

**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:

S1326 - Brown long-eared bat (*Plecotus auritus*)

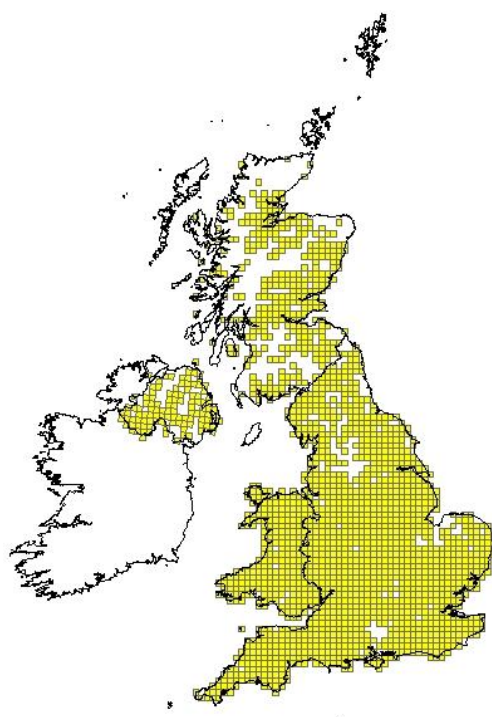
IMPORTANT NOTE – PLEASE READ

- 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 **Northern Ireland Environment Agency** and refers only to the state of the habitat/species in **Northern Ireland** - 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	S1326
	0.2.2 Species scientific name	<i>Plecotus auritus</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	Brown long-eared bat

1.1 Maps		
1.1.1 Distribution map		Sensitive False
	Combined data (2007-2012) from: Bat Conservation Ireland database maintained by Bat Conservation Ireland; Northern Ireland Bat Group database maintained by NIBG; Bat database maintained by CeDAR; National Bat Monitoring Programme maintained by Bat Conservation Trust, UK	



1.1.2 Method used - map	Estimate based on partial data with some extrapolation and/or modelling
1.1.3 Year or period	2007-2012

1.1.4 Additional distribution map	True
	<p>Combined data (all available) from:</p> <p>Bat Conservation Ireland database maintained by Bat Conservation Ireland;</p> <p>Northern Ireland Bat Group database maintained by NIBG;</p> <p>Bat database maintained by CeDAR;</p> <p>National Bat Monitoring Programme maintained by Bat Conservation Trust, UK</p>
1.1.5 Range map	

2.1 Biogeographical region & marine regions	ATL
2.2 Published sources	<p>"Allen, P., Forsyth, I., Hale, P. & Rogers, S. (2000). Bats in Northern Ireland. Irish Naturalists' Journal. Special Zoological Supplement.</p> <p>Anon (2007) The National Monitoring Programme, Annual Report 2006. Bat Conservation Trust, UK.</p> <p>Anon (2009) The National Monitoring Programme, Annual Report 2008. Bat Conservation Trust, UK.</p> <p>Aughney, T., Carden, R. & Roche, N. (2009) Irish Bat Monitoring and Recording Schemes: Annual Report 2008. Bat Conservation Ireland, www.batconservationireland.org.</p> <p>Aughney, T. & Roche, N. (2008) Brown long-eared bat <i>Plecotus auritus</i> Monitoring 2007. Irish Bat Monitoring and Recording Schemes. Bat Conservation Ireland, www.batconservationireland.org.</p> <p>Aughney, T., Roche, N. and Langton, S. (2010) Irish Bat Monitoring and Recording Schemes: Annual Report 2009. Bat Conservation Ireland, www.batconservationireland.org.</p> <p>Aughney, T., Langton, S. & Roche, N. (2011) Brown long-eared bat roost monitoring scheme for the Republic of Ireland: synthesis report 2007-2010. Irish Wildlife Manuals, No. 56. National Parks and Wildlife Service, Department of the Arts, Heritage and the Gaeltacht, Dublin, Ireland.</p> <p>Carden R., Aughney T., Kelleher C. and Roche N. (2010). BATLAS Republic of Ireland, Report for 2008-2009. Irish Bat Monitoring Schemes. Bat Conservation Ireland. Unpublished Report.</p> <p>Fairley, J. (2001). A Basket of Weasels. Published by the author.</p> <p>Harris, S., Morris, P., Wray, S. & Yalden, D. 1995. A review of British mammals: population estimates and conservation status of British mammals other than cetaceans. Joint Nature. Conservation Committee, Peterborough.</p> <p>Harris S. & Yalden D. (eds.) (2008). Mammals of the British Isles Handbook, 4th Edition. The Mammal Society, Southampton, England.</p>

	<p>Hopkirk, A., Aughney T., and Roche, N. (2010). BATLAS Northern Ireland Report for 2009. Irish Bat Monitoring Schemes. Bat Conservation Ireland. Unpublished Report.</p> <p>Lundy, M.G., Aughney, T., Montgomery, W.I., and Roche, N. (2011). Landscape conservation for Irish bats & species specific roosting characteristics. Bat Conservation Ireland. Unpublished.</p> <p>Marnell, F., Kingston, N. & Looney, D. (2009). Ireland Red List No. 3: Terrestrial Mammals. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government. Dublin, Ireland.</p> <p>O’Sullivan, P. (1994). Bats in Ireland. Irish Naturalists’ Journal, 24: Special Zoological Supplement.</p> <p>Richardson, P. (2000). Distribution atlas of bats in Britain and Ireland, 1980-1999. The Bat Conservation Trust, London.</p> <p>Roche, N., Langton, S. & Aughney, T. (2009) The Car Based Bat Monitoring Scheme for Ireland: Synthesis Report 2003-2008. Irish Wildlife Manuals, No. 39. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.</p> <p>Roche, N., Langton, S. and Aughney T. (2012) Car-based bat monitoring in Ireland 2003-2011. Irish Wildlife Manuals, No. 60. National Parks and Wildlife Service, Department of the Arts, Heritage and the Gaeltacht, Ireland.</p> <p>Russ, J.M. (1999). The Microchiroptera of Northern Ireland: community composition, habitat associations and ultrasound. Unpublished Ph.D thesis. The Queen’s University of Belfast.</p> <p>Russ, J.M. & Montgomery, W.I. (2002). Habitat association of bats in Northern Ireland: implications for conservation. Biological Conservation. 108: 49-58.</p> <p>Russ, J. (2008) Review of ASSI designations for bats in Northern Ireland. Northern Ireland Environment Agency, Research and Development Series 08/09.</p> <p>Shiel, C.B. McAney, C.M. and Fairley, J.S. 1991 Analysis of the diet of Natterer’s bat <i>Myotis nattereri</i> and the common long-eared bat <i>Plecotus auritus</i> in the west of Ireland. Journal of Zoology, London, 223: 299–305.</p> <p>Murphy, S.E., Greenaway, F. and Hill, D.A. (2012) Patterns of habitat use by female brown long-eared bats presage negative impacts of woodland conservation management. Journal of Zoology, 288: 177-183."</p>
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2.3 Range	
2.3.1 Surface area Range	10000 Area has been calculated using the number of 2001-2012 10 km sq records available from dataset compiled by Bat Conservation Ireland for this bat species.
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	2001-2012	
2.3.4 Short term trend Trend direction	stable	
2.3.5 Short-term trend Magnitude	a) Minimum	
	b) Maximum	
2.3.6 Long-term trend Period	1989-2012	
2.3.7 Long-term trend Trend direction	stable	
2.3.8 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
2.3.9 Favourable reference range	a) Value in km²	10100
	<p>We have assumed the Favourable Reference Range is the entire land mass of Northern Ireland for three species (common pipistrelle, soprano pipistrelle and Leisler's bat) because their widespread occurrence leads us to believe there is nowhere that they are unlikely to be present, at least on occasion.</p> <p>For the three species which have relatively few known records and most restricted distributions (Natterer's, whiskered and Nathusius' pipistrelle) we have taken the Favourable Reference Range to be the estimated Core Area of habitat within Northern Ireland as derived from Maximum Entropy Modelling of bat records along with various landcover and other factors (see Lundy et al. 2011 for details).</p> <p>For the two remaining species (brown long-eared and Daubenton's) we estimate the Favourable Reference Range to be the full known distribution (10km squares) from 1989 to 2012 even though this is larger than modelled Core Areas described by Lundy et al. (2011), but does not extend across the entire land mass of Northern Ireland, since these species have more restricted habitat requirements than common pipistrelle and soprano pipistrelle, above.</p>	
	b) Operator for FRR	

	c) FRR is unknown (indicated by "true")	False
	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	45000
	c) Maximum	45000
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	Based on a number of assumptions that are as yet untested and should be treated with caution.
2.4.4 Year or period	1999-1999	
2.4.5 Method used Population size	Estimate based on partial data with some extrapolation and/or modelling	
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		
2.4.10 Long-term trend – Period		
2.4.11 Long-term trend Trend direction		
2.4.12 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
	c) Confidence	

	interval	
2.4.13 Long term trend Method used		
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	
	b) Operator	
	c) FRP is unknown indicated by "true"	False
	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	1523	
2.5.2 Year or period	2000-2009	
2.5.3 Method used Habitat for the species	Estimate based on partial data with some extrapolation and/or modelling	
2.5.4 Quality of the habitat	a) Habitat quality	Good

	b) Assessment method	This is calculated from Maximum Entropy modelling of bat records 2000-2009 combined with CORINE landcover, altitude, soil pH, climate and human bias layers (see Lundy et al. 2011).
2.5.5 Short-term trend Period	2000-2009	
2.5.6 Short-term trend Trend direction	unknown	
2.5.7 Long-term trend Period		
2.5.8 Long-term trend Trend direction		
2.5.9 Area of suitable habitat for the species	a) Value in km²	
	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	
A10.01:	H	
B02.03:	H	
B07: Forestry activities not referred to above	H	
A02.01:	M	
B02.02:	M	
B02.04:	M	

B03: forest exploitation without replanting or natural regrowth	M	
B04: use of biocides, hormones and chemicals (forestry)	M	TX
D01.02:	M	
E01.01:	M	
E06.01:	M	
E06.02:	M	
G05: Other human intrusions and disturbances	M	
G05.06:	M	
H06.02:	M	
J03.02:	M	
G05.08:	L	
G05.11:	L	

G05 refers to pressure from deliberate or accidental exclusion from roosts (with or without licence)
B07 refers to pressure from forest fragmentation (Murphy et al. 2012).

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	
A10.01:	H	
B02.02:	H	
B02.03:	H	
B03: forest exploitation without replanting or natural regrowth	H	
B07: Forestry activities not referred to above	H	
A02.01:	M	
B02.04:	M	
B04: use of biocides, hormones and chemicals (forestry)	M	TX
D01.02:	M	
E01.01:	M	
E06.01:	M	

E06.02:	M	
G05: Other human intrusions and disturbances	M	
G05.06:	M	
G05.11:	M	
H06.02:	M	
J03.02:	M	
G05.08:	L	
M01: Changes in abiotic conditions	L	

G05 refers to threat of deliberate or accidental exclusion from roosts (with or without licence)
B07 refers to pressure from forest fragmentation (Murphy et al. 2012).

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 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

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