

# BAT WORKERS' MANUAL



# BAT WORKERS' MANUAL

3RD EDITION 2004

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**JOINT  
NATURE  
CONSERVATION  
COMMITTEE**



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# Foreword

It is now 15 years since the first edition of the *Bat Workers' Manual* was produced and almost 5 years since the second edition appeared. During the last 15 years the bat conservation movement has gone from strength to strength, with a continuing expansion of local bat groups and the development of the Bat Conservation Trust to provide a national focus. At the same time, there have been fundamental changes in the organisation of the statutory conservation bodies, with the split of the Nature Conservancy Council into three separate country agencies and the Joint Nature Conservation Committee, followed by internal reorganisations in each agency. Despite these changes, close working relationships between government and non-government organisations have persisted and, happily, the movement can be characterised as co-operative rather than confrontational.

A major change in the second edition was the development of a chapter on safety in bat work, which drew together and expanded information from the first edition. Although bat-workers have a good safety record, recent litigation has shown clearly that organisations have a responsibility to ensure that people working under their direction, whether paid or not, are able to work in safety. This is a responsibility we must all share and so safety has now been incorporated explicitly into the training syllabus.

The third edition has been produced only 5 years after the second edition because the tragic death of a batworker in Scotland from European Bat Lyssavirus (EBLV) infection at the end of 2002 signalled a fundamental change in the way organisations and individuals approach bat work. This death, together with two records of EBLV in Daubenton's bats in England, means that it must now be assumed that the virus is present in bats in the UK and that bat-handling practices, and health and safety advice must change. This third edition of the manual incorporates those changes and updates some other information and advice.

In other respects very little has changed. A great deal of the original material in the first edition remains as relevant now as it did 15 years ago. The internal reorganisation carried out in the second edition, with the addition of new material to reflect new concerns and the development of new areas of interest, has been retained in the third edition. The excellent drawings by Tom McOwat

have almost all been retained with some updated diagrams where necessary to reflect the changes in health and safety practices.

The third edition has retained a number of case studies on a variety of subjects, which were new to the second edition. These provide a useful perspective on the practical problems that confront bat-workers from time to time and suggest solutions that could be adapted to other circumstances. Good case studies have proved hard to find and we are very grateful to those individuals or organisations who have contributed.

In 1987, the original manual was one of the few publications available to guide practical bat work in the UK. We are now in the fortunate position of having a much greater range of publications available on a variety of topics, such as the use of bat-detectors, habitat conservation, survey work or the construction or modification of roosts of various types. Clearly a manual cannot, and should not, duplicate these, but we have tried to give a brief introduction to these subjects and to suggest sources of further information. An example is the expanding use of bat-detectors, which were barely mentioned in the first edition. Since then the development of technology and fieldcraft have led to a great advance in their use.

Overall, the change in balance of the manual reflects some of the changes that have happened in bat conservation over the last 15 years. For example, there has been less focus on the impact of remedial timber treatment, following the adoption of safer chemicals, whereas the importance of field survey work away from roosts has increased. The importance of public relations and problem-solving for a group of species that depend so heavily on buildings has remained a central theme.

The manual is the product of extensive consultation with many individuals involved in bat conservation and has benefited greatly from their input. It has been impossible to include all the suggestions we have received, but we hope this expanded publication will continue to serve the needs of bat conservationists.

Tony Mitchell-Jones  
Andrew McLeish



# Acknowledgements

As with the first edition, many people helped with the revision and improvement of the second edition, either through general comments and discussion or by contributing sections to particular chapters.

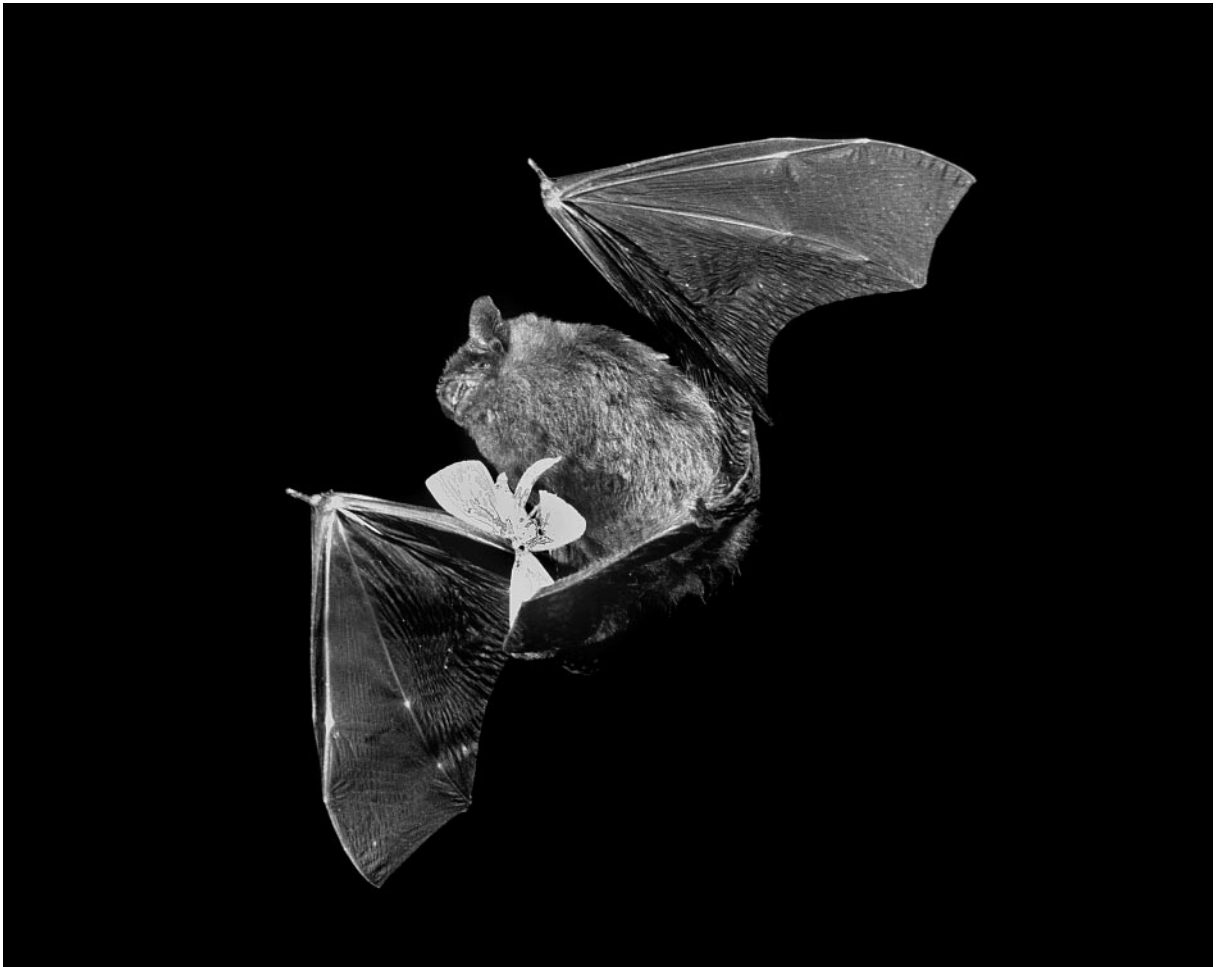
General help was provided by David Bullock and Miriam Glendell (National Trust), Amy Coyte, Tony Hutson, Shirley Thompson and Phil Richardson (Bat Conservation Trust), Rob Raynor (Scottish Natural Heritage), Ruth Warren (Countryside Council for Wales), Gloucester Bat Group, Patty Briggs, Stuart Corbett, Tom McOwat, Louise Oliver and Gill Hinchcliffe.

Chapter 11 benefited greatly from additional information from Frank Greenaway (caves and mines), Geoff Billington (bridges) and Mike

Holmes (trees). Peter Smith updated the information about radio-tracking in Chapter 6, Maggie Brown and Andrew Routh helped to update Chapter 7 and Mike Worsfold provided additional information for Appendix 2.

The swift revision of this third edition was helped greatly by comments from Stewart Pritchard (SNH), Jessa Battersby (JNCC), Liz Halliwell (CCW), staff at the Bat Conservation Trust (Colin Catto, Ali Rasey) and Tony Hutson. Tom McOwat obligingly redrew some of the illustrations.

It is with sadness that we record the untimely death of Gill Hinchcliffe (1958–2002), who contributed so much to bat conservation and the development of bat groups.



Pipistrelle bat. © Frank Greenaway



Bechstein's bat. © Frank Greenaway

# Bats and the law

A J Mitchell-Jones & C J Robertson

## 1.1 Legislation in the United Kingdom

In England, Scotland and Wales all bat species are fully protected under the Wildlife and Countryside Act 1981 (WCA) (as amended) through inclusion in Schedule 5. In England and Wales, this Act has been amended by the Countryside and Rights of Way Act 2000 (CRoW), which adds an extra offence, makes species offences arrestable, increases the time limits for some prosecutions and increases penalties. In Scotland, the Criminal Justice (Scotland) Act 2003 has amended the WCA to widen the powers of arrest, increase the time limits for some prosecutions, increase penalties and extend the use of search warrants. It does not, however, introduce any new offences. The Nature Conservation (Scotland) Bill will introduce further amendments to the WCA in Scotland in 2004.

In Northern Ireland all bats are fully protected by the Wildlife (Northern Ireland) Order 1985 (as amended) through inclusion in Schedule 5.

All bats are also included in Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994, (or Northern Ireland, 1995) (the Habitats Regulations), which defines 'European protected species of animals'.

These various pieces of legislation almost parallel each other, with a few small differences in wording. The legal significance of these differences has not yet been fully established and so the following account attempts to combine them to provide a simplified summary.

Taken together, the Act, Order and Regulations make it illegal to:

- intentionally or deliberately kill, injure or capture (or take) bats;
- deliberately disturb bats (whether in a roost or not);
- recklessly disturb roosting bats or obstruct access to their roosts (England & Wales only; proposed for Scotland in 2004);
- damage or destroy bat roosts;
- possess or transport a bat or any part of a bat, unless acquired legally;
- sell (or offer for sale) or exchange bats, or parts of bats.

The word 'roost' is not used in the legislation, but is used here for simplicity. The actual wording in



Brown long-eared bat. © Frank Greenaway

the legislation is 'any structure or place which any wild animal...uses for shelter or protection' (WCA) or 'breeding site or resting place' (Habitats Regulations). Because bats tend to re-use the same roosts after periods of vacancy, legal opinion is that the roost is protected whether or not the bats are present at the time.

Intentionally can be interpreted directly as 'a result is intended when it is the actor's purpose' or it can be inferred by a court when the result is a virtually certain consequence of the act and the actor knows that it is a virtually certain consequence. Deliberately is not well defined in law, although the House of Lords has equated it with 'wilfully'. A person acts recklessly if he deliberately takes an unacceptable risk (recognises the risk but takes it anyway) or fails to notice or consider an obvious risk (does not consider whether there is a risk).

There are three defences in the law, which allow what would otherwise be prohibited acts.

- 1 Injured or disabled animals may be taken and possessed solely for the purpose of looking after them and releasing them once they are no longer disabled; similarly, badly injured animals may be killed legally.
- 2 Within dwelling-houses, bats may be disturbed and bat roosts may be damaged, destroyed or obstructed. However, bats may not be killed, injured or taken.



- 3 Killing, injuring, taking or disturbing bats, or damaging, destroying or obstructing roosts are not offences if these were the incidental result of a lawful operation and could not reasonably have been avoided.

The above statements apply to any species on Schedule 5 of the Wildlife & Countryside Act 1981 (the Wildlife [Northern Ireland] Order 1985) or any 'European protected species', but there is one special provision, which applies only to bats. This states that defences 2 and 3 above cannot be relied on (except within the living area of a dwelling house) unless the appropriate Statutory Nature Conservation Organisation (SNCO) has been notified and allowed a reasonable time to advise on whether the proposed action should be carried out and, if so, the method to be used. The SNCOs are English Nature, Scottish Natural Heritage, the Countryside Council for Wales and the Environment and Heritage Service in Northern Ireland.

The police are the primary law enforcement agency, so if you think the law has been broken, contact your local police wildlife liaison officer (WLO) or police force. A list of WLOs is available from the RSPB Investigations Section (tel: 01767 680551). Prosecutions for offences under the legislation in all countries must be brought within 6 months of the date on which sufficient evidence became available to the prosecutor, subject to a time limit of 2 years after the commission of the offence. Penalties for most offences are up to level 5 on the standard scale per offence (£5000 per offence in 2003) and/or a custodial sentence of up to 6 months. Further details are given in Childs (2003), which is updated whenever the legislation changes.

The SNCOs can issue licences to allow otherwise prohibited actions, such as catching and handling bats, for scientific or educational reasons, ringing and marking, conservation, photography or protecting zoological collections. Applications should be made to the Licensing Section of the appropriate SNCO.

Licences in connection with public health or safety, prevention of the spread of disease or the prevention of serious damage to livestock, crops or other property may be issued, as appropriate, by the Department for Environment, Food and Rural Affairs (Defra), the Scottish Executive, the National

Assembly for Wales Countryside Division or the Environment & Heritage Service (Northern Ireland). These departments also issue licences under the Habitats Regulations to permit otherwise prohibited acts where this is considered to be for imperative reasons of overriding public interest (primarily development). Licences can only be issued when there is no satisfactory alternative and when the action authorised will not be detrimental to the maintenance of the populations of the species concerned at favourable conservation status in their natural range. Note that these arrangements are subject to change.

Acts or operations that take place on a Site of Special Scientific Interest (SSSI) (Areas of Special Scientific Interest (ASSI [in Northern Ireland]) are covered by Part II of the Wildlife & Countryside Act. The SNCOs have a particular role in the enforcement of this part of the legislation and should be contacted if you believe something illegal is taking place.

This is only a general and simplified guide to the main provisions of the law. The Wildlife and Countryside Act 1981 (and its amendments), the Environmental Protection Act 1990, the Conservation (Natural Habitats, &c.) Regulations 1994, the Countryside and Rights of Way Act 2000, the Criminal Justice (Scotland) Act 2003 or the equivalent legislation in Northern Ireland should be consulted for further details.

Bats are similarly protected in all other parts of the British Isles. Information on bat protection in the Republic of Ireland can be obtained from National Parks & Wildlife, Department of Environment, Heritage and Local Government, 7 Ely Place, Dublin 2 and in the Isle of Man from DAFF, Knockaloe Farm, Peel, Isle of Man IM5 3AJ.

Information on bat protection and the law in the UK is contained in various leaflets, which are available from the SNCOs: English Nature – *Focus on bats* and *Bats in roofs: a guide for surveyors*; Scottish Natural Heritage – *Bats and people*; Countryside Council for Wales – *Ystlumod, Bats*; The Environment and Heritage Service (Northern Ireland) – *Focus on Bats*.

## Law enforcement – gathering evidence

There may come a time when, in the course of your bat work, you witness, or find evidence of, the law being broken. It is essential in such a case that a careful and detailed record of events and evidence is kept if there is to be any hope of a subsequent prosecution being successful. Normally it would be best to ask a police WLO to gather the evidence, but if you are the first on the scene of a crime you can follow these best practice guidelines to gather admissible evidence.

The following notes explain what is required by a court and give some idea of what you can expect if you are asked to give evidence:

- It is vital that you make written notes of any incident. If possible make the notes as the incident occurs, but if this is not possible then make them as soon as possible after the event. If made too late after the event, a court may decide they are inadmissible. If you are making notes at the time, record as many details as you can as they happen. You can follow up these notes after the event with a more methodical appraisal of the situation as you remember it, including anything you did not have time to record.
- Important details to note: date, time, location (including grid reference if possible), descriptions of people, names, addresses and telephone numbers if you know them, vehicle registration numbers and descriptions, exactly what you saw and heard. You can include in your notes things that you overheard somebody else say (e.g. "Mr X told me that Mr Y said..."), but this is called hearsay and it will probably be inadmissible as evidence in court. However, by including it in your notes you may assist the investigating officer with his/her inquiries.
- When writing notes try not to leave any blank spaces and fill in any blank spaces with a line. This shows the court that no changes could have been made after the event. If you do need to make a change, cross out the incorrect section lightly so that it can still be read and add the corrected statement. You must initial and date/time this entry.
- When you have written your notes, sign and date/time them. Make sure any other witnesses read and sign and date/time them too (assuming they agree). Make sure you have their contact details. You must also give the suspect, if present, the opportunity to read and sign your notes. If they refuse, add a note that you gave them this opportunity.
- A statement may be necessary at some stage. A police officer or other investigating officer will take this for you and advise you how it needs to be done.
- If you are asked to appear in court as a witness or expert witness do not worry. It is not you who is on trial. You will be asked to stand in the witness box and swear an oath to tell the truth. You will first be guided through your statement by the prosecution solicitor, after which you will be asked questions by the defence solicitor. You should address your answers to the Magistrates. If you do not know or cannot remember the answer to a question, just say so. Take your original notes along with you. If you wish to refer to them to assist your memory while in the witness box (a prosecution may be many months after the event), ask for permission. There will be a discussion about the admissibility of your notes, so you will need to tell the court how soon after the event you wrote them. In court, you will not be allowed to give hearsay, but do not worry if you are not too sure what that means because you will simply be stopped if the evidence you give is inadmissible.
- Make sure that you report the incident as soon as possible. It makes sense to find out who your local police Wildlife Liaison Officer is and to make contact with them if you suspect you may need their services during your bat work. You can also get help from the SNCO, the Bat Conservation Trust or any police officer.

Source: English Nature/RSPB.

## 1.2 International protection

As well as domestic legislation, bats are also protected under several international Conventions, Directives or Agreements. Where these place obligations on the UK government, they have been translated into the domestic legislation described in Section 1.1.

### European Union Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats and Species Directive)

This Directive places a legal requirement on all Member States of the European Union to protect

specified habitats and species through their own domestic legislation. In the UK this has been implemented by the Conservation (Natural Habitats, &c.) Regulations 1994. All species of bats are on Annex IV ('European protected species of animal'), which requires that they are given full protection. Five species (greater horseshoe, lesser horseshoe, Bechstein's, barbastelle and greater mouse-eared (believed extinct)) are also on Annex II, which requires the designation of Special Areas of Conservation (SAC) to ensure that the species is maintained at a favourable conservation status. In the UK this is being done through the designation of certain selected SSSIs. This international network of sites is known as the Natura 2000 series.

### **Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)**

This convention, to which the UK is a signatory, places obligations on member states to protect threatened or endangered species and their habitats and to ban the use of many unselective methods of capture. It is translated into domestic legislation as the Wildlife & Countryside Act 1981.

All species of bats, except the pipistrelle *Pipistrellus pipistrellus*, are on Appendix II, which requires that they are given special protection. The pipistrelle is on Appendix III, which requires the regulation of its exploitation.

### **Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)**

This global Convention is intended to encourage co-operation between member parties in the conservation of species that move between range states. It provides for the protection of some migratory species, but its main intended method of operation is to encourage range states to set up Agreements to benefit species listed on Appendix II, which includes all European bats.

One such Agreement is the 'Agreement on the Conservation of Populations of European Bats', known as 'Eurobats', which came into force in 1994. Its main provisions are: to restrict the killing or capture of bats; the protection of key bat habitats; the co-ordination of research and conservation experience; and increasing public awareness of bat conservation. These requirements do not appear to need any changes to current UK domestic legislation.

## **1.3 Bat workers and the law**

Perhaps the most significant element of legal protection from the bat worker's point of view is the requirement that householders with bats in their houses, other than in the living area, must notify the appropriate Statutory Nature Conservation Organisation (SNCO) before taking any action against the bats or their roost. Similarly, the SNCO must be notified before any activities that could incidentally affect bats or their roosts are started. This could include building and re-roofing

operations, pest control, remedial timber treatment or cavity-wall insulation. The need for the SNCO to be given an opportunity to advise an owner provides great scope for the prevention of damage to roosts and for education. Most licensable bat work carried out by licensed bat workers relates to the provision of this advice.

## **1.4 Bat work without a licence**

Much research and survey work can be done without a licence, for example searching for new roosts, observing or counting bats outside roosts, discovering feeding areas, analysing food from bat droppings, or building and erecting bat boxes. Much can be learnt through the literature, by talking to other bat workers and by joining a local bat group. Similarly, public relations and publicity work, such as general advice, talks, walks or disseminating information, which forms the core of much conservation activity, does not require a licence. However, if you wish to enter known roosts (including bat boxes that have been or are being used by bats) or disturb, catch or handle bats, you must be covered by an appropriate licence.

## **1.5 The licensing system**

It is important to ensure that you have the licence you need and that you fulfil its conditions. A casual approach to the question of licences may not only jeopardise your own ability to work with bats, but may undermine all our efforts to persuade people who feel seriously inconvenienced by the law to abide by it.

The SNCOs are responsible for issuing licences to enable otherwise prohibited activities to be carried out for scientific, educational or conservation purposes. For most protected species, licence applicants have traditionally been asked to provide references (to establish bona fides) and to justify fully the need to carry out the requested activity. However, for bat work a special training scheme has been set up, which provides training and obviates the need for two references (see Section 1.6).

Special licences can be issued to cover particular circumstances, non-standard techniques, particular liaison requirements and so on, but one standard licence covers the majority of licensees, who are mainly involved in bat-roost visiting.

Licences are not considered necessary for examining single bat boxes because they are unlikely to contain bats. Only if a bat is found in a bat box and further examinations are proposed should a licence be obtained. Similarly, visits to lofts or caves and mines are not licensable unless it is known that bats are likely to be present.

Although the way in which licences are assessed and processed differs between the SNCOs, the following sections describe the licences most commonly issued, together with an indication of the level of knowledge or experience required. Further details will be found in Appendix 7.

### 1.5.1 Bat-roost visitor (conservation) licences

Bat-roost visiting, either in response to a direct enquiry or at the request of the SNCO, is one of the most important activities carried out by local bat-group members because it makes an enormous direct contribution to bat conservation, benefiting many thousands of bats each year.

The standard licence should meet all the legal requirements of a roost visitor, who may need to examine and handle bats in their roosts. The taking of bats by hand or static hand-net can be useful for identification and for public relations, to show a householder how interesting and attractive bats are, so it is included in the standard licence. Occasionally, where a licensee has little or no experience of handling bats, it may be deleted.

Normally only one or two bats should be taken for identification or to show to householders and these should be released as soon as possible. If resting bats cannot be taken by hand, a hand-net may be held in a stationary position beneath the exit hole so that one or two bats are caught as they drop from the exit. It should never be necessary to catch horseshoe bats because these can easily be identified in roosts. Obviously, hibernating bats should be disturbed as little as possible and should not normally be handled.

A basic knowledge of the biology and ecology of bats, plus an ability to catch, identify, handle and present them to people are required to obtain a licence to visit roosts in dwelling houses from April to September. Endorsements to this basic licence may be subject to further conditions.

### 1.5.2 Licences to disturb, take or possess bats for scientific purposes

Licences can be issued to disturb, take or possess bats for research or survey purposes. These include licences to visit known hibernacula, licences to use mist-nets, harp traps or other methods of catching bats in free flight, and licences to possess bats in captivity for research purposes. Licences to disturb or take bats in hibernacula for survey purposes can be viewed as a logical extension of the basic batworker licence, but most other licences are only issued once a project plan has been agreed with the appropriate SNCO.

#### i) To disturb or take bats in hibernacula for survey purposes

Visits to caves, mines, tunnels or other areas known to be regularly used for hibernation can cause disturbance to the bats that hibernate there. Such visits need to be regulated, and licences to disturb hibernating bats will be issued only to applicants who have demonstrated an understanding of the dangers involved and shown themselves to be careful workers. Survey of caves or mines for previously unknown hibernation sites does not require a licence, provided that the visit is abandoned once bats are discovered.

Experienced workers monitoring hibernacula for scientific or survey purposes may wish to be able to handle bats from time to time, for example to monitor their physiological condition or to check the identity of unusual specimens. In practice, experienced surveyors rarely touch bats.

The standard survey licence is usually valid for all species of bat, but exceptions can be made for very sensitive species in particular areas, such as disturbance or handling of horseshoe bats in those areas where they occur. However, members of bat groups who have shown themselves to be valuable and responsible licence holders will not normally be excluded from dealing with any species of bat, on the basis that they will know very well which are the most sensitive species for their area and will not wish to cause disturbance if this can be avoided. It is rarely necessary to take hibernating bats under licence for conservation purposes, as rescuing bats in an emergency can be done without a licence.

The licence, which may be valid for between 1 and 3 years, carries a number of conditions including, most importantly, a general liaison clause to prevent conflict between workers in adjacent areas.

## ii) To disturb, take or possess bats for scientific purposes

This allows endorsements of special techniques or types of activity not otherwise covered. However it does not cover ringing, marking or disturbance for photography, which are licensed separately.

The types of projects that might be covered include:

- use of mist-nets or harp traps for surveys or scientific research;
- taking bats for genetic sampling;
- taking bats for radio-tracking studies (combined with a marking licence);
- possessing bats for flight or echolocation studies in the laboratory.

## iii) To disturb bats for the purpose of photography

Licences may be issued specifically for bat photography but only where there is a special case for doing so. This will normally only be where the results contribute directly to public awareness about bats, as with some filming for television. The welfare of the bats must be the prime consideration at all times.

In England, Scotland and Wales, the standard licence includes a note about photography, which is permissible as an incidental part of licensed conservation or scientific work where no additional disturbance is caused thereby. This does not require a separate licence, but care must be taken not to cross the boundary between what is genuinely incidental and what is designed to get a good photograph. If you are in doubt, it is better to consult the SNCO's Licensing Section and obtain a licence if necessary. In Northern Ireland incidental photography (without a flash) is considered to be included in the basic roost visitors licence. Where you have a valid licence to disturb, take or possess bats, the camera can be a useful device to record the activities undertaken without intruding on them. Flash photography in roosts or hibernacula does not come into this category and requires separate licensing, as does the taking of bats into captivity for filming or photography. Flash photography of

hibernating bats should generally be limited as the noise and light could disturb them.

In order to gain a scientific or photographic licence, applicants need to demonstrate a serious interest in bat work and an understanding of how and when particular techniques should be employed.

Licences for netting, trapping or other techniques for catching bats in flight will require the applicant to demonstrate experience and competence in the use of the particular catching technique, as witnessed by a trainer, and appreciation of its appropriate application. Licences will be issued only for projects that have been agreed with the appropriate SNCO.

## 1.5.3 Licences to ring or mark bats for scientific purposes

These licences are only granted for research projects with clear objectives. Techniques such as fur clipping or the attachment of radio transmitters or passive integrated transponder (PIT) tags are also covered by these licences.

Ringing and marking, or the disturbance associated with these activities, can be harmful to bats so that ringing has been stopped or severely curtailed in several countries. In the UK, the value of ringing and marking techniques is recognised, but licences are issued only for clearly defined projects which will be subject to the approval of the licensing authority. Details of approved ringing and marking methods are given in Chapter 6.

## 1.6 Trainers and training

Trainers receive licences allowing them to train unlicensed bat workers in some or all the activities covered by the standard licence. Conservation licences are of most direct relevance to the work of bat groups, and every bat group should have at least one authorised conservation licence trainer. Initially, each trainer should be able to take on four or five students, but this will obviously vary according to circumstances and should decrease as the number of trainers increases.

The training system allows bat workers without any experience of a particular aspect of bat work, such as handling or the use of hand-nets, to train under their trainer's licence in order to gain the necessary



experience to obtain their own licences. It also helps to ensure that conservation activities are carried out to a high standard and that appropriate conservation advice is given when responding to enquiries.

The knowledge and skills required for each type of licence are set out in the training syllabus (Appendix 7). Both knowledge and skills can be gained in a variety of ways, such as attending talks, conferences or training days, background reading, participation in bat group projects or roost visits under the supervision of a trainer or other licensed bat worker.

## 1.7 Applications, returns, reports and renewals

Application forms need to be completed for the various types of licence and for licence extensions. If you have already had a licence, this can be renewed periodically, provided that you have observed its conditions and reported on your activities.

Application forms for standard licences are available from the SNCO's Licensing Section. They should be completed by the applicant and countersigned by a trainer. However, if an applicant is unable to contact a licensed trainer, the names and addresses of two experienced bat-licence holders who are prepared to act as referees may be provided instead.

It is a condition of all licences that appropriate returns are made stating what licensed activities have been carried out. Where separate reports of bat roost visits have been submitted, this information should not be duplicated on licence returns. A statement of licensed activities carried out is required, so that some assessment of licensed disturbance can be made and the data can be used to further the conservation of bats. Numbers of bats recorded or other information on return forms may be used by the conservation organisations to monitor the status of bats or the value of individual sites.

If an exact renewal of a licence is required on its expiry, this should be requested on the licence return form. If a licence, which is not an exact renewal of a previous licence but includes some additional features, is required, a licence application form should be submitted. This should be accompanied where appropriate by a statement of

the training received or experience gained in the previous year and should be signed by a trainer.

Advice on all aspects of licensing can be obtained from the appropriate SNCO Licensing Section.

## 1.8 Planning Policy

### 1.8.1 Planning Issues

British and international wildlife legislation is central to protecting and conserving our wildlife heritage. However, conflicts frequently arise between the needs of wildlife and the needs of development, either of a specific site or in the wider context of local, regional or national planning.

The requirements for a bat survey in the case of a proposed development will vary according to the type of development, time of year and the type of site to be surveyed. Where an environmental assessment is required, a scoping study would normally be carried out at the outset to determine the likely impacts of any development and the investigations which should be carried out to ensure that the needs of bats are fully met.

### 1.8.2 Planning applications

The majority of development proposals do not require full environmental assessment. Barn conversions, small-scale new housing projects and building alterations are all decided through the local authority planning process. The Local Planning Authority (LPA), when considering an application for development that would be likely, if carried out, to result in a breach of The Wildlife and Countryside Act 1981 or the Conservation (Natural Habitats, &c.) Regulations 1994, should consider what precautions could be taken to prevent such a breach occurring in the event of the development going ahead. The presence of a protected species is therefore a material consideration when a LPA is considering a development proposal. The LPA may impose a planning condition or draw up an agreement under Section 106 of the Town & Country Planning Act 1990 (or S 75 of the Town & Country Planning (Scotland) Act 1997) with the developer to ensure that the needs of bats are fully met.

The LPA should consult with the SNCO, prior to granting planning permission if it appears that a licence may be required with respect to the

development proposal (i.e. if evidence of bats has been found). Note that the destruction of a bat roost is an absolute offence under the Conservation (Natural Habitats &c.) Regulations, so the onus lies with the applicant to satisfy himself that no offences will be committed if the development goes ahead.

In all circumstances it is essential that sufficient information is gathered both about the proposed development and the presence of bats to ensure that an accurate and reasonable opinion can be reached over both the nature and importance of the bat site and the likely impacts should the development go ahead. Proposals for mitigation should be considered at an early stage.

The bat survey work should always be carried out by a consultant with adequate experience and, if necessary, an appropriate licence. If a bat group is to carry out the survey it would be wise to ensure that the group is covered by both appropriate public liability insurance and professional indemnity insurance (the Bat Conservation Trust can provide advice on this).

In many cases the LPA, developer and consultant can work together to find a solution that will be agreeable to all parties. The LPA has the final word in deciding whether an application will be approved. Where planning permission is refused an applicant has a right of appeal. This may be by way of a written procedure or, in about 5% of cases, by way of Public Inquiry. In either case, evidence from expert witnesses may be presented. At public inquiries witnesses are subject to cross-examination by the appellants and possibly by the Inspector.

Once planning permission for a development has been granted, it will still be necessary to obtain a licence from the appropriate authority (see Section 1.1) to permit the disturbance of bats or the destruction of a bat roost. Awareness of planning law and issues in relation to nature conservation varies from authority to authority. In England, *Policy Planning Guidance: Nature Conservation (PPG9)* published by the Department of the Environment, Transport and the Regions (now Defra), sets out the Government's policies on different aspects of planning and gives guidance on how policies for the conservation of our natural heritage are to be reflected in land-use planning. In Scotland, *National Planning Policy Guideline (NPPG) 14: Natural Heritage*, published by the

Scottish Office (now the Scottish Executive) performs a similar function, providing the definitive statement of national planning policy in relation to Scotland's natural heritage. In Wales, TAN(W)5 – a technical advice note – provides information about nature conservation and planning. In Northern Ireland, the Environment and Heritage Service has produced *Planning Conservation Guidelines – Nature Conservation and Planning*.

A personal approach by a bat worker/group may help the LPA gain a better understanding of bat related issues and consequently act on planning applications with more precision and understanding.

### 1.8.3 Environmental Assessment

The definition of an Environmental Assessment (EA) states 'EA is the process by which information about the environmental effects of a project is collected, assessed and taken into account by the planning authority in reaching a decision on whether the proposed development should go ahead'.

Only certain types of development require that an Environmental Assessment (EA) be carried out. Projects are categorised into two schedules depending on their likely environmental effects. Environmental assessment is mandatory for Schedule 1 projects where an EA may be appropriate, which includes oil refineries and major road schemes. Schedule 2 projects are those such as mining or industrial installation where there may be significant effects by virtue of their size, nature or location. The proximity to Sites of Special Scientific Interest or other designated sites is a case in point. Government advice as to the likely need for EA is given in circulars, which are updated at intervals when new information is available.

The information required for an EA can be collated from published documents, consultation exercises and survey work but should be sufficient for a reasonable judgement to be made on the project, whether it is a major road scheme or the development of a new housing estate. The final decision may, for example result in the scheme being turned down, the re-routing of the road link or alteration of the housing-estate design.

The Environmental Statement (ES) is the document produced at the end of this data collation process and should include the following information to

meet current guidelines:

- a description of the development;
- data necessary to identify the main effects of the development;
- an assessment of the likely significant effects on the environment (including fauna);
- measures to avoid, reduce or remedy the impacts of adverse effects.

The needs of bats must be taken into account if they are present on the site of a proposed development that is subject to an EA.

#### 1.8.4 Local plans and unitary development plans

There is one other area in which bat workers/groups may take an interest in planning issues. Local plans and unitary development plans should identify relevant international, national and local nature conservation interests. They should ensure that the protection and enhancement of those interests is properly provided for in development and land-use policies, and place particular emphasis on the strength of protection afforded to international designations. Plans should offer reasonable certainty to developers, landowners and residents about the weight that will be given to nature conservation interests in reaching planning decisions. Nature conservation issues should be included in the surveys of local authority areas as required by sections 11 and 30 of the Town and Country Planning Act 1990 (S. 4 of the Town & Country Planning [Scotland] Act 1997), to ensure that plans are based on sufficient information about local species, habitats, geology and landform. Plans should be concerned not only with designated areas but also with other land of conservation value and, possibly, provision of new habitats.

All local authorities will maintain a record of important nature conservation sites in their area. In many cases the authority will work with the local wildlife trust to achieve this. Recently some authorities have started to store this data on Geographic Information Systems (GIS). The advantage of this method is that planners can refer directly to a computerised map and database to see if there is a nature conservation issue connected with a planning proposal. Important bat sites can be included on the GIS and bat groups should encourage authorities to record these sites on their systems (subject to an appropriate confidentiality agreement).

## 1.9 Biodiversity

In 1994 the government published Biodiversity: The UK Action Plan. This was the British response to the Biodiversity Convention held in Rio de Janeiro, which the government signed in 1992. The overall goal of the UK Action Plan is 'to conserve and enhance biological diversity within the UK, and to contribute to the conservation of global diversity through all appropriate mechanisms'.

Following the publication of the Action Plan, a Biodiversity Steering Group was established, which developed costed action plans for priority species and habitats. Action plans now exist for the greater mouse-eared, pipistrelle, greater horseshoe, lesser horseshoe, barbastelle and Bechstein's bats (Biodiversity: The UK Steering Group Report).

These action plans contain targets for maintaining or increasing populations and proposed actions for achieving those targets.

If the UK Action Plan is to be implemented successfully, it is important that national targets are translated into effective action at a local level. Local Biodiversity Action Plans (LBAPs) are the means by which practical actions can be achieved. The development of Local Biodiversity Action Plans is dependent upon partnership between many organisations, although local authorities are well placed to take the lead in promoting plans, particularly at the county/council area level.

Many LBAPs have now been developed and these will include action plans for individual species of bat and also habitats that are important to bats. Bat groups are well placed to become involved in both developing and implementing LBAPs. Information on developing LBAPs in each country can be obtained through the appropriate Biodiversity Group (see [http://www.ukbap.org.uk/contacts\\_links.htm](http://www.ukbap.org.uk/contacts_links.htm) for details). The Countryside and Rights of Way Act 2000 (S74) places some obligation on Ministers and government departments in England and Wales to have regard to the conservation of biological diversity and to publish lists of habitats and species that are of principal importance for this. The Nature Conservation (Scotland) Bill, to be enacted in 2004, contains similar obligations.



### Public Inquiry confirms importance of lesser horseshoe bat roost

In the autumn of 1991, a breeding roost of lesser horseshoe bats *Rhinolophus hipposideros* in an old coach house near Welshpool, Powys (formerly Montgomeryshire), Wales, came under threat from development proposals. The owner was seeking planning permission to convert the buildings into six flats. This would have considerably reduced the extent of roosting space used by the bats. While space in the small clock turret would have remained, this would not have been adequate to ensure the survival of the breeding colony of up to 70 lesser horseshoe bats; the colony was one of only five in the former county of Montgomeryshire.

The Countryside Council for Wales (CCW) and the Montgomeryshire Wildlife Trust (MWT) assessed the requirements for the roost and advised that if the proposed scheme were reduced to five dwelling units the lesser horseshoe bats would not be threatened.

However, no significant changes to the plans were made and the district council planning committee resolved that planning permission should be granted despite contrary

advice submitted by CCW and MWT. The district council said that legal protection of bats was not as important as the local issues of housing and providing job opportunities. Faced with the impending loss of the breeding colony, CCW and MWT asked the Welsh Office to call the planning application in for decision by the Secretary of State for Wales. This was done, just in time, before the decision of the local planning committee had become operative.

A public inquiry lasting 3 days was held in September 1992, where evidence was given concerning the needs of the lesser horseshoe bats. The outcome was announced almost a year later, in August 1993, when the Secretary of State for Wales decided that planning permission should be refused. In reaching the decision it was recognised that more than local issues were at stake and that the government had a duty to respect both national legislation and the obligation to international agreements relating to bats. This was the first ever public inquiry at which bats were the key issue.

Source: Bat News No 31, October 1993.



Lesser horseshoe bat. © Frank Greenaway

## References and further reading

- ANON. 1979. *Convention on the Conservation of European Wildlife and Natural Habitats*. European Treaty Series No. 104. (Bern Convention, 1982.)
- ANON. 1980. *Convention on the Conservation of Migratory Species of Wild Animals*. Treaty Series No. 87. (Bonn Convention, 1982.)
- ANON. 1981. *Wildlife and Countryside Act 1981*. HMSO, London. 128 pp. ISBN 0 10 546981 5.
- ANON. 1991. *Agreement on the Conservation of Bats in Europe*. (Eurobats.)
- ANON. 1994. *Biodiversity: the UK Action Plan*. Cm 2428. HMSO, London.
- ANON. 1995. *Biodiversity: the UK Steering Group Report. Vol 1: Meeting the Rio Challenge. Vol 2: Action Plans*. HMSO, London.
- ANON. 1996. *Wild Mammals (Protection) Act 1996*. HMSO, London. 2 pp. ISBN 0 10 540396 2.
- ANON. 1998 *UK Biodiversity Group Tranche 2 Action Plans. Volume 1 - Vertebrates and Vascular plants*. English Nature, Peterborough. 267 pp. ISBN 1 85716 406 7.
- ANON. 2000. *Countryside and Rights of Way Act 2000*. HMSO, London. ISBN 0 10 543700 X.
- ANON. 2003. *Criminal Justice (Scotland) Act 2003*. The Stationery Office, London. ISBN 0 10 590049 4.
- ANON. 2003. *Nature Conservation (Scotland) Bill*. (As introduced in the Scottish Parliament on 29th September 2003.)
- CHILDS, J. 2003. *Bats and the law: what to do when the law is broken*. Bat Conservation Trust & Royal Society for the Protection of Birds. Available on the internet at <http://www.bats.org.uk/batlaw.htm>
- COMMISSION OF THE EUROPEAN COMMUNITIES. *Council Directive 92/43/EEC of 21st May 1992 on the Conservation of Natural Habitats and of Wild Flora and Fauna*. Official Journal of the European Communities. No. L206/7, pp. 206–92.
- COMMISSION OF THE EUROPEAN COMMUNITIES. *Council Directive 85/337/EEC of 27th June 1985 on the Assessment of the Effects of Certain Public and Private Projects on the Environment*. Official Journal of the European Communities. L 175, pp. 40–48.
- DEPARTMENT OF THE ENVIRONMENT. 1989. *Environmental Assessment: A guide to the Procedures*. HMSO, London.
- DEPARTMENT OF THE ENVIRONMENT. 1994. *Planning Policy Guidance (PPG 9). Nature Conservation*. HMSO, London. 59 pp. ISBN 0 11 752787 4.
- DERBYSHIRE COUNTY COUNCIL. 1996. (2nd edn). *Species Protected by Law - guidance note*. Derbyshire County Council, Matlock. 22 pp.
- ENGLISH NATURE. 1994. *Roads and Nature Conservation. Guidance on impacts, mitigation and enhancement*. English Nature, Peterborough. 81 pp. ISBN 1 85716 134 3.
- ENGLISH NATURE. 1994. *Nature Conservation in Environmental Assessment*. English Nature, Peterborough. 50 pp. ISBN 1 85716 135 1.
- ENVIRONMENT AND HERITAGE SERVICE. *Planning Conservation Guidelines – Nature Conservation and Planning*. Department of the Environment (NI). ISBN 0 337 082979.
- THE SCOTTISH OFFICE DEVELOPMENT DEPARTMENT. 1999. *National Planning Policy Guideline NPPG 14: Natural Heritage*. ISBN 0 7480 7997 1.
- STATUTORY INSTRUMENT NO. 2716. 1994. *The Conservation (Natural Habitats, &c.) Regulations 1994*. HMSO, London. 59 pp. ISBN 0 11 045716 1.
- STATUTORY INSTRUMENT NO. 171 (NI 2). 1985. *The Wildlife (Northern Ireland) Order 1985*. HMSO, London. 39 pp. ISBN 011 056171 6.
- STATUTORY INSTRUMENT NO. 1160. 1997. *The Hedgerow Regulations 1997*. The Stationery Office Ltd, London. 15 pp. ISBN 0 11 064458 1.



Daubenton's bat. © Frank Greenaway