Tree Inspection Survey for Bats
Southern Windermere Trail: Section 3

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SUMMARY

Flight Ecology were commissioned to undertake a bat survey of the trees within the proposed Southern Windermere Trail. The route is divided into six sections; this report refers to section 3, which passes from Finsthwaite to Lakeside.

The survey comprised a ground level tree assessment (GLTA), carried out on 11th November 2021 and ground-truthing walkover on the 6th January 2023. 77 trees had been previously categorised as having high or moderate potential for bats by the Arboricultural Consultants. An inspection was therefore carried out from the ground to look for any relevant features or evidence of bats and assess whether the proposed development would have an impact on any bat habitat.

All of the trees inspected either lacked any suitable features or were far enough removed from the proposed footpath that significant works would not be necessary. However, many of the trees that are beyond the direct impact of the pathway possess damage and decay features that, although they do not currently provide viable habitat for bats, may develop in the future to provide roosting locations for bats. This includes stubs of dead limbs, fractured branches and/or cavities.

Recommendations have been made to ensure that any potential roost locations are not impacted by the works or by the operation of the footpath. In addition, further recommendations have been made to ensure continued provision of bat habitat within the area.

1 INTRODUCTION

Background

1.1. Flight Ecology were commissioned to undertake a tree inspection survey for bats along the proposed route of the Southern Windermere Trail. The route is divided into six sections; this report refers to section 3, which passes from Finsthwaite to Lakeside.

Survey Objectives

1.2. The purpose of the survey was therefore to:

- Identify any bat potential roosting features (PRF's) within trees that are scheduled for removal;
- Identify any PRF's within trees that are scheduled for crown reduction or crown lifting as part of the proposed scheme;
- Inspect any PRF's for evidence of bats;
- Assess the value of habitats on and off site for their potential as bat foraging and commuting habitat;
- Make recommendations regarding appropriate avoidance, mitigation or compensation measures.

1.3. The instructed works therefore entailed a ground level tree assessment followed by any necessary climbed inspections for bats.

Site Description

1.4. The survey area is located at the south-western end of Windermere, the largest freshwater lake in England. The route of section 3 passes from the Finsthwaite, in the north-west, to the Lakeside, in the south-east, a distance of approximately 1.2km (see figure 1, below).

1.5. The route has been plotted on several topographical plans (Area 3: 3c and 3d & Area 4: 3d), and have previously been surveyed by Arbconsultants arboricultural consultants, as some of the trees will be impacted by the proposed works.

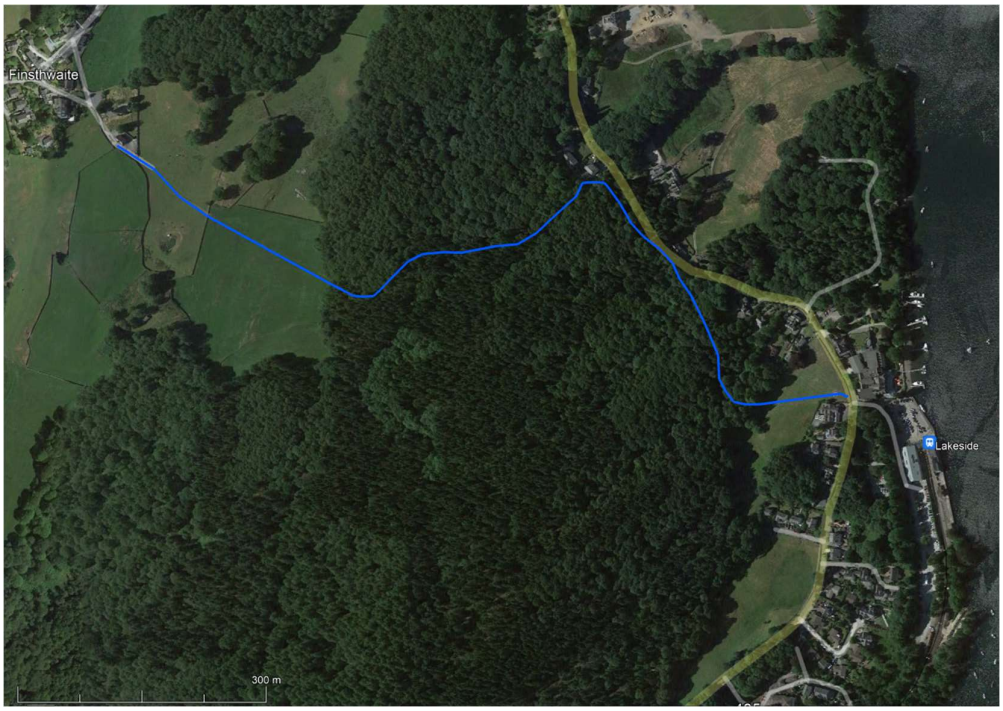

Figure 1: Aerial site plan of entirety of area 3 route (approximate route highlighted in blue)

1.6. The habitat on site comprises predominantly mature mixed woodland. The shores of Windermere lie between 200 and 700m to the east (depending on the location along the route). To the east of the site, and running adjacent to aspects of the proposed footpath route, runs an unnamed road that leads from Newby Bridge, in the south, to Hawkshead, in the north.

2 METHODOLOGY

2.1. The survey comprised a ground level tree assessment (GLTA), carried out on 11th November 2021. The route was walked with Sharon Hodgson, Project Ranger and Sara Spicer, Area Ranger, for the Lake District National Park. Following storm damage, an additional walkover was carried out on the 6th January 2023.

2.2. 77 trees had been previously categorised as having high potential for bats by the Arboricultural Consultants. An inspection was therefore carried out from the ground to look for any relevant features or evidence of bats. This included inspecting trees from the ground using binoculars and a strong torch.

2.3. Following the GLTA, if any tree was concluded as having potential to support bats, then an aerial assessment would be carried out. This would comprise a climbed inspection and close inspection using a hand torch and/or a digital endoscope.

2.4. Following the above inspections, the trees were categorised according to visual evidence of bat roosting potential;

- *Negligible*: Negligible habitat features on site likely to be used by roosting bats.
- *Low*: A PRF which provides a crevice or cavity that is of sufficient size for a bat to take refuge in but which is classed as unsuitable in some way; such as being too large, too small, open to predation or weather etc
- *Moderate*: A PRF that provides suitable habitat for bats, including a suitable size, shape, and inwards extension as well as suitable surrounding habitat BUT shows no visible signs of use, such as smoothing, staining, polishing, distinctive odour etc
- *High*: A PRF that provides suitable habitat for bats, including a suitable size, shape, and inwards extension as well as suitable surrounding habitat AND shows signs of use, such as smoothing, staining, polishing, distinctive odour etc
- *Confirmed*: A PRF that has been shown to have been definitively used by bats, either through the presence of bats or the presence of conclusive evidence, such as droppings or bat-specific parasites.

2.5. As it transpired, no climbed inspections were considered necessary for this section of the route.

Legislation and Planning Policy

Bats

2.6. The Conservation of Habitats and Species Regulations 2010 (as amended) and the Wildlife and Countryside Act 1981 (as amended) provide legal protection to all UK bat species.

2.7. In summary, a person may be guilty of an offence if they:

- Damage or destroy a breeding or resting place of bats;
- Deliberately capture, injure or kill a bat/s;
- Deliberately disturb bats, and in particular disturbance likely to impair animals' ability to survive, breed or nurture young, their ability to hibernate and migrate and disturbance likely to have a significant effect on local distribution and abundance;
- Intentionally or recklessly disturb a bat/s while occupying a structure or place used for shelter and/or protection (Wildlife and Countryside Act 1981 (as amended)); and
- Intentionally or recklessly obstruct access to any structure or place that a bat/s use for shelter or protection (Wildlife and Countryside Act 1981 (as amended)).

2.8. The legislation applies to bat roosts even when they are not occupied.

2.9. Maximum penalties are punishable with fines up to £5,000 per offence and up to 6 months' imprisonment. Actions affecting multiple animals may be construed as separate offences and therefore there is potential for penalties to be applied per animal impacted.

2.10. Under certain circumstances licences can be granted by the Statutory Nature Conservation Organisation (Natural England in England) to permit actions that would otherwise be unlawful.

2.11. Local authorities have obligations under sections 40 and 41 of the Natural Environment and Rural Communities Act (NERC) 2006 to have regard to the purpose of conserving biodiversity in carrying out their duties. Seven species of bat species are listed on Section 41 the NERC Act.

Limitations

2.12. The weather during activity surveys was dry and suitable for bat activity.

3 RESULTS

Desk Study

3.1. Eight species of bats have been recorded breeding in Cumbria; whiskered *Myotis mystacinus*, Brandt's *Myotis brandtii*, Natterer's *Myotis nattererii*, Daubenton's *Myotis Daubentoni*, noctule *Nyctalus noctula* and brown long-eared bats *Plecotus auritus*, common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle and *P. pygmaeus*.

3.2. According to Birds and Wildlife in Cumbria 2010/11' – A County Natural History Report the status of the above species are as follows:

- Whiskered bat – widespread;
- Natterer's bat – widespread near water;
- Noctule – widespread but local;
- Brown long-eared bat – common and widespread;
- Common and soprano pipistrelle – common and widespread;
- Brandt's bat – local (2005/07 edition); and
- Daubenton's bat – widespread but local (2005/07 edition).

3.3. A further two bat species have been identified in Cumbria through auditory detection alone, with no roosts being found: Nathusius' pipistrelle *Pipistrellus nathusii* and Leisler's bat *Nyctalus leisleri*.

Inspection

3.5. All trees within section 3 were inspected in detail for bat roosting potential. A large proportion of the trees along the course of the proposed footpath were originally scheduled for some pruning works; either in order to raise the crown above the proposed footpath, or to remove any potentially dangerous deadwood in the canopy. Eight trees had also been scheduled for felling, in order to make space for the footpath.

3.6. During the walkover survey, carried out in the company of Sharon Hodgson, Project Ranger of the Lake District National Park Authority, it was deemed that all of the trees that are scheduled for pruning or felling works offer no potential roosting locations for bats.

3.7. Through the course of section 3, the proposed footpath passes through woodland that already contains an established footpath, most notably through a Woodland Trust managed area. It was therefore determined that little pruning works would be required in this area, as footpath management is already routinely undertaken.

3.8. An assessment of the woodlands was undertaken, and it was established that there is some potential for roosting bats within the wider habitat. However, the trees adjacent to the footpath which will be impacted by the works did not present any actual roosting habitat.

3.9. Trees close to the path that will not be directly impacted by the works were found to carry some damage and decay features that may provide or develop bat roosting features, but after discussions with Sharon Hodgson, it was concluded that these would not be impacted by the works.

3.10. An additional walkover was carried out on the 6th January 2023, following previous storm damage, to ground truth the 2021 findings and to check for novel features. During this inspection, several of the trees that had previously been inspected were no longer standing. No new potential roost features were found in any of the remaining trees.

3.11. Therefore, as a result of the GLTA and walkover, none of the trees were subjected to a climbed inspection, as it was not deemed necessary.

DISCUSSION AND CONCLUSIONS

4.1. During the survey of the trees scheduled for arboricultural works within section 3, the majority of trees were not considered to have any potential for roosting bats. The trees either lacked any suitable features or were far enough removed from the proposed footpath that significant works would not be necessary.

4.2. Many of the trees that surround the pathway possess damage and decay features that, although they do not currently provide viable habitat for bats, may develop in the future to provide roosting locations for bats. This includes stubs of dead limbs, fractured branches or cavities.

4.3. The majority of the proposed works to the trees within this section involve the 'cleaning-up' of the trees that surround the proposed pathway. Dead wood that poses an imminent falling hazard will be removed to ensure the safety of pathway users. In addition, some trees that overhang the trail will need to be 'crown raised', in order to provide the clearance needed for all user types (including horse-riders). Few trees will therefore be felled, or otherwise significantly impacted. It is therefore considered that works to the trees should be permitted, if carried out considerately and carefully, in order to retain damage and decay features, where possible. Excessive pruning should therefore be avoided.

4.4. Following the opening of the trail, there is some potential for disturbance to bats in the wider woodland through increased footfall around any roost sites. However, the impacts of this activity are considered to be negligible. A footpath already passes alongside the majority of the trees in questions and therefore it is likely that any roosting bats are already habituated to the presence of people passing by, and therefore the increased activity is unlikely to make a significant difference.

4.5. In addition, there is currently no evidence or likely potential for any of the inspected trees to house a maternity roost. Maternity roosts carry a relatively high conservation significance, as they represent the breeding population of the local area. The retention of these large roosts is therefore locally important.

5 RECOMMENDATIONS

5.1. Section 3 has been shown to have low potential for roosting bats, within the affected trees. Therefore, no specific recommendations have been made. However, the following precautionary recommendations should be folowed;

General Advice

- Prior to *any* trees being felled or otherwise worked upon, a pre-felling check should be undertaken by the contracting arborist for signs of bats (as per Arboricultural Association Guidelines);
- If bats, or signs of bats are found prior to or during the arboricultural works then work must cease immediately and a suitably qualified bat ecologist should be consulted with; and
- If additional trees need to be removed from the area then an inspection should be undertaken by a suitably qualified bat ecologist, to establish whether any bat are utilising the features within;

Compensatory Measures

- In order to provide continued roosting opportunities for bats, a series of bat boxes should be erected within the remaining trees on site;
    - This should include small crevice boxes as well as larger 'cavity' boxes;
    - It is recommended that at least 20 boxes are erected within section 3;
- It is also recommended that a network of bird boxes are erected along the whole course of the footpath, within suitable mature trees.

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PHOTOGRAPHS

Photograph 3: Tree 107a – under Woodland Trust management and therefore no works proposed

Photograph 4: Tree 444 and south-eastern end of route in background

Photograph 5: Example of habitat on site

Photograph 6: Example of habitat on site

Photograph 7: Willow trees along fence-line at south-eastern end of route

Photograph 8: Example of habitat