

**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:

S1322 - Natterer's bat (*Myotis nattereri*)

IMPORTANT NOTE – PLEASE READ

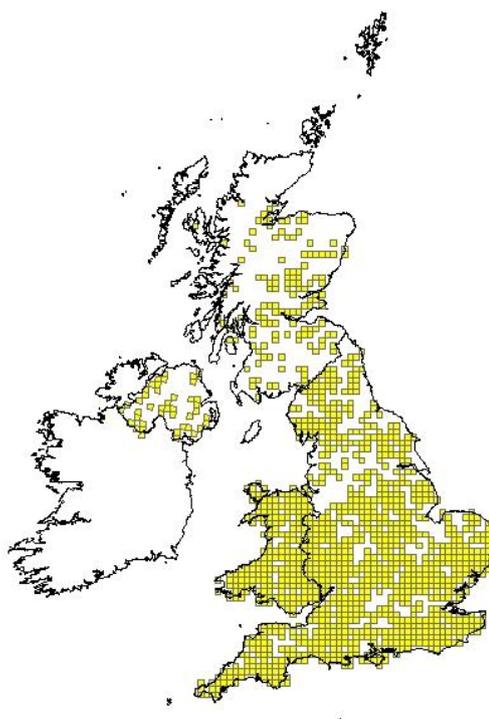
- The country-level reporting information contained in this document is a contribution to the Article 17 UK report for the habitat/species concerned.
- It has been provided by **Scottish Natural Heritage** and refers only to the state of the habitat/species in **Scotland** - it does not constitute an 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	S1322
	0.2.2 Species scientific name	<i>Myotis nattereri</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	Natterer's bat

1.1 Maps

1.1.1 Distribution map	Sensitive	False
<p>Although there have been no structured distribution surveys, it has been reasonably well recorded by local bat groups and during monitoring surveys organised by the National Bat Monitoring Programme. The distribution map is believed to represent the actual distribution of the species well, though it is possible that further survey work in Scotland will extend the known range slightly northwards.</p> <p>Natterer's bat is widespread in England and Wales, being found in all wooded landscapes.</p> <p>In Scotland, Natterer's bat is widespread in lowlands and river valleys as far north as Easter Ross. It appears to be less common in the west, but this may be an artefact of under-recording in that area. It has been recorded on Skye and Arran.</p>		



1.1.2 Method used - map	Estimate based on partial data with some extrapolation and/or modelling Although there have been no structured distribution surveys, it has been reasonably well recorded by local bat groups and during monitoring surveys organised by the National Bat Monitoring Programme. The distribution map is believed to represent the actual distribution of the species well, though it is possible that further survey work in Scotland will extend the known range slightly northwards.
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. • The greatest level of change affecting populations of this species probably occurred prior to 1980, and so 1980 to the present is likely to reflect current distribution and range.
1.1.4 Additional distribution map	False
1.1.5 Range map	

2.1 Biogeographical region & marine regions	ATL
2.2 Published sources	<p>"BAT CONSERVATION TRUST. 2006. The National Bat Monitoring Programme Annual Report 2005. Available to download from Bat Conservation Trust website (www.bats.org.uk) and Tracking Mammals Partnership website (www.trackingmammals.org).</p> <p>BAT CONSERVATION TRUST. 2012. The National Bat Monitoring Programme. Annual Report 2011. Bat Conservation Trust, London. (www.bats.org.uk)</p> <p>BATTERSBY, J (Ed.). 2005. UK Mammals: Species Status and Population Trends. JNCC/Tracking Mammals Partnership http://jncc.defra.gov.uk/page-3311.</p> <p>BOYE, P. & DIETZ, M. 2005. Research Report No 661: Development of good practice guidelines for woodland management for bats. English Nature, Peterborough http://publications.naturalengland.org.uk/publication/65012.</p> <p>CAREY, P.D., WALLIS, S.M., EMMETT, B.E., MASKELL, L.C., MURPHY, J., NORTON, L.R., SIMPSON, I.C., SMART, S.S. 2008. Countryside Survey: UK headline messages from 2007. Centre for Ecology & Hydrology, Wallingford www.ceh.ac.uk/products/publications/CS2007headlinereport.html.</p> <p>HARRIS, S., MORRIS, P., WRAY, S. and YALDEN, D. 1995. A review of British Mammals: population estimates and conservation status of British mammals other than cetaceans. JNCC, Peterborough http://jncc.defra.gov.uk/page-2759.</p> <p>RICHARDSON, P. 2000. Distribution atlas of bats in Britain and</p>

	<p>Ireland 1980-1999. Bat Conservation Trust, London.</p> <p>SMITH, P.G. & RIVERS, N.M. 2008. Natterer's bat <i>Myotis nattereri</i>. Pp 323-328. In HARRIS, S & YALDEN, D.W. Mammals of the British Isles: Handbook, 4th edition. The Mammal Society, Southampton. 799pp.</p> <p>SPEAKMAN, J.R. 1991. The impact of predation by birds on bat populations in the British Isles. Mammal Review, 21, 123-142 http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2907.1991.tb00114.x/abstract."</p>
	<p>BAT CONSERVATION TRUST. 2006. The National Bat Monitoring Programme Annual Report 2005. Available to download from Bat Conservation Trust website (www.bats.org.uk) and Tracking Mammals Partnership website (www.trackingmammals.org).</p> <p>BAT CONSERVATION TRUST. 2012. The National Bat Monitoring Programme. Annual Report 2011. Bat Conservation Trust, London. (www.bats.org.uk)</p> <p>BATTERSBY, J (Ed.). 2005. UK Mammals: Species Status and Population Trends. JNCC/Tracking Mammals Partnership http://jncc.defra.gov.uk/page-3311.</p> <p>BOYE, P. & DIETZ, M. 2005. Research Report No 661: Development of good practice guidelines for woodland management for bats. English Nature, Peterborough http://publications.naturalengland.org.uk/publication/65012.</p> <p>CAREY, P.D., WALLIS, S.M., EMMETT, B.E., MASKELL, L.C., MURPHY, J., NORTON, L.R., SIMPSON, I.C., SMART, S.S. 2008. Countryside Survey: UK headline messages from 2007. Centre for Ecology & Hydrology, Wallingford www.ceh.ac.uk/products/publications/CS2007headlinereport.html.</p> <p>HARRIS, S., MORRIS, P., WRAY, S. and YALDEN, D. 1995. A review of British Mammals: population estimates and conservation status of British mammals other than cetaceans. JNCC, Peterborough http://jncc.defra.gov.uk/page-2759.</p> <p>RICHARDSON, P. 2000. Distribution atlas of bats in Britain and Ireland 1980-1999. Bat Conservation Trust, London.</p> <p>SMITH, P.G. & RIVERS, N.M. 2008. Natterer's bat <i>Myotis nattereri</i>. Pp 323-328. In HARRIS, S & YALDEN, D.W. Mammals of the British Isles: Handbook, 4th edition. The Mammal Society, Southampton. 799pp.</p> <p>SPEAKMAN, J.R. 1991. The impact of predation by birds on bat populations in the British Isles. Mammal Review, 21, 123-142 http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2907.1991.tb00114.x/abstract.</p>

2.3 Range	
2.3.1 Surface area Range	
2.3.2 Method used Surface area of Range	Estimate based on partial data with some extrapolation and/or modelling
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 Optional	a) Minimum	
	b) Maximum	
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

	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	17500
	England: 70,000 Scotland: 17,500 Wales: 12,500 = 100,000 for GB	
	c) Maximum	17500
	England: 70,000 Scotland: 17,500 Wales: 12,500 = 100,000 for GB	
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	2012-2012	
2.4.5 Method used Population size	Estimate based on expert opinion with no or minimal sampling	
	HARRIS, S., MORRIS, P., WRAY, S. and YALDEN, D. 1995. A review of British Mammals: population estimates and conservation status of	

	<p>British mammals other than cetaceans. JNCC, Peterborough http://jncc.defra.gov.uk/page-2759. BAT CONSERVATION TRUST, 2012. The National Bat Monitoring Programme. Annual Report 2011. Bat Conservation Trust, London. (www.bats.org.uk) The estimates were based on expert judgement and extrapolation from limited field surveys. The 1995 population estimate for Great Britain (GB) was based on very limited information, extrapolating from known size of <i>Pipistrellus pipistrellus</i> colonies in relation to size of <i>M. nattereri</i> colonies following the methods described by Speakman (1991) and Harris et al (1995). Harris et al's (1995) reliability rating of the estimate was 4, meaning that it is "based on a very limited amount of information on the species". Although the estimates date from 1995, NBMP data indicate that there is no significant population trend for this species (1997-2012), so there is no justification for updating the estimate.</p>	
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	
	England: 70,000 Scotland: 17,500 Wales: 12,500 = 100,000 for GB	
	b) Operator	
	c) FRP is unknown indicated by "true"	True
	Survey schemes have been detecting stable or increasing trends since 1997, which are not considered to be the result of natural fluctuations. The GB population for this species in 1995 was estimated to be 100,000 individuals (see section 2.4). With stable or increasing trends, widespread distribution and relatively high abundance, the species is judged to have been viable in 1994. The 1994 estimate has, therefore, been set as the favourable reference population. This figure does not include the more recent estimate for the Northern Ireland population and has been set with limited information. It could be revised in the future if better information becomes available.	
	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?	False
	c) Use of different method (e.g. "Range tool")?	False

--	--

2.5 Habitat for the species					
2.5.1 Area estimation	<p>12500</p> <p>M. nattereri require a complex mosaic of habitats to support foraging, roosting and commuting behaviour. Boye & Dietz (2005) provides a good overview of this species' habitat requirements. Various woodland types are used as roost sites and foraging areas. M. nattereri forages in deciduous, mixed and coniferous forests, along forest edges, tree rows, hedges, and in pasture and arable land. In springtime most foraging activity is in open habitats such as orchards, fields and pastures with hedgerows and trees or near waters. However, in summer, foraging activity is concentrated in woodlands and the species even uses dense coniferous forests. M. nattereri prefers to forage at distances up to 1,500 metres from roosts. They tend to have core foraging areas of two to 20 hectares within a home range of 100-600 hectares, which are visited every night by the same individuals. M. nattereri use linear features such as hedges and alleys for flight paths. During summer M. nattereri choose roost sites in woodlands and human settlements. Maternity colonies have been found in lofts, wall crevices, tree holes, wood crevices, and in forests also in bird and bat boxes. Many are located in cattle sheds or barns. Hibernation takes place in caves and mines and even ordinary buildings that have high humidity and temperatures above freezing. The animals often stay near the entrance of the hibernaculum. Summer and winter habitats may be separated by distances of up to 185 kilometres, but most are less than 80 kilometres apart.</p> <p>It is unknown whether the amount of habitat in the UK is sufficient to support a viable population of the species. England: 91,600 Scotland: 12,500 Wales: 17,455</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	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">a) Habitat quality</td> <td>Unknown</td> </tr> <tr> <td>b) Assessment method</td> <td>No or insufficient reliable information available</td> </tr> </table> <p>No or insufficient reliable information available</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 10 km squares in the distribution map.</p>	a) Habitat quality	Unknown	b) Assessment method	No or insufficient reliable information available
a) Habitat quality	Unknown				
b) Assessment method	No or insufficient reliable information available				
2.5.5 Short-term trend					

Period		
2.5.6 Short-term trend	unknown	
Trend direction		
2.5.7 Long-term trend		
Period		
2.5.8 Long-term trend	unknown	
Trend direction		
2.5.9 Area of suitable habitat for the species	a) Value in km²	
	England: 91,600 Scotland: 12,500 Wales: 17,455	
	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	

Pressures can generally be divided into those that affect roosts and those that affect commuting and foraging (including prey availability). Although roosts are strictly protected, a small number of licences permitting structural changes is issued every year. In addition, changes in building practices to improve energy efficiency mean that new buildings may offer fewer roosting opportunities (Mitchell-Jones, 2010). *M. nattereri* forage in woodland, along linear features, over wetlands and parkland. 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
--------------------------------------	--

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	
D01: Roads, paths and railroads	M	

Threats can generally be divided into those that affect roosts and those that affect commuting and foraging (including prey availability). Although roosts are strictly protected, a small number of licences permitting structural changes is issued every year. In addition, changes in building practices to improve energy efficiency mean that new buildings may offer fewer roosting opportunities (Mitchell-Jones, 2010). *M. nattereri* forage in woodland, along linear features, over wetlands and parkland. Agricultural and forestry practices that remove or simplify these habitats, or affect the biomass of insect prey could negatively affect populations.

2.7.1 Method used – Threats	expert opinion
------------------------------------	-----------------------

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	3.2.4 Location	3.2.5 Broad evaluation of the measure
		H = high importance	where the measure is PRIMARILY applied	

	a) Legal/statutory	b) Administrative	c) Contractual	d) Recurrent	e) One-off	M = medium importance L = low importance	a) Inside	b) Outside	c) Both inside & outside	a) Maintain	b) Enhance	c) Long term	d) No effect	e) Unknown	f) Not evaluated

--