

# Bat Survey Report

Leather Lane, Great Missenden, Buckinghamshire

Written by

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## Summary

The purpose of this survey was to assess which bat species are present along a stretch of approximately 600m of Leather Lane in Buckinghamshire, HP16 9LT. The main reason to undertake this survey was to highlight that bats are in fact present along the lane, despite HS2 Ltd preparing to carry out major vegetation clearance works imminently, destroying large tracts of mature, species rich linear woodland and in the process causing serious harm or death to any bats present.

## Habitat and ecology of Leather Lane

Leather Lane is an ancient, ecologically diverse lane, with a linear strip of old woodland and hedgerow running along the southern boundary. Steeped in history and tunnel-like in its appearance, with trees leaning out over the top of it in many places, the character of the lane is typical of the local area of the Chilterns AONB

The tree species present consist of Oak, Ash, Wild Cherry, Hornbeam, Beech, Field Maple, Hawthorn and Blackthorn. There are also Dogwood, Spindle, Dog Rose and Elder present, with plenty of mature Ivy and Wild Clematis growth in places. Many of the trees are of a great age, the Oaks in particular, with plenty well over a century old.

It is worth noting the abundance of deadwood within the wooded strip, an indicator of very little human intervention over the decades (with the exception of the area immediately below the powerline, which is kept cut back), a reason why this habitat is very good for bats and other wildlife.

Badger trails were obvious on previous visits to the site throughout February and March, with several fresh latrines found within the woodland on two separate occasions. The lane is a thoroughfare for Badgers, Foxes, Muntjac and Roe Deer.

The ground flora is indicative of ancient woodland, with a good coverage of Bluebell, Cuckoopint and Dog's Mercury. Further botanical survey work would no doubt reveal many more interesting plants as the season progresses.

Treecreeper, Nuthatch, Green and Great Spotted Woodpecker, Bullfinch, Yellowhammer and Blackcap are just some of the many bird species recorded during our early morning and afternoon visits. Worthy of note is how many birds we have found roosting in the mature trees with the thermal imaging camera at dusk and into the night whilst searching for bat roosts. Bank voles are also present in strong numbers throughout the length of the lane.



## Survey Methods

- Visual assessment for any potential roost features (PRFs) and foraging habitat
- Echo Meter Touch 2 Bat detector, used in conjunction with a smartphone to record and identify any echolocation calls within a good radius of the route of the lane
- Guide TrackIR Pro 19 Thermal Imaging Monocular to confirm bat presence, identify flight routes and feeding patterns

## Findings

Leather Lane, with its ecologically rich linear woodland features described above, presents excellent habitat for a variety of bat species.

We visually assessed the 600m section along Leather Lane for any PRFs. With so many old trees and associated deadwood, we expected PRFs to be present throughout all the survey area. Alongside the most evident bat roosting sites with flaking bark or dense Ivy growth, multiple cavities with bat roosting potential have been identified (see images below).

Bearing in mind the species specific behavioural patterns of bats, who regularly move between roosting sites throughout the season, there is a high likelihood that the identified sites are being used by bats at different times of the year.







Our main survey method was an Echo Meter Touch 2 Bat detector, used in conjunction with a smartphone to record and identify any echolocation calls within a good radius of the route of the lane.

During the first half of April 2021 the weather at dusk was unsuitable for bat surveying, with clear skies allowing temperatures to plummet, coupled with northerly and easterly winds, ensuring that the temperature was simply too low for bats to be able to emerge and successfully find insects.

Our first bat survey was conducted on 19<sup>th</sup> April, when the warmer temperature remained from the late afternoon and held at around the 14 degrees celcius mark well into the evening.

At 20.30, 3 Common Pipistrelles were located hunting directly within the vicinity of the east end of the HS2 compound, flying over our position, across the lane and around the fringes of a large Oak, along the hedgerow on the north side of the lane heading west, then back into the compound where the 3 veteran Oak Trees had been felled by HS2 Ltd contractors on 17<sup>th</sup> March 2021.



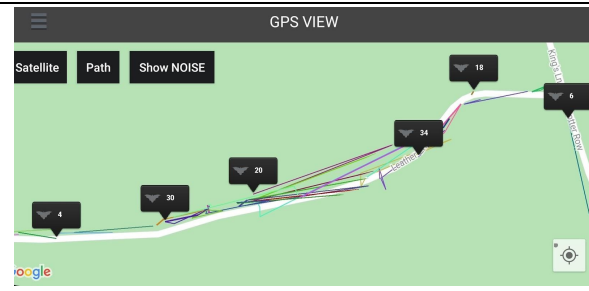
After monitoring this section, we continued west along the lane, noting further bats continuously as we walked. We were able to observe and film the bats flying directly along the route of the lane, often low over the road, and often through the trees within the HS2 site on the southern side, returning over the lane along the same route.

We soon picked up Nathusius' Pipistrelle, the second species present that day, amongst the frequently recorded Common Pipistrelles. A total of 112 bat echolocation recordings were taken on this date over the short period of 1 hour and 10 minutes.

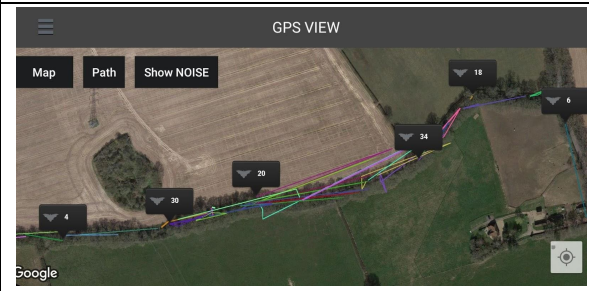
The following images show maps of Leather Lane, with the exact locations and numbers of the echolocations detected on 19<sup>th</sup> April 2021. The complete and detailed list of records is attached with this report.



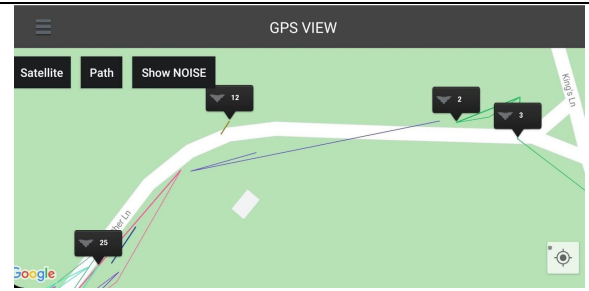
### Overview (Map)



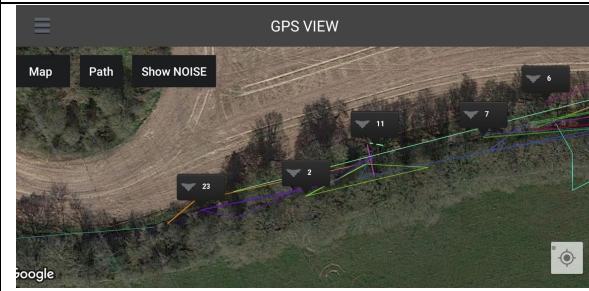
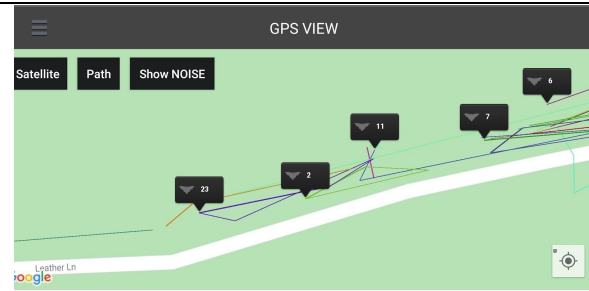
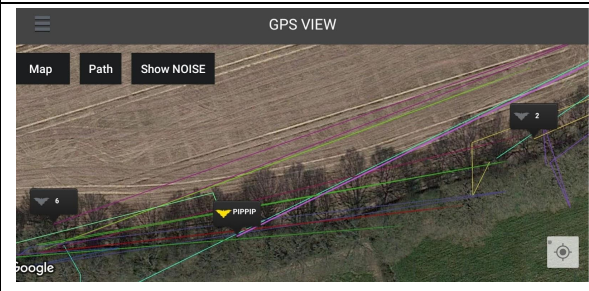
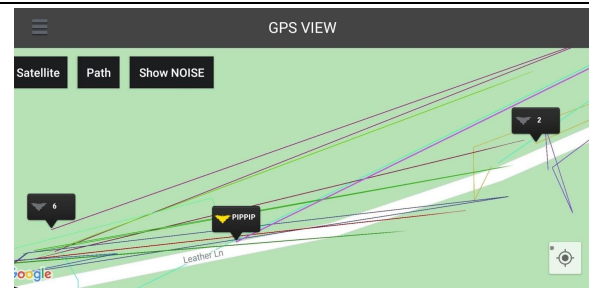
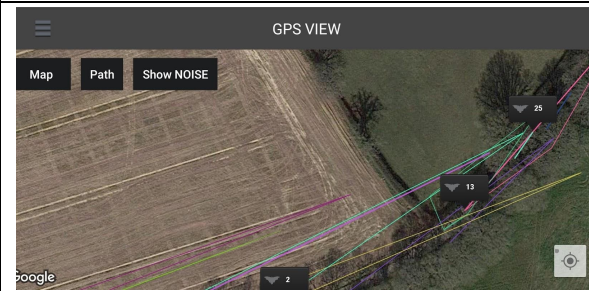
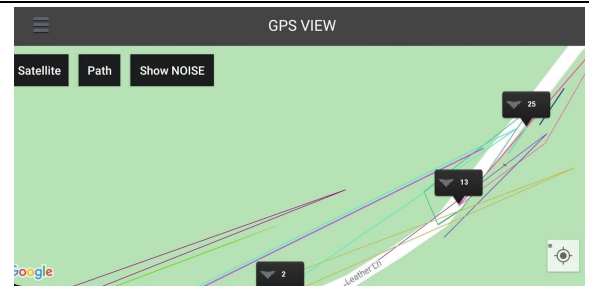
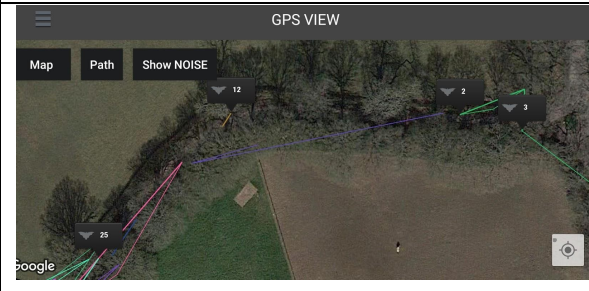
### Overview (Satellite)



### Detailed view (Map)



### Detailed view (Satellite)







We additionally used a thermal imaging monocular to gather supportive evidence of bats along Leather Lane and to identify their feeding patterns. This allowed us to build up data about the bat species present, gain understanding of the bat's flight paths and key foraging areas, all overlaid with accurate mapping imagery, helping us to present our findings in a more precise way, particularly when proof is needed to be shown that bats are present along the site, despite no bat licence being issued by Natural England for the planned tree felling works.

In a similar fashion, the second bat survey was conducted on 9<sup>th</sup> May 2021, when the weather warmed up, with a warm evening of at least 17 degrees celsius forecast through the first few hours of the night when bats were expected to emerge.

We found 6 species that evening, with a total of 260 recordings. The species present were

1. Common Pipistrelle
2. Nathusius' Pipistrelle
3. Barbastelle
4. Leisler's Bat
5. Noctule
6. Natterer's Bat

Almost all of these records were obtained from a position of walking along the tarmac road - both Leather Lane and a short section of Potter Row, with the exception of briefly entering the field just off Leather Lane, which had been proven to have bat foraging activity in the past.

The findings of this particular survey prove spectacularly what a critical bat habitat Leather Lane is, particularly with records of Barbastelle, Natterer's and Leisler's Bat that are scarce in the UK.

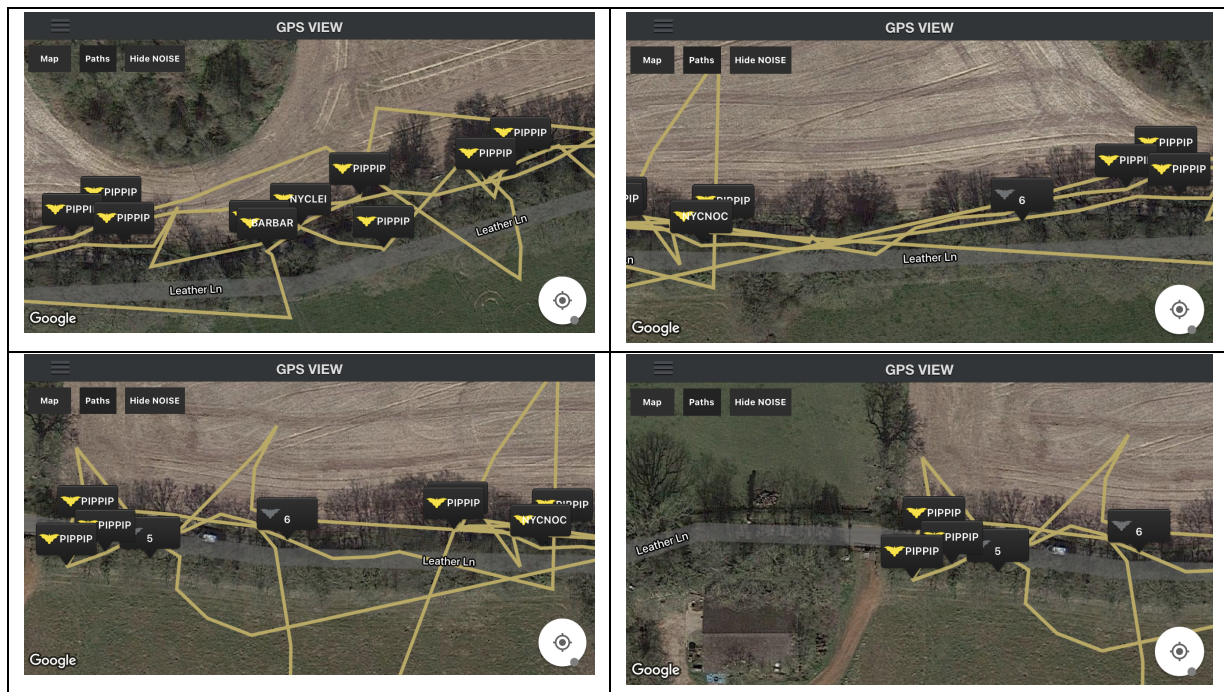
The findings are presented in a map form below. A detailed list of all the records is attached.



Detailed view (Satellite)







## Conclusion

It is conclusive from our findings that bats are evident along Leather Lane. The lane not only provides many suitable PRFs and potential breeding sites for bats, but also acts as a critical corridor for these mammals in the local landscape. It is very likely that with warmer weather during the summer months, several further species could potentially be found here. If more time permitted and with better access into the trees, PRFs could be further investigated by an independent ecologist.

It has been confirmed by Natural England that no bat licences have been issued for HS2 works along Leather Lane. We would be interested in the ecological survey data gathered by HS2 prior to commencing felling works at this location. We are concerned that these surveys do not meet the Bat Conservation Trust guidance and indeed HS2's very own environmental commitments.

Bats are endangered species in the UK. The animals and their roosting sites are protected. If HS2 Ltd pushes forward with the destruction of this ecologically rich habitat, they will be committing wildlife offences. Needless to say the ecology and the local community will be deprived of this historically and ecologically important site. All felling and clearance works could have been (and at the time of writing this could still be) avoided by creating the haul road and overbridge to the north of the lane and copse, allowing all the existing habitat to be left undisturbed.