

DAYTIME BAT SURVEY OF LIME TREE AT STATION AVENUE, CHIRK, WREXHAM

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1.0 INTRODUCTION

- 1.1 Rachel Hacking Ecology Limited was commissioned in 2017 by Co-op to undertake a daytime bat survey of a Lime *Tilia x europaea* tree on Station Avenue, Chirk, Wrexham. The site is the subject of an outline planning application for up to 24no. dwellings, access and associated works (planning reference: P/2016/1165).
- 1.2 The proposed development site is located off Station Avenue, Chirk (O.S. grid reference: SJ288378). The site comprises an area of rank grassland, partially bordered by hedgerows, with a line of mature trees along Station Avenue, the southern boundary of the site.
- 1.3 One of the Lime trees is due to be felled to facilitate access into the site and the tree in question supports some cavities. Emma Broad (Wrexham Borough Council Ecology and Biodiversity Officer) requested an inspection of the tree for the presence of bats prior to determination of the planning application.
- 1.4 The site is surrounded by scattered residential dwellings and amenity land, offering potential bat commuting and foraging opportunities.
- 1.5 Biodiversity is a material consideration to the planning process and consideration must be given to protected species. The proposed works to the tree at Station Avenue, Chirk will be destructive and therefore consideration should be given to roosting bats and other protected and notable species, which could potentially utilise trees.
- 1.6 All bat species are protected under the Conservation of Habitats and Species Regulations 2010, the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000, the Natural Environment and Rural Communities Act 2006 and the Environmental Damage Regulations 2009. It is illegal to disturb or damage a bat roost whether bats are present or not.

2.0 METHODOLOGY

- 2.1 A daytime bat survey of the Lime tree at Station Avenue, Chirk was undertaken to search for, and to assess the potential for, a bat roost to be present within the tree.
- 2.2 The tree was initially surveyed from the ground using close-focussing binoculars to search the trunk and the canopy for any cavities or other potential roosting features (PRFs). Ladders were used to inspect the lower parts of the tree more closely.
- 2.3 The tree was then fully climbed using ropes and a high-powered torch and an endoscope were used to inspect all cavities or shaded areas of the tree. Feature of trees commonly used by bats for roosting and shelter, and field signs that may indicate use of trees by bats were searched for. This included:

Potential bat roosting features in trees	Signs indicating possible use by bats
- Natural holes - Woodpecker holes - Cracks/splits in major limbs - Loose bark - Hollow/cavities - Dense epicormic growths - Dense Ivy - Bat and bird boxes	- Tiny scratches around entry points - Staining around entry point - Bat droppings in, around or below entrance - Audible squeaking at dusk or in warm weather - Flies around entry point - Distinctive smell of bats - Smoothing of surfaces around cavity

Personnel and Timing

- 2.4 Joel Hacking carried out the daytime bat survey, with assistance from Ian Atkinson, on the 17th March 2017. Joel holds a Natural England Level 2 Class Survey Licence for bats (Licence Ref: 2016-24701-CLS-CLS). The weather on the day of the survey was dry and clear.

Survey constraints

- 2.5 Daytime bat surveys can be undertaken at any time of year. The whole tree could be climbed and all cavities could be accessed. There were negligible constraints to the survey.

3.0 RESULTS

- 3.1 Three cavities were reached by climbing the tree using ropes and searched with an endoscope, along with any other potential roosting features. No evidence of bat activity was found within the tree.
- 3.2 The cavities on the end of a limb were searched and were found to be shallow (see Photographs 1 and 2). The cavities were damp internally. They extended approximately 4-5 centimetres into the tree.



Photograph 1 showing the cavities at the end of one of the limbs



Photograph 2 showing one of the cavities at the end of the limb

- 3.3 Another cavity lower down the tree was shallower (approximately 3 centimetres deep) and had an accumulation of damp detritus at the base (see Photograph 3).



Photograph 3 showing another cavity with damp detritus

- 3.4 A linear cavity exists within the main trunk (see Photograph 4). This extends upwards for approximately 15 centimetres. This cavity was thoroughly inspected and found to contain invertebrates only, such as molluscs and woodlice (see Photograph 5).



Photograph 4 showing the linear cavity



Photograph 5 showing the slugs and woodlice through the endoscope

- 3.5 No bat droppings were found within any of the cavities or behind any peeling bark. The cavities are shallow and therefore, exposed to the weather. No characteristic staining was found at any of the cavities.

4.0 SUMMARY AND RECOMMENDATIONS

- 4.1 No evidence of bat activity was found within the Lime tree at Station Avenue, Chirk. The cavities were all reached by climbing the tree with ropes and were all fully inspected with an endoscope. The cavities are shallow and not considered to be optimal bat roosting habitat. No other potential roosting features were found. Given the survey findings, the tree is considered to offer **negligible bat roost suitability**.
- 4.2 It is the opinion of the author of this report that the tree can be felled without the need for further survey work (e.g. bat activity surveys) due to the negligible potential of the tree to support bats. However, if the work is delayed by longer than two years from the date of this survey, a further bat survey will be required to update the findings.
- 4.3 It should be noted that bat absence is very difficult to prove definitively due to their mobility and size, and single or small numbers of bats are able to roost in extremely small spaces. It is recommended that the tree is section-felled.
- 4.4 **If during the tree felling a bat (or an accumulation of bat droppings) is discovered at any time, work is to temporarily cease whilst an experienced bat ecologist is contacted for guidance and assistance.** This can be Rachel Hacking Ecology (0161 427 3548) who undertook the initial survey, any licensed bat worker, or the Bat Conservation Trust (BCT) helpline (0845 1300 228).
- 4.5 It is recommended that four 2F Schwegler Woodcrete bat boxes are erected onto the site following completion of the development. These can be erected onto the new dwellings or onto retained mature trees. They must be erected at least 3 metres off the ground and can face any direction except northwards.

REFERENCES

Collins, J. (ed.). (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Edition*. Bat Conservation Trust. London.

Mitchell-Jones, A. J. (2004). *Bat Mitigation Guidelines*. English Nature.