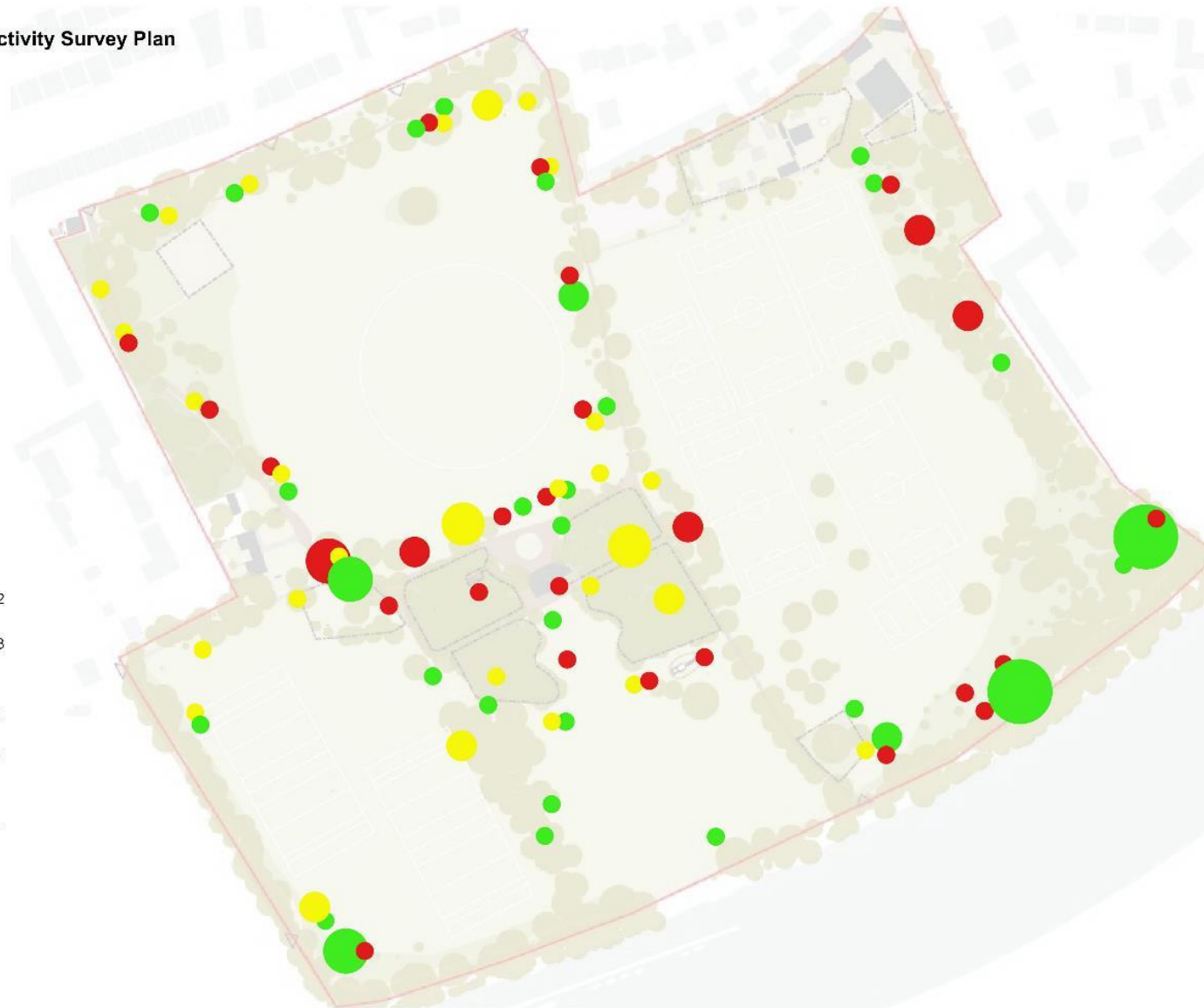
- Bat species encountered
- Common Pipistrelle
 - Common pipistrelle x2
 - Common pipistrelle x3
 - Soprano pipistrelle
 - Soprano pipistrelle x2
 - Soprano pipistrelle x3
 - Pipistrelle sp. (50KHz)
 - Pipistrelle sp. (50KHz) x2
 - Pipistrelle sp. (50KHz) x3
 - Nyctalus sp. (possibly Leisler's)



September Dusk Bat Activity Survey Plan

Legend

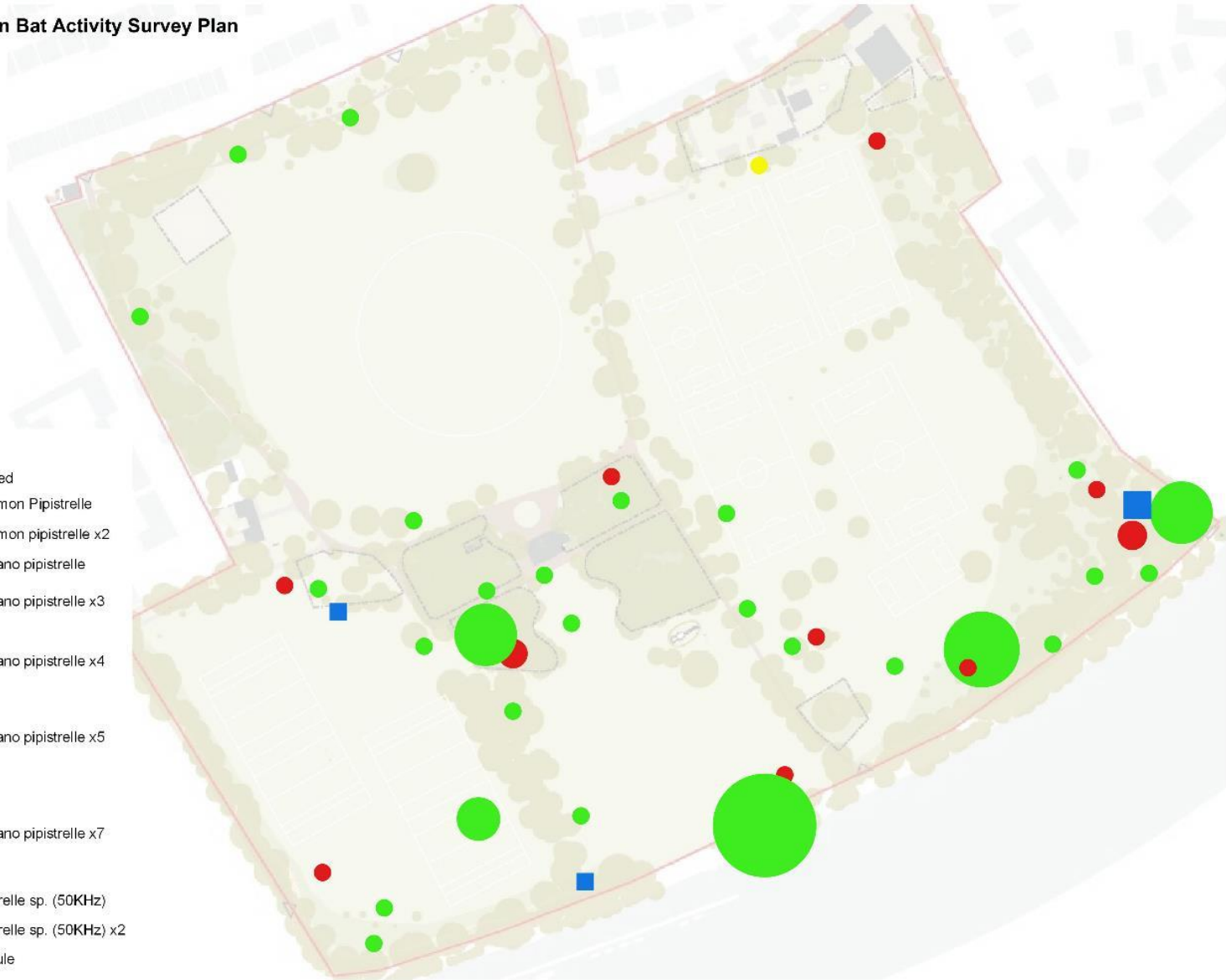
- Bat species encountered
- Common pipistrelle
 - Common pipistrelle x2
 - Common pipistrelle x3
 - Soprano pipistrelle
 - Soprano pipistrelle x2
 - Soprano pipistrelle x3
 - Soprano pipistrelle x4
 - Noctule
 - Noctule x2
 - Noctule x3



September Dawn Bat Activity Survey Plan

Legend

- Bat species encountered
- Common Pipistrelle
 - Common pipistrelle x2
 - Soprano pipistrelle
 - Soprano pipistrelle x3
 - Soprano pipistrelle x4
 - Soprano pipistrelle x5
 - Soprano pipistrelle x7
 - Pipistrelle sp. (50KHz)
 - Pipistrelle sp. (50KHz) x2
 - Noctule

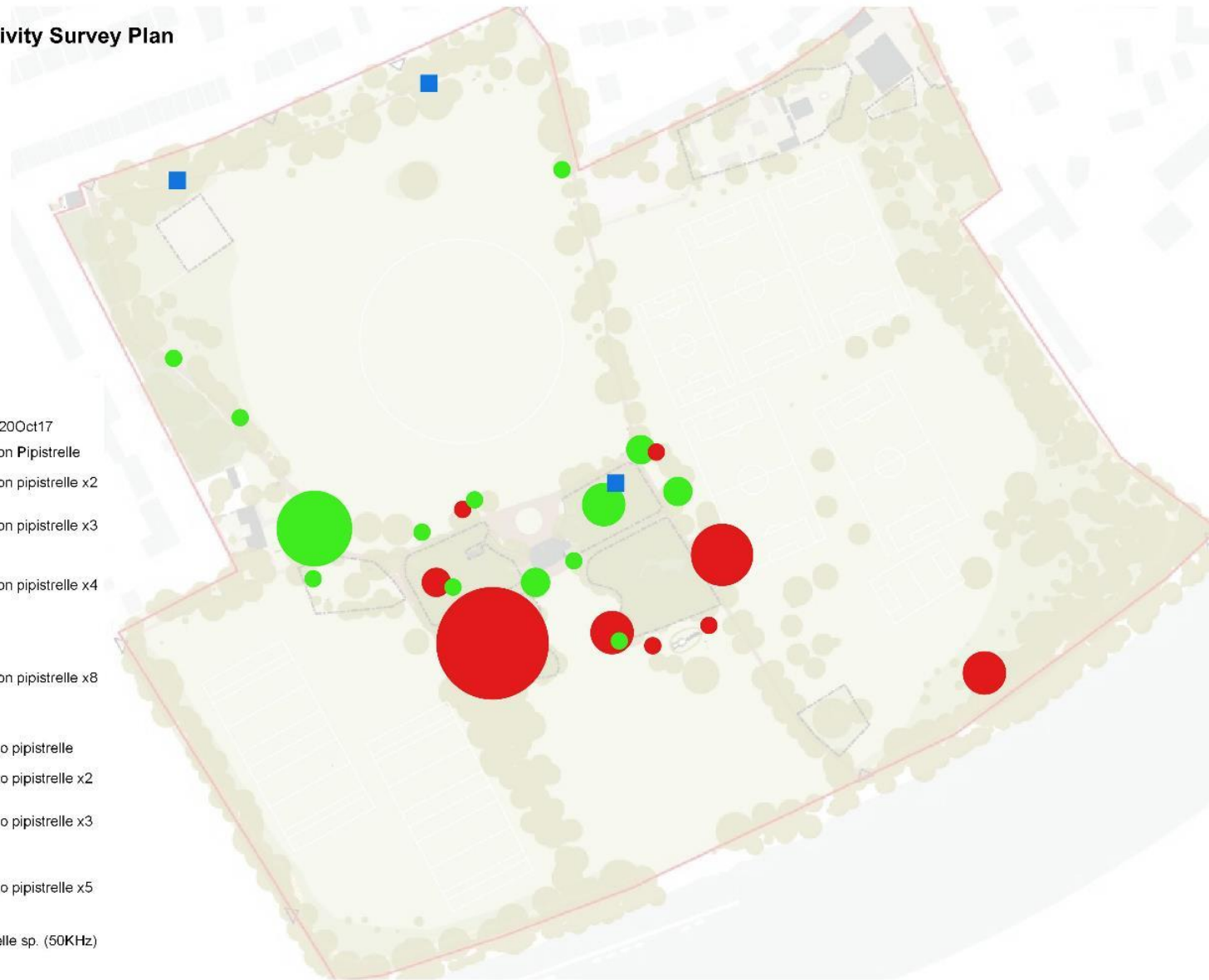


October Bat Activity Survey Plan

Legend

Bat species encountered 20Oct17

- Common Pipistrelle
- Common pipistrelle x2
- Common pipistrelle x3
- Common pipistrelle x4
- Common pipistrelle x8
- Soprano pipistrelle
- Soprano pipistrelle x2
- Soprano pipistrelle x3
- Soprano pipistrelle x5
- Pipistrelle sp. (50KHz)



15. APPENDIX 7 – STATIC BAT DETECTOR POSITIONS

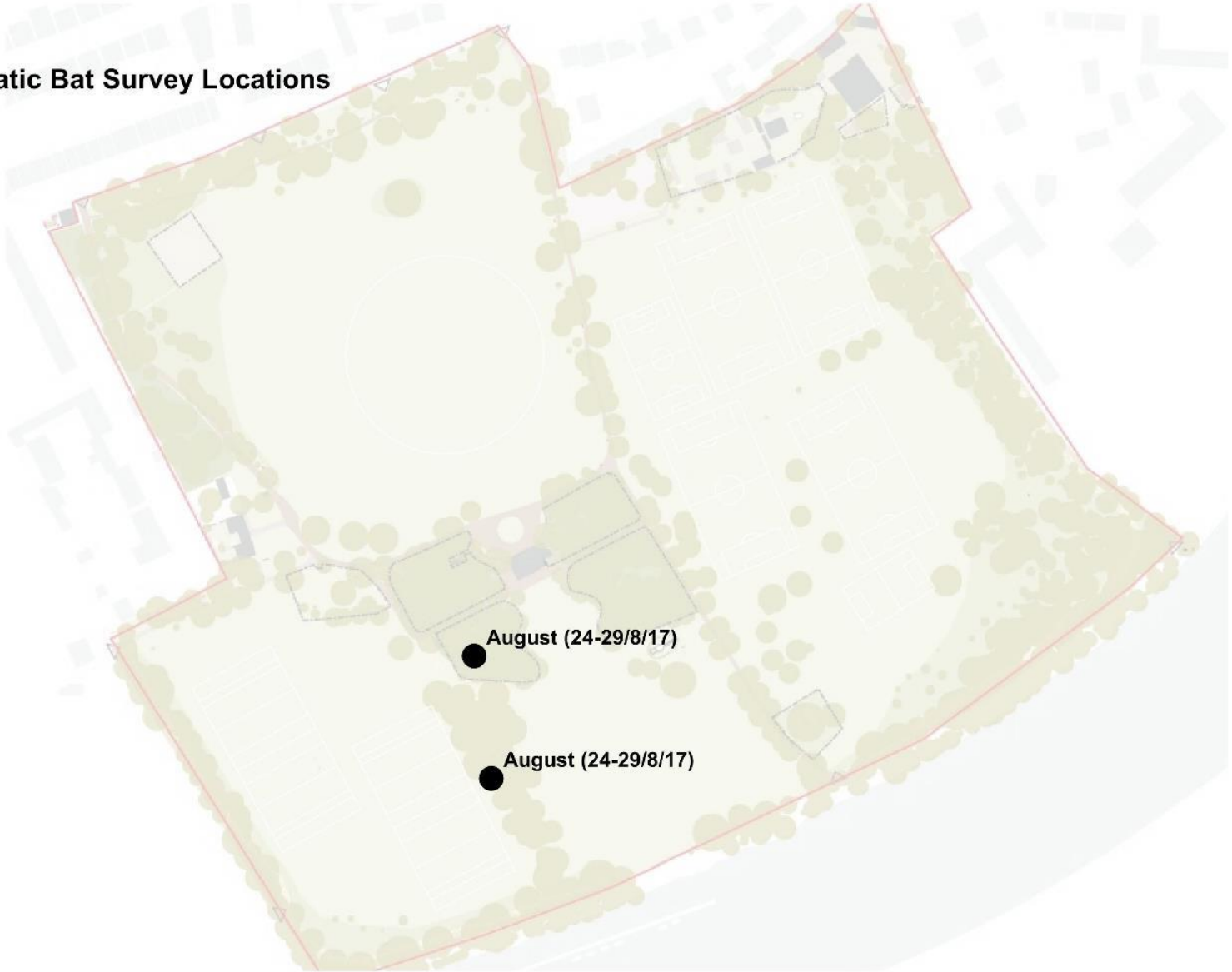
June Static Bat Survey Locations



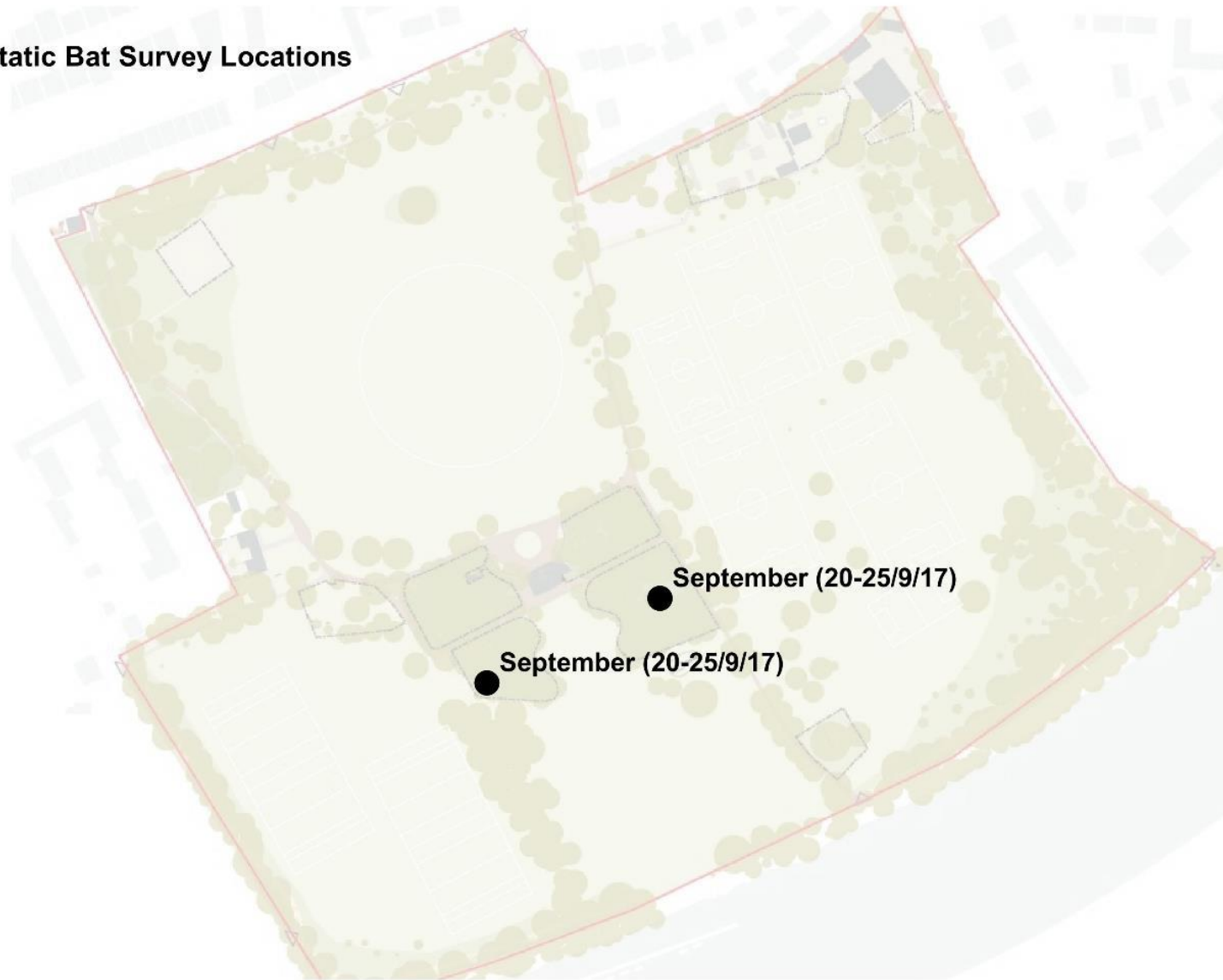
July Static Bat Survey Locations



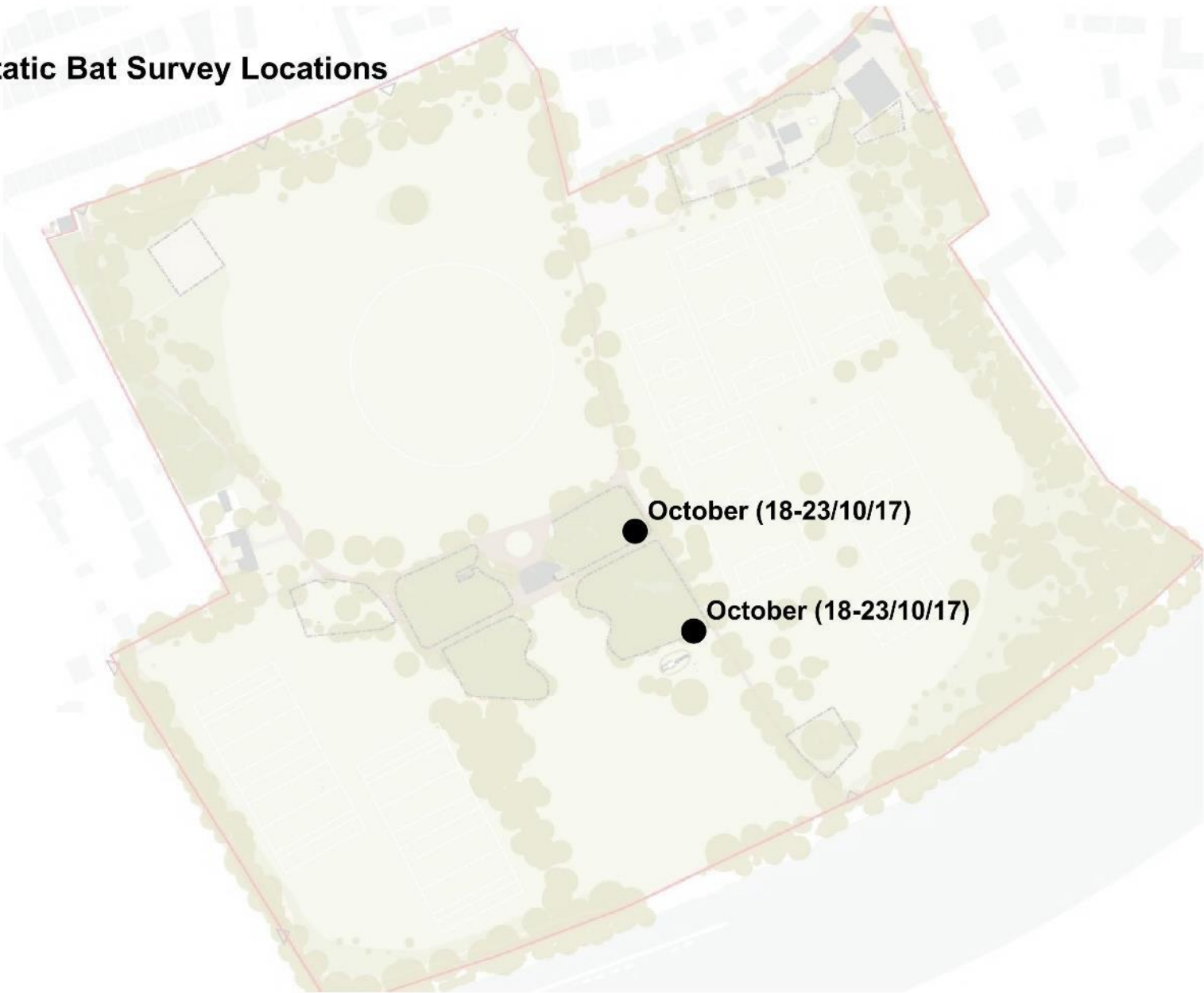
August Static Bat Survey Locations



September Static Bat Survey Locations



October Static Bat Survey Locations





BLANK