

Dusk Echolocation Study Report

155a Wokingham Road, Earley, Reading, Berkshire

May 2017



Table of Contents:

1. Summary.....	2
2. Methodology.....	3
2.1. Dusk Echolocation Survey	3
3. Results	3
3.1. Dusk Echolocation	3
4. Discussion, Conclusion & Recommendations.....	7

1. Summary

- 1.1. Sedghill Ecology Services was commissioned by Turley on behalf of Mulberry Care to conduct a dusk echolocation survey at 155a Wokingham Road, Earley, Reading, Berkshire.
- 1.2. The proposed development is for the placement of two dormers at the front and rear elevation and rear extension at the first-floor level.
- 1.3. A daytime bat and nesting bird assessment was undertaken on the 10th October 2016. There was no evidence of bats recorded during the internal or external inspections however the building was considered to hold moderate overall potential to support bat species. There were multiple access points observed externally and several potential roosting opportunities internally within the roof void. The building was considered to hold particular potential for crevice dwelling bats due to the gaps under tiles and the hanging tiles present on the building.
- 1.4. As the site had potential crevice roosting potential and potential access points, the building required further echolocation studies to rule out the likely absence or confirmed presence of a bat roost. The further studies undertaken during the active bat season, would inform the mitigation required for the proposed works.
- 1.5. The subsequent dusk echolocation survey were undertaken on the 8th May and the 25th May 2017.
- 1.6. The dusk echolocation surveys noted traversing and foraging common and soprano pipistrelle bats. No individuals were noted to emerge or re-enter the building. It is thought with precautionary measures in place the scheme is entirely deliverable.

2. Methodology

2.1. Dusk Echolocation Survey

2.1.1. The evening activity surveys were undertaken in suitable weather conditions by two experienced bat ecologists positioned around the site from half an hour before sunset for two hours. The surveyors used heterodyne bat detectors to listen for echolocation calls and any bat passes were also recorded in frequency division and later analysed using 'Bat Scan'. Any bat sightings were noted including the time, location, behaviour and call.

3. Results

3.1. Dusk Echolocation

3.1.1. The first dusk survey was carried out on the 8th May, with sunset at 20.36. Conditions were suitable with a slight breeze, 20 % cloud cover and 17°C. The end conditions were suitable, 12°C, clear and a slight breeze. The survey noted traversing and foraging activity with the adjacent tree line boundaries within the front and sides of the site. No individuals were noted to emerge or re-enter the site. The rear and sides of the building had up lighting with high levels of light spill to the rear elevation walls and roof spaces. No bats were noted to traverse directly adjacent to the rear boundary. The results of the survey are noted in Table 1.

3.1.2. The second dusk echolocation study was undertaken on the 25th May. The conditions were suitable with a temperature of 18°C, clear no clouds and a slight breeze. Sunset was at 21.02. The end conditions were suitable with 17°C, clear and a slight breeze. The survey noted traversing and distant foraging common and soprano pipistrelle individuals. The building had up lighting and security lights that came on from dusk time. No individuals were noted to emerge or re-enter the building. The results of the survey are noted in Table 2.

Table 1: 8th May Dusk Survey Results (combined results from both surveyors)

Time	Species	kHz number	Method of ID (seen, heard)	Behaviour (exiting roost/commuting/feeding)
20.57	Common pipistrelle	42	Heard	Traversing/ Commuting
20.58	Common pipistrelle	45	Heard	Traversing – distant
21.02	Common pipistrelle	45	Heard	Traversing
21.03	Common pipistrelle	45	Heard	Traversing – distant
21.05	Common pipistrelle	44	Heard	Traversing
21.06	Common pipistrelle	45	Heard	Foraging – distant
21.09	Common pipistrelle	43	Heard	Foraging
21.16	Common pipistrelle	43	Heard	Foraging - distant
21.24	Common pipistrelle	45	Heard	Faint traversing
21.25	Common pipistrelle	45	Heard and Seen	Traversing across the boundary tree line between 155 and 155a
21.31	Common pipistrelle	45	Heard and Seen	Briefly foraging within the front garden adjacent to mature trees
21.41	Common pipistrelle	45	Heard	Faint call – traversing

21.44	Common pipistrelle	44	Heard	Faint call - traversing
-------	--------------------	----	-------	-------------------------

Table 2: 25th May Dusk Survey Results (combined results from both surveyors)

Time	Species	kHz number	Method of ID (seen, heard)	Behaviour (exiting roost/commuting/feeding)
21.35	Common pipistrelle	42	Seen and Heard	Traversing/ Commuting from adjacent tree line (NW) across site to adjacent boundary (SE)
21.34	Soprano pipistrelle	50	Heard	Traversing
21.34	Soprano pipistrelle	50	Heard	Faint traversing
21.37	Soprano pipistrelle	50	Heard	Traversing
21.48	Common pipistrelle	45	Heard	Distant feeding buzz
22.03	Common pipistrelle	45	Heard	Distant feeding buzz
22.11	Common pipistrelle	45	Heard	Distant feeding buzz



Figure 1: Flight Path of Individuals on 8th May



Figure 2: Flight Path of Individuals on 25th May

4. Discussion, Conclusion & Recommendations

- 4.1. The proposed site noted potential crevice roosting opportunities during the 2016 daytime bat inspection. The building was considered to hold moderate overall potential to support bat species and further echolocation studies were recommended during the active bat season to ascertain whether bats are using the property.
- 4.2. It was recommended that four surveyors were used for the echolocation survey, however, given the layout of the building it was not possible to use four surveyors. The western and eastern boundary did not allow for view of the roof space and the boundary vegetation obstructed the view if the surveyors were to survey from the adjacent properties gardens. The use of a front and rear surveyor noted the potential impacted roof spaces and areas directly adjacent to these areas.
- 4.3. No individual bats were observed to emerge or re-enter the building during the dusk echolocation surveys. The surveys noted a small number of traversing and foraging common and soprano pipistrelle bats within the front gardens of the property and within the boundaries of the site.
- 4.4. The rear surveyor noted high levels of light spill that resulted in the rear and Eastern walls and roof spaces illuminated. It is likely that the rear elevation has reduced potential for roosting bats given the high level of light spill that could deter individuals from using this area.
- 4.5. It is not considered that the site hosts a significant bat roost given the results of the two dusk echolocation studies. The results of the survey noted a small number of common and soprano pipistrelle bats within the boundaries of the site and the majority of the recorded activity was after emergence times for these species and distant suggesting that roosts are located offsite.

4.6. Given that the dusk surveys only provided a snap shot of the activity on site, it is recommended that works can proceed, however, it is recommended that the proposed works go ahead with the following measures in place:

4.6.1. Prior to works (2) Schwegler 2F bat box are hung on a suitable tree(s) on site, facing south-easterly at a height of 2-3 metres, given the high light spill at the rear of the elevation it is recommended that the front grounds are used.



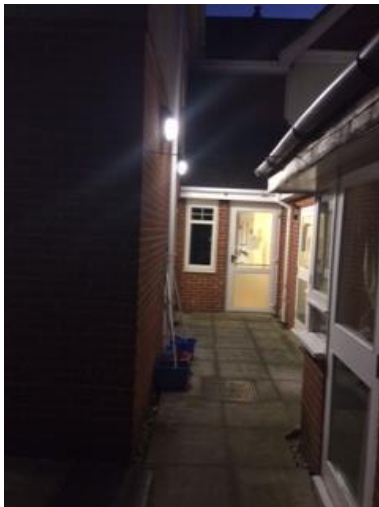
4.6.2. As traversing bats are using the western boundaries of the site, all future lighting is to be direct and avoid light spill.

4.6.3. All demolition works to the soffits, barge, internal and external roof undergo soft 'demolition' under the initial supervision and direction of the ecologist with careful checking and removal of areas with identified potential roosting features.

Photos:



_side of the building with up lighting



rear of site with up lighting



light spill into roof spaces of the rear building



side elevation (Eastern) with light spill

