

# lesser horseshoe bat

## Description of Species

The lesser horseshoe bat is one of the smallest British mammals, typically weighing between 4-9g, with a wingspan of 20- 25cm. The horseshoe shaped nose leaf surrounding the nostrils gives the bat its name.

Adult bats have pinky buff-brown fur while juveniles are dark grey in colour. The bats are instantly recognisable within a roost by their small size and their habit of roosting with their wings wrapped round their body. These bats are rarely found roosting in confined areas within the building structure as unlike other bat species, they have little ability to crawl.

In common with all other bat species found in Britain, the lesser horseshoe is insectivorous. Favoured prey includes midges, craneflies and small moths that it takes on the wing or directly off vegetation. Typically these bats forage in woodlands, hedgerows, tree-lined riverbanks and recently they have been recorded hawking over wetland meadows. They are thought to fly up to 2-3 km from the roost, but recent fieldwork has recorded adults foraging up to 10 km from their breeding roosts, and they will travel even greater



Lesser horseshoe bat

Picture courtesy of Mr John J Kaczanow

distances to reach preferred hibernation sites. The maximum distance recorded is 19 km, in the 1950s, but 4km is more typical of the local data.

A variety of roost types are required throughout the year and these include maternity and hibernation sites. In summer female bats gather in so called maternity roosts, prior to the birth of a single pup per female. These roosts are typically found in older buildings, rural houses and out-buildings, within roof spaces, chimneys or boiler rooms. These roosts are strongly associated with wooded river valleys. North East Wales roost sites are typical with a split between manor houses/halls and their satellite buildings and



lesser horseshoe bat

outlying smallholdings. Critical factors for roost sites include an open direct flight access, non-disturbance and preference to exit buildings at very low levels.

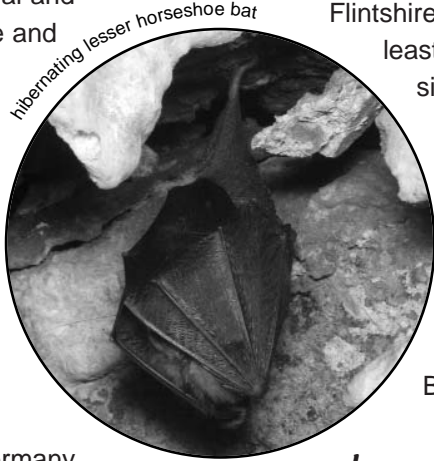
Torpority and hibernation is used as a means of conserving energy when insects are less plentiful, from late autumn to spring. During this period, roost sites are selected which maintain a preferred temperature range of between 7°-12° country wide, or 9°-12°C locally, with high humidity in all sites. Typical sites include caves, tunnels, disused mines, icehouses and cellars. Bats move between hibernation sites over the winter, either within a cave or mine system or to other sites to maintain suitable temperatures. There is also evidence that winter activity has increased since 1986, this includes regular observations of winter-feeding.



## Current Status & Distribution

### International

The lesser horseshoe bat is found throughout central and southern Europe and North Africa and eastwards to central Asia, although there has been a widespread decline across Europe and it is now rare or extinct in The Netherlands, Germany and Poland. Britain supports one of the remaining strongholds for the species, although it is rare and at the northernmost edge of the European range.



### UK and Wales

During the last century, lesser horseshoe bats occurred as far north as Yorkshire and as far east as Kent but they have subsequently suffered a decline in their range. The species is now confined to south western England, Wales, the Welsh borders and Western Ireland. The population has been estimated at 7,000 individuals in Wales and a similar number in England but recent roost counts in Wales suggest a Welsh population of at least 10,000.

NE Wales (Wrexham, Flintshire, Denbighshire and Conwy), supports a significant proportion of the Welsh and UK populations at the north eastern extremity of its range in Europe. The species is concentrated in the lower lying areas of the main river valleys and their tributaries, with hibernation

sites recorded within a combination of natural cave systems and mineral extractions.

### Wrexham

The northern coastal plain, from Flintshire to Wrexham, has the least number of recorded sites. The known populations in Wrexham County Borough are found within the Ceiriog and Clywedog valleys and represent the eastern limit of the range in Britain.

## Legislation

The lesser horseshoe bat has full legal protection under the Wildlife and Countryside Act 1981 (Schedule 5) and requires special protection measures under Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994 transposed from the European Habitats Directive (92/43/EEC).

## Current Factors Affecting Species in North East Wales

The following factors are believed to be partly responsible for the decline of the species:

- *Loss, destruction, disturbance and decay of roosting and hibernation sites caused by deterioration of old buildings and unsympathetic renovation of old buildings and barns.*
- *Loss of insect-rich feeding habitats including hedgerows, woodlands, tree-lines and wooded riparian vegetation,*

*wetlands and old pastures particularly due to high intensity agricultural systems and grazing of woodlands and water-edge habitats by livestock*

- *Loss of linear features, such as continuous hedge lines and tree-lined riverbanks, which connect areas of potential feeding habitat and roosts. Lesser horseshoe bats will cross short breaks in linear structures, but do so very close to the ground (approx. 0.5m) and are therefore, susceptible to predation and can be hit by vehicles whilst crossing roads. This may isolate areas of potentially suitable feeding habitat.*
- *Indiscriminate use of toxic wood preservatives and other chemicals within buildings is also believed to have a negative impact on bat populations.*

## Current Action

### Site and habitat protection

There are no sites within Wrexham County Borough which are statutorily designated for lesser horseshoe bats. However, one roost site does occur within an SSSI and others occur within or adjacent to Wildlife Sites.

### Management and Programmes of Action

Positive conservation management has been undertaken at the main breeding roost: the National Trust have pioneered specially adapted fire doors to accommodate the lesser horseshoe bats at Chirk Castle.

Six sites have been grilled in North-East Wales to protect hibernating bats but none of these are within Wrexham County Borough.



**Survey, Research and Monitoring**

Within Wales counts are carried out annually at the majority of the main breeding sites, as part of the co-ordinated Wales Lesser Horseshoe Bat Summer Roost Surveillance, which includes Chirk castle. The 2001 report concluded that the lesser horseshoe bat population is continuing to increase.

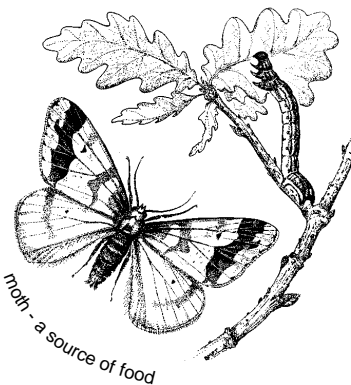
Hibernation sites of importance are also regularly monitored over three week-ends during the winter and have been since 1986. The hibernation sites for the lesser horseshoe bats breeding within the County have yet to be located.

*Sources Of Information*

- UK Biodiversity Steering Group, Volume 2: Action Plans (1995)
- Lesser horseshoe bat surveillance CCW Natural Science Reports (yearly) 1995-2001

*Objectives and Targets*

- 1** *Maintain all existing maternity roosts and hibernation sites that support at least five animals and maintain the overall level of total roost resource.*
- 2** *Consolidate and enhance the area and quality of habitat around key roost sites and localities.*
- 3** *Increase public awareness of lesser horseshoe bats and their legal requirements.*



*Links to Other Action Plans*

**Wrexham Habitat Action Plans:**

- Woodland
- Veteran trees and wood pasture
- River, stream and canal
- Pond
- Garden
- Hedgerow\*

N.B. \* to be published 2004

*Proposed Action with Lead Agencies*

Action	Objectives	Partners	Target
<b>Policy &amp; Legislation</b>			
Review data for all lesser horseshoe bat sites and promote SSSI (and SAC) status where justified.	1	CCW, CBG	2008
Designate all sites containing at least 5 animals as Wildlife Sites.	1	WCBC, NWWT, CBG, CCW	2008
Include the lesser horseshoe bat on the list of features of importance for those SSSIs containing important bat feeding areas.	1, 2	CCW, CBG	2008
<b>Species Management and Protection</b>			
Develop system to highlight potential threats from development at planning stage. Good cross-referenced database to be available for statutory authorities.	1, 2, 3	CCW, WCBC (Development Control, Pest Control), EA, FC	2006
Review the need for management agreements on SSSIs with important feeding areas.	2	CCW	2008
Ensure that Tir Gofal and Woodland Grant schemes, in the vicinity of known lesser horseshoe bat roosts, include relevant habitat management prescriptions and capital works programme to protect and improve potential feeding and commuting habitats (for example, hedgerows, woodlands and stream-side corridors).	2, 3	CCW, FC, NWWT, CBG, FWAG	2004
Investigate opportunities to ensure integrity of sites including by purchase of freehold or tenancy where appropriate.	1, 2	CBG	As resources permit.
Establish artificial roost sites where the potential exists.	1	CCW, WCBC, NWWT, CBG	As resources permit.



<i>Proposed Action with Lead Agencies</i>			
Action	Objectives	Partners	Target
<b>Advisory</b> Distribute leaflets in conjunction with National Organisations on appropriate habitat management for the conservation of the lesser horseshoe bat and distribute to key landowners and other relevant organisations in the vicinity of key populations of the species.	3	BCT, CCW, CBG, NWWT, FWAG	Ongoing.
Ensure that land managers and advisers (particularly those administering relevant agri-environmental schemes) are advised of the location of key roost sites, their importance and appropriate management for the surrounding area.	2, 3	CCW, FC, WCBC, CBG, FWAG, NWWT	2004
<b>Monitoring and Research</b> Identify key areas or population centres especially where there is a lack of known information either hibernation or maternity sites.	1	CCW, CBG	Ongoing.
Survey important hibernation sites to establish access points, their vulnerability and their proximity to the main breeding roost areas.	1	CCW, CBG, BCT, land owners	Ongoing.
Carry out comprehensive survey to identify maternity roosts associated with known hibernacula or hibernacula associated with known maternity roosts/ vice versa, such as Chirk.	1	CCW, CBG, BCT land owners	2013
Develop a systematic recording scheme that includes strategies for monitoring winter and summer roosts, incorporating the CCW Monitoring Strategy.	1	CCW, CBG, BCT	2006
Undertake local studies on flight lines when leaving a roost, as well as their habitat and aerial route way usage; use this research to assist in the development of guidelines and policies for habitat protection, creation and management.	1, 2	BCT, CCW, CBG	2013
To monitor, and report with a view to carrying out remedial works to hibernation sites threatened with landslips and collapse of entrances.	1	CCW, WCBC, CBG, land owners	2008
Ensure that bats have unimpeded access to all roosts and protect by way of grilles or gates where necessary.	1	CCW, CBG, land owners	Ongoing.
<b>Communication and Publicity</b> Develop local web site for county specific data and reference sections for bats.	3	CBG	2006
Establish and maintain points of contact between bat conservationists and organisations associated with the care and restoration of buildings (for example, CADW and Pest Control Department) in the vicinity of lesser horseshoe bat sites.	1, 3	CCW, CBG, WCBC	2006

**Abbreviations for table** BCT - Bat Conservation Trust; CCW - Countryside Council for Wales; CBG - Clwyd Bat Group, EA - Environment Agency; FC - Forestry Commission; FWAG - Farming and Wildlife Advisory Group, NWWT - North Wales Wildlife Trust; WCBC - Wrexham County Borough Council

*Further information*

**Biodiversity Officer**  
Environment Section,  
Planning Department,  
Wrexham County Borough Council,  
Lambpit Street, PO Box 1290  
Wrexham, LL11 1WL

tel: 01978 292019  
fax: 01978 292502  
e-mail: [planning@wrexham.gov.uk](mailto:planning@wrexham.gov.uk)  
website: [www.wrexham.gov.uk/planning](http://www.wrexham.gov.uk/planning)

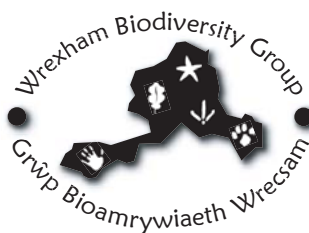
Illustrations courtesy of English Nature. *Authors: Amanda Davies; TIm Hodnett*

Bat photographs courtesy of Mr John J Kaczanow.

Mae'r Cynllun hon ar gael yn Gymraeg. Ffoniwch 01978 292019 am eich copi.

A large print version of this Plan is available.

Please call 01978 292019.



Produced by the Planning Dept, August 2003

