

**European Community Directive  
on the Conservation of Natural Habitats  
and of Wild Fauna and Flora  
(92/43/EEC)**

Supporting documentation for the  
Third Report by the United Kingdom under  
Article 17

on the implementation of the Directive  
from January 2007 to December 2012  
Conservation status assessment for

Species:

S1317 - Nathusius' pipistrelle (*Pipistrellus nathusii*)

**IMPORTANT NOTE – PLEASE READ**

- The country-level reporting information contained in this document is a contribution to the Article 17 UK report for the habitat/species concerned.
- It has been provided by **Natural Resources Wales** and refers only to the state of the habitat/species in **Wales** - it does not constitute an assessment for the whole of the UK.
- The Article 17 UK Approach document provides details on how this information has been used and, combined with information supplied by other Statutory Nature Conservation Bodies
- The format of the document is closely aligned to that set out by the European Commission for Member State reporting – as a result, some of the fields are not applicable at a country-level and have deliberately been left blank – in addition, the content of most fields is constrained by the EC reporting categories.

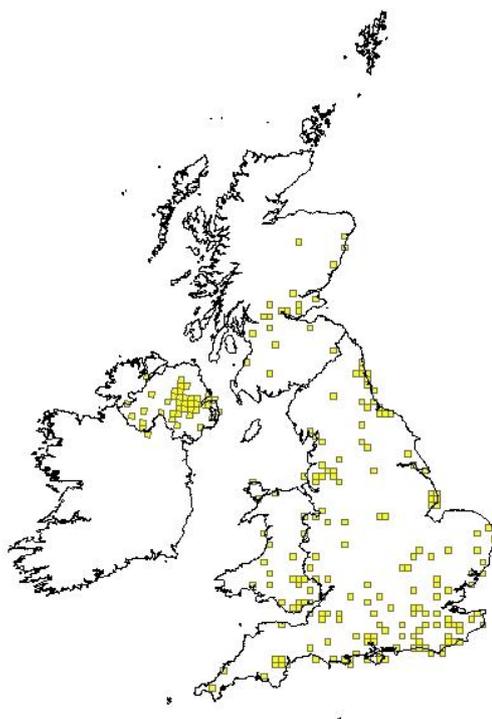
As of 1 April 2013, the Countryside Council for Wales, Environment Agency Wales and Forestry Commission Wales became Natural Resources Wales/Cyfoeth Naturiol Cymru

## Reporting format on the 'main results of the surveillance under Article 11' for Annex II, IV & V species

| <i>Field name</i>  | <i>Brief explanations</i>                                    |                                     |
|--------------------|--|-------------------------------------|
| <b>0.2 Species</b> | <b>0.2.1 Species code</b>                                    | <b>S1317</b>                        |
|                    | <b>0.2.2 Species scientific name</b>                         | <b><i>Pipistrellus nathusii</i></b> |
|                    | <b>0.2.3 Alternative species scientific name</b><br>Optional |                                     |
|                    | <b>0.2.4 Common name</b><br>Optional                         | <b>Nathusius' pipistrelle</b>       |

### 1.1 Maps

|                               |  |                  |              |
|-------------------------------|--|------------------|--------------|
| <b>1.1.1 Distribution map</b> |  | <b>Sensitive</b> | <b>False</b> |
|-------------------------------|--|------------------|--------------|



|                                |  |
|--------------------------------|--|
| <b>1.1.2 Method used - map</b> | <p><b>Estimate based on partial data with some extrapolation and/or modelling</b></p> <p>Distribution map is based on validated records, however, no maternity sites have been found in Wales and its status in Wales is unclear. There are scattered records for the species across Wales. <i>P. nathusii</i> is a highly migratory species, moving south-westwards from northern continental Europe in autumn (Hutterer et al, 2005). Records from Shetland, Orkney and a proportion from eastern England and Scotland represent migratory individuals, as there is a clear peak in records during the autumn. A small number of breeding roosts is known from England and Northern Ireland, so it appears that the UK population consists of both residents and</p> |
|--------------------------------|--|

|  |   |
|--|---|
|  | migrants. See also 1.1.3  |
| <b>1.1.3 Year or period</b>              | <b>2000-2012</b>  |
|  | The date range indicated has been selected to reflect current range/surface area for the species for the following reasons:<br><br>There are limitations in the quality of the data available, particularly of the earlier data. There are few if any records of <i>P.nathusius</i> identified in the hand in Wales. Detector records before the advent of time expansion and frequency division bat detectors are unreliable and those not recorded are unverifiable. The largest dataset (Richardson 2000) has data ranging from 1980-1999 but the date of individual records within this dataset is not known. Deviating from this time period has meant excluding these records. There are very few records from before 1980. |
| <b>1.1.4 Additional distribution map</b> | <b>False</b>  |
| <b>1.1.5 Range map</b>                   |   |

|  |  |
|--|--|
| <b>2.1 Biogeographical region &amp; marine regions</b> | <b>ATL</b>   |
| <b>2.2 Published sources</b>                           | <p>"LUNDY, M., MONTGOMERY, I &amp; RUSS, J. 2010. Climate change-linked range expansion of <i>Nathusius' pipistrelle</i> bat, <i>Pipistrellus nathusii</i> (Keyserling &amp; Blasius, 1839). <i>J. Biogeogr.</i> 37(12): 2232-2242.</p> <p>HUTTERER, R., IVANOVA, T., MEYER-CORDS, C. &amp; RODRIGUES, L. 2005. Bat Migrations in Europe: A review of banding data and literature. Federal Agency for Nature Conservation, Bonn.</p> <p>MITCHELL-JONES, T.J. 2010. Bats in houses – the conservation challenge. Pp 365-378 in <i>Species Management: challenges and solutions for the 21st century</i>. BAXTER, J.M. &amp; GALBRAITH, C.A. TSO Scotland, Edinburgh.</p> <p>MITCHELL-JONES, T.M.J &amp; CARLIN, C (2009). TIN051 Bats and onshore wind turbines Interim Guidance. 2nd edition, February 2012. <a href="http://publications.naturalengland.org.uk/file/490077">http://publications.naturalengland.org.uk/file/490077</a></p> <p>RUSS, J.M., HUTSON, A.M., MONTGOMERY, W.I., RACEY, P.A. &amp; SPEAKMAN, J.R. (2001) The status of <i>Nathusius' pipistrelle</i> (<i>Pipistrellus nathusii</i> Keyserling &amp; Blasius, 1839) in the British Isles. <i>Journal of Zoology</i>, 254, 91–100.</p> <p>RUSS, J.M., JONES, G., RACEY, P.A. &amp; HUTSON, A.M. 2008. <i>Nathusius' pipistrelle</i> <i>Pipistrellus nathusii</i>. Pp 351-355 in HARRIS, S &amp; YALDEN, D.W. <i>Mammals of the British Isles: Handbook</i>, 4th edition. The Mammal Society, Southampton. 799pp."</p> |

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|---------------------------------|--|
| <b>2.3 Range</b>                |  |
| <b>2.3.1 Surface area Range</b> |  |

|  |  |              |
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| <b>2.3.2 Method used</b><br><b>Surface area of Range</b>         | <b>Estimate based on partial data with some extrapolation and/or modelling</b>   |              |
|  | See also Notes 1.1.2 and 1.1.3. Distribution map is based on records, but there are few records available for this species in Wales and a low level of confidence that these reflect the range accurately. |              |
| <b>2.3.3 Short-term trend</b><br><b>Period</b>                   | <b>2001-2012</b>   |              |
| <b>2.3.4 Short term trend</b><br><b>Trend direction</b>          | <b>unknown</b>   |              |
|  | There is insufficient information to trends for this species in Wales. See also Notes 1.1.2 and 1.1.3.<br>No reliable information available.   |              |
| <b>2.3.5 Short-term trend</b><br><b>Magnitude</b>                | <b>a) Minimum</b>  |              |
|  |  |              |
|  | <b>b) Maximum</b>  |              |
| <b>2.3.6 Long-term trend</b><br><b>Period</b>                    | <b>1989-2012</b>   |              |
| <b>2.3.7 Long-term trend</b><br><b>Trend direction</b>           | <b>unknown</b>   |              |
| <b>2.3.8 Long-term trend</b><br><b>Magnitude</b><br><br>Optional | <b>a) Minimum</b>  |              |
|  |  |              |
|  | <b>b) Maximum</b>  |              |
| <b>2.3.9 Favourable reference</b><br><b>range</b>                | <b>a) Value in km<sup>2</sup></b>  |              |
|  |  |              |
|  | <b>b) Operator for FRR</b>   |              |
|  |  |              |
|  | <b>c) FRR is unknown (indicated by "true")</b>   | <b>False</b> |
|  |  |              |
|  | <b>d) Method used to set FRR</b>   |              |
|  |  |              |

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|--|---|--------------|
| <b>2.3.10 Reason for change</b><br>Is the difference between the reported value in 2.3.1 and the previous reporting round mainly due to... | <b>a) Genuine change?</b>   | <b>False</b> |
|  | P. nathusii has clearly been under-recorded in the past and many new bat detector records have increased knowledge of the species' range considerably since the 2007 report. However, defining the species' range is complicated by its migratory nature and it is unclear whether the species is permanently resident through the range shown. The number of records of P. nathusii has increased greatly in recent years. This is at least partly due to the greater use of bat detectors in surveys and a greater awareness of the species among surveyors, but the species may also be extending its range due to climate change (Lundy et al, 2010). |              |
|  | <b>b) Improved knowledge/more accurate data?</b>  | <b>True</b>  |
|  | See Note 2.3.10a.   |              |
|  | <b>c) Use of different method (e.g. "Range tool")?</b>  | <b>False</b> |
|  |   |              |

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| <b>2.4 Population</b>  |  |                              |
| <b>2.4.1 Population size estimation</b><br>(using individuals or agreed exceptions where possible)                               | <b>a) Unit</b>                                       | <b>number of individuals</b> |
|  | <b>b) Minimum</b>                                    |                              |
|  | See Note 2.4.5                                       |                              |
|  | <b>c) Maximum</b>                                    |                              |
| See Note 2.4.5   |  |                              |
| <b>2.4.2 Population size estimation</b> (using population unit other than individuals)<br>Optional ( <i>if 2.4.1 filled in</i> ) | <b>a) Unit</b>                                       |                              |
|  | <b>b) Minimum</b>                                    |                              |
|  | <b>c) Maximum</b>                                    |                              |
|  |  |                              |
| <b>2.4.3 Additional information on population estimates / conversion</b><br>Optional   | <b>a) Definition of "locality"</b>                   |                              |
|  | <b>b) Method to convert data</b>                     |                              |
|  | <b>c) Problems encountered to provide population</b> |                              |
|  |  |                              |

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|---|---|--|
|   | <b>size estimation</b>  |  |
| <b>2.4.4 Year or period</b>                         | <b>2007-2012</b>  |  |
| <b>2.4.5 Method used</b>                            | <b>Absent data</b>  |  |
| <b>Population size</b>                              | The population in the UK is at least partly migratory, though the proportion of residents to migrants is unknown. Insufficient data are available to make a population estimate. No breeding roosts are known in Wales and it is not clear if there is a resident population. |  |
| <b>2.4.6 Short-term trend Period</b>                | <b>2001-2012</b>  |  |
|   | See Notes 2.4.5 and 2.3.10a   |  |
| <b>2.4.7 Short-term trend Trend direction</b>       | <b>unknown</b>  |  |
|   | See Notes 2.5.1 and 2.3.10a   |  |
| <b>2.4.8 Short-term trend Magnitude</b>             | <b>a) Minimum</b>   |  |
|   |   |  |
|   | <b>b) Maximum</b>   |  |
|   |   |  |
|   | <b>c) Confidence interval</b>   |  |
| <b>2.4.9 Short-term trend Method used</b>           | <b>Absent data</b>  |  |
|   | See Notes 2.5.1 and 2.3.10a   |  |
| <b>2.4.10 Long-term trend – Period</b>              | <b>1989-2012</b>  |  |
|   |   |  |
| <b>2.4.11 Long-term trend Trend direction</b>       | <b>unknown</b>  |  |
|   |   |  |
| <b>2.4.12 Long-term trend Magnitude</b><br>Optional | <b>a) Minimum</b>   |  |
|   |   |  |
|   | <b>b) Maximum</b>   |  |
|   |   |  |
|   | <b>c) Confidence interval</b>   |  |

|   |   |                            |              |
|---|---|----------------------------|--------------|
|   |   |                            |              |
| <b>2.4.13 Long term trend Method used</b>     | <b>0</b>  |                            |              |
| <b>2.4.14 Favourable reference population</b> | <b>a) Number of individuals/agreed exceptions/other units</b>   |                            |              |
|   | <b>b) Operator</b>  |                            |              |
|   | <b>c) FRP is unknown indicated by "true"</b>  | <b>False</b>               |              |
|   | <b>d) Method used to set FRP</b>  |                            |              |
|   | <b>2.4.15 Reason for change</b><br>Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to: | <b>a) Genuine change?</b>  | <b>False</b> |
|   |   | See Note 2.4.5 and 2.3.10a |              |
|   | <b>b) Improved knowledge/more accurate data?</b>  | <b>True</b>                |              |
|   | <b>c) Use of different method (e.g. "Range tool")?</b>  | <b>False</b>               |              |

|                                    |   |
|------------------------------------|---|
| <b>2.5 Habitat for the species</b> |   |
| <b>2.5.1 Area estimation</b>       | <p><b>2061</b></p> <p>Feeds in riparian habitats, broadleaved and mixed woodland and parkland. Occasionally found in farmland, but nearly always near running or still water.</p> <p>As this is a generalist species, using a mosaic of habitats, the area of distribution is used as an estimate of habitat area. This is calculated from the number of filled 10km squares in the distribution map.</p> <p>Known maternity roosts are in buildings.</p> <p>It is unknown whether the amount of habitat in the UK is sufficient to support a viable population of the species.</p> |

|   |  |   |
|---|--|---|
| <b>2.5.2 Year or period</b>   | <b>2001-2012</b>   |   |
|   | See Note 2.5.1   |   |
| <b>2.5.3 Method used<br/>Habitat for the species</b>  | <b>Estimate based on expert opinion with no or minimal sampling</b>  |   |
| <b>2.5.4 Quality of the<br/>habitat</b>   | <b>a) Habitat quality</b>  | <b>Unknown</b>  |
|   | The distribution was based on few records and is not considered reliable (see Note 1.1.3). There is insufficient information to assess habitat<br>There is insufficient information available to assess habitat quality. See also Note 2.5.1 |   |
|   | <b>b) Assessment method</b>  | <b>N/A There is insufficient information available to assess habitat quality.</b> |
| <b>2.5.5 Short-term trend<br/>Period</b>  | <b>2001-2012</b>   |   |
| <b>2.5.6 Short-term trend<br/>Trend direction</b>   | <b>unknown</b>   |   |
| <b>2.5.7 Long-term trend<br/>Period</b>   | <b>1989-2012</b>   |   |
| <b>2.5.8 Long-term trend<br/>Trend direction</b>  | <b>unknown</b>   |   |
| <b>2.5.9 Area of suitable habitat<br/>for the species</b>   | <b>a) Value in km<sup>2</sup></b>  | <b>0</b>  |
|   | <b>b) Absence of data indicated as '0'</b>   |   |
| <b>2.5.10 Reason for change</b><br>Is the difference between the value reported at 2.5.1 and the previous reporting round mainly due to | <b>a) Genuine change?</b>  | <b>False</b>  |
|   | There are insufficient data to comment on change between reporting rounds.   |   |
|   | <b>b) Improved knowledge/more accurate data?</b>   | <b>False</b>  |
|   | <b>c) Use of different method (e.g. "Range tool")?</b>   | <b>False</b>  |

| <b>2.6 Main pressures</b> |  |                               |
|---------------------------|--|-------------------------------|
| <b>a) Pressure</b>        | <b>b) Ranking</b>                            | <b>c) Pollution qualifier</b> |
|                           | H = high importance<br>M = medium importance |                               |

|  | L = low importance |  |
|--|--------------------|--|
| A10: Restructuring agricultural land holding                               | H                  |  |
| G05: Other human intrusions and disturbances                               | H                  |  |
| A02: modification of cultivation practices                                 | M                  |  |
| A07: use of biocides, hormones and chemicals                               | M                  |  |
| B02: Forest and Plantation management & use                                | M                  |  |
| D01: Roads, paths and railroads  | M                  |  |
| H01: Pollution to surface waters (limnic & terrestrial, marine & brackish) | L                  |  |
| J02: human induced changes in hydraulic conditions                         | L                  |  |
|  |                    |  |

Pressures and threats can generally be divided into those that affect roosts and those that affect commuting and foraging (including prey availability). Changes in building practices to improve energy efficiency mean that new buildings may offer fewer roosting opportunities (Mitchell-Jones, 2010). Pipistrelles forage along linear features, over wetlands and in woodland clearings. Agricultural and forestry practices that remove or simplify these habitats, or affect the biomass of insect prey could negatively affect populations.

#### 2.6.1 Method used – Pressures

#### based only on expert judgements

Pressures and threats have been identified based on knowledge of the species ecology. It is assumed that the same or similar pressures and threats would apply to the species if resident in Wales.

| 2.7 Threats                                  |  |                        |
|--|--|------------------------|
| a) Threat                                    | b) Ranking   | c) Pollution qualifier |
|  | H = high importance<br>M = medium importance<br>L = low importance |                        |
| A10: Restructuring agricultural land holding | H  |                        |
| G05: Other human intrusions and disturbances | H  |                        |
| A02: modification of cultivation practices   | M  |                        |
| A07: use of biocides, hormones and chemicals | M  |                        |
| B02: Forest and Plantation management & use  | M  |                        |
| C03: Renewable abiotic energy use            | M  |                        |

|  |   |  |
|--|---|--|
| D01: Roads, paths and railroads  | M |  |
| H01: Pollution to surface waters (limnic & terrestrial, marine & brackish) | L |  |
| J02: human induced changes in hydraulic conditions                         | L |  |
|  |   |  |

See 2.6. In addition this species is one that is considered to be at high risk from fatalities associated with wind farms from studies in the European Continent and the threat at the population level is considered to be high, Mitchell-Jones and Carlin, 2009. Current research is considering this, but it is too soon to assess the risk that wind turbines pose to nathusius bat populations in England and Wales.

**2.7.1 Method used – Threats****expert opinion**

See 2.6.1

**2.8 Complementary information****2.8.1 Justification of % thresholds for trends****2.8.2 Other relevant information****2.8.3 Trans-boundary assessment****2.9 Conclusions (*assessment of conservation status at end of reporting period*)**

Please refer to the United Kingdom assessment for this species.

**3 Natura 2000 coverage & conservation measures - Annex II species (*only applies to species listed under Annex II of the Directive*)****3.1 Population****3.1.1 Population size**

Estimation of population size included in the SAC network

**a) Unit****b) Minimum**

|   |                   |  |
|---|-------------------|--|
|   | <b>c) Maximum</b> |  |
| <b>3.1.2 Method used</b>  |                   |  |
| <b>3.1.3 Trend of population size within the network (short-term trend)</b> |                   |  |

| <b>3.2 Conservation measures</b>   |                    |                   |                |              |            |  |   |            |                          |  |            |              |              |            |                  |
|--|--------------------|-------------------|----------------|--------------|------------|--|---|------------|--------------------------|--|------------|--------------|--------------|------------|------------------|
| Conservation measures taken (i.e. already being implemented) within the reporting period and provided information about their importance, location and evaluation. |                    |                   |                |              |            |  |   |            |                          |  |            |              |              |            |                  |
| <b>3.2.1 Measure</b>   | <b>3.2.2 Type</b>  |                   |                |              |            | <b>3.2.3 Ranking</b><br><br>H = high importance<br>M = medium importance<br>L = low importance | <b>3.2.4 Location</b><br><br>where the measure is PRIMARILY applied |            |                          | <b>3.2.5 Broad evaluation of the measure</b> |            |              |              |            |                  |
|  | a) Legal/statutory | b) Administrative | c) Contractual | d) Recurrent | e) One-off |  | a) Inside   | b) Outside | c) Both inside & outside | a) Maintain                                  | b) Enhance | c) Long term | d) No effect | e) Unknown | f) Not evaluated |
|  |                    |                   |                |              |            |  |   |            |                          |  |            |              |              |            |                  |

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