

## **SURVEY METHODOLOGY 2015 – SUNNISIDE FARM, CLEADON**

- 1 The study will include two types of survey on each site visit. The first will be a daylight survey of the buildings to check for signs of bats. The second will be a dusk survey to check for bats emerging from roosts.
- 2 The daylight surveys will involve checking for signs of bats, i.e. bat droppings and urine stains on the exterior walls of the buildings, on window sills, or on the ground around the buildings. The interior of the buildings will also be checked.
- 3 Droppings etc. provide a good indication that there is an access point to a roost somewhere above where the droppings are found, or that bats are roosting above the area of droppings. Persistent urine stains provide a good indication that there is an access point to a roost somewhere above where the stains are found and can be a useful indication that a site is used.
- 4 A preliminary check of cracks and crevices in the buildings will be carried out using an endoscope or by illuminating the gap using a torch. (This will be prior to the emergence survey)
- 5 On some occasions large numbers of moth or butterfly wings are found together with a small number of bat droppings. This may indicate that bats, in particular brown long-eared or Natterer's bat, are feeding and/or roosting within a building. The surveys will also include checking for these signs of bat activity.
- 6 The emergence surveys will run from 20 minutes before sunset until the light had completely failed and will check for bats emerging from roosts and record bats foraging in the area near the buildings. The surveys will be concluded when it was only possible to identify the presence of a bat or bats in the area from recordings on the bat detectors and none of the animals are visible. This is well after the period of time after sunset that the species recorded usually emerge from roosts.  
This methodology is in line with that given in the Bat Conservations Trust's 'Bat Surveys – Good Practice Guidelines', 2<sup>nd</sup> Edition, section 8.3.3 which states ' Dusk emergence surveys should begin at least 15 minutes before sunset and should continue for up to two hours after sunset to take account of all species'.
- 7 The buildings will also be surveyed for signs of barn owl use, i.e pellets, feathers, feeding debris etc.
- 8 **Timing**  
The surveys are to be carried out as follows:-  
Survey 1 – Late May/very early June  
Survey 2 – Late June/early July  
Survey 3 – Early August to mid August.  
If a bat roost is found and there is any difficulty identifying its exact location then a dawn survey may be needed to help to pinpoint the roost.

**Personnel**

- 9 The emergence surveys will be carried out by experienced surveyors all of whom have worked with the consultant for >5years. To ensure good coverage of the site where it is estimated about 10 surveyors will be needed the surveys may be spread over 2 consecutive nights. For the dusk survey bat detectors will be used to identify any species of bats recorded emerging/flying in the area, (Models - Stag Electronics -Bat Box IIID and Bat Box Duet).

**Weather Conditions**

- 10 The surveys will be carried out under suitable weather conditions and will avoid periods of heavy rain and or high winds

**Risk Assessment**

- 11 All of the building will be checked for signs of bat use. Any constraints in surveying the buildings will be noted in the report.

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