

**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

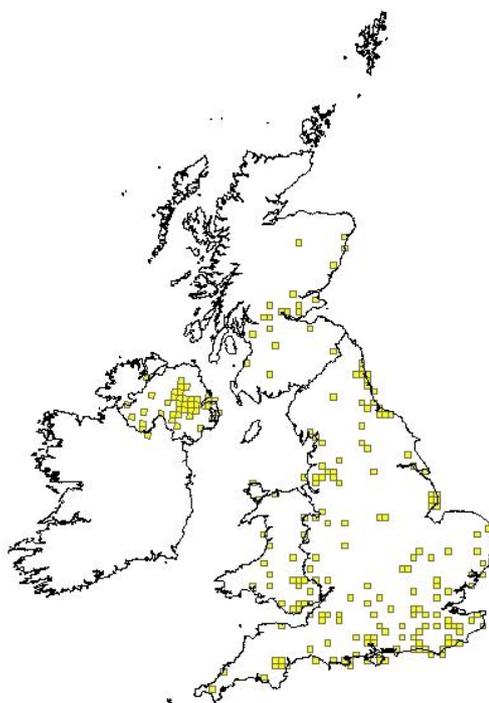
- The country-level reporting information contained in this document is a contribution to the Article 17 UK report for the habitat/species concerned.
- It has been provided by **Scottish Natural Heritage** and refers only to the state of the habitat/species in **Scotland** - it does not constitute an 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.

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>	
0.2 Species	0.2.1 Species code	S1317
	0.2.2 Species scientific name	<i>Pipistrellus nathusii</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	Nathusius' pipistrelle

1.1 Maps

1.1.1 Distribution map	Sensitive	False
<p>P. nathusii 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. However, 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 migrants. No maternity sites have been found in Scotland, but the species has been recorded throughout the year.</p>		



1.1.2 Method used - map	Estimate based on partial data with some extrapolation and/or modelling
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1.1.3 Year or period	1980-2012
	The date range indicated has been selected to reflect current range/surface area for the species for the following reasons: <ul style="list-style-type: none"> • There are limitations in the quality of the data available. 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 would mean having to exclude these records. • There are very few records from before 1980.
1.1.4 Additional distribution map	False
1.1.5 Range map	

2.1 Biogeographical region & marine regions	ATL
2.2 Published sources	<p>HUTTERER, R., IVANOVA, T., MEYER-CORDS, C. & RODRIGUES, L. 2005. Bat Migrations in Europe: A review of banding data and literature. Federal Agency for Nature Conservation, Bonn.</p> <p>LUNDY, M., MONTGOMERY, I & RUSS, J. 2010. Climate change-linked range expansion of Nathusius' pipistrelle bat, <i>Pipistrellus nathusii</i> (Keyserling & Blasius, 1839). <i>J. Biogeogr.</i> 37(12): 2232-2242.</p> <p>NATURAL ENGLAND. 2012. Bats and Onshore wind Turbines: Interim Guidance. Natural England Technical Information Note TIN51, Natural England, Sheffield http://publications.naturalengland.org.uk/publication/35010.</p> <p>RUSS, J.M., HUTSON, A.M., MONTGOMERY, W.I., RACEY, P.A. & SPEAKMAN, J.R. (2001) The status of Nathusius' pipistrelle (<i>Pipistrellus nathusii</i> Keyserling & Blasius, 1839) in the British Isles. <i>Journal of Zoology</i>, 254, 91–100 http://onlinelibrary.wiley.com/doi/10.1017/S0952836901000589/abstract.</p> <p>RUSS, J.M., JONES, G., RACEY, P.A. & HUTSON, A.M. 2008. Nathusius' pipistrelle <i>Pipistrellus nathusii</i>. Pp 351-355 in HARRIS, S & YALDEN, D.W. <i>Mammals of the British Isles: Handbook</i>, 4th edition. The Mammal Society, Southampton. 799pp."</p>
	<p>HUTTERER, R., IVANOVA, T., MEYER-CORDS, C. & RODRIGUES, L. 2005. Bat Migrations in Europe: A review of banding data and literature. Federal Agency for Nature Conservation, Bonn.</p> <p>LUNDY, M., MONTGOMERY, I & RUSS, J. 2010. Climate change-linked range expansion of Nathusius' pipistrelle bat, <i>Pipistrellus nathusii</i> (Keyserling & Blasius, 1839). <i>J. Biogeogr.</i> 37(12): 2232-2242.</p> <p>NATURAL ENGLAND. 2012. Bats and Onshore wind Turbines: Interim Guidance. Natural England Technical Information Note TIN51, Natural England, Sheffield http://publications.naturalengland.org.uk/publication/35010.</p> <p>RUSS, J.M., HUTSON, A.M., MONTGOMERY, W.I., RACEY, P.A. &</p>

	<p>SPEAKMAN, J.R. (2001) The status of <i>Nathusius' pipistrelle</i> (<i>Pipistrellus nathusii</i> Keyserling & Blasius, 1839) in the British Isles. <i>Journal of Zoology</i>, 254, 91–100 http://onlinelibrary.wiley.com/doi/10.1017/S0952836901000589/abstract.</p> <p>RUSS, J.M., JONES, G., RACEY, P.A. & HUTSON, A.M. 2008. <i>Nathusius' pipistrelle</i> <i>Pipistrellus nathusii</i>. Pp 351-355 in HARRIS, S & YALDEN, D.W. <i>Mammals of the British Isles: Handbook</i>, 4th edition. The Mammal Society, Southampton. 799pp.</p>
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2.3 Range	
2.3.1 Surface area Range	
2.3.2 Method used Surface area of Range	<p>Estimate based on partial data with some extrapolation and/or modelling</p> <p><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. However, 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 migrants. No maternity sites have yet been found in Scotland, but the species has been recorded during the summer and so is clearly resident.</p>
2.3.3 Short-term trend Period	
2.3.4 Short term trend Trend direction	unknown
2.3.5 Short-term trend Magnitude	a) Minimum
	b) Maximum
2.3.6 Long-term trend Period	
2.3.7 Long-term trend Trend direction	unknown
2.3.8 Long-term trend Magnitude	a) Minimum
	b) Maximum
Optional	

2.3.9 Favourable reference range	a) Value in km²	
	b) Operator for FRR	
	c) FRR is unknown (indicated by "true")	True
	d) Method used to set FRR	
2.3.10 Reason for change Is the difference between the reported value in 2.3.1 and the previous reporting round mainly due to...	a) Genuine change?	False
	b) Improved knowledge/more accurate data?	False
	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	
	c) Use of different method (e.g. "Range tool")?	False

2.4 Population		
2.4.1 Population size estimation (using individuals or agreed exceptions where possible)	a) Unit	number of individuals
	b) Minimum	
	c) Maximum	
2.4.2 Population size estimation (using population unit other than individuals) Optional (<i>if 2.4.1 filled in</i>)	a) Unit	
	b) Minimum	

	c) Maximum	
2.4.3 Additional information on population estimates / conversion Optional	a) Definition of "locality"	
	b) Method to convert data	
	c) Problems encountered to provide population size estimation	
2.4.4 Year or period		
2.4.5 Method used Population size	Absent data RUSS, J.M., JONES, G., RACEY, P.A. & HUTSON, A.M. 2008. Nathusius' pipistrelle <i>Pipistrellus nathusii</i> . Pp 351-355 in HARRIS, S & YALDEN, D.W. Mammals of the British Isles: Handbook, 4th edition. The Mammal Society, Southampton. 799pp. The population is at least partly migratory, though the proportion of residents to migrants is unknown. Insufficient data are available to make a population estimate. In England, two breeding roosts are known, holding up to 200 individuals each.	
2.4.6 Short-term trend Period		
2.4.7 Short-term trend Trend direction	unknown	
2.4.8 Short-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
2.4.9 Short-term trend Method used	Absent data	
2.4.10 Long-term trend –		

Period		
2.4.11 Long-term trend Trend direction	unknown	
2.4.12 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
	c) Confidence interval	
2.4.13 Long term trend Method used	0	
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	
	b) Operator	
	c) FRP is unknown indicated by "true"	True
	d) Method used to set FRP	
2.4.15 Reason for change Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	a) Genuine change?	False
	b) Improved knowledge/more accurate data?	True
	The number of records of <i>P. nathusii</i> 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).	

	c) Use of different method (e.g. "Range tool")?	False

2.5 Habitat for the species		
2.5.1 Area estimation	1941	
	<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>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. England: 14,700 Scotland:1,941 Wales: 2,061</p> <p>It is unknown whether the amount of habitat in the UK is sufficient to support a viable population of the species.</p>	
2.5.2 Year or period	2012-2012	
2.5.3 Method used Habitat for the species	Estimate based on expert opinion with no or minimal sampling	
2.5.4 Quality of the habitat	a) Habitat quality	Unknown
	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 10 km squares in the distribution map.	
	b) Assessment method	No or insufficient reliable information available
No or insufficient reliable information available		
2.5.5 Short-term trend Period		
2.5.6 Short-term trend Trend direction	unknown	
2.5.7 Long-term trend Period		
2.5.8 Long-term trend Trend direction	unknown	
2.5.9 Area of suitable habitat for the species	a) Value in km²	
	England: 14,700 Scotland:1,941 Wales: 2,061	
	b) Absence of data indicated as '0'	

2.5.10 Reason for change Is the difference between the value reported at 2.5.1 and the previous reporting round mainly due to	a) Genuine change?	False
	b) Improved knowledge/more accurate data?	False
	c) Use of different method (e.g. "Range tool")?	False

2.6 Main pressures		
a) Pressure	b) Ranking	c) Pollution qualifier
	H = high importance 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	O
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 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

RUSS, J.M., JONES, G., RACEY, P.A. & HUTSON, A.M. 2008. *Nathusius' pipistrelle* *Pipistrellus nathusii*. Pp 351-355 in HARRIS, S & YALDEN, D.W. *Mammals of the British Isles: Handbook*, 4th edition. The Mammal Society, Southampton. 799pp.
 MITCHELL-JONES, T.J. 2010. *Bats in houses – the conservation*

	challenge. Pp 365-378 in Species Management: challenges and solutions for the 21st century. BAXTER, J.M. & GALBRAITH, C.A. TSO Scotland, Edinburgh.
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2.7 Threats		
a) Threat	b) Ranking	c) Pollution qualifier
	H = high importance 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	O
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	

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. This species is considered to be at high risk from onshore wind turbines, though specific data are lacking.

2.7.1 Method used – Threats	expert opinion
	NATURAL ENGLAND. 2012. Bats and Onshore wind Turbines: Interim Guidance. Natural England Technical Information Note TIN51, Natural England, Sheffield http://publications.naturalengland.org.uk/publication/35010 .

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****c) Maximum****3.1.2 Method used****3.1.3 Trend of population size within the network
(short-term trend)****3.2 Conservation measures**

Conservation measures taken (i.e. already being implemented) within the reporting period and provided information about their importance, location and evaluation.

3.2.1 Measure	3.2.2 Type					3.2.3 Ranking H = high importance M = medium importance L = low importance	3.2.4 Location where the measure is PRIMARILY applied			3.2.5 Broad evaluation of the measure					
	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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