

# **Annual Newsletter 2024**



Noctule bats © Sierra Larson

Welcome to our Spring 2024 newsletter, looking back on 2023's achievements, as well as some plans for 2024. It continues to amaze us, how Wiltshire Bat Group's members and friends achieve so much each year. Everyone's efforts and contributions should be celebrated – and as you read through last year's highlights, please consider what more you can do to help in the running of the Group and its activities. The bat group is very much "your" group, so if you wish to see the group continue running projects, delivering events and training, please consider how you can help.

## A welcome from the Committee

I am really pleased that once again we are able to provide you with a brief summary of some of the things we got up to in 2023. This annual newsletter is by no means all that is going on, but does provide a recap on most of our major projects. If you are doing something and want to tell us about it, please don't be shy, even the shortest article is welcome for future editions.

I've only managed to get out twice since the new year, once to do a hibernation visit in the south of the county, and the other to help Alex Perry put up some new boxes in Stanton Park Swindon. This is going to be a good site, and I'm glad that after some hard work Alex is in a good position to re-establish regular checks there. Lydiard Park will also be checked more regularly too. The atrocious weather has hampered a lot of post winter work across the county including the Cotswold Water Park, it's been under water for quite a few weeks now, but that's been the same for nearly everyone.

The weather also put paid to some of the swarming events last autumn, and this tied in with some licensing issues meant we didn't do as much as we would've liked, but we are ever hopeful that everything lines up well for this year. I really enjoy the swarming nights when I can muster the energy to stay up later than 9 PM, the camaraderie, meeting members and new people and sometimes the ghost stories. Here's to many more. We are privileged in Wiltshire to have a real good bat assemblage (I think that's the right term) and the expectancy of something unusual turning up is always fascinating.

Although we are a few committee members down at the moment, we will continue to provide a service to members where we can, and I promise not to go on about it too much at our April meeting. Our thanks go out to the Avon Bat Group for allowing us to piggy back on their winter events, and for other external projects opening up volunteering opportunities to our members. Please take advantage of these.

I did actually sneak out of the house a couple of weeks ago to listen to Gareth's talk on the Bats of the Braydon Forest for the Malmesbury and district Natural History Society. I have a vague memory of being there for some of the surveys, but it was a real eye opener to see how far we have come with records for our 'big four'.

Bechstein's, barbastelle, greater and lesser horseshoe now having detailed and comprehensive distribution maps. These are very interesting and made possible mainly by the collection/analysis of acoustic data records, and focused trapping operations. So as usual our big plea is to please submit your records in 2024. Take your detectors with you when out walking the dog or just enjoying your local patch or back garden.

As always, funds raised through membership, walks and talks and other generous donations mean that we are in a healthy financial position. We have over 250 members now, and this continued support allows us to contribute funding to members for equipment and other good bat conservation stories and causes. We get quite a few members from recommendations, so thank you for that too.

On a box check in the Cotswold Water Park we showed a Bechstein's to a member of the public. His comment afterwards was 'how do you know so much about bats?' that's a good question, so as you read through this and maybe feel it's all a bit complicated and difficult, remember, we all started somewhere and knowing very little. Stick with it, it's addictive!

Finally, It took me 25 years to realise Brandt's bat was my favourite, so I always take a gratuitous photo when I get the chance. Here it is.



Brandt's bat – 2023 – WP

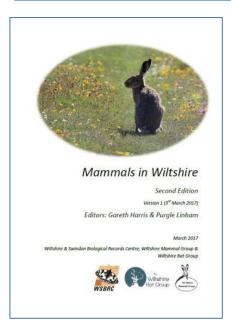
Thanks again, here's to a good 2024.

Will Ponting - March 2024

#### **Contents**

A welcome from the Committee	2
Mammals in Wiltshire 3rd Edition WE WANT YOUR DATA!!	3
News, snippets and headlines in brief	4
Events, training & people engagement – an update from 2023	5
Wiltshire's Best Bat Walks	6
Shared Zoom Talks with Avon Bat Group	6
Country Comes to Town - Trowbridge	6
The County Recorders' Report and highlights for 2023	7
Louise Hartgill	11
Bat Surveys in Bentley Wood 2023	11
The Savernake Forest – project update 2023	14
The Cotswold Water Park	14
2023 Outreach: Bat Talks and Walks for North Wiltshire Groups	16
The π•pistrelle self-build bat detector project	18
And finally	20
Our sincere thanks	20

#### Mammals in Wiltshire 3rd Edition WE WANT YOUR DATA!!



Mammals in Wiltshire (2nd Edition) was published back in March 2017 - this publication was produced through a collaboration between Wiltshire Mammal Group, Wiltshire Bat Group and Wiltshire & Swindon Biological Records Centre. This was a significant undertaking to draw together all this information, from multiple sources, and accurately represented our knowledge of mammals in Wiltshire at that time.

> Since then, I have written of our intention to produce a third edition of the atlas, to capture some of the significant advances in knowledge achieved in recent years.

> Not only do we have new species to include (Alcathoe bat), but the distribution of many species has significantly changed, often due to changes in recording and survey activity (Barbastelle bat, Bechstein's bat, Greater horseshoe bat, Leisler's bat, Harvest mouse, Hazel dormouse) or genuine expansion in range and population (Eurasian beaver, Pine marten).

> So this is notice that we'll be strongly encouraging (more than usual) everyone to please submit records of all mammals, not just bats, for inclusion in the next edition of the atlas. Don't delay. Make sure your recording efforts contribute to wider knowledge and conservation efforts.

If you want to read more about the county's bat populations, please download the atlas here.

## News, snippets and headlines in brief

#### 2024 spring members meeting / AGM

Please put Thursday 11<sup>th</sup> April 2024, at 1900 into your calendars. This will be an in-person meeting at Potterne Wick Scout Centre. As always, there will be a full agenda, updates, speaker and free refreshments. Our speaker will be Lewis Hillier sharing tales from recent bat trips abroad.



#### **Committee members**

Wiltshire Bat Group is YOUR group - we need your help to keep it going, to help with organizing events, talks, leading guided walks, and helping with the various projects.

So if you like what the bat group is doing, and would like to see that continue, or indeed grow, the please get involved and show your support.

The roles aren't onerous – after all, many hands make light work.

Without greater involvement of the membership, group activities will have to reduce, whilst we lack resource to continue them.

#### A huge thank you newsletter editor, Ben Mitchell

Once again a massive thank you to Ben for compiling the newsletter again this year; he's done another great job of compiling everyone's contributions!

#### Acoustic surveys and detectors

In 2021 the committee bought two SongMeter Mini-Bat static detectors. These have been used constantly, but are available for members to borrow, we'll provide guidance, instructions etc.

Anyone interested will also be responsible for analysing their own data (or to find a willing volunteer to do this for them). The deployment of the detectors is the easy part and a large volume of records and therefore effort can be required to identify the recordings in a meaningful way with an acceptable level of accuracy. There is the possibility of using the bat group's BTO Acoustic Pipeline account to aid in the analysis of data but, like any auto-ID platform, the outputs still require some auditing to ensure accurate records.

That said, please do not be discouraged if you have a potential area that you would like to investigate further please get in touch.

#### Heterodyne bat detectors for events

We also have a number of heterodyne detectors that can be borrowed for bat walks. Contact us to book them and arrange collection. They are frequently used so please book them in advance and return promptly.

### Support to projects

The WBG always sets aside funds each year for match funding to projects, including DNA sampling. Just send an email to <a href="wiltsbg@gmail.com">wiltsbg@gmail.com</a> and the Committee will endeavor to help where we can. Recently, we've supported DNA analyses and purchase of kit for bat box checking in Swindon.

#### Bat box checks

There are opportunities to get involved in several projects, including bat box checking. Members of Wiltshire Bat Group are sent the contact details for each project and project leader – please contact them directly to get involved. Not a member? Please email Will Ponting wiltsbgmembership@gmail.com.

- The Cotswold Water Park Monthly bat box checks will commence again the spring, in conjunction with Cotswold Lakes Trust and Lower Mill Estate. If you'd like to come along, please Email Will on wwponting@gmail.com.
- Stanton Country Park (Swindon) speak to Alex Perry to get involved at this great site. alex\_1609@hotmail.co.uk
- Lydiard Country Park (Swindon) speak to Will Ponting about this one too.
- Savernake Forest Project 3 visits are planned for 2024, starting in March, so if you'd like to get involved here, speak to Lisa Wade.

#### Get back in touch.

Obviously, the pandemic led to a reduction in the amount of fieldwork we could do. Things are improving so please get back in touch with the project leaders, make sure you are on their email lists and tell them you are still interested. And if your email address has changed, please update Will Ponting wiltsbgmembership@gmail.com and the individual project leads as well.

#### Data are always important.

Please send any Wiltshire bat records into the County Recorder. This is still the major way in which we all contribute to bat conservation in Wiltshire. Contact Gareth on <a href="wiltsbatsrecords@gmail.com">wiltsbatsrecords@gmail.com</a> for more information; or consider submitting records via iRecord.

#### Website - Wiltshire Bat Group

Our presence on the Wiltshire Mammal Portal continues to be refreshed - previous <u>newsletters</u>, <u>meeting minutes etc</u> can all be found here, as well as other publications such as the Cotswold Water Park Bat Atlas, and <u>Mammals in Wiltshire</u> (2nd Edition).

Not a member? Please join us to support bat conservation in Wiltshire.

## Events, training & people engagement – an update from 2023

Clearly we're still missing Kelly Sheldrick and Ollie Ellis (Events Officer and NBMP Champion, respectively) but their legacy was very much in evidence in 2023 with a number of events.

WBG indoor meetings in April and November were well-attended, and we were delighted to host some brilliant speakers. In April, Tom Kitching from The Vincent Wildlife Trust gave an excellent talk on their work on greater and lesser horseshoe bats, with some focus upon their collaboration with Sussex Bat Group and the pioneer maternity colony of greater horseshoe bats. WBG was delighted to contribute to this project again, as a thank you to Tom.

In November, we hosted Prof Fiona Mathews, long time friend of Wiltshire Bat Group, and recent author (with Tim Kendall) of *Black Ops and Beaver Bombing:* 

Adventures with Britain's Wild Mammals. Fiona shared some stories from the book and also took the opportunity to share some of her team's recent research outputs too.

At the end of Winter 2022-2023, we hosted more online talks, with some brilliant speakers, including Stuart Newsom (Exploring the passive acoustic monitoring of small terrestrial mammals) on the 18<sup>th</sup> January, and Jim Mullholland on the 28<sup>th</sup> February (Surveying trees for bats: a new approach) (who can forget the beautiful, captured images of Bechstein's bat, and the footage of the Noctule evicting the Grey squirrel!??).

Wiltshire Bat Group supported the Nurturing Nature Project, delivering an online talk about the bats of Wiltshire and Cranborne Chase National Landscape on the 23<sup>rd</sup> March, and then a guided walk in Broad Chalke on the 17<sup>th</sup> May.

On the 22<sup>nd</sup> May, GH was invited to speak at the brilliant Pint of Science Festival, a global festival of science hosted by pubs in cities across the world, Salisbury is a participating city so it's a great opportunity to develop arguably more irreverent presentation skills in a more informal environment! GH shared his enthusiasm for greater horseshoe bats, dung beetles and livestock. Wiltshire Mammal Group will be involved again in 2024, so please do look out for these events and support them – tickets sell out quick!

GH was also involved in a series of other events across the county, including a talk at West Lavington Church, a talk for Salisbury Young Farmers Club, a talk for Salisbury & District Natural History Society, supporting a fundraising event at Salisbury Cathedral, and guided walks for the Wylye Valley Farmer Group, Chilmark village and West Lavington Church. With thanks to those people helping with these events including Lisa Wade, Laura Loncar, Louise Hartgill, and to all the lovely, enthusiastic folks who welcomed us.

We're always keen to hear from members who have led walks or talks, promoting bats, bat conservation, and the bat group – if we've not mentioned an event here, it's because we don't know about it, so please get in touch and share your news.

We were also able to loan our bat detectors to groups doing bat walks, including Matt Callaway, Sue Deedigan, and to Wendy Priest to support her NBMP Colony Counts at Lacock Abbey. Check out the BCT's BatChat podcast and listen to Wendy's edition!

Don't forget, we have detectors that can be loaned to members to support guided walks. If you'd like further information, please get in touch.

2024 will likely look very different – without an Events Officer, the already-stretched committee is unlikely going to be able to organise additional events beyond the indoor meetings in April and November. If you love the events we organise, then please consider getting involved and helping to organise them.

GH.

#### Wiltshire's Best Bat Walks

WBG is occasionally asked where the best places are to see bats in the County, for example, by visitors to the county, or by training bat workers. To answer this question we decided to put together a series of on-line guides to short walks in areas where bats are active and usually abundant with varied species. We asked the membership to come up with their suggestions of favourite bat haunts and chose the best three to start the series which we hope to build on over the next few years. The plan is to provide guides to walks covering urban and rural areas within easy reach of anyone across Wiltshire.

We will be launching these guides in the Spring and Summer with an organized and guided walk along each of the routes. Dates to be announced shortly for walks in the following locations:

Coombe Bissett (chosen by Louise Hartgill)
Jubilee Lakes near Royal Wotton Bassett (chosen by Bob Philpott)

Cleveland Lakes Nature reserve, Cotswold Water Park (chosen by Ben Welbourn)

#### Shared Zoom Talks with Avon Bat Group

At the end of 2023 we were invited to link up with our neighbouring bat group to a series of Zoom talks. Having sadly lost our Events Officer, Kelly, to her native Australia, we jumped at the chance. Many thanks to David Westgate at Avon Bat Group for extending the invitation and we hope lots of you have taken advantage. So far there have been talks from Madeline Davis, Science Projects Officer at the BCT and Thomas Foxley, a Post-Grad researcher at UWE and a talk from

Emma Stone, lecturer on bats at the University of Bath.

## Country Comes to Town - Trowbridge

It was a delightful day promoting bats at Wiltshire Wildlife Trust's Country Comes to Town event in Trowbridge in May this year. We had a competition to find where a bat was roosting on a big map covering east Trowbridge, the winning square was chosen by Jesse who was absolutely delighted to find he had won and came home from school to all these prizes which included a bat box, an apple tree, some WBG goodies and a bat walk lead by me!



Jesse and his parents joined me in Semington along the canal one evening in September. After a slow start once the rain had stopped, it was a very active section of the canal. Jesse was so excited to hear so many bats passing including lots of Daubenton's (as expected), noctule, serotine and common and soprano pipistrelle as well. He was far better at spotting bats in the dusky sky than the rest of us!

#### **Matt Callaway**

## The County Recorders' Report and highlights for 2023

#### GARETH HARRIS - WILTSHIRE BAT GROUP

Survey and monitoring work continued to return to some degree of "normal" akin to pre-Covid19 levels. Although the guidance for mammalogists and bat workers remains in place to manage and minimise risks of native mammals catching Covid19 from people, groups are now used to routinely wearing the necessary PPE at all times and managing the risks. Team sizes on survey events are typically smaller, and some surveys are undertaken less frequently, but conversely, landscape-scale acoustic surveys have been expanded and, if anything, the group is generating more data each year.

2023 was a year of some flux and change (for example, relating to access to sites and licensing of projects), which has impacted how projects are delivered, and provides some pause for thought as to the future of some of these projects.

#### 2023 - THE WEATHER

Climate change continues to be evident during our bat monitoring in the county, ranging from the impacts of extreme storms upon woodland bat box schemes and tree roosts, to the deaths of bats in bat boxes during extreme summer temperatures. Warmer and wetter winters also impact the numbers of bats using underground hibernacula in the county. This leads the group to reconsider how we deliver our monitoring in the face of climate change.

#### **COUNTY RECORDERS' REPORT 2023**

As in previous years, WBG is grateful to the many members and non-members who generate large numbers of records of foraging bats, whilst walking many kilometres with their bat detector (often an EchoMeter Touch). The bat group received several thousand records in this way, from infrequently-visited parts of the county, often resulting in records of pretty interesting species.

The following is a quick round-up from some of the projects:

**Savernake Forest** – monitoring of the bat boxes here continued and once again resulted in three encounters

with the Barbastelle maternity group and some brilliant ring recoveries – most of the colony is now ringed, and we are mostly just ringing juveniles now. Some additional Barbastelle bats were encountered away from the maternity colony too.

Collaboration with Forestry England also led to some additional box checks in May, and an extra trapping survey. More on this collaborative work later.

Braydon Forest – monitoring of the original long term bat box scheme, where we have a ringing study on Bechstein's bat, continues with success, albeit with perhaps lower numbers of individual encounters, and with some concern over the new solar farm developments recently permitted around Minety.

Elsewhere, monitoring of the bat boxes in another nearby woodland continued with good numbers of Brown long-eared bat, Natterer's bat etc recorded. The presence of batfly larval cases in the boxes offer tantalising evidence that Bechstein's (or Daubenton's bat) may be using the boxes, but we are yet to encounter one.

The third bat box scheme also continued with brown long-eared bats, soprano pipistrelle and a splendid Noctule bat.

Excitingly, in 2023 I worked with one of the landowners and their land agents, in the Braydon Forest on a large wood pasture creation scheme. Targeting Bechstein's bat, this scheme will see the conversion of a large area of species-poor pasture into wood pasture and with greater species diversity. This is located between two of the Braydon Forest woodlands known to support Bechstein's bat and will increase foraging habitat, landscape connectivity, and in time, increase roosting sites. We look forward to continuing to support this brilliant work.

#### **Bath & Bradford-on-Avon stone mines**

The annual hibernation checks continued on all sites during winter 2022-2023, including those in the bat SAC, however, complications with Natural England reissuing the project licence have resulted in little autumn swarming work in 2023, and a delay to most hibernation checks in winter 2023-24.

#### **Trowbridge Woodlands**

Keith Cohen et al continued with the studies at these woodlands including the bat box monitoring albeit with a change in contract and circumstances, as the contract to deliver this project moves to a commercial

consultancy.

#### **The Farmer Groups**

Several of the farmer groups continued with their landscape-scale acoustic surveys, notably Simon Smart's coordination of work with the Pewsey Downs and Chalke Valley Farmer Groups, and also the Wylye Valley Farmer Group. This work is generating large volumes of data (and thankfully the resource to fully quality check and verify the extensive outputs!).

In 2023, the Wylye Valley Farmer Group commissioned acoustic bat surveys across their landscape, generating a large body of acoustic data for areas not previously subject to survey. Highlights included new records of Barbastelle, Greater horseshoe, Lesser horseshoe, and Leisler's bat, providing further impetus and direction for conservation work here. For example, improving roost provision for horseshoe bats along the river valley, including surveying and enhancing features such as WWII pillboxes.



Greater horseshoe bat @ Gareth Harris

#### **South Wiltshire Greater Horseshoe Bat Project**

This project, coordinated by Simon Smart and I, received further funds in 2023, enabling further work, including further acoustic surveys, dung beetle surveys, roost monitoring and some practical works.

working with Longleat Estate, conducting roost visits and acoustic surveys around the Estate; this will hopefully lead to further opportunities in 2024. I was also commissioned by several major landowners in the county to conduct acoustic surveys of Estates and large land holdings, including the Wylye Valley Farm Group and the Bentley Wood Charitable Trust. All are areas which have had low levels of recording effort in the past, and all generated

- records of species of interest such as greater horseshoe bat.
- Acoustic surveys of Salisbury Cathedral also continued throughout the autumn and winter, in part looking at activity of bats during these periods.
- Dung beetle surveys Simon Smart secured funding for a programme of dung beetle surveys across the Pewsey Downs – surveys are ongoing as we speak, but clearly curtailed by weather conditions!
- in 2022, has been monitored throughout the year, including through roost inspections and acoustic monitoring. Greater horseshoe bats (some sonograms show more than one bat present at the same time) are using the bat house most nights, partly as a feeding perch (with a growing pile of dung beetle remains to illustrate this) but also with some evidence of day roosting too. Natterer's, brown long-eared and Barbastelle continue also to use it.



Small Myotis in hibernation © Gareth Harris

 Roost monitoring as part of the horseshoe project including monitoring of the key hibernation sites of Chilmark Quarries SSSI and Fonthill Grottoes SSSI (resulting in counts of several hundred bats) as well as a series of smaller hibernation sites such as small quarries, grottoes, a lime kiln and church crypts, together resulting in small numbers of horseshoe bats, Natterer's, Daubenton's,

- Barbastelle, whiskered bat and brown longeared bat.
- Public engagement included a guided walk in Chilmark village (on a very cold night, but still yielding a Barbastelle bat foraging over a lawn!) and events with farmer groups such as the Wylye Valley Farmer Group in Codford (also yielding Barbastelle and social-calling Noctule bats).

Cotswold Water Park - the monitoring of bats in the Cotswold Water Park continued, encountering the maternity group of Natterer's bat and the mating groups of Soprano pipistrelle. Monitoring of the bat house showed continued usage by lesser horseshoe bat and brown long-eared bat. Will Ponting describes elsewhere in the newsletter the amazing date he encountered a ringed Bechstein's bat and a Nathusius' pipistrelle bat during bat box monitoring.

**Barbastelle bat, PhD study** – congratulations to **Kieran O'Malley, PhD researcher** from the University of Sussex, Brighton, studying Barbastelle bat who successfully completed his PhD in late 2023. A number of WBG members supported his work in 2021 deploying static detectors to selected sites. During the autumn of 2021 and then in 2022, his methodology was tested further by trapping and radiotracking Barbastelle bats to locate their roosts. In Wiltshire, this resulted in confirmation of 2 new maternity groups.

#### **Species highlights**

At time of writing, reports are still incoming from 2023, however the various landscape-scale acoustic surveys generated many records of rarer species across the county.

A good activity of Greater horseshoe bats was recorded at multiple sites, including at new hibernation sites, new feeding perches/night roosts, and many foraging records. Those records on the eastern edge of the county are perhaps the most interesting as this species extends its range eastwards.

Barbastelle bats were once again widely recorded, with greatest records coming from monitoring projects such as The Old Dairy Bat House, extensive monitoring around Savernake, Drews Pond Wood (Devizes), Monkton Farleigh, Alderbury, Bentley Wood to name but a few. A mating site was located in Devizes, also being uses by Myotis bats and Greater horseshoe.

Away from long-term monitoring projects (such as

Braydon Forest and Trowbridge), Bechstein's bat were trapped likely breeding at a site Avoncliff/Freshford and caught during autumn swarming work in south Wiltshire. Potentially controversial, I also recorded Bechstein's bat at 3 sites during acoustic surveys whereby the recorded social call is distinctive for Bechstein's bat (with second opinions from experts in the field agreeing with this all are in areas in proximity to known maternity colonies, which perhaps lends some weight to the records).



Bechstein's bats in hibernation (in a stone mine ceiling crack)
© Gareth Harris

Brandt's bats were recorded in at least 3 locations, with DNA confirmation for 2 of these. This species remains one of the rarest and least recorded in the county.

Leisler's bats were recorded acoustically at several locations — its worth stating that acoustic ID is undertaken conservatively, and based on recordings made in open, uncluttered habitats. A number of locations produced an intriguing number of records, worthy of follow up, including Tisbury and Warminster. More work is urgently required on this species in the county.

A small number of Nathusius' pipistrelle records were generated too, most notably in Devizes in early Junethese are not the first records for Devizes, perhaps hinting at the need for further work here.

#### Help please!

I'll reissue my reminder from last year about small Myotis species.

**Brandt's bat** remains a rare bat in wiltshire, poorly known and barely studied. Away from swarming sites and hibernation sites, there are still (almost?) no

known, and confirmed, maternity roosts, so a plea to consultant ecologists and other fieldworkers; ANY records and roosts of Brandt's bat, if confirmed, are probably more significant than Bechstein's bat these days! If you record a suspected Brandt's bat, please take a DNA sample to get it confirmed, and please record the biometrics and features you use to make your ID — because I will be in touch for further information to get the record verified. DNA confirmation is always welcomed because of the high potential for confusion with whiskered bat and also Alcathoe bat.... you don't want to be the person who overlooked the Alcathoe bat!

It's also worth reminding recorders and consultants that Brandt's bat in 99% (or 100%) of cases cannot be identified with confidence from acoustic records (regardless of what your EchoMeter Touch or auto-ID platform is telling you). If you submit such records, I will ask for supporting information and unless you do so, will "reduce" the record to a "small Myotis" or "Myotis sp." record.

And, again, Barbastelle bats:

They're widespread in Wiltshire, likely to be encountered anywhere. I encourage recorders and consultants to stop presuming they are rare, improbable, or unlikely. It remains concerning that few fieldworkers (outside of WBG's projects) submit many, if any, Barbastelle records — so they ARE being overlooked. Please look harder.

#### **INCOMING RECORDS**

As in previous years, 2023 is looking like another productive year, and the bat group is on course to generate several thousand records once again. The acoustic surveys of the South Wiltshire Greater Horseshoe Bat Project are perhaps responsible for a sizeable chunk of this but the combined efforts of all of the bat group projects and its membership, and the Farmer Groups, is generating thousands of records each year too.

It's also worth noting that increasing numbers of records are arriving via apps and online recording platforms, most notably iRecord, with this platform being favoured by consultants in particular. Many consultants now submit screenshots of sonograms to support some bat records (such as horseshoe bats and barbastelle), and this is a great way to improve the value of your records.

Verifying the records mentioned above is typically

straightforward, being generated by experienced bat workers and with an abundance of supporting evidence such as sound files, DNA confirmation, biometrics etc.

Finally, a growing area of interest is the acoustic recording by bat workers of terrestrial small mammals, typically as bycatch in static detector surveys. Recent work by Stuart Newson and the BTO Acoustic Pipeline, and the forthcoming book from Neil Middleton et al, and the recent talk to Wiltshire Bat Group by Stuart Newson, is really raising the profile of the value of these records. The South Wiltshire greater Horseshoe Bat Project is generating a growing number of such records each year now, including of Common & Pygmy shrew, and occasional Hazel dormouse, Water vole and Harvest mouse.

But — even when platforms such as BTO Acoustic Pipeline suggest with confidence that a file may contain a small terrestrial mammal species, they are often incorrect, and so such records will only be verified and accepted if submitted with the original sound file. But please do submit these records, because they DO make a difference, particularly for species like pygmy shrew, where we receive few other records.



Bechstein's at Chilmark Quarry – © G. Harris

Finally — before you submit records, please give a thought to the verifier(s) who review and check your records. Every record you submit will invariably be checked by a verifier / county recorder / recording scheme, and these people are — as volunteers — checking many thousands of records each year, obviously a time-consuming job. This is clearly a necessary process that ensures that the bat group and mammal group is producing a high-quality dataset that is greatly trusted by the organisations that use it.

You can help this work by submitting good quality records, by sharing sound files and photos to support records, by helping with enquiries to support verification and ensuring that the data you generate is as accurate as possible. Afterall, this is the same data that data users such as consultant ecologist will receive and use in data requests.

#### Thanks & acknowledgements.

The list of people, landowners and organisations who support and enable the Group's various project is vast, from the group's members, many farmers & landowners, the owners of roosting sites and organisations who provide funding and support. Our funders this year include Forestry England and Cranborne Chase AONB FIPL — if anyone has been omitted, my apologies!

Bat conservation efforts in Wiltshire continue to grow and are underpinned by effective partnerships to do so. Long may that continue.

### **Louise Hartqill**

This photo was taken along the track near my house and is a spot I frequently go to. The seat was made by my father and we put it there so people could rest awhile and enjoy the scene.

While Peter was ill it became my go-to place to get things into perspective. I started to learn about bats and at night I would walk along to this place recording the echolocation of any bats in the area. Sitting on the seat in the darkness I could hear the calls of the Daubenton's bats as they skimmed across the water surface foraging for insects.

It was quiet, still and restorative.



### **Bat Surveys in Bentley Wood 2023**

## Gareth Harris, Wiltshire Bat Group & Gareth Harris Ecology & Conservation

In 2023, the Bentley Wood Trust commissioned me to deliver a detailed bat survey of Bentley Wood. Although this was the first site-wide baseline survey, it follows a number of other surveys, for example, the work of Colin Morris, Vincent Wildlife in the 1990s which established a bat box scheme, the following bat box monitoring that Anne Cozens and David Lambert continued after Colin withdrew, and more recently, some *ad hoc* acoustic surveys and trapping surveys undertaken by myself.

#### **Methods**

During May to July 2023, each of the 1kilometre squares covering Bentley Wood were surveyed with the deployment of a bat detector recording for up to 5 nights; in addition, three squares received additional survey to survey points of interest, such as ponds. We used two Wildlife Acoustic SongMeter Mini BatFS. Trapping surveys with acoustic lures were also undertaken.

#### Results

During over 45 nights of deployment, a total of 30,407 sound files were recorded and then analysed. Following the analysis of these data, and the exclusion of non-bat noise such as wind, raindrops, orthoptera, bird song etc, and excluding those identifications made with a low confidence, a total of 27,445 sound files with bats are included in the following analysis.

A total of 12 bat species were recorded, of which common & widespread species accounted for the majority of passes: Common pipistrelle with over 23,000 passes (84%) and Soprano pipistrelle with 1677 passes (6%).

Table 1 Total Bat Passes Recorded, by Species

Species	<b>Grand Total</b>	%
Greater Horseshoe Bat	2	0.01
Daubenton's Bat	62	0.23
Whiskered/Brandt's Bat	208	0.76
Natterer's Bat	328	1.20
Noctule	318	1.16
Leisler's Bat	44	0.16
Serotine	819	2.98
Common Pipistrelle	23129	84.27

Soprano Pipistrelle	1677	6.11
Nathusius' Pipistrelle	4	0.01
Brown Long-eared Bat	122	0.44
Barbastelle	732	2.67
Grand Total	27445	100%

Drawing comparisons between species and their numbers of passes records must be done with some caution. Each of the bat species may have a different "encounter rate" which reflects their population density, their foraging strategy and how they use the wider landscape, as well as their echolocation characteristics. For example, species such as the horseshoe bats, Brown long-eared bat and Barbastelle have a relatively quiet echolocation which reduces the frequency with which they are recorded. Conversely, pipistrelle bats and Noctule bats are common and widespread, but also have very loud echolocation, producing a higher encounter rate. It is therefore necessary being cautious when comparing activity levels of different bat species - pipistrelle bat passes will always dominate the activity recorded (loud and abundant), and even small numbers of passes of horseshoe bats and Barbastelle bats will be very important.

It is remarkable that the third most frequently recorded species was Barbastelle bat and Serotine bat. With a relatively low detectability (due to their quiet echolocation and low density in the landscape) 732 passes of Barbastelle bat is remarkable. Serotine bats are a very loud species, with arguably a higher detectability — so it's interesting to note that similar numbers and proportions of passes were recorded of these species. It is interesting to note that although Barbastelle will be occupying a series of tree roosts within Bentley Wood, Serotine bat will be roosting in buildings such as dwellings, churches and barns, and then commuting into Bentley Wood to forage.

#### **Species of interest**

**Barbastelle bat** - Barbastelle bat is considered rare, and infrequently encountered by most observers, but our surveys across Wiltshire highlight that this species is remarkably widespread in the county. This species has a low detectability in these types of survey, and so 732 passes is actually very significant.

Barbastelle bats were recorded in all 1km squares. Worthy of discussion are the timings and activity levels of Barbastelle bat during this work. Barbastelle bat typically, in Wiltshire, in my experience, give birth to

their young during the last week of June; during late and for much of July therefore, they are pregnant and/or lactating, and are therefore foraging on the best quality foraging grounds.



Barbastelle at Bentley Wood – © Gareth Harris

The activity levels demonstrated that Barbastelle bats are present within Bentley Wood throughout pregnancy and lactation, clearly suggesting that they are breeding in Bentley Wood.

Greater horseshoe bat - Excitingly, these surveys recorded the first Greater horseshoe bat in Bentley Wood (Heath Copse), albeit only 2 passes. This is exciting in a wider context, as this is part of an eastward movement of Greater horseshoe bat as they begin returning to former haunts in south-east England (with the first maternity colony of this species for 100 years recently reported in Sussex). Population expansion in Wiltshire is supporting this overall eastward movement.

**Leisler's bat** - These surveys also recorded Leisler's bat widely across the wood. This smaller cousin of the Noctule bat is typically very under-recorded. We have seen a surge in records of this species in Wiltshire in the past few years, due to the expansion of landscape-scale acoustic surveys.

**Nathusius' pipistrelle bat** - Somewhat unexpectedly, we also recorded 4 passes of a Nathusius' pipistrelle bat. This species is also classified Near Threatened on

the UK mammal Red List. The Nathusius' pipistrelle is typically found close to large wetlands (not just river corridors). It is a species known to be resident in the UK and in Wiltshire (with the key resident population in the county being in the Cotswold Water Park), but this resident population is swelled by numbers of bats migrating through in Spring and Autumn. We've recently recorded this species along the river Avon near Downton — a small resident population is suspected here.

Four passes of a bat were recorded on the 11<sup>th</sup> July - for those interested in acoustic ID of bat, the passes comprised a long sequence of calls, at or below 38khz.....

#### **Trapping surveys**

Data collected during the acoustic surveys aided our selection of good trapping sites, targeting areas with high Barbastelle bat activity — the aim was to trap individual Barbastelle bats to confirm breeding activity (because sometimes woodlands may be primarily used by males, so we wished to confirm breeding activity in Bentley Wood).

Two trapping surveys were undertaken in August 2023, catching a total of 16 bats of 6 species. This included 3 lactating female Barbastelle bats trapped shortly after dusk, indicating local breeding. In fact, on the 9<sup>th</sup> August 3-4 Barbastelle bats were seen commuting together along a woodland at dusk, indicating emergence from a nearby roosting site.

Date	9 <sup>th</sup> August 2023	23 <sup>rd</sup> August 2023
Species	2 lactating female	1 lactating female
trapped	Barbastelle	Barbastelle
	Soprano pipistrelle (3 adult, 1 juvenile)	Common pipistrelle (1 adult)
	Natterer's bat (2 juvenile)	Natterer's bat (1 adult)
	Whiskered bat (1 juvenile)	Soprano pipistrelle (1 adult)
	Brown long-eared bat (1 juvenile)	Whiskered bat (1 juvenile)
		Brown long-eared bat
		(post lactating female)
Total	10	6

These surveys confirmed that Barbastelle bats are indeed breeding within Bentley Wood, but they also confirmed breeding of other woodland bats, including lactating Brown long-eared bats and a series of

juveniles representing local breeding populations.

#### **Conclusions**

Twelve bat species were confirmed during these surveys, and the trapping surveys confirmed the presence of breeding Barbastelle bats within Bentley Wood. These surveys also recorded Greater horseshoe bat, Leisler's bat, Daubenton's bat and Nathusius' pipistrelle for the first time.



Whiskered Bat at Bentley Woods – © Gareth Harris

It is worth noting the presence of several red listed species in Bentley Wood<sup>1</sup>; Leisler's bat and Nathusius' pipistrelle bat are currently listed as Near Threatened, whilst Serotine bat and Barbastelle bat are currently listed as Vulnerable. (Greater horseshoe bat is not currently red listed because it is currently exhibiting a positive population trend and evidence of range expansion but remains a species of high concern).

With thanks to David Lambert (Bentley Wood Charitable Trust) and Lewis Hillier and Sierra Larsen for assisting with trapping surveys.

Article reproduced with kind permission of the Bentley Wood Charitable Trust.

**Gareth Harris** 

Natural England, Peterborough ISBN 978-1-78354-485-1. Accessed via https://www.mammal.org.uk/science-research/red-list/?hilite=%27red%27%2C%27list%27 6<sup>th</sup> July 2021.

<sup>&</sup>lt;sup>1</sup> Mathews F, and Harrower C. (2020). IUCN – compliant Red List for Britain's Terrestrial Mammals. Assessment by the Mammal Society under contract to Natural England, Natural Resources Wales, and Scottish Natural Heritage.

## The Savernake Forest – project update 2023

Last year, 2023, was a very busy year in the Savernake Forest.

Bat box monitoring started in March with some postwinter maintenance, finding a handful of Common pip, Soprano pip, Noctule, Natterer's and Brown long-eared bats — a just reward for those turning out to help with the hard work of managing bat box schemes.

For the first time in recent years, we also conducted a bat box check in May, in association with the folks at Forestry England. This resulted in 2 more Barbastelle bats, plus assorted Soprano pip, Noctule, Natterer's etc.

The main box checks in July yielded the Barb maternity group (including 3 juveniles), as well as over 70 Natterer's and a sprinkling of Soprano pips. In September, we again encountered the Barbastelle maternity group, as well as over 35 Natterer's and a few Soprano pips.

2023 also saw the commencement of a two year project with Forestry England; in year 1 this comprised a Savernake Forest-wide acoustic survey, with the aim of conducting the first forest-wide baseline survey of bats, but also of searching for new Barbastelle bat maternity groups.

Although the bat group has worked in the Forest since the early 1990s, in recent years much of this work has focussed upon the Barbastelle maternity group at the southern end of the forest. Until now, there hasn't been the time and resource to survey the wider forest, including the outlying woodlands within FE's leasehold (such as Bedwyn Common, Chisbury Wood and Cobham Frith), so this is an exciting opportunity.

The project area covers 20 individual 1km squares – all 20 squares were surveyed with bat detectors in June and then July 2023, with a few supplementary visits to additional features such as ponds. In all, 47 weeks of data were collected (or 329 nights of data), resulting in a dataset comprising (after removing noise and bat files of low confidence) over 166,000 bat passes.....

Clearly the dataset is dominated by Common pipistrelle, but these surveys recorded a suite of common woodland species (Soprano pip, Daubenton's bat, Natterer's bat, Whiskered/Brandt's bat, Noctule,

Serotine, Brown long-eared bat) as well as the first acoustic records of Leisler's bat for the Forest (although we have recorded them very close by, so this isn't especially surprising) and of course, our target species Barbastelle bat.

The Barbastelle bat data is being used to inform the next stage of this research – in 2024, we will undertake a week or trapping and radiotracking in the Savernake to confirm the new potential Barbastelle maternity groups that the acoustic data is hinting at. More will follow on this near the time.....but if you'd like to get involved, we encourage members of the bat group to contact the project lead (whose details you'll have received as a member of the group!).

Lisa Wade & Gareth Harris



May 2023- setting mist nets around Thornhill Pond © Gareth Harris

### The Cotswold Water Park

#### **Update from the Cotswold Water Park**

We have five distinct bat box schemes across the water park. The main focus is usually at Lower Mill Estate where we have been studying the soprano pipistrelles since 2011 (you can read all about the study in last years' newsletter).

This year however was a bit 'strange', everything at Lower Mill seemed weeks behind. It was almost certainly to do with the weather, but soprano pipistrelles were very scarce until August and then not really in numbers we would normally expect. To see what was happening in the other box schemes we put a bit more effort into monitoring these as well. So here is a round up.

The Natterer's maternity colony at Swillbrook reserve was encountered with good numbers of healthy and well grown juveniles on the 2<sup>nd</sup> July. But again, only a handful of soprano pips were present across the site.



Natterer's bat CWP Swillbrook 2023 - WP

The railway line boxes at Cerney Wick which are usually very predictable for soprano pips were better than Lower Mill, but at about a 50% reduction in numbers on previous years. However, just when I was mumbling and grumbling how rubbish it all was the least expected thing happened. A male Bechstein's bat (Z6265) ringed in a box on the railway line on the 23<sup>rd</sup> August 2009 by Daniel Hargreaves turned up fit and well on the 4<sup>th</sup> August!

This was the first time we've seen him since 2009. Then to top it off another new male Bechstein's was found just down the track on the same day. To say I was surprised was an understatement. Z6265 was originally recorded and ringed as an adult so we can only guess how old he is, but at least 15.



Z6265 – Welcome back! male Bechstein's bat August 2023 - WP

The 4<sup>th</sup> August turned out to be one of those red-letter days where the effort to lug ladders around and beat through undergrowth was worth it especially at the Cleveland lakes quarry pad boxes. We didn't find a single soprano pip, but in the last box (which we almost couldn't be bothered to check) we did discover a male Nathusius' pipistrelle. This was only the second Nathusius' to be found in any of our boxes, the last being on the 23<sup>rd</sup> June 2012. He is now affectionately called H5542, maybe he will turn up in the Baltic sometime soon.

In other news, another male Bechstein's was found at Lower Mill Freeth Mere, the first record for this site, and again totally unexpected.

The South Cerney bat house had 4 lesser horseshoes and 3 brown long eared bats in residence during September 2023. I was pleased to take a small number of volunteers to show them the bat house, but less pleased to be told I'd missed 2 lesser horseshoe bats hanging in plain view!

Soprano pip L00289 was recovered again at Lower Mill Pike Corner on the 3<sup>rd</sup> September. He was ringed by Ben Welbourn on the 1<sup>st</sup> July 2014 as an adult so is probably around 10 years old, which I guess is an extraordinary age for a pip.



Soprano pipistrelle L00289 CWP 2023 - WP

Whelford pools boxes were checked for the first time since 2017, it was a bit damp but we did record 17 Natterer's bats and 13 Soprano pipistrelles. The 3 hibernation boxes were empty of bats, but full of droppings, one had at least 15cm of droppings, probably the biggest accumulation I've ever seen! I know these boxes are in Gloucestershire, but they did form part of our original major project monitoring during the mid-2010s, so are still worth doing.

We also did a single check at Stanton Country Park, Swindon. We spent some time last winter locating them and then rehanging the boxes a bit lower to make access and checking easier, although we left it a bit late in the season, we found 3 noctules and 3 soprano pipistrelles.

In summary, it was a slow start across the water park for soprano pipistrelles, but it did pick up a bit in late summer, and we did get to ring 8 juveniles which was the best result for several years. This coupled with a few nice surprises made it a good, if slightly different monitoring season.

I'm glad I've been able to give you the history of some of our finds this year, the data we've collected is becoming a real treasure trove and testament that putting a bit of effort into long term monitoring of sites is really worthwhile.



Nathusius' pipistrelle H5542 CWP August 2023 - WP

Will Ponting November 2023.

I couldn't or wouldn't be able to do this without brilliant volunteers, reserve managers and landowners giving us access, so a big thank you for coming out, you know who you are! climbing electric fences, braving the brambles, thorns and mosquitos and making it a much more pleasant experience than I ever expected. Finally, the moral of the story this year has been, check every box, even if you are scratched, bitten and tired!

# 2023 Outreach: Bat Talks and Walks for North Wiltshire Groups

In 2023 Phil Atkin and I did eight bat talks and walks for groups in Royal Wootton Bassett, Swindon and Chippenham. Seven of those events were for Girlguiding units: Rainbows (ages 4-7), Brownies (7-10) and Guides (10-14). The eighth talk was for the Ladies Group at the Central Methodist Church in Chippenham, who made a generous donation to the WBG to thank us for the event.

All of our talks for children follow the same format: I begin with a short, illustrated introduction to UK bats, focusing on fun facts. Before I start, I give everyone a small paper cup filled with five Skittles, which weigh the same as a Common Pipistrelle. The children are always amazed to learn that such a small, lightweight

bat can eat so many insects in a single night. And, of course, they can't wait to eat the Skittles!

Phil then does an informal talk and demonstration of bat sounds. He gives the group a "hearing test", to demonstrate how high bat call frequencies are. He also plays some recorded human speech, which he slows down 2, 4, 8 and 16 times to illustrate how far we need to drop the frequency of the bat calls to get them into human range. Those demonstrations are a good way of introducing young children to the concept of ultrasound, and they always provoke lots of laughter and conversation.



Phil demonstrating bat sounds to a group of Royal Wootton Bassett Rainbows

After the talks, we close down the indoor part of the session with some bat crafts. Then, if the weather is good, we take the group outside for a short bat walk, which is always very well received.

As you might expect, some of our audiences are initially wary of bats. But what inevitably wins them over is this photo of a Brown Long-eared, which I took during a 2022 Braydon Wood bat box check. This particular bat always elicits a chorus of oohs and aahs, and it has converted quite a few sceptical attendees into bat fans.



Having done bat talks and walks for more than 200

people this year, Phil and I are now firm believers in the importance of educational outreach. People of all ages come away from the talks with a genuine interest in bats, which they are keen to share with others. For that reason, we plan to continue doing talks/walks for North Wiltshire groups in 2024. In fact, we have already committed to leading a family bat walk for the Wiltshire Wildlife Trust at their Lower Moor Farm Reserve in May.

If you have ever considered doing a bat talk, I would strongly encourage you to give it a go. It is not an onerous task and it can be very rewarding, especially when you get comments like this one, which comes from a 9-year-old girl in Royal Wootton Bassett: "I never knew that bats were so interesting!".

**Ilene Sterns** November 2023

## The π•pistrelle self-build bat detector project

Note: The Wiltshire Bat Group has a long-standing policy of <u>not</u> endorsing products (or consultancies). If you decide to go down this route for your sound recording and data analysis needs, then you will have to engage and work directly with Phil to iron out any support problems or build issues. Thanks.

The  $\pi \bullet$ pistrelle project provides an extremely costeffective way for people with little or no electronics assembly experience to build their own bat detectors and ultrasonic recorders. The design was inspired by my experiences volunteering for the Bats in Churches project in 2021 and 2022. Originally designed as a simple heterodyne detector, the first hand-built prototype design (fig. 1) has now matured into three distinct devices (fig. 2).

#### The devices

All devices are powered by 3 AA batteries, and work fine using rechargeables.

π•pistrelle (blue device, far left) is a handheld bat detector with a 10-LED spectrum display, a 3.5mm audio output jack for headphones or powered speaker, and a micro SD card for recording. The audio output provides heterodyned or time-expanded bat sounds, and speech synthesis for user feedback, which makes the device a good choice for visually-impaired users. Recordings are 384kHz 16-bit full-spectrum.

 $\pi \bullet$  pistrelle "batwalk" (red device, centre), removes the recording functionality, so is a pure heterodyne / time-expanding detector.

pippyg (far right) is an AudioMoth form-factor device for overnight recording, which sleeps during the day and monitors the environment at night, recording to SD card if it detects bat activity. Sleep time, wake time and recording duration are controlled by the pipistrelle app, available on the iOS APp Store and the Google Play store for Android (fig 3). pippyg will typically run for 4 or 5 days on rechargeable AA batteries.

#### Operating software and documentation

All devices use the same firmware. A "pipistrelle deliverables" zip file is available from my Google Drive, linked from the project website (https://www.pippyg.com). This contains the firmware image to flash to the devices, assembly instructions and user manuals, and some useful cross-platform

software tools including a tool to convert a folder of wav files into a folder of sonogram JPGs. There is also a "synthesised Noctule" wav file which is essential for testing devices during assembly.



Figure 1 The Prototype





Figure 2 Three distinct devices

#### Purchase and device costs

Circuit boards cost \$5 for 10, plus \$10 for the laser-cut stainless steel "stencil mask" for application of solder paste, and another \$23 or so for shipping. Circuit boards typically are delivered within 6 days of placing an order. Assembly is most economical if a minimum of 5 devices are built - any fewer than this and component shipping will not be free. For a  $\pi$ •pistrelle, the most expensive device to build, the total costs are:

PCBs: \$5 (same price for 10 or 5)

Solder mask: \$10

• Shipping: \$23 total \$38 approx £35

Components to build 5 devices : £71.31 plus VAT
 Components to build 10 devices : £125.50 plus VAT

Cost per-device : £24.11 (5-off) or £18.60 (10-off)



Figure 3 Pipyg-iphone SE

#### **Assembly**

The devices use surface-mount technology which allows the circuitry to fit onto the circuit board with minimal wire cutting and hand-soldering. An inexpensive hotplate is required to melt the solder paste, which is (November 2023 price) £4.99 with free shipping from Amazon. Additionally the usual soldering iron, wire cutters and a multimeter are required, along with a pair of fine tweezers for placing the surface-mount components onto the solder paste. It takes me about 20 minutes to assemble a single device, and the project website has a link to YouTube videos showing complete assembly of  $\pi$ •pistrelle and batwalk. Figure 4 shows a pippyg after the hotplate process.

Assembly is ideally done by someone with previous electronics assembly experience, but it is worth noting that before this project I had no surface-mount electronics assembly experience, and I find assembly very straightforward and reliable. The website contains lots of useful information, with links to PCBWay to purchase blank circuit boards and to DigiKey to buy components.

#### Status

As of November 2023 154 sets of circuit boards have been ordered from PCBWay. There are 14 devices, a mix of pippyg and  $\pi \bullet \text{pistrelle}$ , in Africa helping with a couple of survey projects, one for Bats without Borders. There have been to date 4 "Build your own Bat Detector" workshops that I am aware of, 2 in the UK, 1

in the US and 1 in Australia - thanks to our Kelly for that! Another will be happening soon in the UK. These typically have an experienced electronics person performing the solder paste stencilling and overseeing the hotplate work, with workshop participants placing the components and running through the post-assembly testing, before taking their finished detector home. An article in the July 2023 edition of MagPi (the official Raspberry Pi magazine) drew a lot of attention to the project.

The project hardware is now unlikely to change, but there are ongoing improvements to the software and support tools, so it is well worth downloading a pipistrelle deliverable package every few months to see what's new.

## And finally....

Thanks again for your support. More members and champions for bats and other wildlife are always welcome!

We are on all the social media platforms, Facebook, X (Twitter) and Instagram, and on the Wiltshire Mammal Portal where we post minutes, newsletters and notices.

https://wiltshiremammals.wordpress.com/

#### **Our sincere thanks**

As always there are a host of people to thank, especially our members who continue to donate, renew and fund raise, thank you! every penny this year has gone towards good causes, equipment and bat conservation in Wiltshire.

None of our surveys or events can happen without the support and collaboration of various businesses, Statutory Bodies, land owners, individual donors, farmers, consultancies, interest groups, project leaders, invited speakers and members of the Wiltshire Bat Group, all played a major part in supporting our conservation efforts in 2023.

In no particular order we gratefully acknowledge the help, funding and support of:

- Forestry England
- Natural England
- Black Sheep Countryside Management
- Wiltshire Wildlife Trust
- Cotswold Lakes Trust & Lower Mill Estate
- Swindon Borough Council and Rangers
- Swift Ecology / Ecotype Genetics
- Bat Conservation Trust
- Pewsey Downs, Nadder Valley and Chalke Valley farmer groups
- Wylye Valley Farmer Group
- Chilmark Estate & Fonthill Estate
- Sir Charles Hobhouse, Monkton Farleigh
- Bentley Wood Charitable Trust
- The Woodland Trust
- Cranborne Chase National Landscape
- Defence Infrastructure Organisation
- Tisbury & District Natural History Society
- Salisbury & District Natural History Society

- Malmsbury & District Natural History Society
- Sustainable Warminster community group
- And the vast number of landowners and farmers and roost owners who support all of our projects.
- Daniel Hargreaves and Paul Colley for the use of their photographs

#### The Committee & contact details

Position vacant - Chair

Laura Loncar - Secretary

wiltsbg@gmail.com

Gareth Harris – County Recorder wiltsbatrecords@gmail.com

Will Ponting – Membership and Treasurer wiltsbgmembership@gmail.com

Position vacant – Events Officer

Interested in getting involved and ensuring the long term viability of the Group? Please get in touch!