

Bat Workers Forum Tuesday 13th September 2022

19.00 – 20.40 Via Zoom

1. Welcome, Introductions and Apologies

The meeting was chaired by Jean Matthews. Seven members of BCT staff were in attendance. At the start of the meeting, attendees used the chat function on zoom to say hello. Jean began by saying our thoughts are with the Royal family at this profoundly sad time. Although we are now in a period of national mourning, we decided to continue with some key events such as this one.

Queen Elizabeth II enjoyed spending time in the natural world and recognised the value of protecting it. She also championed charitable organisations and celebrated the work being done by volunteers. In her address to the COP 26 summit in November 2021, the Queen said: “I have drawn great comfort and inspiration from the relentless enthusiasm of people of all ages, especially the young, in calling for everyone to play their part.”

Attendees present at meeting

Abbey Sanders	
Abby Packham	BCT staff
Alan Roe	Derbyshire Bat Conservation Group
Aline Denton	North Ceredigion Bat Group
Amanda Barton	
Amy Kidd	NatureScot
Andrew Dumbleton	Natural England
Andrew Cristinacce	Shropshire Bat Group
Balamurugan S	St. John's College
Bekie Perry	BrumBats
Benjamin Christie	Norwich
Carol Williams	BCT staff
Charlotte Packman	Norfolk & Norwich Bat Group
Christine Hipperson-Jervis	Norfolk & Norwich Bat Group
Claire Munn	Kent Bat Group
Claudia Gebhardt	BCT staff
Colin Dunlop	Wellriggs Ecology
Connah Platt	South Lancashire Bat Group
Eileen Robley	Nevis Eco Services / North Ceredigion Bat Group
Elizabeth Burtenshaw	Surrey Bat Group
Erika Jakins	
Eve Schulte	NatureScot
Gail Armstrong	North Lancashire Bat Group
Hannah van Hesteren	BCT staff
Isobel Davidson	
James Aegerter	East Yorkshire Bat Group/North Yorkshire Bat Group
Jane Harris	Norfolk & Norwich Bat Group
Jean Oudney	Tayside Bat Group
Jean Matthews	Gwynedd Bat Group / Chair, BCT Board of Trustees

Jemila R	Sarah Tucker College, Research Centre of Zoology
Jenny Singh	Worcestershire Bat Group
Joe Nunez-Mino	BCT staff
John Parker	Nottinghamshire Bat Group
John Craig	South Lancashire Bat Group
John Harris	Norfolk Wildlife Services
Kate Taylor	BrumBats
Kate Ballance	RSPCA Stapeley Grange Wildlife Hospital/ South Lancashire Bat Group
Kay Miller	BCT and Herts & Middlesex Bat Group
Kevin Giles	NatureScot
Kirsty Windle	Inverness Bat Group
Kit Stoner	BCT staff
Laura Holmes	Cheshire Bat Group
Linda Hamilton	Devon
Liz Walsh	Jersey Bat Group
Lucy Fay	Herefordshire Mammal Group
Mary Silvester	
Max Hemmings	Mott MacDonald
Morgan Hughes	Urban Bat Project/ BrumBats
Nick Gray	Sussex Bat Group
Nik Knight	Hampshire Bat Group
Pam Hunter	Sussex
Paul Adkins	
Paul Anthony Davis	East Yorkshire Bat Group
Raymond Lancashire	London Bat Group/BCT
Ross Baker	Surrey Bat Group
Scott Brown	Coppice Ecology
Seth Lambiase	Norfolk Wildlife Services
Shirley Thompson	Kent Bat Group/BCT
Simeon Johnson	Brumbats
Stephanie Bennett	Derbyshire Bat Conservation Group
Steve Roe	Derbyshire/FPCR Environment & Design Ltd
Steven Parker	South Lancashire Bat Group
Sue Traer	
Toni Koczy	
Tony Lightley	Forestry and Land Scotland
Trevor Theobald	Pembrokeshire County Council

Apologies sent from:

Julie Harwood	Natural England
Katherine Walsh	Natural England
Sam Dyer	Natural Resources Wales/ Clwyd Bat Group
Becky Wilson	Helpline Manager at BCT
Lisa Worledge	Head of Conservation at BCT
Mandy Tomas	Northumberland Bat Group
Sue Buckland	Hampshire Bat Group

Juliette Butler	Nene Valley Bat Group
Frances Donovan	Essex Bat Group
Kate Baird	
Aileen Salway	NESBATS

2. Minutes and actions from last meeting

The minutes of the last meeting were accepted with no corrections. The minutes can be found on the BCT website: <https://www.bats.org.uk/our-work/conferences-symposia/national-bat-conference/annual-bat-workers-forum>.

Action	Outcome
1. Jan Collins to pass on feedback to CIEEM: it's been disappointing that the beta mitigation guidelines were released during the busy bat season as many simply do not have time to look at them and feedback. Please release these types of documents during winter months when there is more time to input to them.	Joint response from CIEEM and BCT: The consultation for the beta BMG was extended to 13th November 2021 in the end, which is outside the bat survey season; we are aware of how busy 2021 was for consultants and that the ER pilot added to that for ER assessors (not so much candidates as their assessments and accreditations fell during autumn and winter); we do try to consider seasonality in our work, but this can sometimes be difficult as there are other influencing factors.
2. Lisa Worledge to ask Julie Harwood what support NE are offering to get lapsed and removed VBRVs back on to the list. How active are they in contacting people to encourage them to get back onto the network. Getting to point where active VBRVs are hanging by a thread and don't know how much longer can hang on.	Response from Julie Harwood: There are a number of systems in place to encourage inactive VBRVs to become active again (bullet pointed below). Natural England commissioned BCT to contact all inactive VBRVs following the 2020 annual commitment renewal and ladder check. Helpline staff contacted every VBRV who had not completed the renewal by telephone and/or email with the express intention of encouraging their return to the role.
3. Lisa Worledge to look into differences highlighted in advice on rabies vaccinations between bat carer trainees and VBRVs and raise this with NE's Julie Harwood.	Response from Julie Harwood: Natural England takes its duty of care very seriously. The Volunteering Support Team are currently reviewing the policy and guidance on rabies vaccinations with our Health and Safety colleagues and Occupational Health advisers with the view to bringing it in line with guidance from the UK Health Security Agency.

List of systems in place to encourage inactive VBRVs to become active again from Julie Harwood, regarding 'action point 2' above:

- An autogenerated email is sent to the VBRV when they are made inactive notifying them of the change to their status.
- A member of the Volunteering Support Team contacts registered VBRVs who do not complete the annual commitment renewal asking them to confirm if they wish to continue

as a VBRV, reminding them of their status and giving details of what they need to do to become active again.

- Any VBRVs deregistered from class licence CL15 or CL16 by the licensing team are contacted by The Volunteering Support Team as soon as a notification of this is received, asking them to confirm if they wish to continue as a VBRV, reminding them of their status and giving details of what they need to do to become active again.
- Reminders are sent to all VBRVs prior to the need to refresh H&S training.
- An auto-generated email is sent to all VBRVs whose rabies vaccinations are due and another to advise that this has expired if not declared as done.

3. News from Statutory Nature Conservation Organisations

- 3.1. Katherine Walsh (Senior Mammal Specialist) provided a written update for Natural England, read out by Jean Matthews.

See [Appendix A](#) for the written update from the Natural England species team.

Jean Matthews explained that during the booking process there was the opportunity to raise any questions or concerns. Four of these were regarding licensing with Natural England. These were read out by Jean Matthews, who later in the Forum was able to add that we had heard back from Natural England: they were aware of the concerns and would provide responses shortly. To read these queries and their responses, please see [Appendix G](#).

Julie Harwood (Volunteer Bat Roost Visitor support team lead) provided a written update for Natural England's Volunteer Support Team, read out by Hannah van Hesteren. Abby Packham shared the email address for VBRVs to contact Natural England bat volunteer team in the zoom chat: batvolunteers@naturalengland.org.uk.

See [Appendix B](#) for the update from the Natural England VBRV support team.

There was one comment raised during the booking process for the attention of the VBRV team. This was read out by Jean Matthews. To read this query and its response, please see [Appendix G](#).

- 3.2. In a change to the Agenda, Sam Dyer was unable to attend last minute, so provided an update for Natural Resources Wales, read out by Abby Packham. Abby shared Sam's email address for use to address any questions to: sam.dyer@cyfoethnaturiolcymru.gov.uk.

See [Appendix C](#) for the written update from Natural Resources Wales.

- 3.3. Kevin Giles provided an update for NatureScot. He provided his email address for any questions: kevin.giles@nature.scot.

See [Appendix D](#) for the written update from NatureScot.

4. News from BCT

Kit Stoner (BCT CEO) began by explaining that the aim of the update is to provide an overview of BCT's current projects and activities, especially those relevant to bat groups, volunteers and bat workers. Kit acknowledged the work that BCT has undertaken with UK parliaments, through the countries' relevant working groups and parliamentary Champions. It was highlighted that the Nature Recovery Green Paper Consultation and the Levelling up Bill, both released in May, are a cause for concern, with the possibility of weakening important environmental protections. BCT has launched a campaign asking people to write to their MPs. Kit updated attendees on other policy and advocacy work before moving on to an update on the work for the Earned Recognition pilot.

Carol Williams, (BCT Director of Conservation) went on to reassure attendees that BCT is working flat out on the 4th edition Survey Guidelines, but as the Technical Review Board will have to review the draft we are currently unable to provide a predicted publication date. Carol also covered the latest from the Wildlife Crime Project, Roost award and partnerships, and other built environment work.

Various BCT staff then gave updates on BCT work areas which included; NBMP, NightWatch, Ringing the Changes project, Helpline as well as Membership, Communications and Education. During this links were shared for some items in the chat. All links can be found in the update document in [Appendix E](#).

Table showing the sections of the BCT update and the BCT staff member that presented them.

Engaging with UK Parliaments	Kit Stoner
Earned Recognition	Kit Stoner
Wildlife Crime, Biodiversity & the Built Environment	Kit Stoner and Carol Williams
NBMP	Kit Stoner
Other projects	Kit Stoner and Carol Williams
Conferences and Training	Kit Stoner
Helpline	Hannah van Hesteren
Bats and diseases	Carol Williams
Membership, Communications and Education	Joe Nunez-Mino

See [Appendix E](#) for full written update from BCT including links.

Jean Matthews thanked the BCT staff for the update, and commented she is always amazed at how much work goes on.

5. Matters arising regionally/locally

Jean Matthews presented more of the queries that were raised prior to the Forum, two touching upon bats and diseases, and another on the buddy system for VBRVs. In this last query, it was mentioned that there is a shortage of VBRV trainees in Surrey. No additional responses from those present were provided during the Forum.

No other matters were raised during this item.

The queries received prior to the Forum and their responses can be found in [Appendix G](#).

6. Pete Guest Award 2022 result

This award is given in memory of Pete Guest who was an inspirational figure in the bat conservation movement for more than 20 years. Each year, the bat world is invited to nominate individuals who have made an outstanding practical contribution to bat conservation. The criteria for the award include: dedication, innovation, enthusiasm and inspiration in making a difference, both to bats and to people, helping make BCT's vision become a reality.

It was announced that the winner for 2022 was Morgan Hughes of the Birmingham & Black Country Bat Group. Congratulations Morgan. You can read Morgan's moving acceptance speech in [Appendix F](#). Attendees congratulated Morgan in the chat, and commented on her "truly heartfelt" acceptance speech, thanking her for "speaking so movingly and honestly".

Jean Matthews also added congratulations to the other nominees, Nik Knight and Steve Roe.

Abby Packham raised two items for the Forum to vote on:

1. To seek agreement for the permanent removal of postal voting in the PGA. Due to the permanent increase in remote working at BCT, and to prevent any lost votes, whether through the postal service or from being misplaced. Due to the large numbers attending the vote was cast by zoom poll.
 - 41 people voted, with 37 (90%) voting to for the permanent removal of postal voting so this was passed.
2. With the recent changes in the format of both the Bat Workers Forum and the National Bat Conference, such as the move online and the separation of the events, we thought it appropriate to review when the Pete Guest Award winner is announced. Should it be at the online Bat Workers Forum or the hybrid National Bat Conference? Again voting took place via zoom poll.
 - 38 people voted, 21 (55%) to move the award to the National Bat Conference. As not all attendees voted, and the numbers were close, this will be discussed further within BCT.

7. Any other business

The following additional items were raised:

- 7.1. Jean Matthews shared a message on behalf of Naomi, BCT's Training and Conferences Manager: We are still accepting submissions of static posters or short films about research or interesting projects to show over the National Bat Conference Weekend (23rd-25th September). If you are interested in having something displayed about your project work or bat group activities please email nwebster@bats.org.uk. *(Please note, this is no longer valid at the time of sending of the minutes)*
- 7.2. Kit Stoner shared news of a BCT strategy consultation questionnaire: We are in the process of developing a new strategy for BCT (a little delayed due to COVID). The strategy will shape

the direction of the work we do over the next few years. As part of this, we will be asking for feedback from a wide range of stakeholders, and of course a key stakeholder group for us is our partner bat groups and their members. Those of you who were around the last time we refreshed our strategy may remember that we did a consultation towards the end of the process, once we have already got a draft. This time we are taking a different approach, and asking for your feedback at a very early stage so we can take it into account in the development of the strategy.

Another change will be the way we do the survey. We know from feedback last time that groups found it very difficult to get consensus or responses from members of the group, and this is even trickier in a relatively tight timescale. Therefore we will be providing a tick box so you can state whether you are representing the views of the group as a whole, or whether you are replying as an interested individual member of a group.

We will be sending out the request for feedback this week, and asking for replies by **14th October**. The questions will be fairly short and focused, so hopefully this will allow enough time.

- 7.3.** Paul Adkins asked regarding the Species on the Edge project, last July he ran some NBMP Field Surveys on Uist in the Outer Hebrides and found pips at one transect. Would NatureScot consider adding bats as a species of interest in Uist?

BCT's Carol Williams responded: I'm not sure that's absolutely necessary, why I say that is because what we want to do is wherever Species on the Edge is operational that we have a level of awareness raising. This involves training up the project officers there to be aware of bats, be able to do bat walks and raise their profile. As we are now in the accepted delivery stage, that's not so likely they can be added as a species of interest. But it might be possible to raise awareness of the fact that you found pips there, as we want all project areas to consider bats and connecting their communities to them, more people looking out for bats and through that, submitting records.

Paul offered his help as a volunteer.

Any further comments were invited with no further items raised.

At the end of the meeting Jean Matthews thanked everyone for attending and BCT for putting the event together, hoping to see some people virtually at the National Bat Conference. Attendees used the Zoom chat function to say thank you for the meeting and goodbye.

Appendices

Provided on the following pages are the updates from the Statutory Nature Conservation Organisations and BCT given during the meeting; appendices A – D.

Many thanked Morgan for her heartfelt acceptance speech, which she gave again at the National Bat Conference. It can be read in [Appendix F](#).

During booking for the Bat Workers Forum, there was an opportunity to raise any priorities or concerns for consideration. Responses were gathered from relevant BCT staff and external organisations where appropriate. A document detailing the priorities and responses has been collated and can be found in [Appendix G](#).

Please use the interactive contents list below to navigate to a particular appendix.

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APPENDIX A. Update from Natural England Species Team

1. PhD's

NE is a collaborative partner, with Exeter University and BCT on a PhD which started in autumn 2021 on 'Valuing ecosystem services provided by UK bats under climate change'.

NE is part funding a PhD with the UWE, Bristol on 'Developing a strategic model for bat conservation legislation and planning – applications of ecological modelling, mapping and spatial ecology for horseshoe bats in Somerset, England.

2. Other research

NE is funding the Mammal Society and Sussex University to investigate the use of genomic approaches (SNP's) to replace microsatellites in population studies for bat species.

NE is part funding a project working with BCT and the University of Exeter which is using genomic DNA extracted from bat droppings to ascertain the degree of historic decline which may have occurred in the Barbastelle bat and Common pipistrelle populations.

3. Other Projects

Regenerative agriculture – 'Connecting landscapes and people in climate change': NE is supporting this BCT project to increase landowner knowledge about regenerative farming concepts and techniques.

4. Publications

NE is working with a range of partners to produce Favourable Conservation Status definitions for a number of bat species.

NE is working with BCT and a range of partner organisations/stakeholders to update the Bat Survey Good Practice Guidelines for Professional Ecologists.

NE is working with CIEEM and a range of partner organisations/stakeholders to update the Bat Mitigation Guidelines.

NE is working with BCT and other partners to provide advice for roofing and re-roofing bat roosts. This advice covers specific issues which relate to Non-Bitumen Coated Roofing Membranes. Please refer to [BCT's website](#) for the latest updates and NE's licensing pages.

APPENDIX B. Update from Natural England's Volunteer Support Team

Many thanks to all VBRVs for your continued patience and contribution in the activities carried out on behalf of Natural England under the Bat Advice Service contract with The BCT throughout the last two years. Your skills, knowledge, commitment and dedication continue to be invaluable in protecting bats across England. Natural England really appreciates the time and effort you make on a voluntary basis.

Covid-19 update

Natural England's aim throughout the Covid-19 pandemic has been to protect its volunteers and the public. The Government guidance on living with Covid-19 at the time of writing states: *The global pandemic is not over and the Government's Scientific Advisory Group for Emergencies (SAGE) is clear there is considerable uncertainty about the path the pandemic will now take in the UK.* We have recently produced the latest protocol setting out how we will continue to protect volunteers and the public whilst fully restarting bat roost visits and will share this with volunteers when we have received feedback and agreement from BCT.

Changes to The Volunteering Support Team

There have been a couple of minor changes to the team. Sam McLeod who was working for us on a temporary basis is now permanent and Andrew Dumbleton has recently been promoted. Andrew will continue to work on the bat advice service and will work on strengthening our working relationship with the BCT, communications and training amongst other things. A further Support Adviser is currently being recruited to backfill Andrew's post.

Train the trainers training

A further digital version of the train the trainer was delivered across February and March of this year. We acknowledge a lack of trainers in some areas is impacting on trainees being signed off and are considering other ways to make this process work including the possibility of trainers from other counties signing trainees off if recommended by a VBRV who knows them.

Health and safety: rabies

We are currently working with our Natural England Health and Safety colleagues in reviewing and updating our policy and guidance on rabies vaccination. We acknowledge the difficulty VBRVs are having in getting the vaccination and are hoping to improve and simplify this requirement.

Annual Commitment Renewal and Ladder check

You will be aware that we have not asked you to complete this yet. We have updated and improved our system and in recognition of this being a busy time for you all will ask you complete the renewal at the end of the season.

Trainee induction calls

Induction calls for new trainees continue to be conducted in groups which has proved useful for networking and also for trainees to hear questions that others have.

Facebook group

We continue to use our dedicated 'by invitation only' Facebook group called **Natural England Bat Volunteers** to improve our communications with VBRV and currently have over 100 members. Any VBRVs wishing to join the group **please send the email address you use for Facebook to** BatVolunteers@naturalengland.org.uk.

We also have a dedicated Facebook group to help support VBRV trainers. Any trainers wishing to join this group should also please email BatVolunteers@naturalengland.org.uk.

Feedback

We want to receive your feedback and do use it to develop and improve our ways of working and the support we provide to VBRVs and BCT. Please keep contacting us with your comments, ideas and suggestions.

APPENDIX C. Natural Resources Wales Update

For all follow up queries please email Sam Dyer at: sam.dyer@cyfoethnaturiolcymru.gov.uk

Organisational Updates:

- NRW will be launching their Strategic Review of Charging consultation for 2023/24 in October. We strongly suggest that all bat workers who hold or apply for licences within Wales may wish to make appropriate representations to NRW on these proposals as species licences are included for the first time.

New and ongoing projects:

- Natur am Byth; NRW is the lead partner in this new project, which is similar to the 'Back from the Brink' project in England and Species on the Edge in Scotland. BCT and VWT are also key project partners and projects include focus on barbastelle and lesser horseshoe. The partnership has budgeted total project costs at £8m. The Project has secured development phase funding from National Lottery Heritage Fund, with the delivery phase application scheduled to be submitted in Feb 2023. £1.7m cash match funding has been secured from Natural Resources Wales, plus support from the Welsh Government.
- The NRW baseline evaluation project undertook a desk-based favourability assessment of all SSSI and SAC features. For designated breeding site features this was only based on emergence count numbers, not the physical condition of the roost site. We are currently undertaking a project which will tie identified trends at individual roosts to the physical condition of the sites, to understand reasons for the identified trends and most importantly to allow for assessment and prioritisation of any remedial or enhancement works required which will provide resilience to the protected bat site network into the future. We will also be taking climate change resilience into consideration within the assessments. As part of the project, we also wish to have a systematic approach to recording roosts of significance to allow statistically robust methods to examine the value and success of different roost characteristics. Under contract, we have initially assessed approximately 60 lesser horseshoe maternity roost sites. With assistance of Fiona Mathews of Sussex University, half of the roosts assessed have had data loggers installed which will remain in place for at least 12 months. Updated photo monitoring and volunteer info sheets to aid NBMP count coordination have also been produced. This project has acted as a trial and funding has now been secured to assess protected sites across all other regions.
- Funding has been secured for monitoring of a number of protected sites in South East Wales where monitoring data gaps were present, including maternity roosts and complex underground hibernation sites.
- Funding has also been secured for a project centred around the Gwydir Mines SAC to assess the potential of many of the unknown mines that surround the SAC to aid with assessments of impacts during the HRA process and management of commercial forestry in the area.

Continuing work:

- NRW continue to work closely with the Non-Bitumen Coated Roofing Membranes Steering Group to progress this matter.
- NRW continue to take an active role in Eurobats and other proposed new guidelines/publications regarding bats.

APPENDIX D. NatureScot Update

- NatureScot are delighted to continue their support for the Scottish Bat Project and are providing financial support for a further year (2022-2023).
- NatureScot has supplied (further) detailed comments on the draft CIEEM Bat Mitigation Guidelines as well as input to the new (4th) edition of the BCT Bat Survey Guidelines.
- The licensing team have remained extremely busy and therefore some of our bat workers have been continuing to take shifts on the bat helpline, taking calls and giving advice, between 9am and 3pm, for which I thank them very much. The voicemail is there when the phone is not manned, 24 hours a day, and is checked every morning and evening by us for any urgent messages.
- So far this year (2022) there have been over 250 calls to the Bats in Houses Helpline (up 25% on 2021) with 89 visits requested, a reduction of 10% from last year where there were 98 visits requested. This year saw a fairly balanced scattering of visits across Scotland with a higher number of requests coming from the south west and west of Scotland predominantly.
- With the visits, the bat workers have (thankfully) moved out of the 'external only' Covid restrictions and are now performing internal inspections of properties as well, although masks are recommended when entering premises, out of respect and health & safety.
- Given the proclivity of bats in the south west of Scotland, we are casting our nets to try and find additional bat workers to help to lighten the load for our incumbent bat workers in that area.
- Finally, as we move in less restrictive social measures, NatureScot is looking at the possibility of reviving their Annual Bat Workers Conference early in 2023, more information about this nearer the time as we look into the logistics of this.

APPENDIX E. BCT Update for Bat Workers Forum

1. Engaging with UK Parliaments

BCT continues to actively influence policy across three (UK Govt, Scotland, and Wales) of the four legislatures in the UK through our involvement on the relevant working groups of the country Links (Wildlife & Countryside Link (WCL), Wales Environment Link (WEL) and Scottish Environment Link (SEL)), Greener UK and the Better Planning Coalition.

In England, we have three MP species champions for the common pipistrelle, noctule and brown long-eared bat; in Wales where there is one species champion in the Welsh Assembly for the lesser horseshoe bats; and in Scotland we currently have four nature champions.

Of particular note is the Nature Recovery Green Paper consultation in May. The proposals raised serious concerns about the erosion of protection for protected sites and species. BCT's response can be found [here](#).

The Levelling Up Bill came out in May and is of key importance for us as it incorporates planning reform. The Bill is a cause for significant concern, as in its present form it gives the Government extensive powers to change environmental protections in the future, with limited scrutiny. There are clauses that open a door to environmental regression and the Better Planning Coalition is pressing for significant amendments to ensure that this part of the Bill does not weaken important environmental protections.

As well as the two areas above there is additional rhetoric from the Government about repealing or weakening the Habitats Regulations, the vital legislation protecting bats and other wildlife. BCT is amongst those who are taking a proactive stance to draw attention to this threat. You can see our call for help [here](#).

Other key areas of work continue to be around the Environment Act (Target setting, Biodiversity Net Gain, Nature Recovery Network, Local Nature Recovery Strategies (LNRS)) and Species Conservation Strategies and Land Use Planning.

On LNRS we worked with a WCL sub-group on providing a response to the related consultation. We have also worked with one of the counties that carried out an LNRS pilot to consider the best way to ensure species get sufficient profile. Since then we have been working to get better integration between LNRSs and agri-environmental schemes; the planning process and Biodiversity Net Gain (BNG). Most recently we have been developing a proposal to work with one county to take a practical view to what good practice would look like for considering bats. We have also been interviewed by a Defra representative for what the interface with LNRS should look like and to recount our experiences to date.

BCT submitted a response to the Biodiversity Net Gain Consultation which closed in April. The response can be viewed [here](#). BCT have been contacted by the developer of a dashboard tool designed to help small and medium sized businesses with the application of biodiversity net gain. BCT will not be an advocate of what is at a very early stage but have agreed to be a critical friend and point out any issues during its development. So far two meetings have been held.

We are currently on a sub-group for the Agriculture (Wales) Bill Forestry Provision considering forestry related aspects. This work is now moving its focus to the associated guidance.

Other areas of work include the 7th Quinquennial Review with JNCC which has attracted considerable comment from the NGO sector due to the new approach being proposed to select species for scheduling – currently bats will remain fully protected under the Wildlife and Countryside

Act because of their status as European Protected Species. BCT submitted a response to the consultation which can be found [here](#) and are awaiting the response from JNCC and Government to the consultation.

2. Earned Recognition

Bat Conservation Trust is working with Natural England and CIEEM on the pilot for a new transformative approach to licensing mitigation work in England that impacts on bats. This approach is known as Earned Recognition.

Applications for licences involving bats and bat roosts are by far the highest proportion of mitigation licence applications received by Natural England and numbers are increasing year on year. The vast majority are lower risk situations, but they still need to be licensed which requires time, effort and cost on the part of the developer, the consultant and Natural England. This reduces the resources available for monitoring, enforcement and drawing together the evidence base for the effectiveness of mitigation. Natural England's resources to put into licensing are stretched and a more streamlined approach has potential benefits for everyone.

We believe that an accreditation system will help to improve standards of bat mitigation and lead to better outcomes for bat conservation. Earned Recognition works on the basis of assessing and accrediting a consultant's competence in undertaking survey work and designing effective mitigation so that, by using an accredited consultant, developers can experience a more streamlined licensing process for their scheme or project.

The competency requirements for consultants are being defined on the basis of relevant selected elements of CIEEM's Competency Framework (but a more detailed version with a bats emphasis) with the indicators of competence mapped across to BCT's Professional Training Standards. There are different competency requirements based on the level of accreditation applied for which, in turn, relates to the degree of risk to bats and bat roosts from the projects that the accredited consultant will be able to work on. Quite simply, consultants who work on projects that involve higher risks to bats requires a higher level of accreditation that involves demonstrating a higher level of competence.

To date, the Earned Recognition Pilot Project has recruited, assessed and trained 13 assessors and 1 moderator, and nearly 60 people have been accredited as ER Pilot Accredited Ecologists.

On 21 January 2022 the Bat Earned Recognition (ER) Pilot opened the ER Site Registration portal. This enables ecologists who have been successfully accredited under the competency testing process of ER to submit Site Registrations and take full advantage of the benefits of their Earned Recognition status. This includes a streamlined Site Registration ('licence application') service as well as vastly increased autonomy to undertake licensable bat mitigation works compared to the traditional bat mitigation licensing system.

Natural England has now confirmed that the period for Site Registration submissions under the Bat Earned Recognition (ER) Class License by ER Pilot Accredited ecologists has been extended to the end of December 2022. This will enable accredited ecologists to submit as many Site Registrations under ER as possible, and thereby allow robust testing of the pilot materials and processes to the fullest.

The accreditation and assessment processes of the ER pilot, as well as Site Registration elements, will all be thoroughly evaluated as part of the partnership's commitment to building a robust and reasonable ER model. A detailed evaluation of the Pilot to date will be undertaken in August 2022,

with further findings captured, following on from this, until Pilot end Dec 2022 and iteratively feeding into an upscaled and improved model - 'Bat ER Beta'.

Bat ER Beta will include a further round of accreditation testing for ecologists (Jan-Mar 2023) making use of, and testing, improved materials and systems. This is an important step in the potential move to full ER roll out.

The project team and partners would like to express their thanks to those that have contributed to this ground-breaking pilot. Your expertise, feedback and experiences are all valuable to us and will be carefully considered as part of continued refinement of the Earned Recognition approach.

Further details of the Bat ER Pilot are available on the [CIEEM](#) or [BCT](#) project pages. If you wish to get in touch with the Partnership, please contact the NE Project Team's mailbox EarnedRecognition.Bat@naturalengland.org.uk.

3. Wildlife Crime, Biodiversity & the Built Environment

Wildlife Crime. During 2021 the Wildlife Crime Project had oversight on one hundred and thirty-six police related investigations into bat crime. The ten-year average on incident reports is 135.2 incidents, 68% are damage/destruction of roosts. The three bat species impacted most often are Commons Pipistrelle, Brown Long Eared, and Lesser Horseshoe. BCT, the police and partners are aware there is more crime prevention work to be done in relation to such impact and losses.

The annual monitoring and record keeping of local roosts, in particular recording evidence that the roost is active, is critical for the police to progress a criminal investigation.

The project continues to develop crime prevention measures and as of 2022 is currently trialling an engagement method with local LPA's and the police when investigations are subject of planning permission. Training continues to be a mainstay and the Wildlife Crime Project provided inputs for Yorkshire, Leicester, Nottingham, and Staffordshire police during 2021. The 1.5hr presentation streamlines legislation into practical component areas of application and relevance front line police officers will routinely face.

There has been a significant rise in 'out of court disposals' during 2021, these restorative justice outcomes on appropriate police investigations allow for conservation gains, which prosecutions cannot achieve. Such gains include agreements with the offender to protect and enhance the location, often with positive planting, for improvement to insect life and habitats.

However, there are times when prosecution is necessary and the project provides that investigative direction, as well as conservation impact statements. In one case alone the defendant pleaded guilty at court for the destruction of a roost in England, penalties exceeding sixteen hundred pounds were issued. There are many reasons why court penalties vary, from lack of UK sentencing guidelines to early admissions of guilt, however a defendant going through the court process is stressful and costly before an outcome is achieved, this process alone, for many has a sobering deterrent effect.

The Bat Conservation Trust views prosecutions as a last resort, it is far better and less stressful for homeowners and developers to lawfully protect and conserve habitats and species on their sites, rather than finding themselves facing court, and the consequences of their offending with losses both to wildlife, a developer's reputation, and finances.

The project strives in partnership to protect these species and their habitats from those who commit offences against them whilst ensuring offenders do not benefit from their illegal actions in line with BCT conservation priorities.

Bat Surveys for Professional Ecologists Good Practice Guidelines. After some delays due to circumstances beyond our control BCT issued a draft of the 4th edition to the Technical Review Board in February 2022. Some comments were not received until end of June 2022 and we are still working our way through those as some of the topics arising require further consideration and research. The UK Bat Steering Group meeting in July 2022 was on the topic of swarming bats and some information from this will be added to the fourth edition. As the Technical Review Board will have to review the next draft we are currently unable to provide a predicted publication date.

Bat Mitigation. BCT sit on the Advisory Group for *CIEEM's Bat Mitigation Guidelines update*. A public consultation on a beta version of these guidelines went ahead in 2021 with the draft updated accordingly. A meeting of the Advisory Group is now planned for October 2022 to finalise any loose ends, although no publication date is available.

BCT took on a contract with Natural England in spring 2022, involving the ***Development of options to improve the monitoring system for bat regulation***. The project explored how the monitoring system could provide better feedback on the effectiveness of regulated activity in delivering a conservation benefit for bats. A workshop, involving a diverse group of stakeholders, was hosted by BCT on 2nd March 2022. During the workshop, various building blocks were identified to improve monitoring and BCT put these together in a report detailing 3 potential options. NE is now considering these 3 options within the context of other existing and future initiatives.

Also, see Built Environment Project below.

Partnership for Biodiversity in Planning Project. This started in 2015 and involved 19 organisations from the conservation, biodiversity data, planning and development sectors working together to improve the consideration of biodiversity in planning. The project was funded by the Esmée Fairbairn Foundation and came to an end in March 2020. However, we are still maintaining the website and the key output from the project, which is the Wildlife Assessment Checklist, for a minimum of the next 6 months: <https://www.biodiversityinplanning.org/wildlife-assessment-check/>.

The checklist is linked from the Planning Portal website and from the websites of some Local Planning Authorities. This is an interactive trigger list, which asks a developer a series of questions about their proposals and then directs them to commission an ecologist where relevant and provides a list of designated sites and species that may need to be considered before submitting a planning application. The tool was aimed at small and medium-sized developers with a view to triggering ecological input early on in development projects.

Roost Website & Roost Awards. The Roost webpages can be found here: <https://www.bats.org.uk/our-work/buildings-planning-and-development/roost-replacement-and-enhancement>. The pages comprise of two main areas – the first being the case studies pages showcasing bat roost mitigation and monitoring work with the Awards for best practice. The Roost Award 2021 was won on 10th March at an online ceremony following our Mitigation Masterclass, by Chris Damant for [Cliveden swarming roost mitigation work](#). The Roost Awards 2023 will be officially

launched at the National Bat Conference; please consider any case studies that demonstrate best practice but also lessons learned that could be put forward and upload them between October 2022 and February 2023 inclusive.

The second part of Roost is what we do with information we collect from research such as the Mitigation Project or industry feedback, we use to improve roosting opportunities for bats through our Roost Partnership scheme.

Roost Partnership. This is a unique conservation-lead built environment scheme between BCT and bat box or access product manufacturers; working together to provide bat conservation features that can be incorporated onto and into buildings and other structures that are designed with the latest best practice guidance and research knowledge in mind. The Roost Partnership does not endorse particular products but rather promotes the important working relationship between BCT and Partners in a common goal of improving roosting opportunities for bats within our built environment. The Roost Partnership also acts as an information sharing hub used to gather feedback from industry professionals to constantly improve our understanding of bat roosting requirements.

Our first partner is Green&Blue who manufacture bat blocks made from 75% recycled materials and designed with a bat ecologist near where they're based in Cornwall. Our second partner Just Lead manufacturers lead bat access tiles and has been honing their design with BCT's input. Details of both Partner's and links to buy their products can be found here: <https://www.bats.org.uk/our-work/buildings-planning-and-development/roost-replacement-and-enhancement/partnerships>. Jo Ferguson, BCT's Built Environment Manager, is in discussion with current partners about new products and other potential partners.

Non-Bitumen Coated Roofing Membranes (NBCRMs). A steering group formed of BCT, SNCOs, academics from Reading and Leeds Universities (and since 2021, Stacey Waring and roofing membrane manufacturer TLX) meet on a regular basis on the subject of bat entanglement and NBCRMs. Outputs include the steering group developed independent testing methodology for snagging propensity in NBCRMs published in 2020 and publicising of this work throughout the industry (Jo Ferguson having articles published in Roofing Today).

The background to this issue and the most recent update from August 2022, including the SNCOs current position and contact details can be all found on the BCT webpage for NBCRMs: <https://www.bats.org.uk/our-work/buildings-planning-and-development/non-bitumen-coated-roofing-membranes>.

Please note, although BCT facilitate the steering group and are currently hosting this guidance we are not involved in assessing or approving NBCRMs, this is a technical and regulatory issue and therefore the appropriate guidance should be sought through the contact details on the BCT webpage for SNCOs and technical information.

Bats and Lighting Work. Jo Ferguson, BCT's Built Environment Manager, worked with the Institution of Lighting Professionals (ILP) to publish the "Bats and Artificial lighting in the UK" current best practice guidance in September 2018. Since the guidance note was published, more research has been carried out, including into lower impact lighting types, so the steering group reconvened in July 2021 to begin the process of updating the guidance. The steering group is made up of lighting

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engineers and designers, BCT (Jo) and ecologists well versed in lighting research. The new guidance note will include case studies to demonstrate best practice and information from lower impact lighting trials, which BCT has been involved in alongside lighting manufacturer Signify. BCT was accepted to present on how to draft lighting guidance on bats for industry at the ILP annual conference in June 2022 and the International Bat Research Conference in August 2022. Please keep an eye out for a launch event for the new guidance to be announced shortly!

Bat Box Sensor Project. Jo Ferguson and Arup conservation technologists, electrical engineers and ecologists are working together looking to develop bat box sensor prototypes. We are currently at the proof-of-concept stage to discover if a sensor can be built that confirms bat occupancy remotely for ecologists. The chosen sensor design from Phase 1 has now been duplicated for Phase 2 of testing this summer in the field, delayed due to Covid.

4. National Bat Monitoring Programme & Related Projects

NBMP Annual Report 2021. This was published in May 2022 and can be found on the BCT website at: <https://www.bats.org.uk/our-work/national-bat-monitoring-programme/reports/nbmp-annual-report>.

NBMP Summer Surveys. In 2021 the gradual easing of restrictions due to COVID-19 meant that participation in the summer surveys (roost counts, field, and waterway surveys) was less impacted in 2021 than in 2020. The numbers of sites surveyed across all surveys in 2021 returned to levels close to the pre-pandemic levels in 2019. In 2022 there are no restrictions on survey participation, simply basic COVID-19 precautions in the survey Health and Safety guidance, so it is hoped that participation levels will get even closer to pre-pandemic levels. We normally receive data returns right up to the end of the calendar year so it too soon to say whether things will be back to normal this year, but data returns so far look encouraging.

The Sunset Survey has again proved popular this year with 274 volunteers carrying out 590 surveys (as of 24th August) compared with 334 volunteers carrying out 597 surveys in 2021. With more than a month left of this year's survey it is looking likely that we will exceed the number of surveys carried out in 2021. We will be doing more promotion to try to equal last year's number of volunteers returning data, but on average each volunteer has taken part in more surveys this year.

NBMP Hibernation Surveys. Due to the COVID-19 pandemic and following guidance from the IUCN Bat Steering Group (BSG), hibernation surveys for the NBMP were suspended in winter 2020/21. Updated guidance from the IUCN BSG has meant that surveys were able to go ahead again in winter 2021/22, where applying an epidemiological risk assessment of the survey location and survey team indicated that surveys could proceed. To date (as of 24th August) we have received data from 216 sites, compared with 516 sites in winter 2019/20. At this point in the year we do tend to still be waiting for data from many sites but it is expected that we will not match the usual number of site data returns as we are aware of several sites that were not visited in winter 2021/22 due to the outcome of the COVID-19 risk assessments for these sites. If anyone did manage to carry out hibernation surveys last winter and has yet to submit their data to the NBMP we would be grateful if you could input your results as soon as convenient at <https://nbmp.bats.org.uk/Surveys.aspx> or contact us at nbmp@bats.org.uk.

The National Nathusius' Pipistrelle Project. This project was also suspended during 2020 and 2021 following IUCN BSG guidance on trapping surveys. We are resuming this project this year though unfortunately the project licence did arrive in time for the spring surveys. However, we now have the licence which will enable participating bat groups to carry out late summer/autumn trapping surveys. We will be putting together a funding bid to expand the project in the coming years.

NBMP Bat Detector Workshops. In 2022 we began running in person sessions again for the first time since 2019. We also continued to run online sessions as these have proved such a successful way to reach bigger and wider audiences. So far this year we have run 19 workshops (seven in person and 12 online) for at least 404 individual attendees (many attendees attended more than one workshop, giving a total of 586 workshop attendances).

Forest Surveys: During summer 2021 we continued our collaboration work with Forestry England (FE) and repeated the 2019 pilot which developed robust protocols to use passive acoustic bat monitoring to inform natural capital accounting and woodland condition monitoring on the Public Forest Estate. The aim of the 2nd pilot was to find out how bat activity in woodlands varies between years and the interaction between 'site' and 'year'. A copy of the report will shortly be published on BCT's website. This year FE have approached BCT to discuss collecting baseline data on bat species occurrence and activity levels across three sites before 'forest wilding' work begins. Using methods from the Forestry England Bat Survey (FEBS) carried out by FE and BCT in 2019 and 2021 and adapted to incorporate a wider diversity of habitats (in addition to coniferous and broadleaved woodlands) we have started the collection of bat acoustic data at spatial scales relevant to the 'forest wilding' projects.

We continue to work with Forest Research to introduce bat monitoring into the National Forest Inventory using similar methods, with a second pilot running in summer 2022 to further refine the estimates produced from the first pilot. A larger roll-out is planned for 2023.

We are supporting RSPB and Bat Conservation Ireland to develop their own woodland bat surveys, and have published advice on using passive acoustics to survey bats in woodlands at <https://www.bats.org.uk/our-work/national-bat-monitoring-programme/passive-acoustic-surveys/guidelines-for-passive-acoustic-surveys-of-bats-in-woodland>. Pilot data has been collected by RSPB in 2021 and we are helping to roll out the surveys for a second pilot this year and to be expanded in 2023.

NightWatch. NightWatch is a free, inclusive, tech-enabled night-time biodiversity survey open to all regardless of background, experience, or physical ability. It has the dual aims of collecting robust, locally focused biodiversity data, while at the same time engaging a wide range of people from diverse backgrounds and abilities. Funding was secured from the Esmée Fairbairn Foundation, JNCC and the Government Kickstart program to pilot NightWatch last summer, initially targeting a limited number of urban areas and the project is now in its second year. Credit-card sized 'AudioMoth' acoustic sensors were loaned to NightWatchers to place in their window, garden or local green space, and sound recordings were classified using BCT's AI Sound Classification System (SCS). Alongside the use of an acoustic sensor, NightWatchers also undertook a manual survey for approximately an hour after sunset to record other nocturnal species they see or hear, which has been developed in collaboration with PTES. NightWatch will be rolled out across a larger area 2023.

British Bat Survey (BBats): BBatS is a structured citizen science survey that aims to use passive acoustic monitoring (PAM) to plug gaps in monitoring and tackle underrepresentation in bat trends. This summer we have launched the project pilot and over the coming 5 years hope to improve our

understanding of the trends of underrepresented species, but also with a focus on habitats that are rarely monitored and geographic regions that don't get enough attention. BBatS should therefore be able to feed into the NBMP and provide additional vital evidence to produce trends on bat species that have been previously difficult to monitor by our existing monitoring schemes.

EchoHub: We will shortly be launching EchoHub, an open-source sound library focusing exclusively on bat sounds. It will feature recordings contributed by a community of professionals, researchers, educators, and anyone with an interest in bat bioacoustics. It will be free to share and download bat sounds on the portal. The goal of EchoHub is to make it easier to share and access recordings of bat sounds for diverse purposes such as scientific research, conservation, education, and the arts. EchoHub is an ongoing project which aims to collect recordings of all bat species of the British Isles and beyond, capturing a diversity of species, behaviour, recording equipment, and environmental conditions.

Bat Monitoring on Jersey: In summer 2020 we partnered with the Government of Jersey to deliver the Jersey Bat Survey, a static passive acoustic bat survey across Jersey. We compared the results of this survey with 10-years of car-driven transect passive acoustic surveys to assess the most robust method for monitoring bat populations on the island of Jersey using acoustics. Working with the Government of Jersey and Jersey Bat Group, we were also able to advise on a comprehensive monitoring programme for the island using a suite of survey approaches. Additionally, we were able to estimate a 10-year population trend for a common bat species, and identified environmental correlates of bat activity across the island.

Kate Barlow Award: The 2022 winner is Elyce Gosselin. Genomic data generated as a part of Elyce's PhD project will provide novel information about the phylogenomics, landscape genomics and population genomics of the two species of bats found in the Galápagos Islands: the Galapagos red bat (*Lasiurus blossevillei brachyotis*) and hoary bat (*L. villosissimus*). To read more about Elyce's project or details of other Kate Barlow award winners, see: <https://www.bats.org.uk/our-work/awards/the-kate-barlow-award/the-barlow-award-winners> (where you can also see the final project reports of our previous winners).

5. Other Projects

Bats in Churches Partnership Project (BiC). The project has completed capital works in all relevant churches, and all other project churches requiring surveys have had full surveys and bat mitigation plans given. Work is still underway to monitor the churches and mitigation and to collate and share findings to date. One new development is the creation of a sail to be easily erected and taken down in the church to be cleaned, which would catch the bat droppings and urine. This is being trialled in 2022.

The National Bats in Churches study is a random stratified sample of 1000 churches in England over four years (2019 to 2022) and these are our priority churches to survey. The Church Bat Detective survey however can be carried out at any other Church of England or Churches Conservation Trust church in England.

To date the study has records for over 550 churches and 2022 is the final and the busiest year! We have also created two e-learning courses online to help surveyors to carry out the surveys. A results page was created to display the records as they come in

(<https://batsinchurches.bats.org.uk/Results.aspx>), but we will be cleaning and analysing the data over the winter and sharing the findings before the end of the project.

In 2022 we will have held 30 training courses, including online and in-person event, from Roost Count training to Volunteer Bat Roost Visitor training to Heritage Cleaning Workshops.

The BiC Project team produce regular updates via e-newsletters (you can sign-up to receive these via the bats and churches website at: <https://bit.ly/2Xoch3x>). We have also been producing a series of specific bat group updates for those groups that have expressed an interest in the project.

This autumn we plan to hold another series of free Bats in Churches LIVE webinars. Our spring series focused on topics such as bats and disease and myth busting the common worries and concerns that we've received from some churches. You can watch previous events here: <https://batsinchurches.org.uk/get-involved/events/>.

Fascinating World of Woodland bats. This project started in November 2019 and two strands of the project have been completed - Bat Roost Tree Tag and the Woodland Symposium. The Bechstein's bat – finding its limits strand has been extended into 2023, so radiotracking of the Dorset sites can be carried out.

Bat Roost Tree Tag Scheme (BRTTS). The scheme continues to be managed by BCT. Since the BRTTS started, 315 tags have been sent out to surveyors. Twenty-three basic records and one additional record have been submitted to BCT to date. BCT continues to promote BRTTS and attended the Arb Association Bats and Trees conference on the 24th of March, provided an article to the British Islands Bats Volume Three publication and will be talking about the scheme during the tree workshop at this year's National Bat Conference and the East of England Conference. Information about the BRTTS was made available in June and can be found on the [BCT website](#).

Bechstein's bat – finding its limits. For the Bechstein's bat project, we plan to continue to improve our understanding of the Bechstein's bat use of atypical landscape.

Field work in Somerset went ahead this survey season, during the early summer period and the late summer period. Radiotracking training was delivered to volunteers from the Somerset Bat Group by Nick Tomlinson from the Dorset Bat Group on the 16th of April 2022. Following the training five Bechstein's bats were tagged and tracked during the early summer period but only two were tracked during the late summer period. This was because during the late summer period trapping only took place for one night due to the lead surveyor having close contact with someone who tested positive for Covid 19.

Due to work commitments this year, radiotracking surveys of the Dorset site will now take place next year during the early summer period and the late summer period.

Species on the Edge. The Rethink Nature partnership* along with NatureScot, have developed a multi-year project with funding provided by National Lottery Heritage Fund (NLHF) for their Species on the Edge (SotE) project. This project in Scotland presents a new way of working, enhancing collaboration between organisations through multi-species work plans delivered by a shared resource. Nurturing collaborations with communities, SotE will safeguard a suite of nationally and internationally important species, encourage new skills, inspire and re-connect people with nature

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to foster an inter-dependency of community and species conservation action. In June the partnership was informed by NLHF that they had been successful in the bid for funding of the delivery stage of this programme. The four-and-a-half year programme will support seven project areas, from the Solway to Shetland and from the East Coast to the Outer Hebrides. There will be consideration for bats across the piece but with a specific focus on Skye.

Natur am Byth. This partnership project has the same ethos as Back from the Brink and Species on the Edge and will see a collaboration across a number of areas in Wales with a focus on species recovery but also on community involvement. The partners comprise the Rethink Nature Partnership*, alongside the Marine Conservation Society, Vincent Wildlife Trust and Natural Resources Wales. The project is within its development stage with preparation underway for the delivery stage submission in February 2023. BCT has a key focus on the lesser horseshoe bats on the Gower and the potential isolation they face due to the urban infrastructure, especially lighting, that forms so much of the landward boundary with the rest of Wales. Our Project Development Officer Becky Wright-Davies has been meeting with a number of key stakeholders, including Gower AONB, The Gower Society, Swansea Astronomical Society, local councils and Glamorgan Bat Group. Becky has also been reaching out to urban communities where good progress has been made with events and consultations taking place. all with very positive feedback regarding interest and involvement.

*The Rethink Nature Partnership is a group of leading species conservation organisations working together to catalyse the action that species need. The organisations are Bumblebee Conservation Trust, Buglife, Butterfly Conservation, Plantlife, Amphibian and Reptile Conservation, The Royal Society for the Protection of Birds and the Bat Conservation Trust.

Ringling the Changes. A huge thank you to everyone who has provide/offered support for the project to implement a bat ringing database and produce up to date ringing guidelines. We have received financial contributions from bat groups and bat ringers (without this support, for which we are very grateful, it wouldn't have been possible to move forward) and offers of time with database testing or inputting to the guidance. Progress with the two project workstreams is as follows:

1. **Ringling database** – An invitation to tender for the database and web front end will be issued this month (it has been drafted and is currently being reviewed). Development timescales will depend on the successful proposal.
2. **Ringling guidelines** – An initial draft of the guidelines is in preparation and will be shared with the editorial panel this autumn. The aim is to produce the guidelines in parallel with the database development.

We are working towards a deadline for completion of both workstreams in the first half of 2023. An update will be circulated to people who have purchased bat rings and others who have supported the project, by the end of September (with a shorter update included in the September Bat Group Bulletin).

Bat Ring Orders. The process for ring orders is back to normal after the issues caused by the pandemic. Orders can be placed via our website at: <https://www.bats.org.uk/our-work/national-bat-monitoring-programme/bat-rings> (please note we cannot send out orders without having first received a copy of a current project licence covering ringing).

6. Conferences & Training

We now have a blended programme of in-person and online training courses and have been delighted to see the return of key courses like Advanced Bat Survey Techniques which had been on hiatus due to the pandemic. We are retaining certain courses which work particularly well online such as British bats, their ecology and conservation. We are also updating key parts of courses in line with the 4th edition of Bat Surveys Guidelines.

National Bat Conference 2022. A cornerstone of the annual bat calendar, for the first time we held the National Bat Conference as a hybrid event combining an in-person conference near Stafford with a virtual experience for those who preferred to attend online.

BatFest. We have repeated BatFest again this year, using a mixture of our most popular events like the Batty Sketch-a-long and Bat Care for Non-Bat Carers as well as a few new ones like Carry on up the bat roost – 50 shades of grey (long-eared bat) to reach out and celebrate bats and share them with new audiences.

English Regional Conferences 2022. We held our first hybrid conference for the Midlands in March after which we undertook a consultation on the future of the English Regional conferences, thank you to everyone who participated. We are using this feedback to inform the South-East and East of England Bat Conferences which will take place as hybrid events in November.

7. Helpline

Staffing. The Helpline team currently consists of 11 members of staff. The team includes: two Managers, one Assistant Manager/Senior Bat Advisor, three Senior Bat Advisors, one part-time bat advisor and four Seasonal Bat Advisors. Our Seasonal Bat Advisors started in early May and will be finishing in September and October.

Helpline call volume. Between January and August 2022 we have received around 7060 enquiries (4,073 via the BCT Volunteer Bat Care Helpline). Around 1,586 of these enquiries were related to Natural England's free advice service and around 4970 were related to bat care.

Natural England's free Bat Advice service. The Helpline have continued delivering this advice on behalf of Natural England. So far this year we have organized We have organised 535 roost visits.

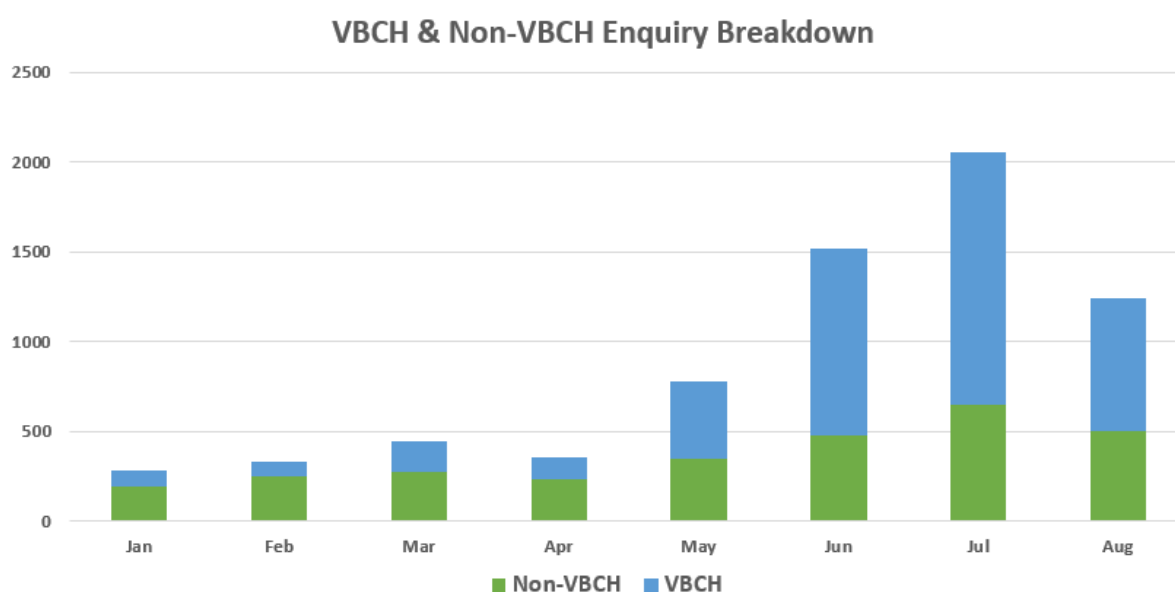
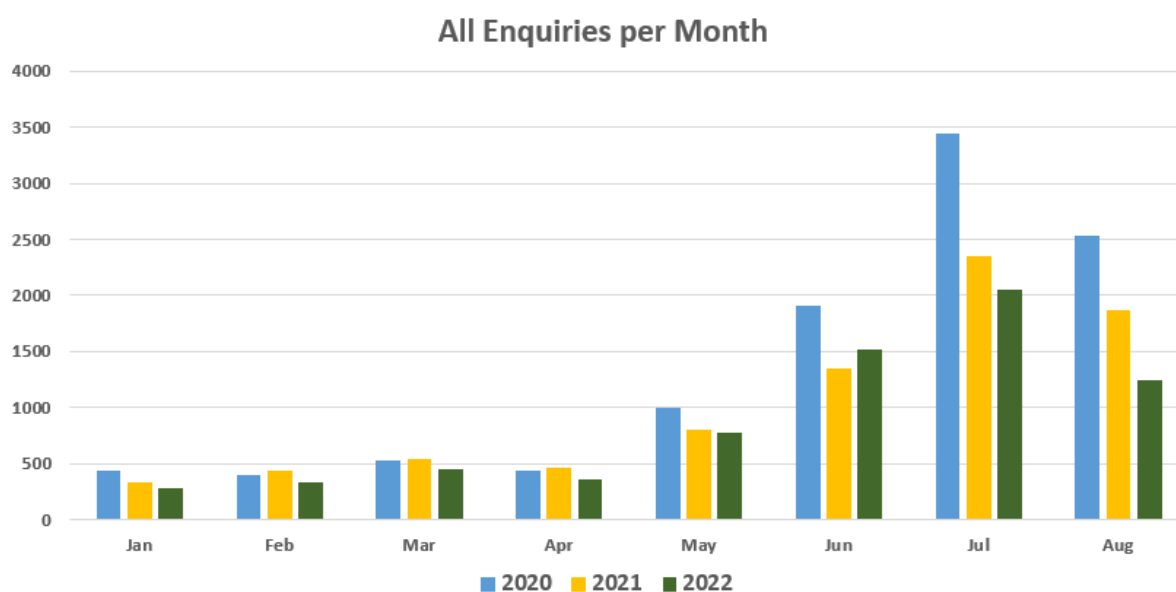
Volunteer Bat Care Helpline (previously OOH). Following the expansion of the Volunteer Bat Care Helpline last year, for the first-time volunteers took bat care calls during office hours throughout winter: 41 volunteers took 927 enquiries and donated 1183 hours of their time from mid-September 2021 to end April 2022. We consulted with bat groups and members of the UK Bat Care Network about the future handling of bat care calls and the decision was made to continue delivering this service to the public via the Volunteer Bat Care Helpline. This year's winter service began on Sept 12th.

The 2022 summer service began on Monday 3rd May and ended on the 11th of September. The summer Volunteer Bat Care Helpline operated from 9:30am to 4:30pm and 6pm-10pm on weekdays and 10am-10pm weekends and bank holidays. As of the end of August, over 3700 enquiries had

been taken by volunteers during the summer service. BCT provide back-up staff support for each shift.

The BCT UK Bat Care Network. The network now has 207 registered carers, ambulance drivers, hospitals, and regional helplines. 15 new carers and 7 ambulance drivers have been added so far in 2022.

Monthly breakdown of call volumes. Figure 1 provides the breakdown of the enquiries outlined above by month; this includes Volunteer Bat Care Helpline calls. Figure 2 shows the proportion of enquiries that came through the VBCH service in 2022



8. Bats & Diseases

Biosecurity and bats. We have developed a new workshop this year ‘biosecurity and bats: effective disease risk management’. It was run most recently for the Scottish Nathusius’ Pipistrelle Month. The [recording is available until 24/09/2022](#) (passcode: =HyXUw*9). The workshop will be on offer at National Bat Conference later this month and at the two English regional conferences in November.

COVID-19 and bats. Anyone undertaking activities that involve direct contact with bats should continue to take appropriate precautions to minimize the risk of human to bat transmission of SARS-CoV-2. We continue to participate in the IUCN Bat Specialist Group’s One Health Working Group. The guidance on bats and COVID-19 is available on the [IUCN Bat Specialist Group website](#) (guidance for field work, bat rehabilitation and cavers). We continue to work with Imperial College London and the Animal & Plant Health Agency on testing of bats in rehabilitation that have been in contact with people who have COVID-19. A paper about this work was published earlier this year in [Conservation Science and Practice](#).

European Bat Lyssaviruses (EBLV). There have been eight EBLV cases so far this year (2022). Seven EBLV-1 cases in serotine (all in Dorset) and one EBLV-2 case in a Daubenton’s bat (in Kent). The latest three cases (which were reported to BCT in the last week) will be included within bulletins later this month. Summary information about the earlier cases was provided in the [Bat Group Bulletin](#)s in May, June, July and August as well as the [Bat Care Bulletin Blog](#). These cases are in line with expectations but are an important reminder that anyone who handles bats continues to wear gloves of an appropriate thickness to prevent bites getting through, that anyone regularly handling bats has pre-exposure vaccinations, and that anyone bitten, licked, nibbled or scratched by a bat, of any species, should seek prompt medical advice (even if they are already vaccinated).

We have updated the web page on [rabies pre-exposure vaccinations](#) to include some information about serology tests. We ask that if you have any questions about pre-exposure vaccinations you check that page first. We welcome feedback on the content and suggestions for additions (email [Lisa Worledge](#)).

We are in the process of reviewing and updating our [rabies guidance information for bat workers and bat rehabilitators](#). This work will be completed in the autumn, the revised documents will be made available on the BCT website and details will be shared via relevant bulletins. The updates won’t change the core advice but will overhaul the presentation of the guidance documents and update other information.

Dead bat packs. Thank you to everyone who submits dead bats to the Animal & Plant Health Agency (APHA) [passive surveillance scheme](#). Please do continue to send dead bats, of any species, to the APHA as this scheme is essential for our understanding of EBLV in the UK. APHA renewed their contract with BCT for support of the passive rabies surveillance scheme to end of March 2023, including sending out dead bat packs to member of the public and bat workers. Please see the [online dead bat pack request form](#) if you have a bat to submit.

9. Membership, Communications and Education

Membership. BCT's membership income and donations have continued to grow although we have seen a distinct slow down over the last few months.

We currently have the support of:

- Nearly 5,000 members including:
 - 87 Life members
 - 35 Corporate members
- 511 Adopt a bat subscribers

Fundraising. Membership is not the only way to raise funds for bats of course. We run a number of fundraising campaigns throughout the year and we were delighted that 2022 began with a campaign via the Big Give which meant every donation we received was doubled, this campaign raised just over £10,700 for all aspects of BCT's work. We are lucky that many supporters take up challenges to raise money for BCT as a whole or specific projects. This year we did have three members of the Bat Conservation Trust team taking part in the Swim Serpentine challenge in September but this was unfortunately cancelled due to the Queen's funeral, we are waiting to see if they can do this next year. We also have one person running the Virtual London Marathon. Other supporters choose to donate when they are shopping online at no extra cost to them and/or by shopping second-hand clothes and recycling! There are an ever increasing number of ways to donate and we even have several retailers who donate a percentage any purchases made protect bats. Full list here:

<https://www.bats.org.uk/support-bats/gifts>.

Social Media Outreach. Social media continues to grow and provide a way of reaching large numbers of people, often younger audiences who are most at ease with these methods of communication. We have just over 200,000 supporters across Facebook (over 123,000), Twitter (over 55,000), Instagram (over 25,000) and LinkedIn (over 7,000).

Other Comms and Engagement. We have published a total of 19 stories on our website in 2022, covering a variety of topics including wildlife crime convictions, publication of reports, policy campaigns and general news pieces of interest. We also welcome blogs from members, supporters, or anyone with an interest in bat conservation. We have published two blogs this year and seven last year. We engage with the media when we can although we do have limited capacity to do so. The [BatChat podcast](#), created and produced by BCT trustee, Steve Roe, will start its fourth season this year and listened to by over 30,000 people each year. The podcast celebrates people involved in bat conservation and is a celebration of all the amazing work being done in the UK and further afield.

Our membership magazines, Bat News and The Young Batworker are published three times a year. We occasionally make an issue of Bat News freely available and this year we released the [Summer 2021 30th anniversary edition](#). Adopt a Bat subscribers receive a newsletter twice a year. The free bat e-Bulletin is sent regularly to over 3,100 subscribers and is available on our website, and the corporate e-Bulletin (also sent regularly) is sent to over 200 subscribers.

Alongside the Training and Conferences Manager we have also organised a virtual panel discussion on International Day of Women and Girls in Science which was a popular and engaging event.

We continue to produce and distribute a number of different information leaflets as well as targeted reports. We have six pin badge designs available (common pipistrelle, noctule, lesser horseshoe bat, barbastelle, Bechstein's bat and Daubenton's bat) which are widely used both as an engagement and fundraising tools.

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Last year we announced the wonderful English folk singing star, Kate Rusby, as our first Ambassador and this year the delightful all-round entertainer, Aruhan Galieva, becomes our second Ambassador.

Education. This part of our work has been led by Shirley Thompson as our Honorary Education Officer for over 30 years. She will soon be joined by a part-time Engagement & Education Officer who will be working on a strategy to develop this important aspect of our work, as well as leading on aspects of engagement and education for existing projects.

APPENDIX F. Pete Guest Award Winner, Morgan Hughes, Acceptance Speech

I've never written a speech before. I know I'm probably supposed to talk about how I first got into bats, and the work that I've been doing, and I've tried to write all that down, but it feels forced, and inauthentic, so this probably isn't going to be what you were expecting.

I must be honest and say that I have been struggling with receiving this award because I find it hard to see my own contribution to bat conservation. It is incredibly difficult to get a sense of the impact of what you do as a researcher, a bat worker, or a field teacher, and incredibly EASY to feel that what you do has little impact. I called my Dad and told him how I was feeling, and he reminded me firstly that it is not up to me, that this decision was made by my peers, that downplaying the value of my work belittles the contribution made by my colleagues and volunteers. And he is right. He also reminded me that accepting this award is an opportunity for ME to say thanks to others. I can honestly say that any merit or value in the work and teaching that I do should be attributed to those who have trained me and supported me, and this award is really for them. So, to that end I would like to thank the following people:

The people who trained me in bats: Susie Duke, John Morgan, Denise Foster-Plume, David Lee and especially to Chris Sherlock, who has been my friend and mentor for nearly 20 years.

The people who taught me how to approach research, and to write about it: Sarah Whild, Alex Lockton, Lynn Besenyei, Chris Young, Simon Maddock, Tom Martin and Danny Haelewaters.

The people who have worked with me for years in the field here in the UK: Rebecca Perry, Tamar Redfern, Tasha Cain, Kate Taylor, Shannan Poyner, Leigh Yeates and Andy Thompson to mention just a few of the 100+ Urban Bat Project volunteers over the years. The committee of the Birmingham and Black Country Bat Group who have supported my research in countless ways. To Ben Dolan from the West Midland Ringing Group for training me in thermal imaging and bird ringing.

To all of the incredible bat researchers I have had the opportunity to work with abroad: Anna Suvorova, Marina Blasevic, Marija Krajnovic, Carmen Sorina and Anneka Goeter, as well as all the staff at OpWall and Biota who have supported my approach to fieldwork innovation and long-term monitoring of bats in Croatia, particularly Mo Johnson, Alex Tozer and Dusan Jelic.

To my friends Rosemary and Coogan for years of moral support; to my brothers and my sisters who cheer me on from thousands of miles away and in particular to my Dad who would be upset if I didn't tell you how proud he is of me. [Even though none of them has a clue what I actually do for a living, I think my family have finally accepted the fact that I'm never going to have a normal job.]

And mostly to my research partner Scott Brown who has held me together and been not only an inspiring colleague, but my best friend, cheerleader and a huge grounding force each time my impostor syndrome gets the better of me. [Which is a lot more often than you'd think.]

And I think I'd like to talk a little about that if you don't mind. Impostor syndrome and mental health. Impostor syndrome is a coiled, unsleeping snake that lives in your head, telling you that everything good you've accomplished is by luck or chance, or by the good grace of others. It tells you that one day they are all going to figure out what a fraud you are. It drains you and destroys your self-worth, chipping away at your mental health.

And I just want to take this opportunity to remind everyone that in the bat world, although we all have the same goal of bat conservation, let's not kid ourselves, it's competitive, and the illusion of relative anonymity afforded us by social media often leads us to be more critical of each other than

perhaps we would in person. I just want to say that we should take a moment to be kind, and to lift each other up, and to consider before we criticise (especially in a public forum), because we have no idea of the damage we are capable of, or the struggles others are enduring.

The success of other people is not to your detriment. If those whom you have trained exceed you, it is to your credit. Gatekeeping of skills and knowledge works against our mutual conservation goals. Life is not about our accomplishments, accolades, innovations or publications. It is about the people in it. Carl Sagan said: "For small creatures such as we the vastness is bearable only through love."

I know that for my team, myself included, these last few years have been pretty tough, especially during lockdown. For us, our ability to continue to do survey work has been a lifeline and gave us a way to connect and do something meaningful through that dreadful time. We had to really box clever with survey schedules in order to abide by local and national restrictions, to keep everyone safe, and still keep the science going. Notwithstanding, the mental health impacts of the pandemic are yet to be fully understood or even estimated.

For lots of us, and maybe for you too, bat work is one of the ways we cope. During bat season, I am out 4 or 5 nights a week doing surveys, on top of working full time and trying to finish my thesis. But if I'm honest, I am not doing this for the volunteers, the data, or even the bats, really. I'm doing it because it is the thing that gets me through the days and weeks and months. Doing something meaningful is my sharpest weapon in the battle against my depression and anxiety.

Like most people, I worry about my impact on the planet, and researching bats is one of the only things I know how to do that makes me feel that, on balance, I am contributing a little bit less to the problem. It is difficult to have hope, and it is all too easy to feel that any impact one person can have is simply raging against the machine. But I am not one person. Neither are you. We are doing this together. Across the world, we bat workers are thousands. So, thank each of you for everything you do. For every bat talk you give, or walk you lead; for every bat box you check, for every biological record you submit, for every tree climbed, every loft inspection, every roost visit, every mealworm decapitated, every hour of sound analysis, and especially for every time you teach others how to do the same. Thank you.

I'd like to finish by reminding each of you to check in with your friends, family and colleagues, see how they are doing. Thanks.

APPENDIX G. Questions Raised Prior to the Forum

Priority points raised included:

- Licensing
- VBRV
- Bats & Diseases

Natural England Licensing

Priority raised: *Why are licence renewals timed for the middle of the season? This can be very stressful.*

Response from Natural England's Wildlife Licensing Service Advisor, Phil Bowater: Natural England has to process a vast number of licence returns and renewals for a wide range of species. Historically the bat licence renewal was placed at this time to help spread the work for advisers throughout the year. We do however recognise the inconvenience this can cause consultants amidst a busy survey season. We are currently reviewing options to move the bat survey class licence return period to a quieter time of year for consultants (e.g. end of winter) but this is unfortunately not as simple a task as it might appear, as it has implications on other work areas and projects currently underway. We hope to consult consultants on this in due course and, whilst it is unlikely we will be able to enact changes in time for 2023, we hope to implement a change in time for 2024.

Priority raised: *Feedback for NE regarding the move to online forms: can take a long time for those who have a lot of surveys to report but the change is appreciated by those with shorter returns.*

Feedback provided to Natural England's Wildlife Licensing Service Advisor, Phil Bowater: The online form system is currently facilitated through 'Qualtrics' software as an interim solution. We recognise the limits of this tool and there is a longer-term project to move all licences onto forms created on GOV.UK, which should result in forms that are easier to use. The advantages of collecting survey data via the online form are that it is much easier for NE to collate and use the survey data. All the data from ~3000 bat licence holders can be downloaded onto 1 spreadsheet from the online form. If the data from the licence holders was, for example, collected on separate spreadsheets, it would take a significant length of time for NE to process (e.g. if it takes only 3 minutes to merge a spreadsheet worth of data, this would be about 4 - 5 weeks work).

This year, anyone who needed more than 100 rows to report their survey returns was sent an excel spreadsheet, we will be looking to bring this threshold down to 40 rows for the next season to help more consultants with large numbers of returns. We recommend consultants, where possible, check the information they need for their licence returns prior to the start of the survey season to help ensure they collect the right information throughout the season.

Natural England has a wide range of reforms underway and we will however continue to review and revise the form and our associated IT systems to help provide the best service we can. If people have feedback on systems or processes we'd very much encourage them to provide constructive feedback via email.

Priority raised: *The large delay in obtaining the National Nathusius' Pipistrelle Project licence this year.*

Response from Natural England's Wildlife Licensing Service Advisor, Phil Bowater: Please accept our apologies for the regrettable delay in issuing this licence. Operational resourcing pressures combined with a range of other factors severely inhibited NE's ability to process some areas licensing casework, in particular Bat Sci-Cons applications. We have since made significant changes to our processes and resourcing and are confident that this will have improved the situation for subsequent years.

Priority raised: *Will the VBRV class licence return also be moved online? Some people were confused by process requiring a survey class licence online return but the VBRV one to be via an emailed form. In the middle of a very busy grounded/baby bat season, alongside full-time work, the simpler the process the better!*

Response from Natural England's Volunteering Support Team Leader, Julie Harwood: We understand that the fact that the VBRV (CL15 and 16) licence returns could not be submitted online caused some confusion and frustration. Currently the system has a free text box allowing these licence details to be entered, acknowledges that they have been submitted but will not process the return. This issue has been escalated.

Response from Natural England's Wildlife Licensing Service Advisor, Phil Bowater: Natural England has to prioritise the services it digitises and when. Two key components involved in deciding which areas to prioritise for the use of online forms is 1) the ease of payment method for the customer and also NE; which also allows for reduced administration/charging costs and 2) the ease of collection of better quality survey data. As VBRV licences are not a chargeable licence type and licence holders are not required to report on each survey that they have done, VBRV licences have not yet been prioritised for moving to an online system, as the benefits are less demonstrable. We are grateful to feedback we receive however and continue to review the situation with a view to providing the best service we can but need to prioritise areas which will provide the most benefit to customers and NE.

Natural England Volunteer Bat Roost Visitor

Priority raised: *The need for VBRV's to keep a list of local Trainees, and to contact them before Referrals to give them an opportunity to accompany the VBRV.*

Response from Natural England's Volunteering Support Team Leader, Julie Harwood: Given the lack of active Trainers currently we would encourage VBRVs to offer the opportunity to Trainees of accompanying them to support their training. Permission of the Trainee to share their details in such a way would need to be sought.

Additional Response from BCT's Lisa Worledge: VBRVs who are able to engage with trainees on their visit could liaise with their local trainers over how to enable this. If a VBRV isn't sure who the trainers are in the area, try reaching out to the bat group in the first instance.

Priority raised: *I had a query about using buddies on roost visits that I raised with NE in May this year. During the discussions it was mentioned that buddies are not allowed to help with emergence surveys as they are not allowed to actively participate in surveys only other VBRVs or trainees. This is now being reviewed for next season and will be mentioned in the next issue of Bat line. But I wanted it brought up at the Bat Workers Forum as it is likely to mean emergence surveys which require more than 1 surveyor will no longer be possible in the meantime as there are a scarcity of roost visitors and no trainees in and around Surrey, which is another issue itself.*

Response given in Bat Line: The Volunteering Support Team have recently received a few enquiries relating to the use of Buddies during roost visits, which have been taken on board as part of our ongoing review of our Health and Safety policy for volunteers; in this instance, this relates directly to your lone working arrangements whilst attending Roost Visits, a subject we are currently looking into.

We encourage buddies to be used in all on-site instances where lone working is an issue, and you do not have an available VBRV/Trainee to accompany you on your roost visit.

With that in mind we are keen to find out how vital buddies are to you.

We know buddies are essential in making sure you arrive home safely after a roost visit but what about those instances where a buddy accompanied you on a roost visit for lone working protection – for example on an emergence survey where you are outside a property attempting to identify numbers and species of bats.

We would love any feedback you could provide, but please could you focus on the following questions:

- Do you have a buddy that you take with you on roost visits for purposes of lone working protection?
- If you do take a buddy with you roughly in the main, what kind of protection do you need them for? – emergence surveys or internal roost visits?
- If you do take a buddy with you how often did you take them with you this year and in 2019?
- If you do take a buddy with you on a roost visit, do they travel with you in the same vehicle?

These are the main questions you could help with answering but also if you have any additional buddy or lone working feedback, please let us know at batvolunteers@naturalengland.org.uk, addressing your emails to 'Buddy/Lone Working feedback'. We will then collate your responses and use the results to come up with ways the buddy system could be adapted to improve the support they can provide to VBRVs.

Bats & Diseases

Priority raised: *Could disabled / unreleasable Daubenton's bats please be allowed to be kept for educational purposes as EBLV1 and 2 has been found in other species. Even if it's just to show other bat carers what they look like, identifying particulars etc. Daubenton's are my second most numerous bat species I get, and quite frankly are easier to handle than pips. We already take correct precautions with all bat species, are the powers that be saying that they are not enough? Carers are*

missing out on a huge resource, it's like being told or shown a picture of a parti-coloured bat, I am sure they are much easier to identify if you have seen and handled a real one.

Response from Bat Conservation Trust's Lisa Worledge: It is important to note that rabies in bats can take time to manifest. There was a case some years ago of a Daubenton's bat that could not be released. It had been in care for eight months (during which time it was used for education at events) before it showed symptoms and had to be euthanised, at which point EBLV-2 was confirmed. Daubenton's bats and serotines should not be used as education bats in the sense of taking them to events, etc. However, in training new carers when at an appropriate stage, or existing carers who may not have come across the species before, then the trainer may wish to use Daubenton's bats and/or serotines they have in care **at the time**. This is very different from having bats at events. The precautions set out in the [Supplement to Good Practice Guidelines for Bat Rehabilitators: Managing Disease Risk](#) for handling and care of the bats should always be followed, including during training with new carers.

We are in the process of reviewing both the supplementary guidance and the main rabies guidance. We will include a section in the supplement on training of new carers specifically. We will seek input from the specialists at Defra and the Animal & Plant Health Agency to ensure the guidance we provide is correct. We hope to have the new guidance available later this year.

For more general information, there are details of what needs to be considered in terms of whether a bat is suitable for permanent captivity if it cannot be released back into the wild, please see section 2. of the Ethics chapter of the [Bat Care Guidelines](#).

Priority raised: *I discuss about the deep effects of White Nose Syndrome (WNS) on bat populations in different geographical regions of the world. Now these days, WNS becomes a major threat to the population of different species of bats founding in cold areas. WNS attack the bats during hibernation period and cause the death of the bat. This disease is caused by a fungus called Pseudogymnoascus destructans. Understanding the mechanism of action of this disease needs time to study about the effects of this disease on bats' metabolic activity during hibernation and also the response of the immune system during this process. WNS endangers different species of bats like small brown bat in Ontario, Canada, and in other nearby areas, 6 million of this species are killed due to this disease in last 10 years. If there is any group to researching on this disease it's my honour to become the part of this group for the great service to maintain the balance of this ecosystem.*

Response from the Bat Conservation Trust's Lisa Worledge: The fungus that causes white-nose syndrome (WNS), has been identified on a number of bats in multiple European countries, including the UK, and across Asia. However, unlike in North America, these findings have not been linked with mass mortalities and WNS has not been confirmed this side of the Atlantic. The UK cases have come from a combination of passive and active surveillance work. The first confirmation was from a swab sample taken from a live Daubenton's bat at a hibernation site in Kent back in February 2013 and submitted to the passive surveillance scheme run by the Animal & Plant Health Agency (APHA). A second positive case through the passive scheme came from another Daubenton's bat this time at a hibernation site in Norfolk in March 2014. There have been a number of subsequent cases found through active surveillance work, in collaboration with different Universities, as well as through the ongoing passive surveillance. There is more information about WNS on the BCT website at: <https://www.bats.org.uk/about-bats/threats-to-bats/white-nose-syndrome/overview>.

We have no current active surveillance work, but research continues in North America and elsewhere in Europe. If someone is interested in getting involved, we would suggest making contact with academic institutions that are studying the fungus and/or WNS. A search on [Web of Science](#) or [ResearchGate](#) should highlight which institutions have active projects underway. There were also talks at two recent conferences relating to WNS, [3rd International Symposium on Infectious Diseases of Bats](#) and [19th International Bat Research Conference](#). A search of the programmes for these two events will show relevant research.