



# OUR BEACON FOR BATS PROJECT



2010 - 2014

## END OF PROJECT REPORT

Dr Jane Sedgeley-Strachan,  
Hilary Macmillan, David Jermyn,  
Helen Kidwell





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# ACKNOWLEDGEMENTS

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Thank you to our hundred or so volunteers. Collectively, they contributed many new lesser horseshoe bat records to inform our BatMap, planted thousands of trees and helped out at numerous public events. Special thanks are due to our long term volunteers and those who came back for repeat sessions. In no particular order: Margaret, Peter, Charlotte, Cherry, John, Rob S, Roger, Craig, Barry, Clare, Tim, Caroline, Carola, Selwyn R, Lyndon, Eleanor, Andy, Gary, Steph, Ben, Bryn, Kate, Jason, Heather, Christina, John, Brian, Liza, Ian, Peter J, Barbara, Caroline L, Lorraine, David H, Gavin, Kerry, Tyler, John B, Terry, Linda, Mary, Hannah, Steve, Nik, Christine, Louise, Iestyn, Meryl, Alison, Glyn, Andy L, Adam, Christopher, Chris, Norm, Rob M, Rachel, Trevor, Julia, Colin, John, Ceri, Andy and Selwyn E.

Thank you to our official partners and local community groups. Together we carried out several collaborative projects and events and achieved far more working together than we could have alone. Partners included Brecon Beacons National Park Authority, Brecknock Wildlife Trust, Brecknock Moth Group and Brecknock Bat Group, Canal & River Trust, Cwmdu Sustainable Environment Group, Llangattock Community Woodland Group, The Green Valleys, Biodiversity Information Service, Keep Wales Tidy Long Forest project and Cadw. Special thanks to BBNPA staff: Sunita, Hayley S, Linda, Francesca, and Ron for delivering such a comprehensive education programme and to Huw, Sam and John for organising volunteers for tree planting at Gilestone Farm. Thanks to Rachel at Keep Wales Tidy, Gareth at The Green Valleys and Roger for his wood working skills, Hayley G and Ian at Cadw, Mark and colleagues at Canal & River Trust and local Natural Resources Wales (NRW) staff.

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Thank you to the OB4B Working Group and The Vincent Wildlife Trust (VWT) core staff for their excellent support and guidance: Henry, Rob, Natalie, Lizzie and Helen and to Kirsty, the OB4B Officer in the first year of the project.

A sincere thank you also to Phil and Diane Morgan for their tremendous support and active involvement with the Working Group and the project’s survey work.

Finally, we would like to express our gratitude to our funders. Without the support of the Heritage Lottery Fund, Brecon Beacons Trust and Natural Resources Wales, this project would



## DEDICATION

We would like to dedicate this report to the late Rob Strachan. Rob gave a huge amount of his time towards this project. He was an invaluable member of the project’s Working Group, and we are indebted to him for his advice, his sourcing of funding and his enthusiastic leadership of workshops and training sessions. An awe-inspiring naturalist, a committed conservationist and a true friend to the VWT.



# 1 | THE EVOLUTION OF THE PROJECT

The Our Beacon for Bats project aimed to contribute to the long-term conservation of lesser horseshoe bats in the upper Usk Valley through working with local people to raise awareness, add to our knowledge of how bats use the area and undertake habitat enhancements.



The upper Usk Valley has one of the most significant populations of lesser horseshoe bats in Europe, and the Trust has been managing bat roosts in the valley for more than 20 years. Today, we manage five roosts in this bat hotspot, including the largest known lesser horseshoe bat maternity colony in western Europe.

The idea for this project evolved over a period of two or three years. We launched the project in 2011 and it ran until the beginning of 2014. It was funded by the Brecon Beacons Trust and the Heritage Lottery Fund, with later additional funding secured for habitat enhancement from Natural Resources Wales. The project area covered the upper Usk Valley, from Brecon to Crickhowell.

This project took our conservation work with bats one step further, beyond their roosts and into the wider landscape. We wanted to work with local people and visitors to develop their understanding of the importance of the local landscape

for this internationally important bat species. We wanted to help landowners to enhance their land holdings for the bats and we wanted to broaden our own knowledge of the bats' roosting and foraging areas.



**PHOTOS** (Left) Lesser horseshoe bat leaving a roost © Frank Greenaway. (Above) Pencelli Mill, one of the five bat roosts in the upper Usk Valley managed by the VWT.



## THE PROJECT'S KEY AIMS



## THE LESSER HORSESHOE BAT

The lesser horseshoe bat is one of our smallest bats. At rest it hangs upside down, often with its wings wrapped around its body.

This species avoids open and well-lit areas, usually emerging when dark. They fly under cover of hedgerows and tree-lines to areas of deciduous woodland to catch insect prey.

In summer, these bats often breed in attics or sometimes heated cellars in old, undisturbed buildings. In winter, the bats hibernate in caves, mines, unheated cellars or ice houses.

After a long period of decline, this bat is now showing signs of recovery. Still giving cause for concern, however, is its dependence on breeding and hibernation sites that are both scarce and under threat, together with the loss of foraging habitats through the removal of hedgerows and tree lines.

The VWT owns one lesser horseshoe bat maternity roost and manages four others within the upper Usk Valley.



**PHOTOS** (Left) Volunteers Chris and Alison listening out for lesser horseshoe bats. (Above) Lesser horseshoe bat in flight © Frank Greenaway.

- Raise awareness of the importance of lesser horseshoe bats in the upper Usk Valley.
- Engage local communities in mapping bat commuting routes and identifying important landscape features for the lesser horseshoe bat.
- Ensure local people enjoy the wonders of lesser horseshoe bats by learning about their ecology and environmental needs, by identifying them in the field, and by promoting the special presence of lesser horseshoe bats within their neighbourhood.
- Provide local landowners with practical support and guidance for enhancing a lesser horseshoe bat landscape.

“My involvement as a volunteer with the Our Beacons for Bats project was a first for me. I had prior to this always been rather suspicious of bats. However, by taking part in surveys and habitat enhancement, I learnt a lot about them and marvel at their physiology and behaviour. I also now understand the importance of habitat and will strive to do my best to help to protect what we have here in the Brecon Beacons.”

**Peter**, OB4B volunteer



## 2 | PEOPLE AND PARTNERSHIPS



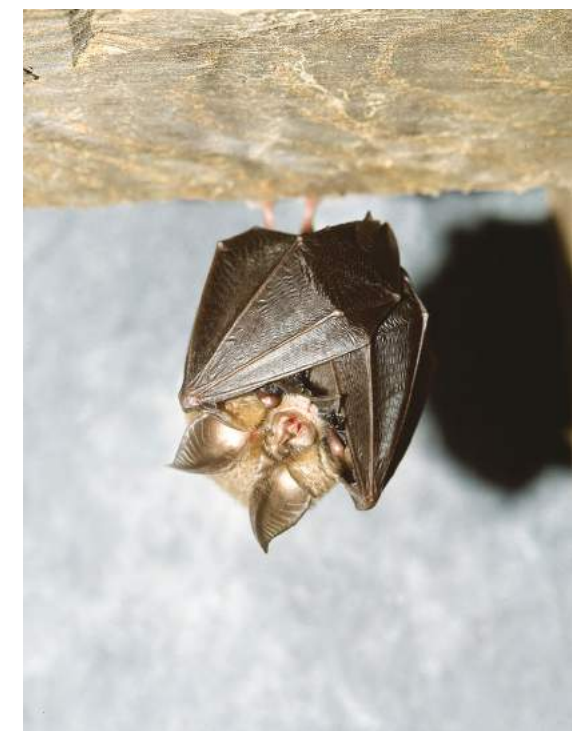
“We need to embrace a new, restorative approach which rebuilds nature and creates a more resilient natural environment for the benefit of wildlife and ourselves. This will require strong leadership from government, but is not a job for government alone. It will require effective and positive engagement with the landowners and land managers. And it will need improved collaboration between local authorities, local communities, statutory agencies, the voluntary and private sectors, farmers, other land-managers and individual citizens.”

**Making Space for Nature, Lawton 2010**

### KEY AIMS:

- Raise awareness of the importance of lesser horseshoe bats in the upper Usk Valley.
- Ensure local people enjoy the wonders of lesser horseshoe bats by learning about their ecology and environmental needs, by identifying them in the field, and by promoting the special presence of lesser horseshoe bats within their neighbourhood.

**PHOTOS (Left)** Members of Brecon University of the Third Age (U3A) helping count lesser horseshoe bats flying out from a maternity roost in the upper Usk Valley. **(Right)** Lesser horseshoe bat roosting © Frank Greenaway.





## 2.1 EDUCATION AND AWARENESS

### 2.1.1 WORKING WITH SCHOOLS

Raising young people’s awareness of bats, and the lesser horseshoe bat in particular, was to us a very important part of the project. With no education team of our own, the Trust teamed up with the Brecon Beacons National Park Authority’s (BBNPA) Education Service. This collaboration was integral to the project. Their expertise, resources and contacts with local schools meant they were best placed to deliver key elements of the OB4B’s education and awareness programme. The Education Service team received a day’s training on lesser horseshoe bat ecology, which included a visit to a local bat roost with expert staff from the VWT. Ongoing advice and support was also provided by the OB4B Project Officer.

The BBNPA Education Service delivered an outreach programme to all schools in the project area. Visits comprised two half days or one whole day visit to each school.

- All sessions were highly interactive and designed to inspire pupils’ interest and improve understanding of lesser horseshoe bats living in their local area. Sessions were age appropriate and curriculum linked.
- Each participating school received a pack of follow-up lesson resources.
- Brecon Beacons National Park achieved International Dark Sky Reserve status in 2013. Lesser horseshoe bats were used as a vehicle to teach about impacts of light pollution.
- Activities at primary schools included exploration of a 3D landscape model and use of maps, puppets, specimen bats, sound bites, drawing and games.
- A school art competition was run to allow children to reflect on their learning and reinforce messages.
- Secondary school pupils watched ‘real-time’ film footage and counted bats emerging from a roost. After comparing tallies the pupils discussed how to improve reliability and accuracy of data. They also had the opportunity to interpret data and graphs and identify bat calls using sonograms.
- Children were encouraged to bring along adults to an afternoon event at Llangattock Community Beechwoods. Participants were able to meet a bat, play games, and follow a specially designed bat trail to explore the woods. There was also the opportunity for adults to enrol as OB4B project volunteers.

### CASE STUDY

#### Lesser horseshoe 3D Model

Pupils used a 3D local landscape model to explore a bat friendly landscape learning about key habitats, including roost sites, commuting routes and foraging areas. The concept of connectivity and impacts of land management were discussed.

**PHOTO** BBNPA Education Officers Hayley Sharp and Francesca Bell at Crickhowell High School with the 3D landscape model.



### CASE STUDY

#### School Art Competition

As the education programme came to a conclusion a school art competition was held to give children the chance to reflect on their learning and to reinforce messages. Pupils were invited to use a range of media to express what they had learnt about lesser horseshoe bats, the landscape and how this landscape could be improved for bats. Over 200 pieces of artwork were submitted and displayed at the National Park Visitor Centre, The Brecon County Show and in Brecon Library.

**PHOTO** A small selection of entries from the school art competition.





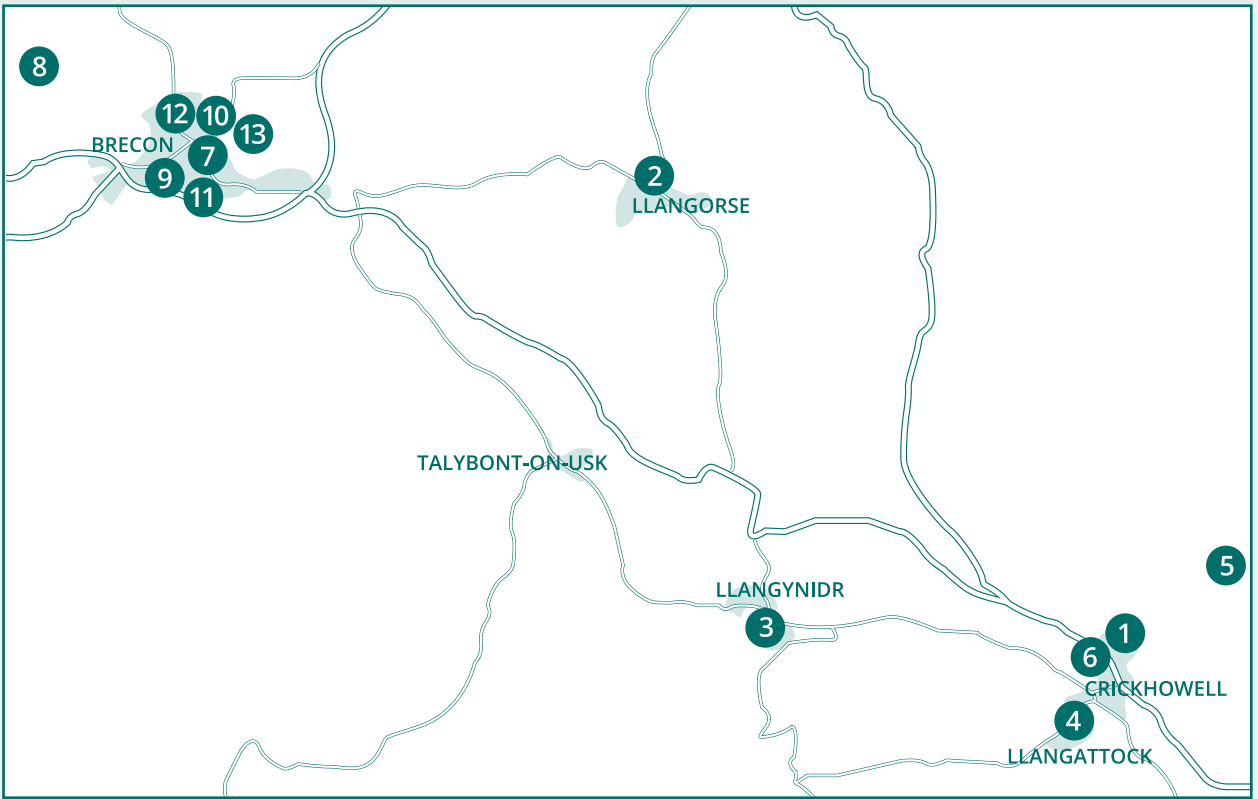


**PHOTO** Pupils from Crickhowell Community Primary School mimicking roosting bats.

"I am now often recognised as the Bat lady in many of our local National Park schools! The message is still loud and clear with the pupils I come into contact with. The mention of the lesser horseshoe bat is frequently a starting point when I go into work with local schools. I always include lesser horseshoe bats in my teaching now and I have encouraged the rest of the team to do the same! It is wonderful when there is feedback from young people e.g. in events you meet pupils who have been part of outreach lessons at school and they come and start telling us things about bats".

**Hayley Sharp**, Education Officer, BBNPA

### Schools visited by the BBNPA Education Service during the OB4B project



#### YEAR 1 - 2012

- 1 Crickhowell Community Primary School - 298 pupils
- 2 Llangors Church in Wales Primary School - 141 pupils
- 3 Llangynidr Community Primary School - 134 pupils
- 4 Llangattock Church in Wales School - 65 pupils
- 5 Llanbedr C in W A Primary School - 37 pupils
- 6 Crickhowell Secondary School - 103 pupils

#### YEAR 2 - 2013

- 7 Mount Street Junior School - 148 pupils
- 8 Cradoc Church in Wales School - 133 pupils
- 9 Llanfaes Primary School - 201 pupils
- 10 Mount Street Infant School - 114 pupils
- 11 Ysgol Penmaes - 33 pupils
- 12 Priory Church in Wales - 54 pupils
- 13 Ysgol Y Bannau - 94 pupils

**TOTAL PUPILS WORKED WITH: 1,495**



### 2.1.2 RAISING AWARENESS IN THE COMMUNITY

Over the life of the project, we used a range of approaches to inform, enthuse and engage local communities and the wider public. These included leaflets, displays, walks, talks, special events, attendance at local shows, national radio and TV coverage, e-newsletters, a webpage and regular Facebook contributions.

- OB4B and BBNPA Education Service staff attended seven shows and festivals. These included the Welsh Smallholder and Garden Festival, the Brecon Agricultural Show, a Queen's Diamond Jubilee event at Glanusk Estate, the Royal Welsh Show and the Green Man Festival. It was estimated that over 300,000 people attended these events. Visitors were offered a range of bat-based activities, displays, information leaflets along with opportunities to sign up as a volunteer and attend future events. We also provided specialist bat and habitat management packs for landowners.
- OB4B and VWT staff ran 17 events for local community and wildlife groups. We delivered indoor talks, evening walks with bat detectors and roost emergence counts to a range of local interest groups. These included the Brecknock Moth Group, Cwmdru Woodland and Sustainable Energy Group, the University of the Third Age, the Women's Institute, the Brecon Beacons Society and the Farming and Wildlife Advisory Group.



- In partnership with the Brecknock Wildlife Trust, BBNPA Education Service staff and Cadw (the Welsh Government's historic environment service), we ran six events for the general public. These included annual bat detector walks along the river in Brecon, a bat detector walk at Hay Festival, a family fun day at Llangattock Beechwoods and an after-hours evening event focusing on bats using Tretower Court and Castle. The local moth group also helped with the latter event.



### CASE STUDY Bat Webcam

A webcam was placed inside a major lesser horseshoe bat breeding roost. Between July and November 2013 the webcam page had 1,749 hits making it the fourth most viewed page on the VWT's website at the time.

#### PHOTO

A still from our webcam at the lesser horseshoe bat roost.

- Two E-zines were produced in 2012 and 2013 and 200 people signed up to receive them.
- Dedicated webpages were set up on the VWT's website. These were visited frequently and particularly after the installation of a webcam inside a major lesser horseshoe bat breeding roost. The OB4B Project Officer contributed regularly to Facebook keeping followers updated with current news and advertising forthcoming events.



**PHOTOS (Left)** Children exploring bat activities at the OB4B and BBNPA stand at the Brecon Show. **(Above)** Members of the public commenting on the Tretower bat and moth event on the VWT's Facebook page.





- Media coverage was generated on 23 occasions, ranging from local parish newsletters to regional and national Welsh press and national TV and radio. The VWT's lesser horseshoe expert and Conservation Programme Manager Dr Henry Schofield and the OB4B Project Officer Dr Jane Sedgeley-Strachan were interviewed on BBC Radio 4's the Living World aired on 12<sup>th</sup> May 2012 and on BBC One's Countryfile on 30<sup>th</sup> September 2012.
- Margaret, a key volunteer and registered blind, gave a recorded interview for the South Wales Talking Magazine to raise awareness of bats and how blind people can be involved with bat work.

**PHOTO** The VWT's Conservation Programme Manager Dr Henry Schofield (middle) being interviewed on Countryfile.

"For someone with sight loss, getting involved with Our Beacons for Bats opened up a whole new world for me of using hearing instead of sight. I particularly enjoyed helping with the surveys and getting out to new places with new people to study lesser horseshoe bats. I have since given a recorded interview for the South Wales Talking Magazine and hopefully helped to raise awareness of bats and how blind people can be involved."

**Margaret**, OB4B volunteer

## CASE STUDY

### 'After hours' tour of Tretower Court and Castle

Tretower Court and Castle are historic buildings maintained and managed by Cadw. The partially restored Court is home to a small colony of lesser horseshoe bats.

The OB4B Project Officer and Custodian Hayley Gunter put together the first public event to include a bat focus. Visitors attended an indoor talk on the history of the site and the bats that live there. They were then conducted on an atmospheric guided tour around the inside of the buildings before it got fully dark and finally participated in a bat detector walk and a moth trapping session in the grounds.

The event was a resounding success. It was over-subscribed with a waiting list. The feedback from the general public and Cadw staff clearly demonstrates how the presence of bats in an historic monument can be viewed positively and certainly adds value to the site and to the visitor experience.

Hi Jane,

Just wanted to provide some feedback from our Bat Event at Tretower Court last Saturday.

I have had numerous positive comments and enquiries on future events as the evening was thoroughly enjoyed by all, and has added another dimension to the range of events we offer here at Tretower Court and Castle.

Having never taken part in a Bat walk I was particularly interested in the work of The Vincent Wildlife Trust and I hope you agree that events of this nature really help deliver the message of how organisations, whether wildlife or heritage, can thrive with the involvement and support of local people.

I feel that the combination of educating visitors on the habitat of the various wildlife to be found at Tretower, alongside the programme of conservation taking place at the monument, provides a unique insight to the life of historic properties in the care of Cadw.

Thank you so much for your hard work and commitment in making the first Bat Event at Tretower Court a resounding success and I look forward to working with you on future projects.

Kind Regards,  
Hayley

**Hayley Gunter**, Custodian - Tretower Court and Castle in email to OB4B Project Officer





CASE STUDY

Family friendly bat walks in Brecon

BBNPA and Brecknock Wildlife Trust run annual bat walks for local people and visitors to the national park along the River Usk in Brecon. The VWT was asked to assist with the walks, and the OB4B Project Officer; David Jermyn, the VWT Reserves Officer; Eleanor Jones, a key OB4B volunteer and bat carer; and Rob Strachan, mammal expert, volunteer and member of the OB4B Working Group contributed their knowledge and bat expertise. The project also provided 15 bat detectors for participants to use which enhanced the experience by greatly improving chances of seeing and hearing bats. The numbers of attendees reached capacity each year and the walks were very popular as shown by feedback from participants in 2012.

PHOTO Participants on one of the bat walks in Brecon.

“Thank you very much for the Brecon bat walk last night. I thought it was one of the best outdoor family natural history presentations I have attended. The surprise factor was superb. Dreading rain, not enough bat detectors to go round and that [my 14 year old daughter and her three friends] might be bored it was fantastic to be greeted with lots of help and bat detectors, live bats, box-bat, the star Rob Strachan, information that’s not in books, rich bat habitat and an unexpected bat species! Thank you again for a memorable evening we all enjoyed.”

Vicky, Participant in a Brecon bat walk

OB4B Community and Public Events

Activity	2011	2012	2013
Family fun day, Llangattock Beechwoods			1
Bat and moth night to celebrate National Moth Day with Brecknock Moth Group			1
BBQ, bats and moths with Cwmdu Sustainable Environment Group		1	1
Bat emergence count and talks at VWT lesser horseshoe bat roosts	1	2	2
Public bat detector walks with Brecknock Wildlife Trust and BBNPA	1	2	1
European Bat Night Event	1		
Bat walk and talk for Farming & Wildlife Advisory Group	1		
‘Hedgerows never sleep’ joint event with Keep Wales Tidy Long Forest project			1
Mosaic Group wildlife champions (BME) bat detector walk in Brecon- delivered by BBNPA		1	
Indoor talks	1	2	2
After-hours tour of Tretower Court and Castle, Heritage, Bats and Moths			1
Total Events: 23			



## 2.2 TRAINING AND VOLUNTEERING

### KEY AIMS:

- Ensure local people enjoy the wonders of lesser horseshoe bats by learning about their ecology and environmental needs, by identifying them in the field, and by promoting the special presence of lesser horseshoe bats within their neighbourhood.
- Engage local communities in mapping bat commuting routes and identifying important landscape features for the lesser horseshoe bat.



### 2.2.1 TRAINING

OB4B and VWT staff delivered 17 training events for a range of people living and working locally. Attendees included volunteers wanting to participate in the OB4B project, professional ecologists, planners, teachers and community groups. Training on lesser horseshoe bat ecology, habitat requirements, bat detector use, bat call identification and analysis and survey and monitoring techniques was provided through a combination of group workshops, open days, tours, practical sessions and one-to-one tuition. Key objectives of the training programme were to better inform those involved in land-use decisions and to engage volunteers to help gather and map new data on lesser horseshoe bat foraging areas and roost sites.

- Two training days on bat ecology, one for BBNPA Education Service staff and one for local teachers were held to help facilitate our education programme.
- An introductory workshop on bat detectors and survey techniques was held to enthuse existing volunteers, engage new volunteers and give them the opportunity to sign up for future survey work.
- Additional bat detector sessions were run in response to demand: four for local community groups wishing to survey woodlands and hedgerows they managed; one for BBNPA Ecologists, two for volunteer survey teams and five one-to-one sessions on bat detector use, call identification analyses and data storage.

- A specialist training day on bat roosting and foraging requirements was run for BBNPA planning ecologists and historic buildings staff.
- A group of commercial ecological consultants also toured bat roosts managed by the VWT to learn how to successfully design and modify bat roosts to suit lesser horseshoe bats.
- Seven individual volunteers and one community group developed their own complimentary bat survey projects as a result of training given to them on the OB4B project.

**PHOTO** The VWT's Reserves Officer David Jermyn explaining to BBNPA Ecologists and historic building staff important roosting and foraging habitat requirements.

50%

ATTENDEES OF BAT  
DETECTOR TRAINING  
WORKSHOPS WHO  
WENT ON TO BECOME  
KEY VOLUNTEERS

“Specific information about lesser horseshoe bat biology; [and] first hand views of functional bat mitigation measures.”

**Bradley Welch**, BBNPA Ecologist  
describing what he learnt during  
a specialist training day





## CASE STUDY

### Bat Detector Workshop

An introductory workshop on bat detectors and survey techniques was held as a preliminary to a concerted effort to map bat habitats within the project area. Thirty-one people from a variety of backgrounds and with varied degrees of experience signed up to the workshop. They attended an indoor session and evening outdoor practical demonstration. Fifteen people from this workshop went on to become regular volunteers for the OB4B project participating in both surveys and habitat enhancement work.

“Fascinating information, I liked the technical detail.”

“Very useful learned some new things.”

“Very good - informative and interesting.”

“Fascinating, well explained.”

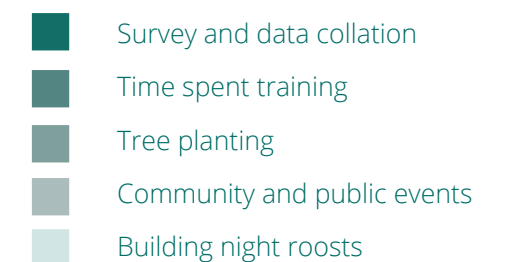
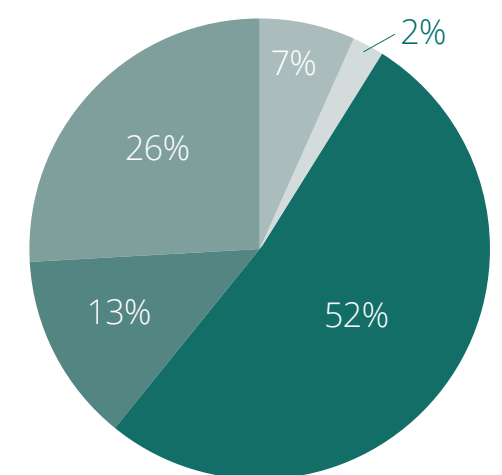
#### Comments from Workshop attendees

**PHOTOS (Top)** The VWT’s Conservation Programme Manager Dr Henry Schofield demonstrating bat detector survey techniques. **(Bottom)** Participants of the bat detector workshop.

## 2.2.2 VOLUNTEERING

Local people were encouraged to participate in all aspects of the OB4B project and were vital to the project’s success. Individuals, community groups and landowners provided voluntary assistance at public events, attended training courses, carried out survey and monitoring work, collated and analysed bat data, helped construct new temporary roosts and planted 1000s of trees.

- OB4B engaged 100 individual volunteers. Of these, 76 were regular and 24 were casual.
- Individuals participated between one and eight times.
- Volunteers contributed a total of 1,877 hours of their time over three years.



Activity	2011	2012	2013
Community and public events	38	52	36
Building night roosts			41
Survey and data collation	193	508	272
Time spent training		127	124
Tree planting			486
Total volunteer hours: <b>1,877</b>			





"In 2012, we got involved with bat surveys and tree planting and learnt to use bat detectors. In the summer of 2013, we decided to borrow one and went out on several exploratory dusk forays. One evening we arrived at a disused barn about ten minute walk from our home and to our surprise and delight we heard the distinctive warble of the lesser horseshoe bat. We then undertook a daily survey using an automatic song meter bat detector, moving it around to establish flight patterns radiating from the site over around six weeks. In 2014, with David Jermyn from the VWT, we did a count with three of us watching the front entrances and using an infrared camera at the rear. Data revealed that there were in excess of 100 individuals so it was official, a new colony had been found!"

**Cherry and John**, Key survey volunteers

"I'd like to be involved in any programme of volunteering next year as the project is great, the learning experience is fantastic and such a broad range of people show up. Also to get the opportunity to work closely with experienced bat workers and to gain an insight into lesser horseshoes is invaluable to anyone interested in bats."

**Glyn**, OB4B volunteer

"Participation in the Our Beacon for Bats project has given me a lot of enjoyment and satisfaction. I have been able to contribute even with my disability."

**Margaret**, OB4B volunteer

**PHOTOS (Left)** Cherry and John, key survey volunteers. **(Above)** OB4B Project Officer, Dr Jane Sedgely-Strachan, VWT's David Jermyn and Rob Strachan with key OB4B volunteers from 2012 survey season.

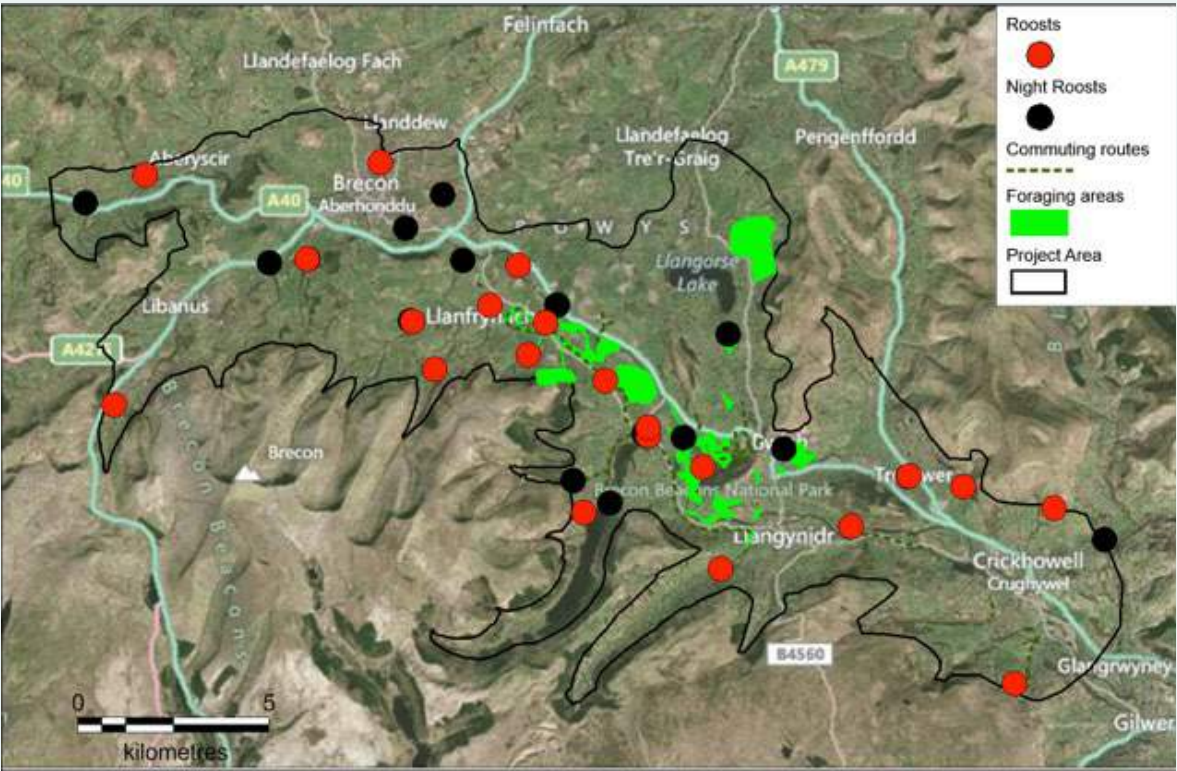


CASE STUDY  
Bat Map

A key objective of the OB4B project was to engage local communities in mapping out and identifying important landscape features for the lesser horseshoe bat.

**MAP** The OB4B ‘BatMap’ showing the roosts, commuting routes and foraging areas of the lesser horseshoe bat within the project area.

The resulting ‘BatMap’(see below) and accompanying data can be used to help inform local land management decisions. Data gathered by volunteers was used to inform major habitat enhancement work on the Gilestone farm the following year (see case study on Gilestone Farm, p.27-28).



**PHOTOS** (Top) Volunteers Charlotte, Margaret and Peter surveying along hedges and tree lines. (Bottom) Landowner Stephen with automated Song meter SM2 bat detector on his farm and orchards.

- Volunteers spent 973 hours surveying, collating and analysing bat call data.
- Automated static bat detectors were put out at 217 locations for 488 nights.
- Approximately 25km of canal was surveyed
- Important new commuting routes and foraging areas were identified.
- Lesser horseshoe bats were recorded at 205 locations.
- Volunteers found a new maternity (breeding) roost.



“We started our survey in early June and completed in September 2012, during which time we surveyed on 135 nights at 86 locations. We have now submitted a full report with a large spreadsheet of data to Jane [OB4B Project Officer] and the VWT. The whole experience was fantastic. We loved visiting the farm and exploring its hedges, trees and the hidden corners near ponds or the river. We certainly learnt a lot! We have hugely enjoyed this work and Jane has been a pleasure to work with! We can certainly recommend this voluntary work.”

**Peter, Margaret and Charlotte, Key survey volunteers**



2.3 HABITAT ENHANCEMENTS

“The essence of what needs to be done to enhance the resilience and coherence of England’s ecological network can be summarised in four words: more, bigger, better and joined.”

Making Space for Nature, Lawton 2010



An important component of the OB4B project was to provide local landowners with practical support and guidance and work with local people to improve habitats for lesser horseshoe bats. This was achieved by increasing permeability of the landscape through creating new night-roosting opportunities and planting trees and hedges to improve linkages between roost sites and foraging areas.

2.3.1 TREE AND HEDGEROW PLANTING

We worked with fencing contractors, OB4B volunteers, BBNPA volunteers and staff, NRW staff, local community groups and landowners to restore fragmented hedgerows and to plant new hedges and areas of wet woodland.

“We have worked with the Our Beacons for Bats project to improve gappy hedgerows on our land. We also adapted two pill boxes to make them into bat roosts. It has been an interesting and rewarding process learning more about our local bat population and we would like to participate in similar work in the future.”

Richard, Local farmer and landowner

PHOTO Tree planting volunteers at Gilestone Farm.

11,800 TREES PLANTED



6 Locations WITH 5 LANDOWNERS



2.75ha WET WOODLAND



2.9km HEDGEROWS





# CASE STUDY

## Tree planting at Gilestone Farm

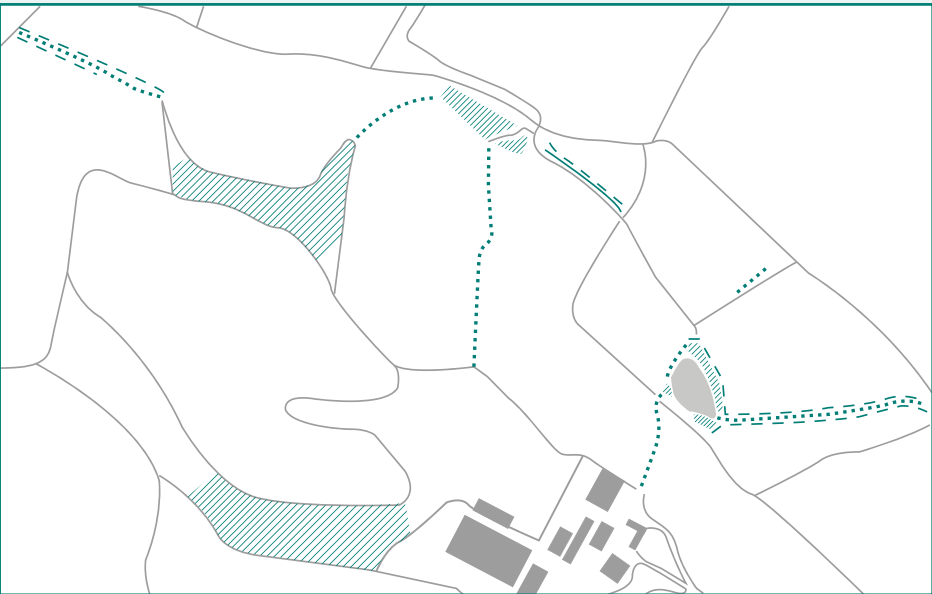
Gilestone Farm is situated between two major lesser horseshoe bat roosts. In conjunction with work at the same site by Natural Resources Wales (NRW), habitat tasks included the planting and fencing of 1.17 ha of new wet woodland and planting and restoring 0.75 km of hedgerows to improve the habitat for lesser horseshoe bats and other wildlife.

In January 2013, a total of 2,500 wet woodland trees (oak, crack, grey and goat willows, rowan, aspen and oak) and 1,200 hedgerow whips (mixed native species) were planted. Fencing, hedgerow planting and hedge-laying was completed by a contractor, but the wet woodland planting was carried out by an army of volunteers in over just two days.

“It was a pleasure to work with The Vincent Wildlife Trust on such a worthwhile project. A large number of volunteers were brought together and the volume of trees planted in two days showed the true meaning of ‘many hands make light work!’ The project provided an opportunity for people to meet and socialise whilst improving the upper Usk Valley as habitat for lesser horseshoe bats as well as many other species. Important links have been forged with further projects carried out and more to follow I’m sure!”

Sam Ridge, BBNPA Warden

BBNPA wardens coordinated around 60 volunteers from communities throughout the National Park. Alongside BBNPA and VWT staff and volunteers, were representatives from NRW and The Brecknock Wildlife Trust.



**MAP**  
Areas planted at Gilestone farm during the OB4B project

KEY:	
	Woodland planting
	Tree line or gapping up
	Fencing
	Hedge planting



### 2.3.2 INCREASING ROOSTING STRUCTURES

We worked with the Canal & River Trust, Brecknock Wildlife Trust, a local community group and landowners to create eight new or improved roosting opportunities for lesser horseshoe bats. Three of these are purpose built structures and five are existing buildings that have been modified. Monitoring to date has shown that five of the eight structures are used by bats.

“It was great to share my knowledge of woodworking and construction with David’s [VWT Reserves Officer] knowledge of bats and their preferences for roosts. Together we produced and installed some quality night roosts. I certainly learnt a lot.”

**Roger**, OB4B and The Green Valleys volunteer and woodworker

#### Enhancing existing structures



##### Pump house conversion

Brecknock Wildlife Trust introduced us to local landowners **Clive and Audrey** who wanted to convert an old pump house on their property into a bat roost. The VWT advised on what needed to be done and Clive carried out the work. Lesser horseshoe bat calls were recorded inside the building within weeks of conversion.



##### Pill box modification

Simple modifications were made to three World War II Pill boxes to make them less draughty and more bat friendly. The VWT Reserves Officer David Jermyn carried out enhancements to one pill box and the concept was swiftly taken up by **landowner and farmer Richard** who adapted two pill boxes on his farm and replanted an old fragmented hedge leading up to the boxes. So far, up to five lesser horseshoe bats have been seen inside one pillboxes along with droppings from at least two other bats species.



##### Lime kiln modification

A canal-side lime kiln was successfully modified in a collaborative project with the **Canal & River Trust**. In 2013, 250-500 lesser horseshoe bat droppings were found inside the lime kiln just five weeks after modification work. In addition, one lesser horseshoe bat was seen day-roosting inside the structure during a follow-up monitoring visit in April 2014.



## 2.4 THE ADDED VALUE OF PARTNERSHIP WORKING

### Purpose built structures

#### Bespoke temporary night roosts

An objective of the OB4B project was to trial a temporary structure specially designed to accommodate night-roosting lesser horseshoe bats. These structures allow bats to conserve energy by providing a secure refuge in which to rest and digest food without having to return to their main day-roosting site.

The night roost was developed as a kit-set that is easy to replicate, transport and assemble on site. Designed with wheels, the night roost is considered by some planning authorities to qualify as a temporary structure and as such may not require planning permission. Three night roosts were installed in 2013 - and so far bats have used two. One proved to be very popular, with droppings from lesser horseshoe bat and brown long-eared bats present within two weeks of the structure being erected. In October 2014, five lesser horseshoe bats were recorded roosting together in this same night roost. Unidentified bat droppings (most likely pipistrelle) have been recorded in the second night roost to be used.

Detailed plans are available on our website: [www.vwt.org.uk/download\\_category/bats/](http://www.vwt.org.uk/download_category/bats/)



Working closely with organisations and individuals living and working in the project area was integral to the successful delivery of the OB4B project from the very start. Our major partner, the BBNPA, was involved from the first year of the project and funding from NRW boosted the project from the second year onwards. As the project progressed, VWT staff actively developed closer relationships with a plethora of environment and heritage based organisations and community groups to share resources, be more cost effective and undertake more activities.

- OB4B collaborated with Brecknock Wildlife Trust, Keep Wales Tidy Long Forest project, The Green Valleys, Brecknock Moth Group, Brecknock Bat Group, Cadw and the Canal & River Trust on a range of projects and events.
- Working with BBNPA Education Team enabled delivery of an education outreach programme to all schools in the project area as well as a presence at local shows - activities well outside the scope of a single part-time project officer.
- Initially, OB4B project had funding available to build only one temporary night roost, but by working with The Green Valleys local community groups, we obtained match funding and a further two were built.
- The Canal & River Trust and individual landowners approached the VWT with match-funding and labour to modify five existing buildings to become night and occasional day roosts for lesser horseshoe bats. This work was not part of the original project brief and was an added bonus.

**PHOTO** Members of Cwmdu Sustainable Environment Group and The Green Valleys putting the finishing touches to a lesser horseshoe bat night roost.







“Working in partnership with the Our Beacon for Bats project was a fantastic opportunity to make very real gains for conservation, creating lesser horseshoe bat roosting habitat at the listed Brecon lime kilns. It’s great that this important part of our industrial heritage can be used by bats, while not compromising the site. It was really good to find signs of usage within weeks of construction, and we are excited to see how the site develops over the coming years.”

**Dr Mark Robinson, National Ecologist, Canal & River Trust**

“By working in partnership far more was achieved than if either party had undertaken the work alone.”

**Dr Sunita Welch, Education Manager, Brecon Beacons National Park Authority**

“This is putting joined-up thinking into practice. NRW is very keen to support the Our Beacon for Bats project as it will encourage landowners in the upper Usk Valley to adopt more environmentally friendly land management practices that will help manage soil run-off and diffuse pollution to protect water bodies.”

**Rob Strachan, Biodiversity Technical Specialist, NRW**

**PHOTO** Canal & River Trust’s National Ecologist Dr Mark Robinson, Heritage Advisor David Viner, OB4B Project Officer Dr Jane Sedgeley-Strachan and CRT Ecologist Laura Plenty outside the river-side lime kilns that were successfully adapted to become a lesser horseshoe bat roost.



## CASE STUDY

### Natural Resources Wales

Initially, the OB4B project had a target of planting 3,000 trees (equivalent to c.500m hedgerow), but generous grants from NRW enabled the project to greatly exceed expectations. A total of 11,800 trees have been planted to date, equating to 2.75ha new wet woodland and 2.9km of hedgerow, and with more to follow.

Working with a third sector organisation such as the VWT with its local knowledge, contacts and expertise was an efficient and cost effective way for NRW to deliver Water Framework Directive actions through targeted habitat enhancement and creation.

The planting of native tree species such as alder, black poplar and willow along the river valleys will also create much needed shade alongside watercourses and enhance the riparian corridor. The use of trees to shade the River Usk and its tributaries, benefits Atlantic salmon and sea trout by keeping the rivers cool and also provides safe havens for species such as the otter alongside re connecting the river corridor habitat for bats. Importantly, it improves the resilience of the catchment to future climate change.

**PHOTO** Rob Strachan from Natural Resources Wales with David Jermyn, The Vincent Wildlife Trust’s Reserves Officer, talking with local farmer Mr Charles Weston.



## 3 | EVALUATION

Did we improve the “resilience” of the lesser horseshoe bat population in the upper Usk Valley?

“It is vital to develop a much better collaboration between local authorities, local communities, statutory agencies, the voluntary and private sectors, farmers, landowners, other land managers and individual citizens and that it will require effective and positive engagement...education, explanation, and empowerment”.

**Making Space for Nature, Lawton 2010**

In 2010, the Department for Environment Food and Rural Affairs (DEFRA) published the report ‘Making Space for Nature: a review of England’s wildlife sites and ecological network’. This independent review summarised what needs to be done to enhance the resilience and coherence of England’s ecological network in four words: more, bigger, better and joined and described five key approaches to encompass these. We need to:

1. Improve the quality of current sites by better habitat management.
2. Increase the size of current wildlife sites.
3. Enhance connections between, or join up, sites, either through physical corridors, or through ‘stepping stones’.
4. Create new sites.
5. Reduce the pressures on wildlife by improving the wider environment, including through buffering wildlife sites.

The OB4B project has directly applied these approaches and has worked successfully with local people to improve “the resilience and coherence” of the lesser horseshoe bat population in the upper Usk Valley.

**PHOTO** Part of the upper Usk Valley, Brecon, the focal area for the Our Beacons for Bats project.





## Key outcomes of the OB4B project



### Community

**MORE** organisations, community groups and individuals actively engaged in bat conservation.



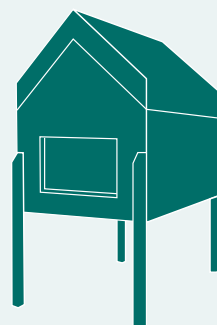
### Landscape

**BIGGER** foraging and commuting areas for bats through tree planting and restoration of failing hedgerows.



### Education

**BETTER** informed and enthused local people who have discovered more about the needs of the lesser horseshoe bat.



### Roosts

Provision of new roosting opportunities between key roosts and foraging areas to create a more **JOINED** up landscape.

## What worked well

- Pre-project desk and field research and later networking by the Project Officer, identified key organisations and individuals living and working in the project area and enabled the VWT to establish crucial partnerships.
- Synergistic benefits of partnership working. Sharing resources meant that VWT and partner organisations were able to be more cost effective and undertake far more activities than working in isolation.
- Project management was enhanced by having a Working Group which included two external members with local and national expertise (from the local Bat Group and Natural Resources Wales). The working group provided an invaluable forum for discussing ideas, suggestions and feedback and for identifying priorities and ensuring targets were being met.
- The Project Officer was very successful at keeping volunteers motivated and the training enabled volunteers to use their own initiative and work unsupervised when required.
- A locally based core VWT staff member provided support to the Project Officer and brought practical expertise and insight to the project.

## What didn't work so well

- With hindsight the workload was too much for one part-time staff member, especially with the need to respond to new opportunities as the project gained momentum and attracted interest.
- In an area with a small population base, volunteers are often involved in multiple projects and there is a risk of them over-committing their time.
- With a varied skill and experience base, it is important to build in extra one-to-one training time to ensure consistency of survey data collection.
- It is vital to manage people's expectations regarding the time restraints of a project, to ensure key elements are delivered on time and also to avoid negativity when the project ends.
- It can be difficult to maintain momentum when the project comes to an end and the Project Officer leaves. Core staff time required will be required beyond the life of a project.
- The project required far more core VWT staff time than originally envisaged.



## 4 | PROJECT LEGACY

A project of this kind was a first for the VWT, and we have learnt a lot along the way in terms of project planning and management. This knowledge will help us with subsequent community and 'citizen science' projects and we hope this report may be of help to others about to embark on such a project for the first time.



- Enhanced foraging, commuting and roosting opportunities for lesser horseshoe bats.
  - Better protection for key sites.
  - Enthused, better informed and more actively involved local people.
  - Local businesses benefited directly from project. These included landowners, fencing contractors, tree nursery and timber merchants. Local pubs were frequently used as meeting venues and pre and post survey sessions. Creation of night roosts provided work for local saw mill/wood craftsman and some public events were designed to boost tourism.
  - Advice and training to a range of professional individuals and organisations. This information then disseminated to colleagues and the wider public.
  - Production of the BatMap has improved existing knowledge and is available to key organisations to help inform land management decisions.
  - A bat detector lending service for individuals and organisations to borrow for their own projects and events.
  - A pool of trained volunteers potentially available for future projects.
- “The message about lesser horseshoe bats has become ingrained in our teaching about protected rare species in the Brecon Beacons National Park”.
- Dr Sunita Welch**, Education Manager,  
Brecon Beacons National Park Authority

**PHOTO** Llangattock Beechwoods bat trail.





## The Vincent Wildlife Trust (VWT)

The Vincent Wildlife Trust has been involved in wildlife research and conservation since 1975. It has focused particularly on the needs of British mammals including the otter, pine marten, polecat, stoat, weasel, water vole, dormouse and the bats.

Currently the VWT's work is centred on the pine marten, polecat, and the rarer bats.

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**[www.vwt.org.uk](http://www.vwt.org.uk)**

3 & 4 Bronsil Courtyard, Eastnor, Ledbury, Herefordshire, HR8 1EP

**Tel:** 01531 636441

**Email:** [enquiries@vwt.org.uk](mailto:enquiries@vwt.org.uk)

Charity Nos. 1112100 (England) SC043066 (Scotland) DCHY00019 (Ireland)

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