

Carol-Anne OCallaghan
Hammonds Hall Farm
Potter Row
Great Missenden
Buckinghamshire
HP16 9LT

17th June 2021

Dear Carol-Anne,

Further to my previous letter (dated 11th June) I have provided below my assessment of the data obtained from the Anabat express detector deployed along Leather Lane. I provided the results of my analysis of the data previously, but I have included it again at the end of this letter for ease of reference. You have provided data for a further three nights (8th to 10th June 2021) which I will also analyse and report on separately.

I have visited Leather Lane on four occasions in 2021, most recently on 8th June, in order to familiarise myself with it, the characteristics of the lane and its setting, so that I can contextualise the bat data you have supplied against my own understanding and assessment of the lane.

As background, I am a professional ecologist with 18 years' experience across a wide range of ecological issues. I am a Principal Ecologist at Bioscan although my involvement at Leather Lane is provided as a private individual. I am a full member of the Chartered Institute of Environmental and Ecological Management and have appeared as an expert witness at several planning Public Inquiries including where an impact on bats has been a key consideration. I am registered to use Natural England's level 2 (CL18) bat survey licence (registration: 2015-11529), am a Registered Consultant on Natural England's Low Impact Class Licence for Bats (registration: RC102). I have also held numerous site-specific mitigation licences for bats. In a professional capacity, my work includes the full range of work relating to bats, from designing survey programs to assessing the extent of use of an area or feature by bats, and analysis and interpretation of data collected via transect, static detector and emergence/re-entry surveys. I also provide advice to commercial clients regarding how proposals can be modified to reduce or remove an impact on bats, and advise on options for mitigating potential residual effects on bat activity, such as from artificial light.

Assessment

To date, the data collected from Leather Lane has confirmed the presence of at least seven species of bat: common and soprano pipistrelle *Pipistrellus pipistrellus* and *P. pygmaeus*, noctule *Nyctalus noctula*, serotine *Eptesicus serotinus* and barbastelle *Barbastella barbastellus* and at least one species from each of the *Plecotus* and *Myotis* genera. Of these, soprano pipistrelle, noctule and barbastelle are identified as Species of Principal Importance further to the Government's duties under Section 41 of the Natural Environment and Rural Communities Act 2006. Barbastelle is also considered very rare in Britain¹.

Of significance in the data is the regularity with which bats are recorded by the detector, with typically only a few minutes between each registration (the full data set is appended). Furthermore, this high level of activity is maintained throughout the night, indicating that bats utilise the lane more-or-less continually. A likely reason for this is the context of the lane when seen at a landscape scale. Leather Lane is broadly aligned west-east perpendicular to the A413, making it one of only three single carriage way roads across a stretch of land over 7km long between Frith Hill at Great Missenden to the south and Hale Road at Wendover to the north. Particular to Leather Lane though is the fact that it is also below the level of the adjacent land for much of its length; a 'holloway', and there is a continuous

¹ Bat conservation trust barbastelle factsheet, <https://www.bats.org.uk/about-bats/what-are-bats/uk-bats>

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hedgerow along the southern side for the entire length of the lane. These two characteristics create a sheltered corridor and optimal conditions for bat activity and it is not unreasonable to suggest that the lane is unique² when compared to the other lanes.

Landscape scale features that provide high quality commuting routes are a key factor in the maintenance of local bat populations, providing sheltered corridors between roosts and feeding areas. This is particularly important for the barbastelle bat which is known to forage as much as 20km from roost sites³. Removal or significant alternation to the lane and its particular characteristic therefore poses a significant risk of, at best, disrupting or hindering bat movement, or, at worst, removing an important bat corridor entirely.

In accordance with the mitigation hierarchy⁴ the first option should be to avoid any impact to Leather Lane that could compromise its bat corridor function. Whilst it may not be possible or indeed in the best interest of bats⁵ to re-route the track to entirely avoid Leather Lane, the first consideration should be to avoid a direct impact. One option for this would be to put the track through a tunnel and thereby maintain the integrity of the lane intact. I am not aware that this has been given full consideration or therefore ruled out as an option.

Where avoidance has been shown not to be possible, design changes should be made to maintain the characteristics of the lane, in particular its location below the level of the surrounding land, together with the mature trees and a hedgerow along the southern side. Minimising the width of the track and area either side would ensure that at this location only the very narrowest cut was needed. A green bridge along the alignment of the existing road to ensure there is no break in the corridor should also be considered. As stated in the NPPF, only once such options have been fully considered and ruled out, should the last resort of compensating for the impact be considered.

I hope the above is of assistance and please get in touch to discuss anything further if necessary.

Regards



Sam Watson MCIEEM BSc (Hons)
Principal Ecologist

² Bowood Lane is also set below the adjacent ground level but lacks a continuous hedgerow

³ Zeale, M. R. K. Davidson-Watts, I., & Jones, G. (2012). *Home range use and habitat selection by barbastelle bats (Barbastella barbastellus): Implications for conservation. Journal of Mammalogy*, **93**(4), 1110-1118.

⁴ Para 175(a) of the NPPF (February 2019 version)

⁵ An alternative route may result in a impact to other key areas for bats

Table 1 - Total number of bat registrations per night for each species

Survey night	Common pipistrelle	Soprano pipistrelle	<i>Pipistrellus</i> bat	<i>Plecotus</i> bat	Noctule	Serotine	NyctEpte	Barbastelle	<i>Myotis</i> bat	Unidentified bat
28/05/2021	147	13		3			2			
29/05/2021	75	4	5		1		1			1
30/05/2021	77	2	4	2				1		1
31/05/2021	213		10	1						2
01/06/2021	135	3	4	1	1		1		2	
02/06/2021	368	26								3
03/06/2021	320	4	9	3		1	1			5
04/06/2021	243	8	10	1					1	1
05/06/2021	345	4	10	1			3			
06/06/2021	413	14	1	1			2	7		

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3rd December 2021

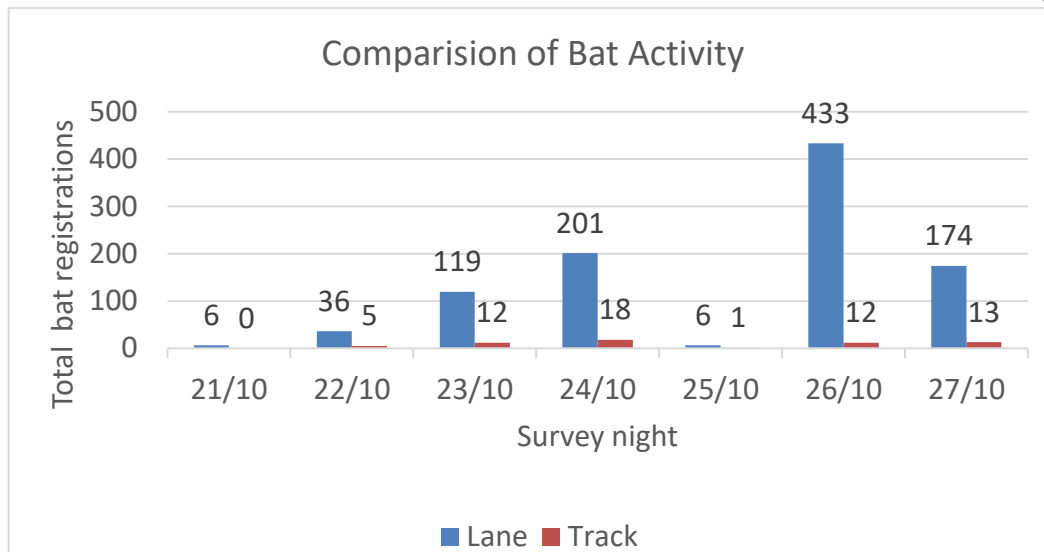
Dear Carol-Anne,

Thank you for sending me the latest bat activity data. I understand that this was collected over the period 21st to 27th October 2021, from two anabat express detectors running concurrently, one located at the lower end of Leather Lane and the other located at the mid-point of the gap created in the hedgerow and tree line where the track crosses the lane.

Although the survey period is outside of the main bat activity period, as the data were collected simultaneously, any influence of the weather on bat activity will have effected registrations at both location and so I am satisfied that the two data sets are comparable.

The results of the analysis of the data are provided in the table below and shown on the following graph.

Survey night	Location	Common pipistrelle	Soprano pipistrelle	Pipistrellus species	NyctEpte	Barbastelle	Unidentified bat	Total
21/10/21	Track	0	0	0	0	0	0	0
	Lane	4	0	1	1	0	0	6
22/10/21	Track	4	1	0	0	0	0	5
	Lane	36	0	0	0	0	0	36
23/10/21	Track	10	1	0	0	0	1	12
	Lane	105	13	0	0	1	0	119
24/10/21	Track	18	0	0	0	0	0	18
	Lane	198	2	0	0	1	0	201
25/10/21	Track	1	0	0	0	0	0	1
	Lane	5	0	0	1	0	0	6
26/10/21	Track	12	0	0	0	0	0	12
	Lane	432	1	0	0	0	0	433
27/10/21	Track	13	0	0	0	0	0	13
	Lane	173	0	0	0	1	0	174



The data show a clear difference in the bat activity at the two locations, with significantly more bat registrations recorded by the detector on the lane, compared to the detector on the track crossing. The only discernible difference in the parameters at these locations is the absence of a c40m length of the tree line and hedgerow where the track crosses Leather Lane. I can only conclude from this that this lack of vegetation is an obstacle to bat movement and that the corridor function of leather lane has been significantly denuded due to this vegetation clearance.

As has been shown from the data collected earlier in the year and which I also noted during my own dawn surveys in 2021, Leather Lane is clearly an important and significant bat corridor within the landscape, used by at least seven species, including by the very rare barbastelle bat *Barbastella barbastellus*.

On the basis of the above, mitigation for the impact of the track crossing must include a green bridge over the track to replace the removed linkage and reinstate this important wildlife corridor. I note that HS2 promote the use of green bridges¹, as shown below and Leather Lane is a clear case where this mitigation option must be applied.



Furthermore, any additional removal of the trees will only increase the impact of HS2 on this corridor

¹ Source - <https://www.gov.uk/government/news/hs2-launches-plans-for-unprecedented-green-corridor-stretching-alongside-the-railway>

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and all options for retaining the remaining trees and hedgerow must be implemented, such as routing the replacement over-road on the north side of Leather Lane, before further removal of the trees and hedgerow can be considered acceptable.

I hope the above is of assistance and please get in touch to discuss anything further if necessary.

Regards

A handwritten signature in black ink that reads "SWatson". The letters are cursive and somewhat stylized, with the 'S' and 'W' being particularly prominent.

Sam Watson MCIEEM BSc (Hons)
Principal Ecologist

FAO Lindsey Spinks

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11th February 2022

Dear Lindsey

LEATHER LANE TREES & HS2

Thank you for asking for my opinion on the matters concerning the threat posed by HS2 works to important habitat features for bats at the above site.

Bioscan is a specialist ecological consultancy with long experience (since 1984) of ecological surveys and assessments for bats and other wildlife in relation to development projects. The bulk of our work is for the commercial development sector, including national infrastructure projects.

Having reviewed the ecological information, we agree that there can be little doubt that the tree line along Leather Lane is important for local bat populations – indeed that importance is likely to have increased in the wake of removal of alternative landscape-scale bat commuting conduits over the last year in connection with the HS2 project. **This information includes recordings from static bat detectors that we can corroborate confirm the presence of the rare barbastelle bat. No known maternity colonies of this species exist in the South Bucks locality and therefore the presence of this species is highly significant.**

There is thus a clear risk of the substantive removal of the commuting corridor offered by Leather Lane having a regionally significant impact on bat populations.

This risk translates to a compunction for works to be re-appraised in the light of the mitigation hierarchy, and for efforts to be pursued to avoid, minimise or compensate the likely impacts that will arise. In the absence of more detailed information about how the commuting conduit relates to local roosts, including of the rare barbastelle, a precautionary approach is required. That compunction applies regardless of the fact that the project has the appropriate legal and regulatory consents. It is not unprecedented that environmental matters arise during construction that require to be dealt with by reactive design changes. Indeed that is no more than responsible practice.

In this situation, whilst it is disappointing that efforts have had to be made not by HS2 Ltd, but by concerned third parties, to explore less damaging alternatives, the factual position is that less damaging alternatives have been identified as detailed in your submissions. Furthermore, engineering expertise has been brought to bear to ensure that these are practical and viable.

There are thus compelling reasons why this alternative needs to be looked at seriously and indeed potential grounds for challenge if it is not. I therefore lend my support to your request for Government to intervene to ensure appropriate alternatives are adopted in the interests of minimising environmental harms from this project.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'D Woodfield', written in a cursive style.

Dominic Woodfield CEcol CEnv MCIEEM
Managing Director