



thewildlifepartnership

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Land West of Friarshaugh, Gattonside, Climb & Inspect



A REPORT PREPARED BY THE
WILDLIFE PARTNERSHIP
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1. Introduction

1.1 Background.

This document describes the results of a ground and aerial inspection of four mature ash trees located on land to the west of Friarshaugh Farm in Gattonside. A Preliminary Ecological Appraisal (PEA) undertaken by The Wildlife Partnership in December 2020 identified these four trees as having the potential to support both roosting bats and barn owl. The PEA also identified a suspected single hole badger sett at the base of one of the trees. Therefore, the current survey included a ground and aerial inspection of the four ash trees and an updated assessment of the suspected sett.

The primary aims of the survey were:

- To assess the potential use of the trees by bats.
- To search for any evidence of bats, for example bat droppings (faeces) inside or on the outside of the trees.
- Provide an updated assessment of the suspected badger sett
- To indicate any further survey requirements.
- To provide guidance in relation to bat species and the proposed works

2. Methods

2.1 Timing

A detailed survey of the four ash trees was undertaken on the 20th of April 2021 by a licensed bat ecologist (Dr. Barry Nicholls - Licence number: 126104) and a trained field assistant Dr. Yolanda Corripio.

2.2 Weather Conditions

Conditions on the day of the survey were good and provided no constraints. Temperature at the time of the survey was recorded as 11°C and wind speed as 0.3m/s.

2.3 Survey Methodology

2.3.1 Tree survey

All trees were surveyed from ground level, using close focusing binoculars and a high-powered torch where necessary. All trees identified as having the potential to support roosting bats were climbed and inspected using arborists tree climbing methods. All trees were assessed for bat roosting potential according to the Bat Surveys Good Practice Guidelines issued by the Bat Conservation Trust (Table 1). The features bats typically use for tree roosts are: natural rot holes, woodpecker holes, gaps behind bark, splits in branches, gaps where trunks or branches have split then fused together, natural faults or gaps, and behind dense ivy. Such features were noted from ground level. The following signs of bats were also searched for:

- Bat droppings.
- Urine stains.
- Distinctive 'batty' odour.
- Fur oil stains.
- Live or dead bats.

Table 1: Bat survey protocol for trees due to be affected by arboricultural work (Adapted from a protocol provided by SLR Consulting Limited, in Bat Surveys Good Survey Guidelines).

Tree Category and Description	Stage 1 Survey requirements prior to determination	Stage 2 Further measures to inform mitigation	Stage 3 Likely mitigation
Category 1 Confirmed bat roost tree with field evidence of the presence of bats, e.g. droppings, scratch marks, grease marks or urine staining.	Tree identified on a map and on the ground. Further assessment to provide a best expert judgement on the likely use of the roost, numbers and species of bat, by analysis of droppings or other field evidence. Ecologist involvement will be required.	Avoid disturbance to trees where possible ¹ . Further dusk and dawn surveys to establish more accurately the presence, species, numbers and type of roost present, and to inform the requirements for mitigation if felling is required.	Felled under Habitats Regulations licence ² following the installation of equivalent habitats as a replacement. Felling would be undertaken taking reasonable avoidance measures ³ such as 'soft felling' to minimise the risk of harm to individual bats.
Category 2a Trees that have a high potential to support bat roosts	Tree identified on a map and on the ground. Further assessed to provide a best expert judgement on the potential use of suitable cavities, based on the habitat preferences of bats. Ecologist involvement may be required.	Avoid disturbance to trees where possible ¹ . More detailed, off-the-ground visual assessment. 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.	Trees with confirmed roosts following further survey would be upgraded to Category 1 and felled under licence as above. Trees with no confirmed roosts would be downgraded to Category 2b and felled taking reasonable avoidance measures ³ .
Category 2b Trees with a moderate/low potential to support bat roosts	None. Ecologist involvement is unlikely to be required.	Avoid disturbance to trees where possible ¹ . No further surveys.	Trees would be felled taking reasonable avoidance measures ³ .
Category 3 Trees with negligible potential to support bat roosts	None. Ecologist involvement will not be required unless new evidence is found.	None.	No mitigation for bats required.

Notes

1. A general principle for those involved in advising on and undertaking tree works should be, wherever possible, to avoid disturbance and retain all features which offer some value to bats. For safety-related tree work, a balance should be sought between tree safety standards and the impact on wildlife.

2. When a Habitats Regulations licence to undertake work on a tree roost is required, the licence will need to demonstrate that alternative approaches have been previously considered to try to avoid works to the tree. These may be options such as diverting paths away from hazardous trees and removing unsafe limbs, instead of felling an entire tree.

3. Reasonable avoidance measures are considered to be good practice. 'Soft felling' is a generic term used to describe more cautious felling approaches, using lowering and cushioning techniques to reduce the impact of felling limbs that may still have bats within cavities.

3. Results

3.1 Tree Survey

The four mature ash trees are all located on a spur of broadleaved plantation woodland along the western boundary of the site (see Figures 1 & 2). All of these trees are in relatively poor health and show evidence of Chalara dieback. However, mature trees in this condition typically have a high ecological value and present a myriad of features that can be exploited by tree-roosting bat species and a variety of bird species. All trees that have the potential to support roosting bats have been categorised according to the criteria laid out in Table 1 and their locations marked on an aerial photograph (see Figure 1). Expected impacts and recommendations relating to the proposed development are outlined below.



Figure 1. Aerial photograph of the proposed development site showing the location of the four mature ash trees.

Table 2. Trees identified as having bat roosting potential, approximate location shown in Figure 1.

Tag No.*	Tree Species	Category (Table 1)	Grid reference	Features suitable for roosting
3497	Ash	2b	NT 54800 34979	Hollow main stem
3495	Ash	2b	NT 54801 34982	Rotten and broken branches
3494	Ash	2b	NT 54763 35025	Knotholes
**	Ash	2b	NT 54763 35035	Hollow main stem

*Tag number refers to the unique aluminum tags placed during the tree survey undertaken by Caledon Tree Surveys Ltd.

**This tree did not have a tag and was not included in the tree survey.

Tree 3497 – Mature ash tree (*Fraxinus excelsior*) in poor condition with three co-dominant stems from 3m, although the highest stem has been sheared off at approximately 6m (see Figure 3). The tree is badly rotted and has a myriad of small cavities across the three main stems; some of which are dry and sheltered internally (Figure 4). However, all of these small cavities were fully inspected with a flexible endoscope and no bats were present at the time of the survey and there was no evidence to indicate that bats have ever been present in this tree (category 2b in Table 1).

The main stem of the tree is completely hollow and further inspection revealed the interior to be heavily splashed with bird droppings and a total of four barn owl pellets could be seen at the base of the hollow interior (Figure 5). There were no features identified across the tree that would provide a suitable barn owl nest and there was no evidence to indicate the presence of a nest; therefore, this is likely a roosting only site for this species.

Tree 3495 – Mature ash tree (*Fraxinus excelsior*) in relatively poor condition (Figure 6) with numerous broken branches and large open knotholes across the upper canopy, several of which lead into sheltered cavities (see Figures 7-9 for example). During the survey carrion crows were observed entering several of these locations and active nests for this species were present across the upper canopy. However, despite a through aerial inspection there was no evidence to indicate that bats have ever been present within this tree despite an abundance of potential roosting habitat (category 2b in Table 1).

Tree 3494 – Mature ash tree (*Fraxinus excelsior*) in relatively poor condition (Figure 10) with an abundance of open knotholes (Figures 11-13). All of these locations were thoroughly inspected with the aid of a flexible endoscope and, although several of the cavities were filled with old nesting material, there was no evidence to indicate the presence of bats (category 2b in Table 1). There were also no active nests or evidence of barn owl within this tree; however, a collection of approximately 6-7 primary barn owl feathers were found in a pile at the base of the tree (Figure 14).

Untagged Tree – Mature ash tree (*Fraxinus excelsior*) that has been subject to some fairly extreme fire damage leaving the main stem completely hollowed out (Figure 15). The hollow interior leads to numerous dry and sheltered cavities (see Figures 16 & 17 for example). However, all of these locations were fully inspected and there was no evidence anywhere to indicate the presence of bats (category 2b in Table 1) no active nests were identified and there was no evidence of barn owl across this tree.

3.2 Badger

The suspected single hole badger sett at the base of the ash tree (tag no: 3497) was re-inspected for the first time since December 2020. The surrounding vegetation has now grown up around the base of the tree but a single hole remains clear indicating current use. However, the hole is relatively small and the entrance is covered in fresh rabbit droppings. Therefore, it is highly likely that the hole is currently only being used by rabbits; however, badgers are active in the area and there is a possibility that this sett could be reoccupied in the future.

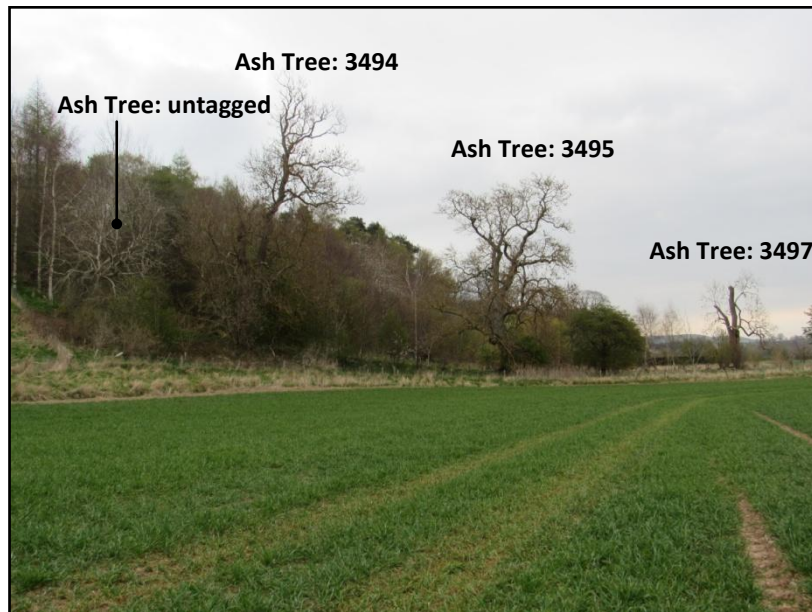


Figure 2. Four mature ash trees identified within the spur of broadleaved plantation – see Figure 1 for location.



Figure 3. Ash tree labelled 3497 in Figure 1.



Figure 4. The rotten and hollow stem has an abundance of small cavities that would provide suitable roost sites for tree dwelling bat species. However, there was no evidence to indicate that bats have ever been present



Figure 5. A total of four barn owl pellets could be seen at the base of the hollow tree. None of the pellets could be collected and it is entirely possible that more may be present and out of sight.

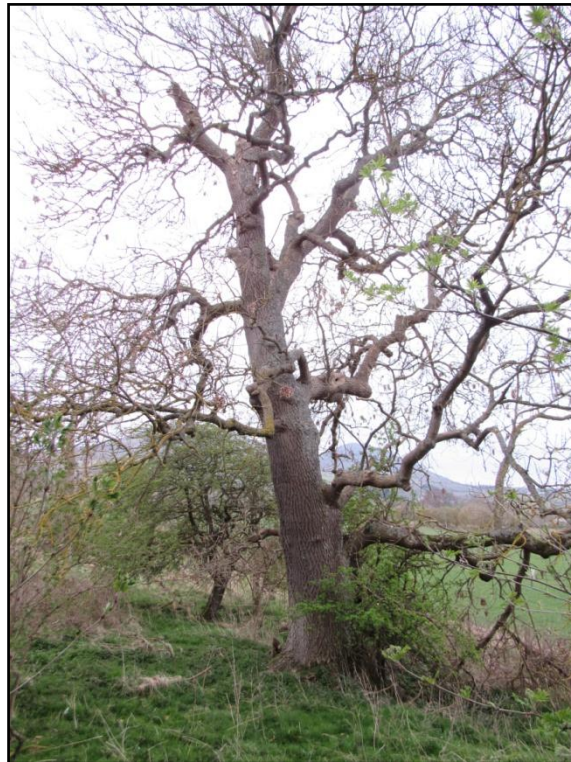


Figure 6. Ash tree labelled 3495 in Figure 1.



Figure 7. Large upward facing knothole that was regularly visited by a pair of carrion crows throughout the survey.



Figure 8. This knothole leads into a hollow cavity that extends for approximately 30-40cm along the branch. However, there was no evidence to indicate that bats have ever been in occupation and the cavity was damp and filled with woodlice.



Figure 9. This small knothole on a south facing branch leads in to a hollow interior that was filled with old nesting material.



Figure 10. Ash tree labelled 3494 in Figure 1.



Figure 11. Large open knothole on a north facing branch. The cavity was empty inside with no evidence of occupation by bats or birds.



Figure 12. Shallow wound on the southern aspect of the main stem looks significant from ground level but offers no sheltered habitat for bats or birds.



Figure 13. Small knothole on the underside of a south facing branch. The interior was damp and shallow with no evidence of occupation by bats or birds.



Figure 14. Small pile of adult barn owl feathers found approximately 10m from the base of the tree labelled 3494.



Figure 15. Mature ash tree that did not have a tag number (see Figures 1& 2 for location)



Figure 16. The main stem has been badly damaged by fire and is now completely hollowed out leading to numerous hollow branches. All of these locations were thoroughly inspected and there was no evidence to indicate the presence of birds or bats.



Figure 17. Example of one of the sheltered cavities identified within the untagged tree.

4. Conclusions and Recommendations

4.1 Bats

No bats or signs of bats were observed during the daylight survey of the trees and there is no evidence to suggest that bats were present in any of the trees at the time of survey. However, bat species typically show a high degree of roost lability (switching regularly between a number of different roost sites) and all of the trees surveyed have features that would provide potential roost sites for bat species. Therefore, if any of these trees are to be felled they should be felled outwith the active bat season (May till September inclusive) and should be fully re-inspected by a licensed bat ecologist prior to being felled.

4.2 Barn Owl

Barn owl pellets were found within the hollowed interior of the ash tree labelled 3497; there was no evidence to indicate that barn owls nest within this tree and this is likely a roosting only site for this species. However, without suitable mitigation the loss of this roosting site may have a significant impact on resident birds. It is typical for resident barn owls to occupy more than one site within their home range (typically two or three roosting sites may be used within 1.5 km of the breeding site), and if one occupied site is lost, barn owls may not only disappear from that site but also abandon other sites simultaneously, often leaving the area entirely despite the presence of suitable alternative sites within the area. Furthermore when rearing young it is common for the male bird to roost elsewhere from the female and the young. Therefore, to encourage barn owls to breed at the site it is recommended that this tree is retained if at all possible. However, if this tree is to be removed then it should be fully re-inspected prior to works commencing and the lost roost site should be replaced with a barn owl box that can be used for roosting and/or nesting purposes.

4.3 Other Breeding Birds

Carrion crows were abundant across the ash trees throughout the survey and active nests for this species were present in the upper canopy of several of the ash trees. The nests of all species of bird are protected whilst they are active. Therefore if any of these trees are to be felled then they should be timed to avoid the bird breeding season which is March-August.

4.4 Badger

The suspected single hole badger sett at the base of the ash tree labeled 3497 was re-inspected and, although there were signs that a single entrance hole is currently in use, the size of the hole, in conjunction with an abundance of rabbit droppings, would indicate that it is likely only currently occupied by rabbits. However badgers can very quickly re-open old setts; therefore, if any works are sited within 30m of this location then further monitoring e.g. camera-trap surveying will be necessary to demonstrate whether this is an active sett and to determine its status.

APPENDIX 1. Legislation Relevant to Bat Species.

BATS

All species of bats and their breeding sites or resting places (roosts) are protected under regulation 39 of the Conservation (Natural Habitats) regulations 1994 (amended 2007 and 2009) and section 9 of the Wildlife and Countryside Act 1981.

It is an offence to –

- Deliberately capture, injure or kill a bat.
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats.
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time).
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat.
- Intentionally or recklessly obstruct access to a bat roost.

The conservation (natural habitats) Regulations 1994 amendment of 2007/2009 clarifies 'disturbance' of bats as any activity that will impair their ability:

- To survive, breed, or rear or nurture their young.
- In the case of animals of a hibernating or migratory species, to hibernate or migrate.
- To affect significantly the local distribution or abundance of the species to which they belong

If a known bat roost is to be disturbed or damaged for reasons of development, a European protected species licence must be obtained from the Scottish Government Species Licensing Team Landscapes and Habitats Division Rural Directorate before demolition of the buildings may proceed. The Scottish Government requires approximately 6-8 weeks to process the licence application - the exact length of time depends on the complexity of the individual case, and the provision of comprehensive information in the application. The application can only be made once detailed planning consent has been obtained. European protected species licences may be issued for the purposes of:

- Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.

And in every case, a licence cannot be granted unless:

- There is no satisfactory alternative.
- The action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Favourable conservation status' is defined in the Habitats and Species Directive as:

- The sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its population within the territory.

It is assessed as favourable when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long term basis as a viable component of its natural habitats, and the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and:
- There is, or will probably continue to be, a sufficiently large habitat to maintain its populations on a long term basis.