### Proposed Action with Lead Agencies

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### Abbreviations for table
- **BCT**: Bat Conservation Trust
- **CCW**: County Council for Wales
- **CBG**: Cleydon Bat Group
- **EA**: Environment Agency
- **FC**: Forestry Commission
- **FWAG**: Farming and Wildlife Advisory Group
- **NWWT**: North Wales Wildlife Trust
- **WCBC**: Wrexham County Borough Council
- **CADW**: Commission for Archaeology and Natural Resources Wales

### Further information
- **Biodiversity Officer**
  - Environment Section, Planning Department, Wrexham County Borough Council, Lamplit Street, PO Box 1290, Wrexham, LL11 1WL
  - tel: 01978 292019
  - fax: 01978 292502
  - e-mail: planning@wrexham.gov.uk
  - website: www.wrexham.gov.uk/planning

Illustrations courtesy of English Nature. Authors: Amanda Davies, Tim Hodnett

Bat photographs courtesy of Mr John J Kaczanow.

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A large print version of this Plan is available. Please call 01978 292019.
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 as far as the northern 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.

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 lesser horseshoe 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.

**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

**Sources Of Information**

- Lesser horseshoe bat surveillance CCW Natural Science Reports (yearly) 1995-2001

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Further information
Biodiversity Officer
Environment Section, Planning Department, Wrexham County Borough Council, Llambili Street, PO Box 1290, Wrexham, LL11 1WL
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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 2-3km from the roost, but recent fieldwork has recorded adults foraging up to 10 km from their breeding roosts, and they will travel even greater 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 bats are typically found in older buildings, rural houses and outbuildings, within roof spaces, chimneys or boiler rooms. These sites are strongly associated with wooded river valleys. North East Wales roost sites are typical of a split between manor houses/halls and their satellite buildings and outlying smallholdings. Critical factors for roost sites include an open direct flight access, non-disturbance and preference to exit buildings at very low levels.

Torpidity 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°C 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.