AGREEMENT FOR THE CONSERVATION OF BATS IN EUROPE (EUROBATS)

Report on the implementation of the Agreement in the United Kingdom

2007

This document reports on actions undertaken by the UK in 2007 to meet its obligations under the Agreement.

A. GENERAL INFORMATION

Party: United Kingdom

Date of Report: June 2008

Period Covered by Report: January – December 2007

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
BCT	Bat Conservation Trust
BRE	Building Research Establishment
CCW	Countryside Council for Wales
CEO	Chief Executive Officer
CIEF	Construction Industry Research and Information Forum
DEFRA	Department for Environment, Food and Rural Affairs
EEA	European Environment Agency
EA	Environment Agency
EBLV	European Bat Lyssavirus
HPA	Health Protection Agency
JNCC	Joint Nature Conservation Committee
IEEM	Institute of Ecology and Environmental Management
ILE	Institute of Lighting Engineers
IWG	Intercessional Working Group
MP	Member of Parliament
NBMP	National Bat Monitoring Programme
NE	Natural England
NWCU	National Wildlife Crime Unit
RIBA	Royal Institute of British Architects
RICS	Royal Institution of Chartered Surveyors
RSPB	Royal Society for the Protection of Birds
RSPCA	Royal Society for the Prevention of Cruelty to Animals
SAC	Special Area of Conservation
SAPs	Species Action Plans
SEBI 2010	Streamlining European 2010 Indicators (SEBI 2010)
SEPA	Scottish Environment Protection Agency
SNH	Scottish National Heritage

SSSI	Site of Special Scientific Interest
UK	United Kingdom
UK BAP	United Kingdom Biodiversity Action Plan
UKGBC	UK Green Building Council
VLA	Veterinary Laboratories Agency
WIIS	Wildlife Incident Investigation Scheme
WCO	Wildlife Crime Officer

B. STATUS OF BATS WITHIN THE TERRITORY OF THE PARTY

1. Summary Details of Resident Species

UK

There are 16 species of bats resident and breeding in the United Kingdom (UK). The status of *Myotis myotis* in not confirmed, with only one individual known in the UK at present. No further records of 'suspected' *Myotis dasycneme*, have been provided to the Bat Conservation Trust (BCT) in 2007, although it still remains possible that the species may be found resident in this country in the future. The only record of a vagrant species provided to BCT in 2007, was a single Savi's pipistrelle *Hypsugo savii* rescued in Cowes, Isle of Wight by the Isle of Wight Hospital.

2. Status and Trends

UK

Trends in UK Biodiversity Action Plan species

Until recently 7 species had a dedicated Species Action Plan (SAP): *Rhinolophus ferrumequinum, Rhinolophus hipposideros, Myotis bechsteinii, Pipistellus pipistrellus/Pipistrellus pygmaeus, Barbastella barbastellus* and *Myotis myotis*. 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. Criteria were drawn up to decide which species should be added, removed or remain on the list. National Bat Monitoring Programme data were used to apply the criteria to bats. Subsequently, the mammal expert group concluded that:

- *P. pipistrellus* and *M. myotis* should be removed from the priority list;
- *P. pygmaeus, R. ferrumequinum, R. hipposideros, B. barbastellus* and *M. bechsteinii* would remain; and
- *Nyctalus noctula* and *Plecotus auritus* should be added to the priority list.

This new priority list was formally adopted by all four UK administrations in August 2007. It contains 1149 species and 65 habitats all considered to be a priority for conservation within the UK. A lack of data on certain rare or little studied bat species (such as the *Plecotus austriacus* and *Nyctalus leisleri*) prevented their inclusion on the list and some other species such as *Eptesicus serotinus* bat only missed the inclusion threshold of the criteria by a very small percentage.

In February & November 2007 a 'signposting' exercise for the species on the new UK BAP list was undertaken.

The two exercises allocated priorities to each of the species on the new UK BAP list and involved:

- drawing up actions assigned to each species where appropriate;
- identifying to which country each action applied;
- checking the country distribution of the species;

- determining success criteria (i.e. the point at which a species could theoretically be removed from the list); and

- highlighting those priority habitats most relevant to each species in the light of the forthcoming 'habitat-based approach' to the delivery of the UK Biodiversity Action Plan (see below).

The arrangements for the delivery of the UK BAP will change from mid 2009 onwards to a more 'habitats-focused' approach. The arrangements are still in development and will determine how conservation action for all bat species on the UK BAP will be delivered. Current SAPs can be found at www.ukbap.org.uk

Methodology

The National Bat Monitoring Programme (NBMP) has been run by BCT since 1996, funded by the Joint Nature Conservation Committee (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 summarises NBMP trends for 2007. Further explanation for some species is provided via a short explanatory discussion.

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
Rh. ferrum-equinum	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
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	1999-2007	23.9	2.7	Both trends are no longer quite significant
		Colony	2000-2007	-3.5	-0.5	
		Waterway	1999-2007	10.7	1.3	
		Colony	1999-2007	-12	-1.6	
Myotis nattereri	Common	Hibernation	1999-2007	64.9*	6.5*	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 -4.5*	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 commencing 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				
Myotis myotis	Status unconfirmed	Only one individual known in UK at present				

* indicates significant result at 5% ($p<0.05$)

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 been successfully developed and tested. BCT launched the Bechstein's Survey Project in February 2008. The aim of this project is to establish the current distribution of Bechstein's bats in England and Wales, working closely with experts, volunteers and woodland owners / managers. In the first year of the project, surveys will take place in Carmarthenshire/Dyfed, Cornwall, Oxfordshire and Surrey. Further details will be provided in the 2008 report.

Barbastella barbastellus

The woodland field survey was piloted in 2004 by BCT as a new method to survey and monitor bats in Special Area of Conservation (SAC) woodlands. Survey development is progressing steadily as adjustments are made to deal with potential sources of error in the methodology. This is necessary to ensure long-term viability and repeatability of the survey. Development of an appropriate standardised method for the analysis has required a number of adjustments to eliminate observer bias. Temporal and financial constraints have affected the development of a protocol for bat sound analysis. 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 *B. Barbastellus,, P.pipistrellus, P. pygmaeus, N. noctula, N. leisleri* and *E. serotinus* plus *Myotis* as a species group.

3. Habitats and Roost Sites

England and Wales

The final report detailing results of on-going monitoring at Paston Barn for the period February 2006 to February 2007 was submitted to Natural England in the first quarter of 2007. Despite pre-parturition numbers being down in 2006, post-parturition numbers were up. This could reflect a particularly good breeding season in 2006 or separation from the colony into more than one roost and later regrouping.

The largest pre-parturition count of *Rhinolophus hipposideros* in Wales was 685 at Buckland House SSSI, near Brecon. The largest pre-parturition count of *Pipistrellus pygmaeus* in Wales was 1268

Scotland

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

4. Threats

Main threats to bat conservation within the UK are:

- Building demolition;
- Building maintenance and alterations;
- 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; and
- Potential impact of windfarms.

5. Data collection, analysis, interpretation and dissemination

UK

The latest report of the NBMP for 2006 is available to download from http://www.bats.org.uk/pages/nbmp_reports.html
A summary report called *State of the UK's Bats* is also available at the above link.

The third report on the Bats and Roadside Mammals Project in 2007 is available to download from http://www.bats.org.uk/pages/nbmp_reports.html#BRMReports.

Every six years, Member States of the European Union are required (by Article 17 of the Directive) to report on implementation of the Habitats Directive. The second Habitats Directive report, covering the period 2001-2006 focused on assessment of conservation status of all habitats and species of Community interest. This is the first time assessments of conservation status of the habitats and species on the annexes of the Directive have been undertaken.
The report for the UK covers both metropolitan UK (Atlantic biogeographic region) and Gibraltar (Mediterranean biogeographical region). The Atlantic part was led and coordinated by JNCC in consultation with species and habitats specialists across the UK. The Mediterranean part was completed by the Gibraltar Ornithology and Natural History Society under contract to the Government of Gibraltar. Information on conservation status assessments is available to download from http://www.jncc.gov.uk/page-4062 .

All UK resident bat species are listed on Annex IV of the Directive and four are listed on Annex II. The conservation status assessments involved collating information on range, population trends and

habitat requirements for each species, and assessing future prospects. All four parameters contributed to the decision on the overall conclusion for each species. The results may play a role in decisions on future management actions for European protected bat species.

Table 2 summarises the report's assessment of each bat species for the UK. Numbers in brackets indicate the reliability of data on which the assessments were based (1 high, 2 moderate, 3 low).

Table 2: Summary of the Article 17 conservation status assessment for UK bat species.

Species	***Range***	***Population***	***Habitat***	***Future prospects***	***Overall***
Rhinolophus ferrumequinum	Favourable (2)	Unfavourable-Inadequate but improving (1)	Unknown (3)	Unfavourable-Inadequate but improving (2)	**Unfavourable-Inadequate but improving (2)**
Rhinolophus hipposideros	Favourable (2)	Favourable (2)	Unknown(3)	Favourable (2)	**Favourable (2)**
Barbastella barbastellus	Favourable (3)	Unknown	Unknown	Unknown	**Unknown**
Eptesicus serotinus	Favourable (2)	Favourable (2)	Unknown	Unknown	**Unknown**
Myotis bechsteinii	Favourable (3)	Unfavourable-Inadequate (3)	Unknown	Unknown	**Unfavourable-Inadequate (3)**
Myotis brandtii	Favourable (3)	Unknown	Unknown	Unknown	**Unknown**
Myotis daubentonii	Favourable (2)	Favourable (2)	Unknown	Favourable (2)	**Favourable (2)**
Myotis mystacinus	Favourable (3)	Unknown	Unknown	Unknown	**Unknown**
Myotis nattereri	Favourable (2)	Favourable (3)	Unknown	Favourable (3)	**Favourable (3)**
Nyctalus leisleri	Favourable (2)	Favourable (3)	Unknown	Unknown	**Unknown**
Nyctalus noctula	Favourable (2)	Favourable (2)	Unknown	Unknown	**Unknown (2)**
Pipistrellus nathusii	Unknown	Unknown	Unknown	Unknown	**Unknown**
Pipistrellus pipistrellus	Favourable (2)	Favourable (2)	Unknown	Favourable (2)	**Favourable (2)**
Pipistrellus pygmaeus	Favourable (2)	Unknown	Unknown	Favourable (3)	**Unknown**
Plecotus auritus	Favourable (2)	Favourable (2)	Unknown	Favourable (3)	**Favourable (2)**
Plecotus austriacus	Favourable (3)	Unknown	Unknown	Unknown	**Unknown**

England

A study was published by Anita Glover and John Altringham of the University of Leeds that investigated the importance to bats of the caves of the Yorkshire Dales (*Biological Conservation* **141** (2008) 1493-1504). The study was supported by the Yorkshire Dales National Park Authority. Prior to this study nothing had been published about bats in this, the largest karst landscape in the UK. The area was shown to support very substantial mating populations of *Myotis* and *Plecotus* species in the late summer and autumn. It is likely that many of the caves are also important hibernacula. The technique of automated echolocation call logging of cave and mine entrances is likely to reveal many more swarming (mating) and hibernation sites across the UK and beyond.

Research on the conservation biology of bats at the University of Bristol included the following:

- Developing models to predict the distribution of *M. bechsteinii* in Dorset.
- Genetic variation of greater horseshoe bats across their range (with Queen Mary University of London).
- Analysis of Defra licence reports by ecological consultants.
- Effects of lighting on bat behaviour.
- Ecology of *B. barbastellus* in Devon, including development of molecular methods for determining diet.
- Effects of riparian buffer zones on bat activity.
- Hibernal ecology of *Myotis* bats.

Wales

CCW has been continuing to test and develop stand alone automated bat counters for monitoring the condition of *R. ferrumequinum* SACs and other sites where access is restricted.
A review of the *R. hipposideros* surveillance programme was commissioned. The report will be published shortly.
The population estimate for *R. hipposideros* in Wales has been revised. The results were presented to the UK National Bat Conference and will be published in 2008. The results support the conclusions of the National Bat Monitoring Programme indicating that the population has increased in recent years, possibly due to a series of warmer winters and suggest that previous estimates have been underestimates. However, the species is still under threat from habitat fragmentation and roost loss.

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 two days a week during 2007. This project aims to assist bat workers and the public in reporting incidents of bat crime and in helping and encouraging the police to follow up cases where appropriate. Further information on the project can be found at http://www.bats.org.uk/pages/bat_crime_investigations.html.

A progress report covering the period July 2004 to April 2007 is now available via http://www.bats.org.uk/publications_download.php/228/BatRelatedCrime_2007_web.pdf During this time 170 bat-related crime incidents were recorded (plus another 40 that were not possible to follow up). Of the 170 crimes, 66% were connected with the building development/building maintenance sector. An update on bat related crime prosecutions between May and December 2007 can be downloaded via http://www.bats.org.uk/publications_download.php/389/Bat_Crime_update_Bat_News_Article.pdf

A total of 65 incidents were reported with five prosecutions relating to bat crime in 2007. Police involvement in cases has improved since Kelvin Jones was appointed as Operation Bat Project Officer to the National Wildlife Crime Unit (NWCU). Bats remain a police wildlife crime priority for 2007 and 2008. The Investigations Officer has given bat sessions for the police at their Wildlife Crime Officers (WCO) training event, and produced training materials.

It is clear that around two thirds of all offences involving bats are still committed by the construction industry, highlighting the need for education of workers in this sector as well as tough enforcement where necessary. The police have enforcement of bat legislation as a national priority and continue to implement 'Operation Bat'. The NWCU employed an Operation Bat officer for the duration of 2007 to assist in updating Operation Bat by the police.

A summary of the five prosecutions (two in Scotland, one in Wales and two in England) in 2007 is provided below:

- Hamilton – builder fined £300 for destroying a bat roost in a dwelling house whilst undertaking works to the roof;
- Falkirk – builder fined £2000 for destroying a bat roost despite knowing bat roost was present;
- Merseyside – developer and builder destroyed a known brown long-eared bat roost during barn conversion works. Total fines and costs for both amounted to £1,750;
- Pembrokeshire – buildings containing known roosts of brown long-eared and pipistrelle bats were demolished. A Habitats Regulations licence had been applied for but demolition went ahead before it had been determined. Total fines and costs amounted to £1,500; and

- Kent – a child threw a live pipistrelle into the air, kicked it, the bat died soon afterwards. The boy admitted causing unnecessary suffering to the bat and magistrates gave him a three-month referral order and ordered him to pay £43 costs.

Earlier in 2007 BCT was involved in consultations with Defra and the Statutory Nature Conservation Organisations (SNCO) regarding the amendments to the Conservation (Natural Habitats, &c.) Regulations 1994. This included comments to Natural England on the guidance on licensing exclusions from domestic dwellings; to the Scottish Executive on draft guidance about the amendments in Scotland; and to Defra highlighting concerns about the definition of disturbance and significance in the amended Regulations. Work in keeping bat workers up to date on changes is ongoing.

Scotland

In February 2007, the Conservation (Natural Habitats, &c.) Regulations 1994 were amended in Scotland. The amendments have tightened up the legislation by removing several defences and introducing a set of specific individual offences concerning disturbance to European Protected Species.

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

England

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), however further research is required to support this application.

Wales

No further SSSIs have been designated for their bat interest in Wales during 2007, however Ganllwyd SSSI has been enlarged to amalgamation Coed Ganllwyd SSSI, Parc Dolmelynllyn a Glasdir SSSI, Cefn Coch Mine SSSI and Glasdir Copper Mine SSSI which include the lesser horseshoe bat *Rhinolophus hipposideros* as a feature.

8. Consideration given to habitats which are important to bats

Wales

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

Gwynedd Council, Pembrokeshire Coast National Park and CCW started a pilot project for the Review of Consents to consider the impacts of developments on the *R. hipposideros*. The Review provides guidelines for local authorities to consider the impacts on SACs for projects that were given approval before this was a requirement under the Habitats Regulations.

Scotland

Scottish Natural Heritage (SNH) continues to provide advice to a range of schemes that may affect bats such as proposed developments. Emphasis is on maintaining connectivity between habitats and minimising the effects of fragmentation.

SNH worked closely with the Scottish Government throughout 2007 to develop appropriate habitat management prescriptions that will benefit bats, in the recently introduced Scottish agri-environment incentive schemes, collectively known as the Scotland Rural Development Programme.

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 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 in July 2007. It was attended by the new Biodiversity Minister Joan Ruddock and a number of other Members of Parliament (MPs).

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. 2007 was a harsh year for bats especially with the bad weather over the summer. It was the busiest summer since the helpline was started and there were double the number of calls compared to 2006 regarding grounded and injured bats. Callers to the helpline are sent leaflets such as *Encouraging Bats* and *Living with Bats.*

BCT's Bat Surveys – Good Practice Guidelines
In 2007 BCT's Bat Surveys – Good Practice Guidelines were launched. Consultation on a draft of the guidelines was held between 7th February and 7th March 2007. The final version is now available via BCT's website free of charge at http://www.bats.org.uk/pages/professional_guidance.html The guidelines have been endorsed by the Institute of Ecology and Environmental Management (IEEM).

Mitigation Conference
A two-day conference was held in Leicester on 25-26th April 2007 by BCT on the subject of bat mitigation. It was attended by 120 people (mainly consultants). The conference was mainly workshop based, with people contributing their case studies on different types of mitigation.

The first day focussed on methods for mitigating impacts on bat roosts and the second day on methods for mitigating impacts on bat foraging areas and commuting routes. There was also a question and answer session with a panel of construction industry experts about the practicalities of incorporating bat roosts in buildings and bridges. Work on the proceedings is in progress and we hope to complete these by mid 2008.

Count Bat
The Count Bat Project commenced in October 2007. The project is funded by the Heritage Lottery Fund (HLF), Natural England (NE) and The City Bridge Trust and aims to engage wider audiences in the delivery of Bat Biodiversity Action. The project will be delivered by three regional officers and is a four year programme. It builds on the success of the pilot project in which BCT demonstrated how through working with key partners it is possible to introduce a wide audience to bat conservation. The programme includes training for volunteers to become NBMP surveyors and take part in a range of volunteer roles. Further details will be provided in the next report.

Training
BCT ran over 30 advertised training courses in 2007, aimed at the following target audiences: ecological consultants, arborists, the construction industry and local authority planners. The training project has also generated two other associated projects: the Bat
Care/Rehabilitation project and the Mitigation Conference. Both were inspired by the need to run training courses on the subjects, and realisation that there was not enough information collated or agreed in order to do so.

Bat Care
A facilitated workshop on bat care/rehabilitation was held in March 2007. This was attended by a number of key bat carers, along with a vet and a representative from the Royal Society for the Prevention of Cruelty to Animals (RSPCA). The notes of this workshop will be used to develop new guidelines for vets and bat carers. Further information will be provided in the next report.

Turbines
BCT held a turbines and bats workshop in February 2007. This was funded by Defra and was well attended by experts from the turbine industry and bat conservation and research. All agreed that, although we know of bat mortality caused by wind farms in the USA and on mainland Europe, the priority is to find out about bat mortality at wind farm sites in the UK. BCT is producing a brief for a research project to quantify bat mortality at existing turbine sites.

BCT has concerns about the potential impacts of micro-turbines and the exemption of house holder micro-generation from the planning system. BCT has received details in which bats have been killed at micro turbines. A potential increase in the numbers of small and medium-sized turbines placed in hedgerows could have serious implications.

Bats and the Built Environment Project
This project commenced at the beginning of 2007. The aim of the project is to:

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

The project officer has taken the message to industry exhibitions and conferences and given six papers in 2007. A working relationship has been formed with a number of influential organisations within the building industry including the Royal Institution of Chartered Surveyors (RICS), UK Green Building Council (UKGBC), Building Research Establishment (BRE), Institution of Lighting Engineers (ILE); and Construction Industry Environmental Forum (CIEF). Representatives of the building sector have given presentations, run workshops or sat on question and answer panels at bat conservation conferences. Architects, chartered surveyors, engineers, membrane manufacturers and lighting engineers have taken part in this way.

European Bat Weekend
BCT supported National Bat Weekend in 2007. An interactive map was put up on BCT's website that provided information on bat groups holding events to celebrate National Bat Weekend. A total of 60 events were held and BCT supported bat groups by providing appropriate materials.

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 March.
A one-day Wales Batworkers Event was held in October 2007 in Llandrindod Wells with over 80 delegates.

Scotland

Scottish Natural Heritage (SNH) continues to provide advice to a range of schemes that may affect bats such as proposed developments. Emphasis is on maintaining connectivity between habitats and minimising the effects of fragmentation.

SNH worked closely with the Scottish Government throughout 2007 to develop appropriate habitat management prescriptions that will benefit bats, in the recently introduced Scottish agri-environment incentive schemes, collectively known as the Scotland Rural Development Programme.

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

Wales

CCW continued to fund a project investigating the diet of *B. barbastellus*. This project is also funded by Natural England.

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 a project to create bat habitat close to a newly created artificial hibernation site. 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.

The North Wales Wildlife Trust received funding for a survey of rare woodland mammals.

A project in Pembrokeshire has replaced and updated bat boxes for *P. pipistrellus* and carried out improvement works to cellars to benefit *R. ferrumequinum* and *R. hipposideros*.
The fund supported a pilot study for a survey for *M. bechsteinii* in Wales and found sites meeting the criteria for survey.

Scotland

SNH continues to provide statutory advice to members of the public particularly in relation to issues concerning bat roosts and houses

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.

Bats and Lighting
A Bats and Lighting document has been jointly produced by the ILE and BCT aimed at bat workers and lighting engineers (available on BCT http://www.bats.org.uk/pages/professional_guidance.html and ILE websites). Progress has been made towards joint research with the lighting industry.

Modelling Daubenton's bat distribution
A new partnership project with the Environment Agency began in 2007 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.

Bats as Indicators
BCT has been developing the concept of Bats as Indicators at UK, country and European scales. Good progress has been made on this and further detail will be provided in the 2008 report.

In late 2007, BCT was awarded a contract from the European Environment Agency (EEA) to develop a methodology of a bat indicator for the 'Streamlining European 2010 Indicators (SEBI 2010)' in partnership with the Zoological Society of London. This work is on-going and involves collating information on bat monitoring schemes throughout Europe.

Wales

Landscapes for Lessers *(R. hipposideros)* Phase 2
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 maintainance 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). Further details will be provided in the 2008 report.

CCW continued to fund the automatic bat counters in *R. ferrumequinum* and *R. hipposideros* roosts. Andrews, P.T. (2007). Monitoring of Horseshoe Bats through the use of automatic bat counters. Report on nursery roosts in Wales, 2006. CCW Science Report No. 797

Agri-Environment Schemes
BCT has been a collaborator on an 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.

Scotland

SNH has continued its monitoring programme of European Bat Lyssavirus (EBLV) seroprevalence in *Myotis daubentonii*. This work builds on monitoring undertaken from 2003 to 2006 and involved testing blood (for EBLV2) and saliva from 240 *M. daubentonii*.

In 2007, an additional sample of 50 *M. nattereri*, 30 *P. pygmaeus* and 20 *P. pipistrellus* was tested for both the EBLV1 and EBLV2 strains. One specimen of *M. nattereri* was found to be seropositive for EBLV1. No bats have been detected in Scotland with the live virus at any point during this on-going active surveillance programme.

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

In the first quarter of 2007 BCT met with the Chief Executive Officer (CEO) of the British Pest Control Association and contributed an article about bats on the British Pest Control Associations' website.

The Wildlife Incident Investigation Scheme (WIIS) is operated by the four UK agriculture departments and is co-ordinated by the Pesticides Safety Directorate, an executive agency of DEFRA. 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 against the proper target species) may lead to prosecution or other enforcement action. During 2007, no cases involving bats were reported to the scheme.

Scotland

When consulted over proposed timber treatment in bat roosts, SNH continues to advise the use of only those compounds that have been approved for use as such, i.e permethrin/cypermethrin or boron-based compounds. A list of approved products is available and periodically updated.

D. FUNCTIONING OF THE AGREEMENT

14. Co-operation with other Range States

UK

BCT attended the Pre-Eurobats meeting in Defra Bristol on 24th April 2007 and the Eurobats 12th Advisory Committee Meeting in Budapest. BCT chaired the Intercessional Working Group (IWG) on Bats and Bioindicators and is leading on the Pan European Project Monitoring Underground sites (see section 15 below for further details).

BCT continues to be a member of the European Bat Lyssavirus (EBLV) Working Group. We have produced and distributed updated guidelines for bat workers and handlers. We continue to work closely with the Health Protection Agency (HPA) offices, Animal Health offices and Defra on bat bite issues and incidents. 2007 saw the sixth discovery of a UK bat with live virus – again found in late summer/early autumn, and again a Daubenton's bat *Myotis daubentoni*. To increase the number of individuals of rarer species sent to the Veterinary Laboratories Agency (VLA) for passive surveillance, we have informed bat groups that they can, in exceptional circumstances, have the bat returned (it will of course have to test negative). This has been agreed with VLA and Defra as it is a departure from the norm, and involves needle biopsy. BCT also responded to Defra's Wildlife Health Strategy consultation, focusing comments on EBLVs and, to a lesser extent, illegal landings.

BCT is partner in a Darwin Initiative funded project to monitor bat biodiversity in Bulgaria and Romania. The project is being led by the Institute of Zoology in London (ZSL). The aim of the project is to generate long-term data on biodiversity indicator species to assess the impact of national development and global change. The project is working 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 bring voluntary action by citizens to benefit wider scientific research and local biodiversity. The project has already established a network of surveyors, made good contacts with national road authorities and plans to enhance channels of communication between these two parties. A lot of data has been generated which once analysed will allow a significant contribution to the knowledge and understanding of bat biodiversity in Bulgaria and Romania. Further details on this project will be provided in the 2008 report.

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

UK

Pan European Project
At the end of 2007 funding for the Pan European Project, Monitoring Underground Sites was obtained. Further details on this project will be provided in the 2008 report.

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**.**

Scotland

SNH contributed to a workshop on bats and mitigation, organised by the Bat Conservation Trust in April 2007.