Ecological Review – Ruby's Wood Bat Survey

Site: Ruby's Wood SX5954
Survey Period: 1–4 July 2026
Detector Dataset: Automated ultrasonic bat recordings
Records Analysed: Approximately 874 detections from the supplied dataset

Executive Summary

Survey Objectives

The survey has been designed to:

1. Identify bat species present.
2. Assess relative activity levels.
3. Record feeding activity.
4. Determine the ecological significance of the woodland for bats.
5. Inform future habitat management.

Ruby's Wood supports a **species-rich bat assemblage** with evidence of at least **8 bat species** recorded during the survey period. The survey demonstrates that the woodland functions as an important nocturnal habitat for commuting, foraging and feeding bats.

The dataset is strongly dominated by **Common Pipistrelle (*Pipistrellus pipistrellus*)**, which accounts for the majority of bat activity recorded. However, the presence of several less common species substantially increases the ecological significance of the site.

These records indicate that Ruby's Wood provides a structurally diverse landscape with habitat features capable of supporting a broad range of ecological niches.

Common Pipistrelle (*Pipistrellus pipistrellus*) is overwhelmingly dominant.
Additional species recorded include:

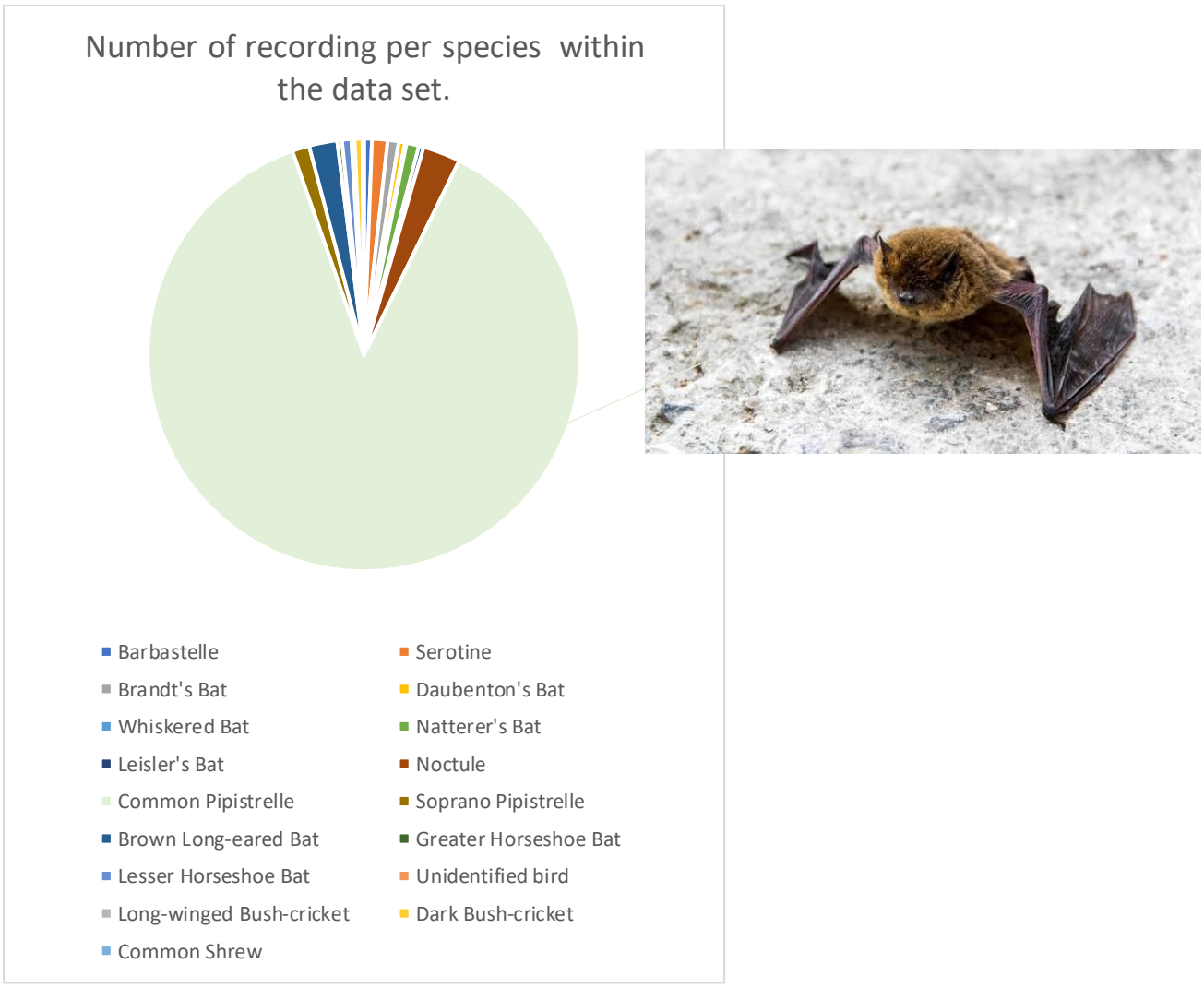
- Barbastelle (*Barbastella barbastellus*)
- Serotine (*Eptesicus serotinus*)
- Noctule (*Nyctalus noctula*)
- Leisler's Bat (*Nyctalus leisleri*)
- Brandt's Bat (*Myotis brandtii*)
- Daubenton's Bat (*Myotis daubentonii*)
- Whiskered Bat (*Myotis mystacinus*)
- Natterer's Bat (*Myotis nattereri*)

Multiple feeding buzzes were recorded, indicating active foraging. Activity was concentrated between approximately 21:45 and 04:40. The assemblage includes species considered of higher conservation interest, particularly Barbastelle.

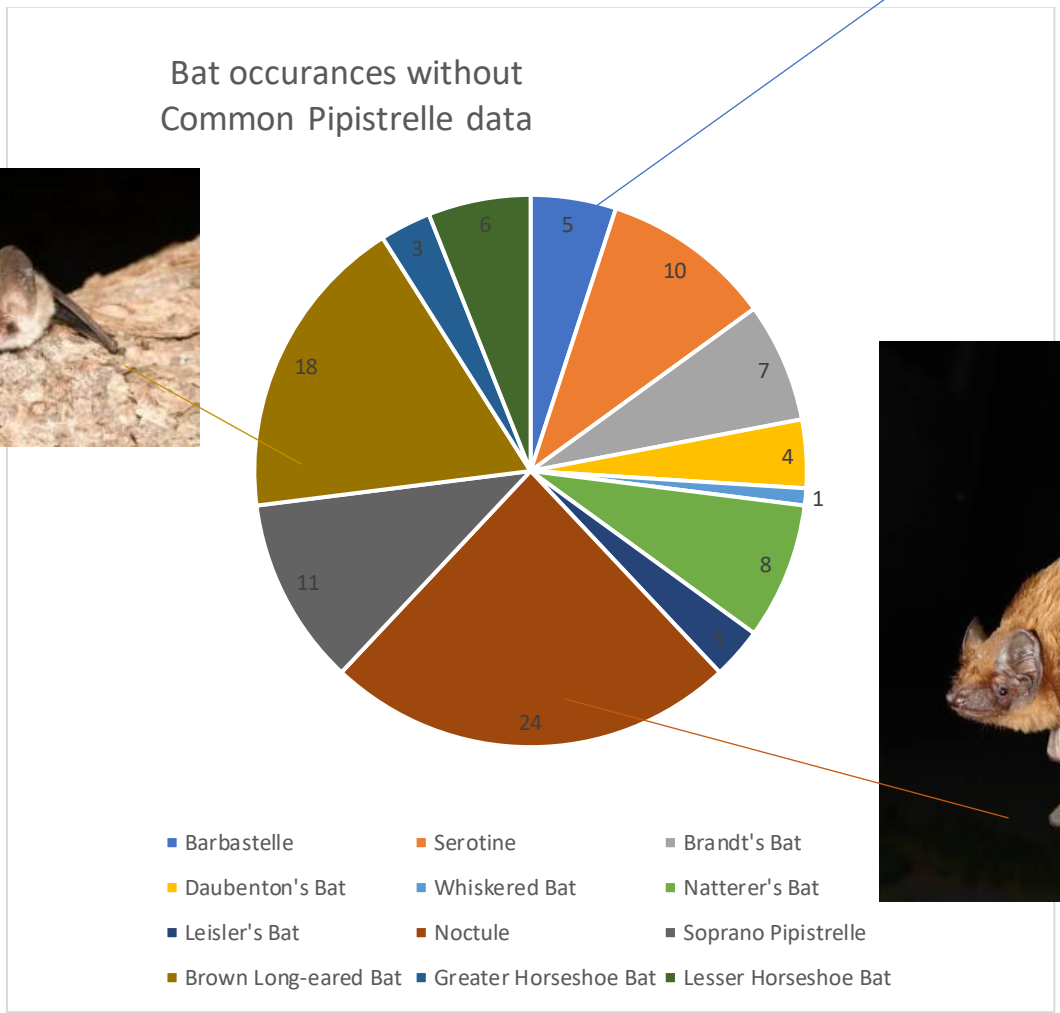
Species Inventory

Species	Scientific Name
Common Pipistrelle	*Pipistrellus*
Barbastelle	*Barbastella barbastellus*
Serotine	*Eptesicus serotinus*
Noctule	*Nyctalus noctula*
Leisler's Bat	*Nyctalus leisleri*
Brandt's Bat	*Myotis brandtii*
Daubenton's Bat	*Myotis daubentonii*
Whiskered Bat	*Myotis mystacinus*
Natterer's Bat	*Myotis nattereri*

All species were identified directly in the detector outputs. Pie chart shows overwelming dominance of Common Pipistrelle (Light green) making up 87% of the recording. This does not indicate individual numbers of bats. The same bat could be recorded multiple times.



It is clearer to see the occurance other bat species with the removal of the common pipistrelle data. This piechart reflects the 13% of other recordings.



Species Richness

Species richness is high for a single woodland monitoring location.

Minimum confirmed richness: 8–9 species.

For a woodland of this size, this indicates:

- Diverse habitat structure
- Suitable insect abundance
- Good connectivity with surrounding landscape
- Potential value as a bat commuting corridor

Community Composition

Dominant Species

The Common Pipistrelle is overwhelmingly dominant in the dataset. Hundreds of detections occur continuously through the night.

This typically indicates:

- High insect abundance
- Well-developed woodland edge habitat
- Suitable flight corridors
- Limited disturbance

Secondary Species

Noctule

Regular records including feeding activity.

Significance:

- Fast-flying open-space forager
- Requires larger landscape connectivity
- Indicator of wider habitat quality

Serotine

Multiple high-confidence records.

Significance:

- Comparatively less common
- Often associated with mature landscapes

Barbastelle

Several detections were recorded.

This is the most ecologically significant record in the dataset.

Barbastelle is:

- Rare nationally
- Woodland-associated
- Sensitive to habitat fragmentation
- Often considered a conservation priority

Feeding Activity Assessment

Numerous detections include:

- Feeding buzzes
- Social calls
- Echolocation sequences

throughout the survey period.

Interpretation

Feeding buzzes are strong evidence that bats are actively exploiting prey within or adjacent to the woodland.

This indicates the site functions as foraging habitat rather than merely transit habitat

Temporal Activity Patterns

Evening Emergence

Peak activity begins shortly after sunset. Large volumes of Common Pipistrelle records occur between approximately:

21:45–23:30 hrs

This suggests:

- Immediate use of the woodland after emergence
- Nearby day roosts may exist

Midnight Activity

Activity remains high throughout the night. Continuous detections of pipistrelles and occasional records of larger species continue from:

00:00–03:00 hrs

This is characteristic of a high-quality feeding landscape.

Dawn Activity

Bat activity remains present until approximately:

04:30 hrs

This extended activity window demonstrates sustained prey availability.

Biodiversity Assessment

Habitat Interpretation

The recordings suggest the woodland contains:

Woodland Edge Habitat

Supported by:

- Pipistrelle dominance
- Frequent feeding buzzes

Mature Trees

Supported indirectly by:

- Barbastelle presence
- Natterer's records
- Brandt's records

Insect-Rich Foraging Areas

Indicated by:

- Continuous activity
- Multiple feeding sequences

Connectivity Features

Likely including:

- Hedgerows
- Tree lines
- Woodland corridors

supported by Noctule and Leisler's detections.

Conservation Significance

The site should be regarded as having:

Very High Local Importance with a **likely District Importance.** The evidence of Barbastelle **suggests importance at the county level** as well. However further survey efforts would be required to confirm county-level significance.

Risks

The following actions would likely reduce ecological value:

- Woodland thinning
- Removal of mature trees
- Artificial lighting
- Hedgerow fragmentation
- Reduction in woodland edge habitat
- Removal of standing deadwood

Management Recommendations

Priority 1 – Retain Mature Trees

All mature trees should be retained where feasible.

Particular attention should be paid to:

- Cavities
- Cracks
- Lifted bark

which may support roosting bats.

Priority 2 – Maintain Dark Corridors

Avoid installation of:

- White LED lighting
- Floodlights
- Security lighting

along woodland edges.

Priority 3 – Enhance Invertebrate Habitat

Increase insect resources through:

- Wildflower management
- Reduced mowing
- Deadwood retention
- Native shrub planting

Priority 4 – Expand Monitoring

Recommended future work:

- Emergence surveys
- Static detector surveys over multiple seasons
- Roost assessment surveys
- Habitat mapping

Conclusion

Based on the bat assemblage recorded, Ruby's Wood should be considered an ecologically valuable woodland habitat supporting a diverse bat community including species of elevated conservation interest. Activity data indicate that the site functions as both a significant foraging area and commuting route. Any proposed land-use change should seek to retain mature trees, preserve dark corridors, maintain structural habitat diversity and avoid fragmentation of functional bat habitat. The presence of Barbastelle records particularly elevates the site's conservation importance and warrants precautionary management.