
Wimbledon Park, Wimbledon SW19.

Bat Surveys, October, 2005

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1. Introduction and background.

- 1.1 Merton Council, instructed Furesfen, to carry out bat surveys around an athletics stadium at Wimbledon Park, Wimbledon TQ245725. This was in advance of proposed tree operations as Lombardy poplar roots had encroached on the running track.
- 1.2 Wimbledon Park is a Grade1 Site of Borough Importance for Nature Conservation. The track abuts the largest lake in the borough. To the north east of the track lies Horse Close Wood one of the few remaining fragments of ancient woodland in the borough.
- 1.3 The setting for the track is characterised in nature conservation terms as: open water; parkland with scattered trees with nearby hedgerows, secondary and ancient woodland and vertical habitats (ivy). All features of interest to bats.
- 1.4 Informal management of areas within the park such as the woodland, local large gardens and the presence of a substantial area of standing open water increase the likelihood of onsite nature conservation interest, which should be identified before operations take place.
- 1.5 Surveys were commissioned to determine if any bat species were using the poplar trees for roosting purposes. Mature trees often contain many crevices and voids which are suitable for bat ingress and occupation which must be checked in advance of works.
- 1.6 The fieldwork was undertaken by A. Fure assisted by S. Finlow-Bates and others. Consultation was undertaken with Merton staff in producing this short report.
- 1.7 There are several pieces of legislation concerning certain wildlife species and habitats: The legislative framework (e.g. the Wildlife and Countryside Act 1981 and the EC Directive on the Conservation of Habitats and Wild Fauna and Flora (92/43/EEC) for the presence of protected species and habitats. All species of bat are protected in the UK on Schedules 5 of the Wildlife and Countryside Act (1981, as amended) and on Schedule 2 of the Conservation (Natural Habitats) Regulations (1994). Bats are also protected by the Wild Mammals (Protection) Act, (1996).
- 1.8 This report seeks to:
 - Clarify the bat use of the site.
 - Discuss the impact of works on any bats that may be present.
 - Make pre works recommendations.
- 1.9 In compiling this report the following have been completed:
 - A desktop study.
 - Two bat emergence and activity surveys from inside and outside the running track.

2. Method.

2.0 Desk Study.

Anecdotal records were sought from:

- Members of the London Bat Group.

2.1. Consultation included:

- Merton staff.

2.2 Tree inspection.

This was conducted on the 6.10.05 in a good light ½ hour before sunset. Fieldwork for bat interest included inspection of:

- Some of the trees where possible from the ground only.
- Surrounding vegetation (ivy).
- Adjacent structures such as the pavilion, toilets etc.

2.3 Features of interest were noted and searches conducted as follows:

- Looking for bat droppings on ledges and for obvious staining.
- Checking cobwebs as dropping traps.
- Checking trunk surfaces for adherent faeces.

2.4 Bat surveys

Bat emergence and activity surveys were undertaken on the evenings of 4.10.05 and 6.10.05 using recordable Bat Box 4 Frequency Division and Pettersson D240X Time Expansion equipment. Recordings were made using mini disc equipment. A powerful beam was used to search briefly across the lake.

3. Results.

3.1 Desk Study

The area is well known for its bat interest and there have been public walks undertaken by the London Bat Group and others in former years. Upwards of 4 species are regularly known to occur. The London Ecology Unit Handbook 29 attests to this interest.

3.2 Inspection of Trees and Structures.

The fifteen poplar trees were inspected with binoculars. They averaged 2.5m in girth at chest height and were approximately twenty metres high (Fig 1). There were no obvious woodpecker holes although nearby, accessible, similar age cohorts, exhibited loose bark (Fig. 2), injured limbs and thick epicormic growth. These features were considered suitable for bat occupation but no evidence of past or present use was found during visual inspection. There were no adherent faeces, droppings in cobwebs or around the surrounding vegetation. The stadium and associated buildings were inspected for signs of bat occupation although none were found.



Fig 1. Fifteen Lombardy poplar



Fig 2. Loose Bark

3.4. Bat Survey

Two bat emergence and activity surveys were undertaken during 4.10 and 6.10.05 and brief tables are appended. Emergence surveys revealed at least one noctule bat using the central poplars. During the activity surveys in the early part of the evening, bats were noted feeding intensively but later many social calls were heard some of which were audible due to the low height at which the bats were flying.

3.5 Bat species

Six species were recorded. Noctule activity was prolonged and good numbers of this species were present (maxima of six). Pipistrelle bat activity was noted more than fifteen minutes *after* sunset around the waters edge and poplar trees. *Pipistrellus pygmaeus* have a strong presence in the area and were later joined by *Pipistrellus pipistrellus*. A single serotine bat began feeding approximately thirty minutes after sunset.

3.6 Daubenton's bats, a specialist of slow moving and open water, were recorded thirty minutes after sunset moving along the eastern line of trees during the survey. They were not detected on the open water until much later. A brown long eared bat was detected in the open woodland foraging up and down the path emitting social calls.

Discussion

4.1 Bat Surveys

Three surveys were originally planned but the third was not necessary as the level of bat interest in this 'hot spot' was apparent from the outset. A short report was requested and issues arising from the survey cannot be dealt with in depth.

4.2 Range of species.

The watery, relatively dark and undisturbed nature of the park at its northern aspect creates a foraging haven for at least six species of bat. This is considerably more species than can be found on many local nature reserves in a whole season of recording.

4.3 Abundance

Numbers of pipistrelles were estimated to be in excess of a hundred during the first survey which was considerably reduced on the second evening. They remained at the waterside for an hour and a half indicating that they are present in the park for most, if not all of their evenings foraging, demonstrating the importance of this area for this species. Numbers of Daubenton's were much lower, their early emergence thirty minutes after sunset, indicated roosting nearby. They disappeared early on the first evening, possibly due to the strong wind over the water. Singles were noted feeding by the end of the surveys on both occasions.

4.4 Bat use of trees.

Poplars are noteworthy for the diverse range of invertebrate species they are associated with. They were originally planted for shelter as a break against the prevailing wind whose protection has now become a sanctuary for the local bat population using these trees for a variety of functions such as:

- **Commuting routes:** around the park to the lake.
- **Cover:** during the early part of the evening whilst light levels are still high.
- **Shelter:** during the early part of the evening when the wind is 'up.'
- **Foraging area:** the trees are both an insect breeding habitat and offer a sheltered microclimate.

4.5 Impact of works.

The felling of fifteen trees of this maturity with such a high level of associated bat interest is hard to justify when there are alternatives which will satisfy the need to ensure running track safety such as investigating root pruning techniques for (as few as possible of) these trees. In the case of any removals replanting of suitable species of trees and shrubs to compensate with the loss of foraging, cover, shelter and commuting route will need to be implemented.

4.6 Conclusion

Any tree in the northern part of the park has the potential to have bat interest at some part of the year. (Comments on the southern section are beyond the remit of this report.) For this reason prior to any works trees must be inspected by an environmental arboriculturalist with a bat license. Alternatively they could be inspected by a licensed bat worker with a fiberscope using a cherry picker.

This conclusion is drawn due to the:

- High level of bat interest,
- The early emergence of bats,
- The presence of several tree dwelling species.

5 Recommendations

- Cherry pickers and fiberscope operators should be used to inspect crevices prior to any tree works.
- A Watching Brief should be implemented.
- A package of replanting should be designed to incorporate the wide range of functions currently undertaken by the poplars should it be necessary to fell any trees.
- Root pruning should be investigated for as few trees as possible.
- Further surveys will be needed should works fail to commence before the end of March, 2006. This includes: breeding bird surveys; a bat emergence survey.
- Material changes to this report can only be made with the author's permission.
- **If bats are found at any stage during felling operations WORK MUST BE HALTED IMMEDIATELY and English Nature contacted or myself contacted.**

Appendix A.

Table 1 – Selected bat activity 4.10.05.

Sunset 18.32 p.m. Cloud cover 4/8. Temperature 13 degrees centigrade. Strong wind at start.

Time	Details: 3 surveyors spread across the treeline external to running track.
18.48	Noctule in the open
18.50	Noctule skimming east low along the conifers no echolocation. The only definitive sign of emergence from poplars.
18.51	Noctule feeding
18.53	Bat species
18.56	Constant noctule passes back and forward
18.58	55khz pipistrelle bat s audible social calls
19.00	Myotis species. Daubenton's seen on lake.
19.01	Noctule
19.10	55khz and 45khz pips Pips flying around lake, activity constant.
19.?	Serotine, low passes
19.45	No Daubenton's on lake
20.15	BLE in woodland emitting social calls
20.30	Daubenton's returned to water in low numbers. Finish

Table 2 – Selected bat activity 6.10.05.

Sunset 18.27 p.m. Cloud cover 7/8. Temperature 16 degrees centigrade. No wind throughout.

Time	Details: 3 surveyors spread across the treeline from inside running track
18.26	First noctule overhead feeding within track 1 min after sunset.
18.32	Noctule
18.37	3 noctules within interior increasing to 6
	No Daubenton's present on lake although Myotis presence noted below
19.45	First 55khz
	55khz pips Pips flying around edge of lake, activity constant.
19.10	3 layers of bats flying through double line of poplars. Topmost noctules, lower a serotine and myotis at head height.
	Investigate woodland 2 pips and BLE social calls
20.30	2 Daubenton's flying around lake before finish at 20.30