

## **BAT SURVEY OF TREES AT REDLAND GREEN ON 31 MAY, 2008**

**Equipment used** (1) AnaBat SD1 frequency division bat; detector/recorder (2) BatBox "Duet" heterodyne detector.

**Surveyor** Lyndon Roberts. Member of Avon Bat Group and Natural England (NE) Voluntary Bat Warden. Holder of NE-issued conservation and scientific bat licenses. Ecological consultant and Associate Member of the Institute of Ecology and Environmental Management (IEEM).

**Weather conditions** Temperature 18C, zero wind, cloud cover 2/8.

**Site details** Redland Green, Bristol. The survey was conducted beneath two large (mature) Ash trees, earmarked for felling by Bristol City Council. Approximate OS grid reference ST 579 572.

**Survey details and results** The survey commenced at 20:55 (BST) and finished at 21:35. Sunset was at 21:16.

- At 21:06, two (possibly three) large bats were seen flying high (and briefly foraging) over the site, heading north-west. These were initially identified in the field as Noctule (*Nyctalus noctula*). However, subsequent sonogram analysis suggested Leisler's Bat (*Nyctalus leisleri*) (echolocating at 22-23 kHz) as the correct identification.
- At 21:23, a small bat was seen (and recorded) flying within the closed canopy of the larger of the two Ash trees. This was identified in the field as a pipistrelle (*Pipistrellus*) species. Subsequent sonogram analysis showed this to be a Soprano Pipistrelle (*Pipistrellus pygmaeus*). After making a brief appearance, the bat disappeared, making a re-appearance at 21:30. By 21:35, the bat

was constantly present, foraging under the two Ash trees and other trees overhanging the north side of the footpath (**Figure 1** refers).

**Discussion** Pipistrelle bats normally emerge from their roost sites 20-30 minutes after sunset (Jones & Walsh, 2001). Emergence is often earlier in woodland where light levels are lower. The appearance of a Soprano Pipistrelle at the survey site, seven minutes after sunset, very strongly indicates that it emerged from a roost site nearby. It is more than likely that it emerged from one of the two mature Ash trees. The absence of the bat (assuming that it was the same individual) between 21:23 and 21:30 indicates that it probably returned to its roost after sampling the light conditions, before emerging again later. The record of two probable Leisler's bats flying over the park is of less significance for the site as there was no indication that they emerged from any trees nearby. However, Leisler's bat is rare in the UK (although there is at least one large colony in the Clifton area of Bristol) and it is known that tree lines and woodland edge within suburban areas provide important commuting and foraging habitat for this species (Waters *et al.*, 1999).

**Recommendations for further survey** Best practice for bat surveys is set out in *Bat Surveys: Good Practice Guidelines*, published by the Bat Conservation Trust (BCT, 2007). The *Guidelines* are endorsed by IEEM. They state that for trees with a high potential to support bat roosts "Further dusk and dawn surveys to establish the presence of bats and, if present, the species, numbers and type of roost to inform the requirements for mitigation if felling is required." The *Guidelines* further state that trees with confirmed roosts following further survey should only be felled under licence. Further information about bats and trees and the legal status of bats can be found on the BCT website as follows:

## Bats and Trees in England

- [http://www.bats.org.uk/publications\\_download.php/249/batstrees.pdf](http://www.bats.org.uk/publications_download.php/249/batstrees.pdf)

## Bats and the Law

- [http://www.bats.org.uk/pages/bats\\_and\\_the\\_law.html](http://www.bats.org.uk/pages/bats_and_the_law.html)

## References

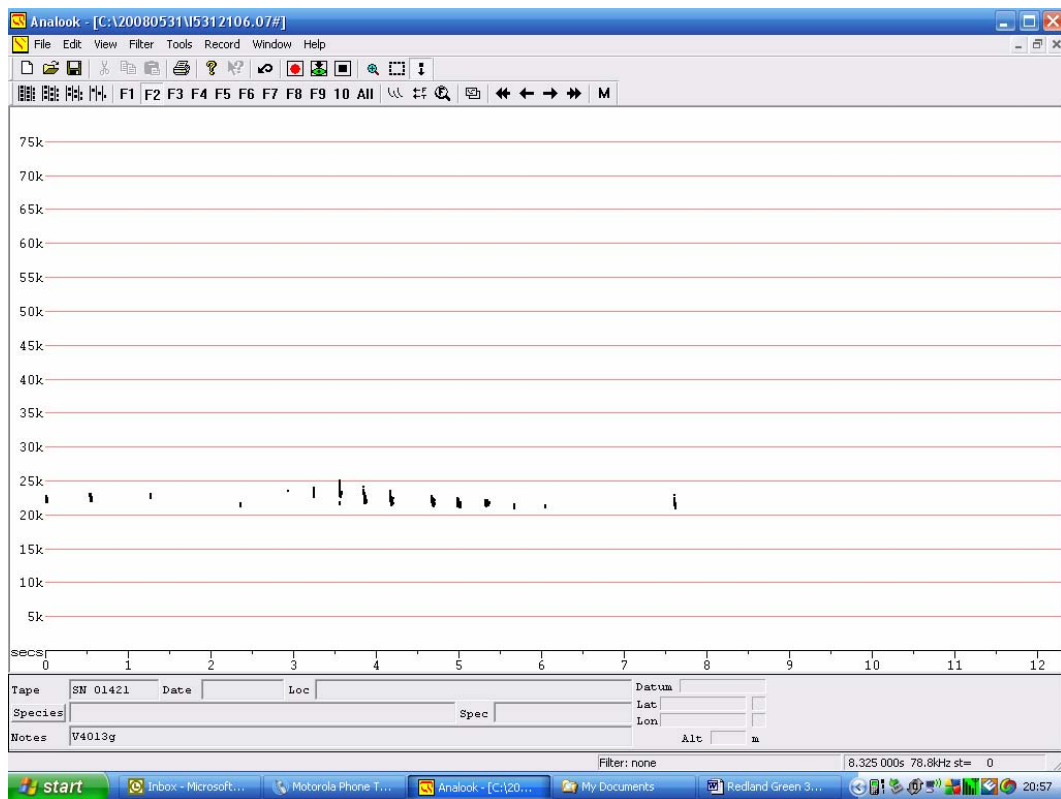
- IEEM (2007). *Bat Surveys: Good Practice Guidelines*. The Bat Conservation Trust.
- Jones K & Walsh A (2001). *A Guide to British Bats*. Field Studies Council / The Mammal Society.
- Waters D, Jones G & Furlong M (1999). Foraging ecology of Leisler's bat (*Nyctalus leisleri*) at two sites in southern Britain. *Journal of the Zoological Society of London* 249: 173-178.

**Figure 1** Bat activity at Redland Green 31.05.08

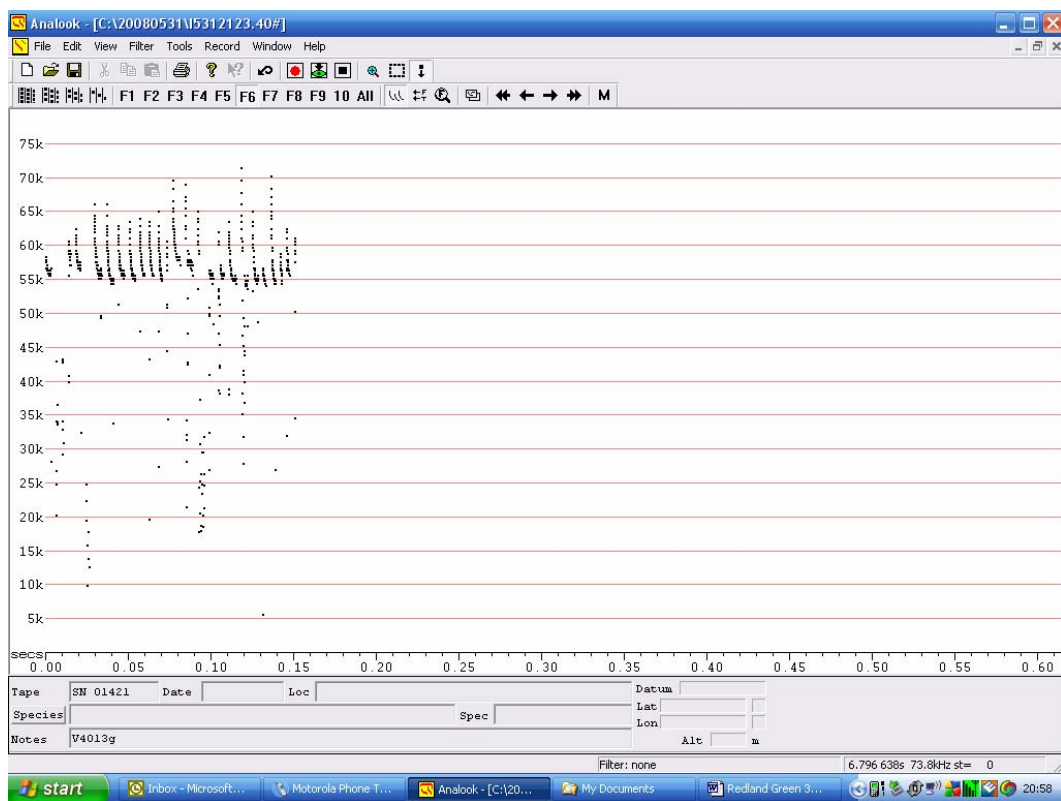


Key: Soprano pipistrelle foraging area (red broken line) and Leisler's bat commuting route (solid blue line).

Figure 2 Sonograms from AnaBat recordings



(a) Probable Leisler's bat, recorded at 21:06



(b) Soprano Pipistrelle, recorded at 21:23