AGREEMENT FOR THE CONSERVATION OF BATS IN EUROPE (EUROBATS)

Report on the implementation of the Agreement in the United Kingdom

2008

This document reports on actions undertaken by the UK in 2008 to meet its obligations under the Agreement.

A. GENERAL INFORMATION

Party: United Kingdom

Date of Report: 31 March 2009

Period Covered by Report: January – December 2008

Competent Authority: The Department for Environment, Food and Rural Affairs (DEFRA)

Changes Regarding:

Competent Authority -
Appointed member of the Advisory Committee -
Membership of other committees/working groups -

A. Abbreviations

BAP	Biodiversity Action Plan
BBC	British Broadcasting Corporation
BCT	Bat Conservation Trust
BERR	Department for Business, Enterprise and Regulatory Reform
BIG	Biodiversity Integration Group
BRE	Building Research Establishment
BSI	British Standards Institution
CCW	Countryside Council for Wales
CIEF	Construction Industry Research and Information Forum
CIOB	Chartered Institute of Building
CIRIA	Construction Industry Research and Information Association
DEFRA	Department for Environment, Food and Rural Affairs
EEA	European Environment Agency
EA	Environment Agency
EBLV	European Bat Lyssavirus
EBS	England Biodiversity Strategy
EC	European Commission
eNGO	Environmental Non-Governmental Organisation
ETWG	England's Trees, Woods and Forests
EU	European Union
GBIF	Global Biodiversity Information Facility
GONHS	Gibraltar Ornithological and Natural History Society
HLF	Heritage Lottery Fund
HPA	Health Protection Agency
JNCC	Joint Nature Conservation Committee
ILE	Institute of Lighting Engineers
IWG	Intercessional Working Group
MP	Member of Parliament

NBMP	National Bat Monitoring Programme
NE	Natural England
NERC	Natural Environment and Research Council
NGO	Non-Governmental Organisation
NIA	National Insulation Association
NWCU	National Wildlife Crime Unit
PAW	Partnership Against Wildlife Crime
RIBA	Royal Institute of British Architects
RICS	Royal Institution of Chartered Surveyors
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SEBI 2010	Streamlining European 2010 Indicators (SEBI 2010)
SPAB	Society for the Protection of Ancient Buildings
SSSI	Site of Special Scientific Interest
UK	United Kingdom
UK BAP	United Kingdom Biodiversity Action Plan
VLA	Veterinary Laboratories Agency
WAG	Welsh Assembly Government
WIIS	Wildlife Incident Investigation Scheme
WCO	Wildlife Crime Officer
ZSL	Zoological Society of London

B. STATUS OF BATS WITHIN THE TERRITORY OF THE PARTY

1. Summary Details of Resident Species

UK (Great Britain)

There are 16 species of bats resident and breeding in the United Kingdom (UK). The status of greater mouse-eared bat *Myotis myotis* is not confirmed, with only one individual known in the UK at present. No further records of 'suspected' pond bat *Myotis dasycneme*, have been provided to the Bat Conservation Trust (BCT) in 2008, although it still remains possible that the species may be found resident in this country in the future. One confirmed and one 'suspected' record of a parti-coloured bat *Vespertilio murinus* were noted in September 2008 in Norfolk and Sussex respectively.

Gibraltar

There are currently 3 species of bat in Gibraltar which include the Soprano pipistrelle (*Pipistrellus pygmaeus*), Schriber's bat (*Miniopterus schribersii*) and the European free-tailed bat (*Tadaria teniotis*). It is very likly that the common pipistrelle (*Pipistrellus pipistrellus*) is also present in Gibraltar and further investigations are being carried out at present by the Gibraltar Ornithological and Natural History Society (GONHS)

2. Status and Trends

Trends in UK Biodiversity Action Plan species

UK

Biodiversity Action Planning (BAP)

Signposting

In early 2008 BCT contributed to the Joint Nature Conservation Committee's (JNCC) 'signposting' exercise. The aim was to repeat a similar exercise undertaken in early 2007 and

involved checking the previously identified conservation actions assigned to the bat BAP species, rank them in priority order, check the distribution (at a broad country level) and suggest success criteria. BCT are the lead partner for six bat BAP species on the new UK BAP list (the barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, lesser horseshoe *Rhinolophus hipposideros*, brown long-eared *Plecotus auritus*, noctule *Nyctalus noctula* and soprano pipistrelle *Pipistrellus pygmaeus* bat)and Natural England (NE) undertook this work for the greater horseshoe bat *Rhinolophus ferrumequinum*.

BAP Reporting 2008

BCT completed the 2008 BAP reporting exercise for the species on the 'old' UK BAP for which BCT is lead partner: barbastelle *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, lesser horseshoe *Rhinolophus hipposideros*, common *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus* in November 2008. NE reported on the greater horseshoe bat *Rhinolophus ferrumequinum*. The exercise involved: assessing the current status and trends for each species and assessing progress against the targets (set in 2006); highlighting studies on these species that have increased our knowledge base; identifying further research required, threats and constraints to BAP delivery; and successes in BAP delivery since the last BAP reporting round in 2005.

Methodology

The National Bat Monitoring Programme (NBMP) has been run by BCT since 1996 and funded by the JNCC since 2001. It is the longest running purpose-built multi-species monitoring programme for mammals in the UK, producing statistically robust population trends for 11 of the UK's resident bat species. Four survey methods are employed to monitor the UK's bats:

- Field surveys with bat detectors;
- Hibernation site surveys;
- Summer maternity colony counts; and
- Car survey with broadband detectors.

The NBMP's datasets are unique in that some species are monitored using more than one of the survey methods and may have two trends described. However, the robustness of the data obtained may vary among survey methods. As a rule, trends from field surveys currently take priority, followed by the hibernation survey, and then by the colony counts unless otherwise stated.

Status of UK's bat species monitored by NBMP

Table 1 below summarises NBMP trends for 2007. This information is from the 2007 Annual Report which is available on BCT's website at http://www.bats.org.uk/pages/nbmp.html. Analysis of the data collected during 2008 is currently in progress and the report for 2008 will also be made available on BCT's website shortly. Further explanation for some species is provided via a short explanatory discussion below.

Table 1: UK long-term population trends and average annual percentage change.

Species	Status	Survey	Trend time period	Long-term trend %	Average annual change %	Comments
Rhinolophus ferrumequinum	Rare	Hibernation Colony	1999-2007 1999-2007	31.9 66.6	3.5 6.6	Significant increase from Colony Counts
Rhinolophus hipposideros	Rare	Hibernation Colony	1999-2007 1999-2007	41* 49.2	4.4* 5.1	Significant increase on both surveys
Eptesicus serotinus	Widespread but scarce in southern Britain	Field	1999-2007	27	3	No significant trend from either survey
		Colony	1999-2007	-12	-1.6	
Myotis brandtii/M. mystacinus /	Common in N and W England, rare elsewhere	Hibernation	1999-2007	20.1	2.3	No significant trend
Myotis daubentonii	Common	Hibernation Waterway	1999-2007 1999-2007	23.9† 10.7†	2.7† 1.3†	Both trends are no longer quite significant
Myotis nattereri	Common	Hibernation Colony	1999-2007 2000-2007	64.9 -3.5	6.5 -0.5	Significant increase from Hibernation Survey
Nyctalus noctula	Uncommon	Field	1999-2007	30.1	3.3	No significant trend
Pipistrellus pipistrellus	Common	Field Colony	1999-2007 1999-2007	65* -40.3	6.5* -6.2	Both trends significant; Field Survey considered more robust, therefore considered to be increasing
Pipistrellus pygmaeus	Common	Field Colony	1999-2007 1999-2007	-15.6 -31.1	-2.1 -4.6	Colony trend is significant but should be treated with caution due to colony mobility; Field Survey considered more robust but trend not significant
Plecotus auritus	Common	Hibernation Colony	1999-2007 2001-2007	6 36.8	0.7 5.4	Colony trend now marginally significant but should be treated with caution at present
Myotis bechsteinii	Very rare	No trend data available; distribution survey commenced in 2008				
Nyctalus leisleri	Scarce in GB, common in Ireland	Recorded on Roadside Survey but more data needed to detect trends				
Pipistrellus nathusii	Rare	Recorded on Roadside Survey but more data needed to detect trends				
Barbastella barbastellus	Rare	Recorded on Woodland Survey but more data needed to detect trends				
Plecotus austriacus	Very rare	No trend data available; a few records from hibernation survey				
Myotis myotis	Status unconfirmed	Only one individual known in UK at present; recorded on Hibernation Survey				

*indicates most significantly robust trend.
† indicates marginally non significant

Volunteer participation levels remained high in 2007 with 956 volunteers returning data. Again there were increases in numbers of volunteers taking part in the Field Survey and Waterway Survey which are among the more challenging surveys. Increased participation in the Field Survey is partially due to the availability of an online tutorial designed to help volunteers take part in this survey.

Information for species with limited trend data

Myotis bechsteinii

No trend data are currently available because this species is very difficult to monitor using existing survey techniques. A protocol for a baseline distribution survey has now been successfully developed and tested. BCT launched the Bechstein's *Myotis bechsteinii*
Survey Project in February 2008. The aim of this project is to assess the distribution of Bechstein's bat across its UK range and evaluate the potential for future population monitoring. An initial four bat groups (Cornwall, Oxfordshire, Surrey and Carmarthenshire and Dyfed bat groups jointly) took part in the first year of the project in 2008. A total of 47 target woodlands were surveyed in 45 10km squares; 3 Bechstein's bats *Myotis bechsteinii* were found during the survey, all of which (2 males and 1 female) were recorded in Surrey and 139 bats of 11 species were captured. Further details of the project are provided in section 12 'recent and ongoing programmes relating to the conservation management of bats' of this report.

Barbastella barbastellus

The woodland field survey was piloted in 2004 by BCT as a new method to survey and monitor bats in woodlands. Survey development has been progressing slowly but steadily as adjustments are made to deal with potential sources of error in the methodology as they are discovered. This is necessary to ensure long-term viability and repeatability. Development of an appropriate standardised method for the analysis has taken some time and a number of adjustments have been required to eliminate observer bias. Temporal and financial constraints have also impacted the development of a protocol for bat sound analysis. However BCT are keen to expand the survey and start training volunteers to make it more sustainable and volunteer led as we now have a simple, robust and repeatable analysis protocol which can deliver records of barbastelles *Barbastella barbastellus*, common *Pipistrellus pipistrellus* and soprano pipistrelles *Pipistrellus pygmaeus*, noctules *Nyctalus noctula*, Leisler's *Nyctalus leisleri* bat and serotine *Eptesicus serotinus* plus the *Myotis* genus as a species group. However this would be dependent on additional funding sources to extend current capacity.

Information gathered and advice received from national experts on the *Barbastella barbastellus* status in the UK during the 2008 BAP Reporting round suggest that further research and survey is required to gain a better understanding of the current UK distribution of the barbastelle and its roosting locations. Some parts of the known range are much better surveyed than others. The use of acoustic surveys with an autobat could improve our knowledge on the UK range. It would be helpful to produce a predictive model of 'expected suitable areas' for this species (for now and in the future with climate change) in line with similar work undertaken in continental Europe. A number of local studies are being undertaken by individuals and bat groups but there is a need for a national review and co-ordination of this work including ensuring all studies are peer-reviewed.

England

The New BAP Process

Throughout 2008, BCT was heavily involved with influencing the development of the new framework for delivery of BAP within England via the England Biodiversity Strategy (EBS) delivery framework 'A New Framework for the Delivery of Priority Habitats and Species in England' which has now been launched. A series of nine 'Biodiversity Integration Groups' (BIGs) have been drawn up comprising: lowland farmland, uplands, lakes and ponds, rivers, wetlands,

coastal, marine, urban and brownfield and woodland. These groups will be tasked with driving the delivery of relevant habitat and species targets.

Wales

In 2005 the UK government and devolved administrations commenced a priority review of all the species on the original UK Biodiversity Action Plan (BAP) list from 1994 when the UK BAP was created. Amongst other species, the mammal expert group concluded that *P. pipistrellus* should be removed from the priority list. Under Sections 41 and 42 of the Natural Environment and Rural Communities (NERC) Act 2006 England and Wales (respectively) are required to publish a list of organisms and types of habitat of principal importance for the purpose of conserving biodiversity. The lists are based on the priority review,

Wales decided to retain *P. pipistrellus* in the list of priority species because it was considered that there was insufficient information on the status of the population in Wales to justify its removal.

Gibraltar

Soprano pipistrelle (*Pipistrllus pygmaeus*) – Common species found in open, urban areas interspersed with Gardens, where they roost in crevices and roofs of buildings. No estimates of population numbers are available at present. The population trend has been identified as being stable to decreasing.
European Free-tailed bat (Tadaria tenitotis) – European free-tailed bats roost in cracks and crevices on rock faces in Gibraltar and therefore roost sites are difficult to locate. No information regarding population size appears to be available at present.

Schreiber's Bat (Miniopterus schreibersii) – This is reported to occupy a range of 4 km2 and the population was estimated at between 101 and 250 individuals in 2007. The population is said to be transient, with the bats being present in their only known roost (close to O'Hara's Battery) mainly during months of February to April and October to November. Recent data suggests that up to 292 bats have been recorded in 2008.

The following documents have been used to provide the status and trend data:

1. Report on the Conservation of Terrestrial flora and fauna in Gibraltar in2008. Report by Wildlife (Gibraltar) Ltd, February 2009.
2. Six year report for the EC Habitats Directive 2000-2006: Gibraltar. Report by Wildlife (Gibraltar) Ltd, August 2007.
3. Perez, C. 2006. Biodiversity Action Plan, Gibraltar: Planning for Nature. Gibraltar Ornithological and Natural History Society.

3. Habitats and Roost Sites

Wales

The largest pre-parturition count of *Rhinolophus hipposideros* in Wales was 720 at Buckland House SSSI, near Brecon. The largest pre-parturition count of *Pipistrellus pygmaeus* in Wales was 933 (Cobden's – unless NBMP has a larger count?)

Scotland

There is no evidence of significant changes in bat habitat and roost sites since the last report.

4. Threats

UK

Main threats to bat conservation within the UK are:

- Building demolition;
- Maintenance and alterations to buildings (including inappropriate timing of works);
- Woodland management and tree work;
- Barn conversions;
- Loss of habitat due to planning proposals;
- Loss of traditional farmland landscape and agricultural practices;
- Work on underground sites;
- Lack of knowledge on successful mitigation approaches;
- Potential impact of wind farms; and
- Inappropriate management or clearance of key habitats for foraging, commuting and roosting bats (including inappropriate timing of habitat management).
- habitat fragmentation

Also, specific to Gibraltar :

- Development and subsequent loss of foraging habitat in the vicinity of the Upper Rock Nature Reserve
- RE-roofing
- Cliff Stabilisation works

5. Data collection, analysis, interpretation and dissemination

UK

The latest report of the NBMP for 2007 is available on the BCT's website via http://www.bats.org.uk/pages/nbmp_reports.html. The 2008 report is in progress and will also be available on the website when finalised.

The fourth report on the Bats and Roadside Mammals Project in 2008 has also been completed (see http://www.bats.org.uk/pages/nbmp_reports.html). In 2008 the project built on the success of 2006 and 2007, recruiting more groups hence providing a greater coverage of the UK and increasing the number of geo-referenced mammal records. Groups participated in either the Bats & Roadside Mammals Survey or the iBats UK project which uses as slightly different methodology and an on-line management system. iBats UK is the UK component of the iBats Program established in 2006 by the BCT and Zoological Society of London (ZSL) working in partnership. The aim of the programme is to enable European and Global monitoring of bats. Further details can be found via www.ibats.org.uk. Ten groups participated in the Bats & Roadside Mammals Survey in 2008, surveying a total of 34 routes. A total of 2375 bats were recorded from 12 bat / species groups and 220 other mammal species noted. Eight groups participated in the iBats Survey and information from 32 of the surveyed routes have been uploaded on the iBats websites. The iBatsUK 'pilot' demonstrated that the Bats and Roadside Mammals Survey would benefit from integration with the Indictor Bats Programme (iBats) to ensure the data contributes to the global monitoring of the species and to provide a web-based portal for volunteers to safely view, store and manage their data.

Wales

The population estimate for *R. hipposideros* in Wales has been revised to 28,000. It is likely that the population has increased in recent years, possibly due to a series of warmer winters but also that previous estimates have been underestimates. The species is still under threat from habitat fragmentation and roost loss. (Matthews, J.E. & Halliwell, E.C. (2009) Lesser Horseshoe Bat summer roost surveillance, 29 May to 17 June, 2002 - 2007 CCW Staff Science Report No. No.06/9/1).

CCW and the Forestry Commission have been modelling ecological connectivity in Wales using a range of species traits. A study of use of the landscape by *R. ferrumequinum* will apply the model to real species.

CCW is contributing to joint research projects on Bats and Wind Turbines, Bats and Lighting, A Dietary Study of the Barbastelle Bat *B. barbastellus.*

Welsh bat groups continue to take part in the annual Lesser horseshoe bat roost count using non-intrusive standardised methods. Results are fed into the National Bat Monitoring Programme.
The Species Challenge Fund funded by CCW included the second year of a project by The Snowdonia National Park and Gwynedd Bat Group trained volunteers in bat detecting and recording survey transects to contribute to a mammal Atlas for the Park. The volunteers also used acoustic lures and harp traps to try to track down elusive bat species, but work was hampered by the cool wet weather.

Gibraltar

Bat monitoring is carried out by the GONHS throughout Gibraltar on an intermittent basis.

C: MEASURES TAKEN IN ACCORDANCE WITH ARTICLE III TO THE AGREEMENT

6. Legal measures taken to protect bats, including enforcement action

UK

BCT's Investigations Project continued to operate during 2008. There were a total of 65 bat crime incidents reported to BCT between December 2007 and November 2008. There were also two successful prosecutions in 2008, one in Hertfordshire in which fines of £3500 were imposed for damage / destruction of a roost; and one in Wales in which a roofer was fined £5000 for the damage / destruction of two bat roosts. BCT provided Impact Statements to magistrates for both of these cases. Kelvin Jones remained in post as Operation Bat Project Officer to the National Wildlife Crime Unit (NWCU) until September 2008. Bats remain a UK wildlife crime priority for 2009-2010.

Training sessions for Wildlife Crime Officers (WCOs) in England and Wales has continued throughout 2008. Further details on the Investigations Project can be found at http://www.bats.org.uk/pages/bat_crime_investigations.html

England

Amendments made to the legislation (Habitats Regulations), giving Natural England and opportunity to provide guidance on the interpretation of 'disturbance' and 'damaging or destroying breeding sites or resting places'

Scotland

Further amendments were made to the Conservation (Natural Habitats, &c.) Regulations 1994 during 2008 in Scotland, (see Conservation (Natural Habitats, &c.) Amendment (No.2) (Scotland) Regulations 2008), although the changes did not come into effect until 26 January 2009. It is now an offence to deliberately or recklessly disturb a bat (or other EPS) while it is hibernating or migrating.
Further amendments have been introduced in respect of mercy killing and the tending of injured bats.

Wales

Thirty three incidents involving possible offences against bats or bat roosts were reported to the police in Wales. These resulted in four official warnings or advice, no cautions and one prosecution. One case is still outstanding and concerns the possible fraudulent alteration of a consultant's report and another case is going to court at the end of March 2009.

Gibraltar

All species of bats are protected under the Gibraltar Nature Protection Act 1991. Schreiber's bats are listed for teh designation of the Rock of Gibraltar Site of Community Importance (SCI) as they are included in the Habitats Directive under Annex II.

7. Sites identified and protected which are important to the conservation of bats

England

No new sites protected. However, work is ongoing to safeguard Bentley Barn in Suffolk, a traditional farm building which is home to several species of bat. BCT has been involved in work to request the designation of Bentley Barn as a Site of Special Scientific Interest (SSSI), further research is required to support this application.

Wales

One site was notified as SSSI for lesser horseshoe bats. The site is linked to the Meirionydd Oakwoods and Bat Sites SAC.

Scotland

There are no SSSIs or SACs in Scotland where bats are part of the notified interest of the site. However, the National Trust for Scotland (NTS), has established the first site specifically identified for its exceptional bat interest – the Threave Bat Reserve near Castle Douglas in SW Scotland. Much of the site is already designed as SSSI and/or SPA, primarily for its wetland interest. This habitat protection will help secure the future of this important assemblage of bat species at the site.

8. Consideration given to habitats which are important to bats

England

There have been a number of relevant consultations in England including:

- The Forestry Commission England's 'Strategy for England's Trees, Woods and Forests (ETWF)' in May 2008;
- The Forestry Commission England's 'Managing England's Ancient and Native Woodlands' in August 2008; and

- Two BSI (British Standards Institution) consultations relating to bats and tree work in August 2008 and October 2008.

Wales

Landscapes for Lessers
The Countryside Council for Wales (CCW) and BCT have worked jointly on Phase 2 of the Landscapes for Lessers project that commenced at the end of 2007 and was completed in February 2009. The project proposes a holistic approach to horseshoe bat conservation (primarily for the lesser horseshoe bat *Rhinolophus hipposideros*) focussing on the maintenance, creation of, and improvements to roost sites, flight lines and foraging habitats at a landscape scale. It uniquely links work in rural, semi-urban and urban environments, providing many opportunities for innovation and inclusion in conservation. Phase 3 of the project (currently subject to funding) will also aim to benefit other species and habitats of importance in the landscape. Further details are provided in section 12 'recent and on-going programmes relating to the conservation and management of bats' of this report.

Tir Gofal Desk Study
The Tir Gofal scheme now includes Species Packages which target management prescriptions for *Rhinolophus ferrumequinum* and *R. hipposideros*.

Scotland

Forestry Commission Scotland and SNH have jointly produced practical guidance for forest managers entitled "Forest operations and bats in Scotland".

Gibraltar

Habitats within the rock of Gibraltar SCI that are used by bats are all protected under the Habitats Directive and its local transposition through Part IIA of the Nature Protection Act 1991.

9. Activities carried out to promote the awareness of the importance of the conservation of bats

UK

BCT continues to promote awareness of the importance of the conservation of bats in the UK through a range of publications, events, projects and communication activities. Members of the BCT receive Bat News and Young Batworker. BCT also sends out an email bulletin to interested bat workers. BCT held a bat walk for Members of Parliament in the Palace of Westminster on 14th October 2008. It was attended by the new Minister for Natural and Marine Environment, Wildlife and Rural Affairs Huw Irranca-Davies MP and other MPs, peers and journalists. A similar event for journalists was also held earlier in the year on the 13th May 2008 at Regent's Park.

Count Bat
A considerable amount of work to increase the awareness of bat conservation to wider audiences has been undertaken in 2008 through BCT's Count Bat Project. The 4 year England Count Bat Project started in mid-January 2008 with three regional officers employed to cover the country. The project is funded by the Heritage Lottery Fund (HLF), Natural England (NE) and The City Bridge Trust and is run by BCT. The project aims to broaden the spectrum of people involved in bat conservation, thereby widening the audiences in delivering bat BAPs, increasing awareness and encouraging further surveys. From the partnerships built with local bat groups and external organisations at the start of the project the following events were run in 2008. In 2008 work has included: seven training events, 35 educations events (including school visits) and 17 surveys. NBMP monitoring has been promoted and it is hoped that though the winter evaluation of events it will be possible to ascertain how many attendees of Count Bat survey events and training have gone on to take part in this program.

Count Bat activities have taken place across the country with Bedfordshire, Sunderland, Avon, Greenwich and Haringey being particular hotspots for events. The main target groups have been urban communities (29 events) and culturally diverse communities (11 events) with further events for visually impaired audiences. Further partnerships have been built with visually impaired, deaf and hard of hearing, and learning difficulties audiences. More general promotion of bat conservation has been achieved through working with the BBC Breathing Places program, with bats featuring in their 'just do one thing' activities sheet for schools, and through input and funding for the 'Explore the World of Bats' education pack.

National Bat Helpline

The National Bat Helpline was set up to provide information for all of those who come across bats. It receives more than 9,000 enquiries each year, from a diverse range of people including householders, builders, teachers and those who have found injured or grounded bats. In October 2008, BCT started a new contract with Natural England to run the bat casework in a number of regions. In addition to the regions already covered by BCT, an additional seven counties were taken on. The most frequent type of call in 2008 related to injured, grounded or baby bats with 1818 enquires (between January to November 2008), followed by bat roosts within houses (971 enquires) and planning and development (843 enquires). The busiest day on the helpline in 2008 was 28th July 2008 where a total of 112 enquires were received!

Training and Best Practice

Over 30 courses were run by BCT in 2008, including courses for professionals and volunteers. Volunteer courses included roost visitor courses, two Training for Trainers courses in conjunction with NE, and a number of introductory courses run with the Count Bat Project. The courses for consultants continued to run, with a new course, Surveying Trees, being introduced in November with excellent feedback. Other courses run included Arboriculture and Bats, a basic awareness course for arborists.

- Following on from the Bat Care and Rehabilitation workshop in 2007, the Bat Care Guidelines were distributed to all veterinary practices in the UK and all those on the BCT bat care network in 2008.
- Progress was made on the professional licensing scheme, with a panel meeting to discuss ideas about how to take this forward. A decision was made about the structure of the scheme and work is now continuing on a syllabus.
- BCT has produced a Best Practice Guide to 'Managing trees in woods for bats in London' under the Forestry Commission's Capital Woodland Project;
- In 2008, BCT also produced a joint publication with the Environment Agency (EA) entitled 'Riparian Habitat Management for bats' and are currently awaiting the results of consultation before publication.

Wind turbine Publication

Natural England has published a Technical Information Note, 'Bats and Onshore Wind Turbines'. This guidance, based on the Eurobats publication, has been written to help planners and wind turbine operators consider the potential adverse impacts to bats when assessing proposals for wind turbine development. It applies to bats and their activity in the wider countryside and does not specifically address turbines proposed near protected sites, particularly those designated due to important bat populations. Such situations will require more extensive work in order to assess impacts on those populations. This note will be updated as more evidence becomes available, particularly the findings from research currently being under taken, with support from the British Wind Energy Association.

The note can be downloaded from www.naturalengland.org.uk. Go to 'Publications' and search for 'TIN051'.

Bats and the Built Environment Project
2008 was the second year of this project which carries out work in two key areas:

- Ensuring the appropriate provision of suitable mitigation and enhancement for existing bat roosts in built structures; and
- Promoting the pro-active creation of new roosting, commuting and foraging opportunities for bats within new build.

Conferences, workshops and events
Papers were presented at nine industry conferences in 2008 including the National Federation of Roofing Contractors, building engineers, the Property Care Association, chartered surveyors, the lighting industry (including the prestigious Charles Marques Memorial Lecture) the Society for the Protection of Ancient Buildings (SPAB) and Cadw (Historic environment service of the Welsh Assembly).

In addition, in 2008 a BCT project officer has worked collaboratively with the Construction Industry Environmental Forum (CIEF) to organise, chair and present at two half day conferences on 'Putting Biodiversity into sustainable construction'.

A BCT stand was present for the three days of the Ecobuild Exhibition in Earls Court which generated a lot of interest as the only non-commercial wildlife organisation present.

Collaborative working
BCT has maintained a working relationship with organisations within the building industry such as the Chartered Institute of Building (CIOB); Royal Institution of Chartered Surveyors (RICS); Royal Institute of British Architects (RIBA); Alfred McAlpine; Building Research Establishment (BRE); National Insulation Association (NIA) ; Dupont); Institution of Lighting Engineers (ILE); Construction Industry Research and Information Association (CIRIA); CIEF. Many key areas are being addressed such as consideration for bats by energy inspectors and in the demolition process.

Publications
The Bats and Built Environment Project Officer at BCT has had numerous articles published in 2008 in various organisations in-house magazines. Examples include: the Institute of Lighting Engineers' 'Lighting Journal', Royal Institution of Chartered Surveyors and the National Trust.

European Bat Weekend
BCT and Defra supported European Bat Weekend in August 2008. An interactive map was put up on BCT's website that provided information on bat groups holding events to celebrate this event. BCT's bat group officer, Welsh and Scottish bat projects and the Count Bat Project all supported this initiative.

Wales

The Welsh Project Officer continued to promote bat conservation in Wales by attending the public events, producing weekly updates for bat workers in Wales and providing support for bat groups.

The annual liaison meeting between CCW and the Bat Groups of Wales was held in April.
A one-day Wales Batworkers Event was held in October 2008 in Llandrindod Wells with over 80 delegates. A Welsh Bat Conference and Workshop, including training in sound analysis, was held in Aberystwyth in June 2008. Despite heavy downpours bat workers over 100 bat workers undertook an evening survey in the surrounding area, providing new anformation on species distribution in the area and records of *P. nathusius,* which had not been recorded there previously.

Welsh Bat Officer
The Welsh Bat Project Officer continued to promote bat conservation in Wales in 2008 by attending public events, producing updates for bat workers in Wales and providing support for bat groups.
Events co-ordinated and provided by the Welsh Bat Officer in 2008 include:

- Refresher training for current trainers in Wales was provided in Abergavenny in February 2008.
- Wales Bat Workers Day took place on 25 October 2008 (well attended by 85 delegates); and.
- Commencement of the provision of seminars for architects in Wales on bats and legislation.

Scotland

SNH continues to provide the majority of the funding for the BCT Scottish Bat Officer. SNH sponsored the BCT Scottish Bat Workers' Conference in November 2008. SNH has also provided financial support to the National Trust for Scotland to facilitate:

- Bat surveys on NTS properties, e.g the Castles & Gardens Bat Project which involved 71 volunteers and trainers across Scotland;
- The work of the NTS Ranger Service which includes the bat conservation initiatives at various NTS properties;
- Direct training of NTS staff to undertake bat work and promote bat conservation.

Scottish Bat Officer
BCT Special Projects
The Dundee City Bat project coordinated by the Scottish Bat Officer at BCT (survey work carried out over 2007) was written up by the end of January 2008. All records were forwarded to the Local Records Centre. The results were analysed to produce a Dundee City "Bat Hot spots" map. The project led to the formation of the Dundee city bat group who continued to survey the city during 2008. The Scottish Bat Officer has also worked with Perth Bat group and the local ranger service to develop plans for a similar Project in Perth to be carried out over 2009.

Raising awareness
25 bat events were organised in Scotland around European Bat weekend. In the period since 2008 the Scottish Bat Officer gave 4 radio interviews and was involved in the production of 8 newspaper, magazine and British Broadcasting Corporation (BBC) news website articles. Bat talks were given to around 80 school pupils during the PAW events organized in Glasgow.

Training others
The Scottish Bat Officer has delivered training talks and courses to several specialist interest groups including; Natural History Societies, Police Wildlife Crime Officers, Engineers, Biodiversity officers, Planners, Architects, Arborists and bat workers. The Scottish Bat Conference in November 2008 was attended by 117 bat workers and offered 5 talks and a choice of 5 training workshops.

Gibraltar

Bat evenings for the public and youth groups have been organised by the GONHS. European Bat Night is also celebrated locally by the GONHS in order to raise awareness on bat conservation issues.

10. Responsible bodies, in accordance with Article III.5 of the Agreement, nominated for the provision of advice on bat conservation and management

Bat Conservation Trust (BCT).
Environment Department of the States of Guernsey.
La Societe Guernesiaise.
Nature Conservancy Councils (Gibraltar).
Gibraltar Ornithological and Natural History Society.

11. Additional action undertaken to safeguard populations of bats

12. Recent and ongoing programmes (including research and policy initiatives) relating to the conservation and management of bats. In the case of research, summaries of completed projects should be provided, giving references where possible and acknowledging the sources of funding.

UK

Modelling Daubenton's *Myotis daubentonii* bat distribution
This partnership project between BCT and the EA began in 2007. Work has continued on this project in 2008 to link bat survey data with habitat and landscape features. NBMP Waterway Survey data were analysed alongside River Habitat Survey data in order to understand more accurately the factors governing occurrence and density. The study showed that biological water quality, river width and the presence of trees are all important predictors of Daubenton's bat *Myotis daubentonii* numbers, and the NBMP Waterway survey delivers a cost effective waterbody environmental quality index. This work is currently being written up into a paper due for publication in 2009.

Bats as Indicators
UK Biodiversity Indicator
During the past two years, BCT have been working to promote and develop a bat indicator for inclusion in the UK biodiversity indicators (see http://www.jncc.gov.uk/page-1824). In May 2008 the minister approved a proposal for bats as an indicator.

European Environment Agency (EEA Contract Developing Bats as Indicators
In 2008, BCT undertook a project on behalf of EEA entitled: "Streamlining European 2010 Biodiversity Indicators (SEBI 2010): Developing a methodology for using bats as indicator species; and testing the usability of GBIF (Global Biodiversity Information Facility) data for use in 2010 biodiversity indicators". This contract involved gathering information on bat surveillance programmes operating in countries across Europe, assessing the suitability of the data they provide for inclusion in an indicator and proposing a methodology. During the project experts who have been involved in the development of indicators for other taxa were consulted. The study concluded that there are sufficient countries within the European Union (EU) that are undertaking appropriate surveys to produce a European Indicator. The next step will be to agree a methodology and weighting system for use by all relevant countries.

Bechstein's *Myotis bechsteinii* Bat Survey Project
This species has a close association with semi-natural woodlands but is difficult to survey for using standard monitoring techniques. A new survey technique has been developed which allows systematic sampling of this species for the first time. The technique uses an acoustic lure (the Sussex Autobat), to relay synthesised social calls of bats. Bechstein's bats *Myotis bechsteinii*, whilst in territorial mode will respond to the Autobat, allowing them to be caught in a harp trap (Greenaway *et al.,* 2001).

This method is being used as the basis of a 3.5 year project (which began in September 2007) to assess the distribution of Bechstein's bat *Myotis bechsteinii* across its UK range and evaluate the potential for future population monitoring. This is an invasive technique and as such is

conducted under a strict project licence. The protocol is designed to limit the possible stress and intrusiveness of the work.

An initial four bat groups (Cornwall, Oxfordshire, Surrey and a joint effort from Carmarthenshire and Dyfed bat groups) took part in the first year (2008) of the project. Two individuals from each group acted as volunteer coordinators, attending all relevant training and coordinating the effort for their group. Following the main training course in May, surveying took place over the summer of 2008.

Initial analysis indicates that the project has generated a large number of new records for each group that took part, with records being obtained for 11 different species. Although targeted at Bechstein's bats *Myotis bechsteinii,* other species will also respond to the lure and as such the project has the potential to generate a large amount of data.

Unfortunately the summer of 2008 surveying has been hampered by bad weather and it is thought that this may have had a negative affect on the breeding success of the Bechstein's bat *Myotis bechsteinii*. As such re-surveying of certain counties in 2009 may be necessary to ensure that the project is portraying an accurate picture of Bechstein's bat *Myotis bechsteinii* distribution. The results of the first summer season (2008) are now being analysed and decisions are being made as to the approach to be taken for the second and third year of the project.

England

Conservation biology of the grey long-eared bat, *Plecotus austriacus*

This is a Scientific Partnership Project between BCT and University of Bristol and is funded by Vincent Weir. Research projects have been undertaken on most bat species in Britain and many have produced important results that have informed conservation and management decisions. However, no study of substance has been conducted in recent years on the grey long-eared bat, *Plecotus austriacus* in the UK. Research on other bats has been influential in guiding management practices for species such as greater horseshoe bats *Rhinolophus ferrumequinum*: studies at the University of Bristol (e.g. Duvergé 1996) resulted in guidelines that were applied to Countryside Stewardship Schemes whereby farmers were paid to enhance habitat features important to bats on their land. The method appears to have been highly successful: for example greater horseshoe bats *Rhinolophus ferrumequinum* in Devon maternity roosts increased by approximately 58% since Countryside Stewardship was implemented (Longley 2003). A similar research project has just been completed at Bristol on lesser horseshoe bats *Rhinolophus hipposideros* (Knight 2008), and the findings will be used to inform BAP and Environmental Stewardship schemes involving this species.

Grey long-eared bats *Plecotus austriacus* are extremely rare in Great Britain. Harris *et al*. (1995) state that the species is found only in Devon, Dorset, Hampshire (including the Isle of Wight), and Somerset. More recently, grey long-eared bats *Plecotus austriacus* have been found in Sussex. The pre-breeding population might be as low as 1000 individuals, and three colonies in Dorset and one in Devon have become extinct in the past 40 years (Harris *et al*. 1995). If grey long-eared bats *Plecotus austriacus* are to survive in Britain in the long term, it is vital that effective conservation measures are put in place that are based on sound scientific research. This project aims to conduct such research by focussing on four topics, and using state-of-the-art scientific approaches to address them.

A project is under way to assess whether agri-environment schemes have made a positive contribution to the conservation of the Greater horseshoe bat *Rhinolophus ferrumequinum*. This is being done by remapping the area in a 4 km radius around important roosts that were first mapped in 1994/5 to see whether these areas are now being managed more favourably for the bats. Agri-environment schemes have encouraged the better management of hedgerows, so these are being surveyed to see whether they are more suitable for the bats to hunt along. A survey of farmers will measure their attitude to the bats and their enthusiasm for taking part in

bat conservation efforts. This work is funded by Natural England and the mapping has been carried out by the Farming and Wildlife Advisory Group. Natural England will also analyse the distribution of agri-environment schemes to see if work to encourage farmers in these areas has resulted in a greater than average uptake of the schemes.

Wales

Phase 2 of a partnership project between Countryside Council for Wales (CCW) and BCT 'Landscapes for Lessers' commenced at the end of 2007. The project is funded by CCW and proposes holistic approach to *R.. hipposideros* conservation focussing on maintenance and creation of and improvements to roost sites, flight lines and foraging habitats. The project builds on the pilot study and is a planning exercise for the implementation of the fundraising for a Wales-wide implementation Phase (phase 3). The next stage (2009-10) will be to seek large scale funding to roll out the project across the whole of Wales.

Landscapes for Lessers (*Rhinolophus hipposideros*) Phase 2

As highlighted in section 8 of this report Phase 2 of a partnership project between Countryside Council for Wales (CCW) and BCT 'Landscapes for Lessers' commenced at the end of 2007 and was completed in February 2009. The project is funded by CCW. The key aim of the project is to identify existing and novel solutions to addressing the current threats to the lesser horseshoe bat *Rhinolophus hipposideros* in Wales. The project proposes a holistic approach to horseshoe *Rhinolophus* sp. bat conservation in Wales focussing on the maintenance, creation of, and improvements to roost sites, flight lines and foraging habitats at a landscape scale. This project uniquely links work in rural, semi-urban and urban environments, providing many opportunities for innovation and inclusion in conservation. The project will also aim to benefit other species and habitats of importance in the landscape.

The project involved drawing together a steering group (including representatives from a wide range of sectors including agriculture, planning, other Non-Governmental Organisations (NGOs) etc) as well as a network of stakeholders with an interest in the project. The project was launched on 22nd May 2008 in Newtown, Wales and a total of 22 participants attended the morning launch with a further 20 stakeholders attending the steering group meeting in the afternoon. Other organisations and individuals were also identified that could be involved in the implementation stage whether because of a specific interest in the conservation of the lesser horseshoe bat *Rhinolophus hipposideros* or because the project could deliver other benefits of relevance to their objectives. A desk study was undertaken to provide the rationale for the proposed project delivery areas and order of project roll-out. A project specification and a fundraising plan were drawn up and discussed at the final steering group meeting on 10th December 2008 in Builth Wells. The aim is now to get funding to undertake Phase 3 of the project. Further information on the project can be found via www.bats.org.uk/l4l

Agri-Environment Schemes

As highlighted in section 8 of this report, BCT has been a collaborator on a Royal Society for the Protection of Birds (RSPB) led desk study to see how the Welsh Agri-Environment schemes (primarily Tir Gofal) are likely to affect birds, plants and mammals. This project began in September 2007 and was funded by the Welsh Assembly Government.

In 2008 BCT was part of a successful consortium of a bid led by the RSPB (including a number of other eNGO partners) for the species monitoring lot of a multidisciplinary programme covering all the principal Welsh agri-environment schemes, species monitoring, a range of environmental measures (e.g. water quality) and ecosystem function. The work will involve a large amount of bat surveys over the next 3 or 4 years and will commence in 2009. Further details will be provided in the next report.

Scotland

SNH has continued its monitoring programme of European Bat Lyssavirus (EBLV) seroprevalence in Scottish bats. This work involved testing blood (for EBLV2 antibody) and saliva from 239 *Myotis daubentonii* and 237 *M. nattereri* (for EBLV1 and EBLV2 antibody).

13. Consideration being given to the potential effects of pesticides on bats, and their food sources and efforts to replace timber treatment chemicals, which are highly toxic to bats

UK

BCT had a stand at the National Pest Technician's Association's national 'Pest Tech' Event on 5 November 2008 in Birmingham (the largest one-day Pest Control Exhibition held in Europe for pest controllers, product manufacturers and distributors). The stand helped to raise awareness of the impacts to bats from pest control.

The Wildlife Incident Investigation Scheme (WIIS) is operated by the four UK agriculture departments. The results are co-ordinated by the Chemicals Regulation Directorate (formerly the Pesticides Safety Directorate) of the Health and Safety Directorate (HSE). Although there are some local differences in detail, the basic operation of the Scheme is the same throughout the UK. Field investigations are carried out into cases where it is suspected wildlife has been affected by pesticides. Post mortem examinations of casualties are undertaken and samples analysed for pesticide residues. The results are used in reviews of the conditions of approval of the pesticides concerned. Evidence of illegal use (whether a deliberate attempt to poison wildlife or an unapproved method of use) may lead to prosecution or other enforcement action.

During 2008 one bat case was reported to the scheme. In that case it was suspected that a timber treatment may have caused the death of a bat which was found in a water tank, but the analysis that was carried out was negative.

D. FUNCTIONING OF THE AGREEMENT

14. Co-operation with other Range States

UK

EUROBATS

The UK was represented at the Advisory Committee meeting in Cluj-Napoca, Romania in August 2008 and convened meetings of the Bats as Indicators and Bat Conservation and Sustainable Forest Management Intersessionary Working Group (IWG).

Bats as Indicators

The purpose of this group is evolving into an information exchange /support network for countries interested in developing bats as indicators. For example, in countries where particular sectors such as agriculture, forestry etc are rigidly compartmentalized the idea of using species as indicators is very outside the culture and it is useful to have a place to go for information on what has been developed elsewhere. The group supported the idea of an international workshop on indicators at a later date. BCT supported work to agree the text of the Monitoring Guidelines developed by the IWG on Monitoring Bats. Full records of the EUROBATS meeting are available at http://www.eurobats.org/documents/meeting_reports/meeting_reports.htm .

The UK also attended the European Bat Research Symposium in Cluj-Napoca, Romania in August 2008 and BCT presented a talk titled 'Developing a Methodology for Using Bats as Indicator Species" drawing heavily on work completed for the European Environment Agency contract (see section 12 'recent and on-going programmes relating to the conservation and management of bats' of this report).

Rabies
BCT continues to be a member of the European Bat Lyssavirus (EBLV) Working Group. They have produced and distributed guidelines for bat workers and handlers. They continue to work closely with the Health Protection Agency (HPA) offices, Animal Health offices andDefra on bat bite issues and incidents.

Two Daubenton's bats tested positive to EBLV2 under the Veterinary Laboratories Agency (VLA)'s passive surveillance in 2008.

- The first bat was submitted to the VLA after the May Bank Holiday, after carers became concerned about its behaviour. The bat had been in care in SE England since August 2007. BCT understands good practice guidelines were followed at all times. Bat workers were notified on 9th May 2008; with a reminder that bats used for public relations purposes at events or shown to the public should not be handled by members of the public and that any bat worker who presents bats should wear protective gloves when handling bats. Due to the nature of this particular case, we also recommend that Daubenton's bats *Myotis daubentonii* should not be taken to public events.

- The second bat was found at a site in Shropshire in October 2008. This was the second case of EBLV2 at this site - the first was in autumn 2007 - therefore a protocol for dealing with dead bats was already in place. During a meeting between the BCT, the HPA, Animal Health, Defra, English Heritage and the VLA, representatives agreed that this protocol had proved effective and that measures in place prevented contact with bats.

White-nose Syndrome
In response to suspect cases of white-nose syndrome announced in Europe in November 2008, BCT produced guidelines for bat workers and cavers and set-up a national surveillance programme as a pre-cautionary measure in the last quarter of 2008.

The guidelines informed bat workers:
- what to look for;
- how to record and where to send data; and
- how bat workers and others can minimise the risk of WNS spreading by modifying their behaviour in hibernacula.

These guidelines were circulated by BCT to NBMP volunteers as part of the hibernation survey packs, sent to bat workers in the bat worker bulletin and put on the BCT website. Defra and BCT will be exploring how to work with other European partners towards a co-ordinated approach to this issue in 2009.

Monitoring Bat Biodiversity in Bulgaria and Romania
Since 2006, BCT has been a partner in a project funded by the Darwin Initiative, Rufford Lange foundation and Bat Conservation International to monitor bat biodiversity in Bulgaria and Romania. The project is led by the Zoological Society of London with the aim to generate long-term data on biodiversity indicator species to assess the impact of national development and global change. The project works with existing in-country networks, offering training in bat monitoring techniques, development monitoring protocols and creating training materials. Volunteers have been sent out to monitor bat species along national road networks to provide an initial baseline with which future monitoring surveys can be compared. The partnership between BCT and ZSL has been important and is a good example of bringing voluntary action by citizens to benefit wider scientific research and local biodiversity. The project has established a network of surveyors in Romania and Bulgaria, made good contacts with national road authorities and has enhanced channels of communication between these two parties. Since 2006, 131 transects (covering 3853 km) have been carried out in Romania, 164 transects (covering 5816 km) in Bulgaria involving over 133 participants, generating 7388 geo-referenced bat calls from the data analysed so far. The project has just received Post-project funding from the Darwin Initiative to continue the monitoring programmes in Romania and Bulgaria until 2011 and to extend the

surveys into Ukraine, Western Russia and Hungary. With the success of this project, BCT and ZSL have formalised this project into 'iBats', a global bat monitoring program and we currently have a number of pilot projects ongoing in Mongolia, Thailand, Zambia, Madagascar, Mexico, New York with funders including The British Ecological Society, The Edge Program (ZSL), Black Rock Forest Foundation, and the Darwin Initiative Scoping Awards. Additionally with an award from The Leverhulme Trust and Natural Environment and Research Council (NERC) in 2009, we are also developing an automatic identification system for the calls (based on a global call library) and a 'batphone' which would be an all in one device to geo-reference and record ultrasonic bat calls from transects.

Gibraltar

None in Europe but GONHS has carried out work in Northern Morocco as part of the Gibraltar EU interegg Project.

15. Measures taken to implement Resolutions adopted by Meetings of Parties

UK

Pan European Monitoring of Bats in Underground Sites Projects
With further funding from Defra, BCT lead on a feasibility study on the Pan European Monitoring of bats at underground sites in 2008. 27 countries signed up to the first phase.
Aims of the project will be:

- To provide population indices for European bat species on a regular basis;
- To identify important underground sites and provide information to assist in their protection;
- To raise awareness, enhance information exchange, build capacity and increase volunteer engagement;
- To contribute towards delivering obligations (e.g. under the European Commission (EC) Habitats Directive); and
- To measure and assist in predicting the effect of future global change on bat biodiversity.

Bats as Indicators
Work undertaken by BCT on developing a methodology for a bat biodiversity indicator (see EEA project description in section 12) is a direct agreement with the aims of the Intercessional Working Group (IWG) on bats as Bioindicators. Members of the IWG were contacted for information**.**