

22nd August 2024
Our reference: 2024/02/22

Flint Cottage, Northfleet Green, Northfleet DA13 9PN Kent

Following a 'Preliminary Ecological Appraisal'¹ which identified the risk of bats being present in a roundel outbuilding (assessed as having low suitability for roosting bats), KB Ecology Ltd was commissioned to undertake night-time bat surveys.

The Bat Conservation Trust's guidelines provide a table stating the 'minimum number of presence/absence survey visits required to provide confidence in negative preliminary roost assessment from buildings, built structures and trees in summer.

Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result):

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
One survey visit. One dusk emergence survey ^a (structures). No further surveys required (trees).	Two separate dusk emergence survey visits ^b .	Three separate dusk emergence survey visits ^b .
a Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case-by-case basis. In some cases, more than one survey may be needed, particularly where there are several buildings in this category. b Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at least three weeks apart, preferably more.		

Recommended timings for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees where other methods such as PRF inspection are not possible, but unlikely to give confidence in a negative result):

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
May to August (structures). No further surveys required (trees).	May to September ^a , with at least one of surveys between May and August	May to September, with at least two of surveys between May and August ^b
a September surveys are both weather- and location-dependent. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season. September surveys are likely to miss maternity roosts due to dispersal before this time, but may pick up mating roosts. b Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at least three weeks apart, preferably more. Survey timings should consider the prevailing conditions in the year of survey, which will vary geographically. In years with a cold spring, the surveys should not be started in early May or all completed in May. The surveys should maximise the possibility of detecting maternity roosts which can switch roosts between pregnancy and lactation, and the optimum coverage includes the pre-parturition, post-parturition and mating periods.		

¹ Report by KB Ecology, dated 13th February 2020 / Ref No 2020/01/16

Thus one emergence survey was undertaken in August 2024 by L Hoadley², S Stanley³, using Echo Meter Touch 2 Pro / Batlogger M2 bat detectors. Two night-vision aids were also used (Sony FDR AX-53 / Canon XA11), with infrared illuminators.

No bats were seen emerging from the building during the survey. Only a low number of common pipistrelle, serotine, noctule and *Myotis* bats were seen and heard commuting and foraging.

The roundel outbuilding is thus not considered as being used as a bat roost and no mitigation or licence is expected to be needed prior to its demolition/ conversion⁴.

Lighting can be detrimental to roosting, foraging and commuting bats⁵. Three of the four species detected, the common pipistrelle, serotine and noctule bats, are species which are not negatively impacted by street lights. But *Myotis* bat can be adversely affected by lighting (see below⁶).

Table 5.2. Summary of predicted impacts of lighting for each species/group according to bat behaviour. Further research is required to have high confidence in many of these predictions and therefore they should be used as guidance only.

Impact	High	Medium	Low
Behaviour			
Maternity roost	All species	+	+
Night roost	<i>Rhinolophus hipposideros</i> <i>Rhinolophus ferrumequinum</i> <i>Myotis</i> spp. <i>Plecotus</i> spp.	<i>Pipistrellus</i> spp. <i>Nyctalus</i> spp. <i>Eptesicus serotinus</i> <i>Barbastella barbastellus</i>	+
Emergence	All species	+	+
Foraging	<i>Rhinolophus hipposideros</i> <i>Rhinolophus ferrumequinum</i> <i>Myotis</i> spp. <i>Plecotus</i> spp.	+	<i>Pipistrellus</i> spp. <i>Nyctalus</i> spp. <i>Eptesicus serotinus</i> <i>Barbastella barbastellus</i>
Commuting	<i>Rhinolophus hipposideros</i> <i>Rhinolophus ferrumequinum</i> <i>Myotis</i> spp. <i>Plecotus</i> spp.	+	<i>Pipistrellus</i> spp. <i>Nyctalus</i> spp. <i>Eptesicus serotinus</i> <i>Barbastella barbastellus</i>
Swarming	All species	-	-
Hibernation	All species	+	+

Thus, the recommendations from the Bat Conservation Trust, titled Bats and Lighting in the UK, should be considered, when designing any lighting scheme for the proposed development. See link for details <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

² 5 years' experience in bat surveys

³ 12 years' experience in bat surveys

⁴ Updated surveys should be carried out every two years, to check that usage hasn't changed, prior to works taking place.

⁵ http://www.bats.org.uk/pages/bats_and_lighting.html and <http://www.batsandlighting.co.uk/index.html> for more information

⁶ see Stone, E.L. (2013) Bats and lighting: Overview of current evidence and mitigation [http://www.bats.org.uk/data/files/Bats_and_Lighting - Overview of evidence and mitigation - 2014 UPDATE.pdf](http://www.bats.org.uk/data/files/Bats_and_Lighting_-_Overview_of_evidence_and_mitigation_-_2014_UPDATE.pdf)

Detailed Results:



Site Name and Building Number	Land at Flint Cottage, Gravesend	Surveyor Name / Equipment	Steve Stanley / Batlogger M2, Canon XA11
Weather Conditions	10% Cloud, Wind 1, Rain 0	Date	16th August 2024
Start Time	20:03	Finish Time	21:48
Air Temperature (°C) at Start of Survey	20	Air Temperature (°C) at End of Survey	16
Sunset	20:18	Sunrise	
Position:	West of building.		
Time	Species	Activity*	Comments
20:53	Pip 45	C	Distant pass, not seen.
20:56	Noctule	C	Distant pass, not seen.
21:03	Noctule	C	Brief pass, not seen.
21:11	Pip 45	C	Distant pass, not seen.
21:24	Serotine	F	Brief F nearby, not seen.
21:25	Pip 45	F	F south of building along track for 1 min.
21:33	Myotis	C	Brief pass, not seen. Nothing seen on cameras.

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