



UK priority species pages – Version 2

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SPECIES PAGES FOR 2007 UK BAP PRIORITY SPECIES

(see endnotes for an explanation of the various components of this compilation).

Barbastella barbastellus (Schreber, 1774)

Barbastelle Bat

1 General information

Level 1	Terrestrial mammals
Level 2	terrestrial mammal
On 1997 UK BAP list	Species Action Plan

2 UK BAP criteriaⁱ

1. International threat	2. International responsibility (2a) + moderate decline in UK (2b)	3. Marked decline in the UK	4. Other important factor(s)
True	False	False	True

3 Evidence for Criteriaⁱⁱ

Criterion 1	Vulnerable
Criterion 2a	
Criterion 2b	
Criterion 3	
Criterion 4	Factors that caused original decline still operate and there is still limited survey information

4 Distribution by Country

England	Scotland	Wales	Northern Ireland	International Waters
Y	N	Y	N	

5 Distribution Information

Distribution data source	Stage 1 information
Distribution data notes	
number of sites (where less than or equal to 10)	
Units used for number of sites	

6 Actions identified by expertsⁱⁱⁱ

Action number	Action text	Reporting category
1	<p>HABITAT BASED ACTION Protect the condition of priority woodland and wetland habitat (to help provide sufficient good quality roost trees allied with insect rich foraging grounds). (This could also benefit other bat species e.g. Bechstein's).</p> <p>Ensure the protection and preservation of mature woodland and improve the condition of young woodland for barbastelles.</p> <p>Encourage woodland expansion to help buffer core woodland areas. Increase flight-line connectivity of woodland areas to each other and to other foraging habitats at the landscape level (e.g. via hedgerow creation). This would help multiple species with dispersion, adaptation (not just bats).</p>	Priority habitat action
2	<p>RESEARCH & MONITORING Research required on finer habitat requirements, regional differences, management needs etc. (Some is currently underway, but more of an applied nature to inform conservation action would be beneficial).</p> <p>Continue monitoring within the National Bat Monitoring Programme (NBMP). Woodland Survey initiated at barbastelle Special Areas of Conservation (SAC) sites for Common Standards.</p> <p>Monitoring has potential to give population trends for the UK in the future. Baseline distribution survey is also needed and the woodland survey has proved useful both for locating new records and for monitoring existing ones. The continued development of this survey is a priority.</p>	Species-specific research
3	<p>LAND-USE POLICY Ensure the needs of barbastelles are considered in agri-environment schemes e.g. Environmental Stewardship Higher Level Scheme (HLS) & Entry Level Scheme (ELS). These will assist at the farm scale to ensure the creation of hedgerows, small linear woods; field margins etc. remain in the landscape and provide sufficient</p>	Wider "landscape" action

	<p>connectivity and insect biodiversity.</p> <p>Climate change may dry wetter habitats this bat uses for feeding. It is likely to be sensitive to pollution impacts on its insect prey.</p> <p>Improvements of farmland such as to wet meadows by blocking land drains and to small farm woodlands by ensuring retention of roost trees may help, but not completely.</p>	
4	<p>DESIGNATION</p> <p>Continued protection of existing designated Sites of Special Scientific Interest (SSSIs) and SACs is essential, as is designation of more sites as they become known. Measures must be taken to ensure foraging areas are eligible for designation and protection in addition to roosting sites.</p>	<p>Species-specific legislative action (protection or site designation)</p>

7 Signpost to Priority Habitat^{iv}

Priority Habitat Name
Boundary features: Hedgerows
Stding Open Water: Ponds
Woodlnd (broad lvd): Lowland Mixed Deciduous Woodland
Woodlnd (broad lvd): Upland Oakwood
Woodlnd (broad lvd): Wood-Pasture & Parkland

8 Additional information from specialists^v

Attribute	Value
NBN current scientific name	Barbastella barbastellus
NBN common name	Barbastelle Bat
classification level 1	Terrestrial mammals
classification level 2	terrestrial mammal
Latest UK Population/extent Estimate	5000 (E: 4500, W: 500)
Units of measurement	Individuals
Proportion left	1
decline	0
over observed years	0
decline over 25 years	0
Additional comments/ information	No trend information. NB population estimate is based on figures from 1995 and reliability is poor. Recent discoveries of colonies through use of new technologies are indicative that more may be present than previously thought.

Global or European IUCN category if known	VU
Crit1 satisfied Yes/No/ Unknown	yes
Confidence in assesment crit 1	high
Additional comments/ information including confidence in assessm	Listed under A2c due to habitat loss and degradation and continuing population decline (greater than 30% over 10 years)
Crit2 satisfied Yes/No/ Unknown	no
Crit3 satisfied Yes/No/ Unknown	unknown
Comments on UK decline and confidence in assessment	Historic trend is uncertain. A decline may have occurred but is not reliably quantified. Current status is closely linked to the availability of suitable trees and barns in which to roost, hence declines may have occurred through roost loss in the past.
Factor	Factors that caused original decline still operate and there is still limited survey information
Crit4 satisfied (Yes/ No/ Unknown)	yes
Confidence in assesment crit 4	high
1st source	TMP report

9 Additional information for species listed under the Habitats Directive^{vi}

Attribute	Value
Conclusions - overall assessment	(XX) - Unknown
Conclusions - range	(FV) - Favourable
Conclusions - population	(XX) - Unknown
Conclusions - habitat	(XX) - Unknown
Conclusions - future prospects	(XX) - Unknown
Published sources and/or websites	<p>BAT CONSERVATION TRUST. 2005. The National Bat Monitoring Programme Annual Report 2004. 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. 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>BATTERSBY, J (Ed.) & TRACKING MAMMALS PARTNERSHIP. 2005. UK Mammals: Species Status and Population Trends. JNCC/Tracking Mammals Partnership.</p> <p>BOYE, P. & DIETZ, M. 2005. Research Report No 661: Development of good practice guidelines for woodland management for bats. English Nature, Peterborough.</p> <p>HAINES-YOUNG, R.H., BARR, C.J., BLACK, H.I.J., BRIGGS, D.J., BUNCE, R.G.H., CLARKE, R.T., COOPER, A., DAWSON, F.H., FIRBANK, L.G., FULLER, R.M., FURSE, M.T., GILLESPIE, M.K., HILL, R., HORNUNG, M., HOWARD, D.C., McCANN, T., MORECROFT, M.D., PETIT, S., SIER, A.R.J., SMART, S.M., SMITH, G.M.,</p>

	<p>STOTT, A.P., STUART, R.C. & WATKINS, J.W. 2000. Accounting for nature: assessing habitats in the UK countryside. Countryside Survey 2000. DETR, HMSO, London.</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. JNCC, Peterborough.</p> <p>MACDONALD, D.W. & TATTERSALL, F. (2001) Britain's Mammals: The Challenge for Conservation. People's Trust for Endangered Species, London.</p> <p>MCLEOD, C.R., YEO, M., BROWN, A.E., BURN, A.J., HOPKINS, J.J. & WAY, S.F., eds. 2002. The Habitats Directive: Selection of Special Areas of Conservation in the UK, 2nd edn. Joint Nature Conservation Committee, Peterborough</p> <p>RICHARDSON, P. (2000) Distribution atlas of bats in Britain and Ireland 1980-1999. Bat Conservation Trust, London.</p> <p>Data Map Sources</p> <p>Biological Records Centre - Mammals Database 100 m; Natural England - Batsites inventory for Britain (via the National Biodiversity Network (NBN) Gateway).</p> <p>Bat Conservation Trust - National Bat Monitoring Programme Hibernation Survey (1997- 2005).</p> <p>Bat Conservation Trust - Distribution atlas of bats in Britain and Ireland 1980-1999. GB data only.</p>
surface area of range in km2	80939
surface area of range in km2 EU	80939
Date of range determination	1980-2006
Quality of data concerning range	Poor
Range trend	Unknown (X)
Range trend magnitude (%)	Not applicable

Range trend period	1994-2006
Range trend reasons 0 - Unknown	False
Range trend reasons 1 - Improved knowledge/more accurate data	False
Range trend reasons 2 - Climate change	False
Range trend reasons 3 - Direct human influence	False
Range trend reasons 4 - Indirect anthropo or zoogenic influence	False
Range trend reasons 5 - Natural processes	False
Range trend reasons 6 - Other (specify)	False
Reasons for reported trend in range specify	Not applicable
Population_min	5000
Population_min EU	5000
Population_max	5000
Population_max EU	5000
Population units	Individuals
Population date	1995
Population method	1 - Based on expert opinion
Population quality	Poor
Population trend	Unknown (X)
Population magnitude (%)	Not applicable
Population period	1994-2006
Pop trend reasons 0 - Unknown	False
Pop trend reasons 1 - Improved knowledge/more accurate data	False
Pop trend reasons 2 - Climate change	False
Pop trend reasons 3 - Direct human influence	False
Pop trend reasons 4 - Indirect anthropo or zoogenic influence	False
Pop trend reasons 5 - Natural processes	False
Pop trend reasons 6 - Other (specify)	False
Reasons for reported trend in Pop specify	Not applicable
Surface area of the habitat in km2	Unknown
Date of area estimation	2006
Quality of data on habitat area	Poor
Habitat trend	Unknown (X)
Habitat trend period	1990-1998
Hab trend reasons 0 Unknown	False
Hab trend reasons 1 Improved knowledge	False
Hab trend reasons 2 Climate change	False
Hab trend reasons 3 Direct human influence	True
Hab trend reasons 4 Indirect anthropo or zoogenic influence	False

Hab trend reasons 5 Natural processes	False
Hab trend reasons 6 Other (specify)	False
Reasons for reported trend in Hab specify	Not applicable
Justification of % thresholds for trends	Not applicable
Future prospects	Unknown
Favourable reference range	80939
Favourable reference range EU	80939
Habitat name	<p><i>B. barbastellus</i> requires a complex mosaic of habitats to support foraging, roosting and commuting behaviour. Boye & Dietz (2005) provides a good overview of this species' habitat requirements.</p> <p>Foraging areas are predominantly in woodlands or parks, but they can also stretch along forest edges, tree rows, hedges, waterways, or field roads with trees. The home range extends up to 8-10 kilometres around the roost.</p> <p>Most summer roosts are found in narrow crevices in trees or buildings, but the preferred natural roost sites seem to be behind loose bark. Sometimes woodpecker holes are used and the species is frequently found behind window shutters or wall cover (shingles from wood or slate) on houses. On rare occasions the species is observed in bat boxes. During spring and summer roost sites are changed frequently, sometimes every day, so that the group composition varies continuously.</p> <p>Winter roosts are known in caves, old mines and bunkers. Most of the population probably hibernates in tree crevices and walls of houses. Summer and winter roosts seem to be a maximum of 20 km apart.</p>
Other relevent information	See audit trail documents for further information.

10 Species designations^{vii}

Abbreviation	Reporting Category	Designation	Designation description	Year	Source	Comment
HabReg:Sch2	The Conservation of Habitats and Species Regulations 2010	Schedule 2	Schedule 2: European protected species of animals.	1994	The Conservation of Habitats and Species Regulations 2010	
Bern:A2	Bern Convention	Appendix 2	Special protection (‘appropriate and necessary legislative and administrative measures’) for the animal taxa listed, including: all forms of deliberate capture and keeping and deliberate killing; the deliberate damage to or destruction of breeding or resting sites; the deliberate disturbance of wild fauna, particularly during the period of breeding, rearing and hibernation, insofar as disturbance would be significant in relation to the objectives of this Convention; the deliberate destruction or taking of eggs from the wild or keeping these eggs even if empty; the possession of and internal trade in these animals, alive or	1979	Bern Convention	

			dead, including stuffed animals and any readily recognisable part or derivative thereof, where this would contribute to the effectiveness of the provisions of this article.			
CMS_Bonn:A2	Convention on Migratory Species	Bonn Appendix 2	Migratory species having an unfavourable conservation status for which Range States are encouraged to conclude international agreements for their benefit.	1985	Bonn Convention	Geographic constraint=Only European populations.
CMS_EUROBATS:A1	Convention on Migratory Species	EUROBATS Annex I	Protection and enhancement of species populations through legislation, education, conservation measures and international co-operation.	2000	Agreement on the Conservation of Populations of European Bats (EUROBATS)	
HabDir:A2*	Habitats Directive	Annex 2 - non-priority species	Animal and plant species of Community interest (i.e. endangered, vulnerable, rare or endemic in the European Community) whose conservation requires the designation of special areas of conservation. Note that the contents of this annex have been updated in April 2003 following the Treaty of Accession.	1992	Habitats Directive	
HabDir:A4	Habitats Directive	Annex 4	Animal and plant species of Community interest (i.e. endangered, vulnerable, rare or	1992	Habitats Directive	

			endemic in the European Community) in need of strict protection. They are protected from killing, disturbance or the destruction of them or their habitat. Note that the contents of this annex have been updated in April 2003 following the Treaty of Accession.			
England NERC S.41	Biodiversity Lists - England	England NERC S.41	Species “of principal importance for the purpose of conserving biodiversity” covered under section 41 (England) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.	2008	Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (section 41) and Wales (section 42)	Geographic constraint=Listing is for England only
Wales NERC S.42	Biodiversity Lists - Wales	Wales NERC S.42	Species “of principal importance for the purpose of conserving biodiversity” covered under Section 42 (Wales) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.	2009	Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England (section 41) and Wales (section	Geographic constraint=Listing is for Wales only

					42)	
BAP:2007	Biodiversity Action Plan UK list of priority species	Priority Species	The UK List of Priority Species and Habitats contains 1150 species and 65 habitats that have been listed as priorities for conservation action under the UK Biodiversity Action Plan (UK BAP).	2007	UK list of Priority Habitats and Species	status on former BAP list: Species Action Plan
WACA:Sch5_sect9.4b	Wildlife and Countryside Act 1981	Schedule 5 Section 9.4b	Section 9.4 Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.	1981	Wildlife and Countryside Act Schedules 1,5 and 8 (protected birds, animals and plants)	Geographic constraint=Designation does not apply in Scotland since 15/02/2007.
WACA:Sch5Sect9.4c	Wildlife and Countryside Act 1981	Schedule 5 Section 9.4c	Animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.	2007	Wildlife and Countryside Act Schedules 1,5 and 8 (protected birds, animals and plants)	Geographic constraint=Does not apply to Scotland
WACA:Sch5_sect9.5a	Wildlife and Countryside Act 1981	Schedule 5 Section 9.5a	Section 9.5 Animals which are protected from being sold, offered for sale or being held or transported for sale either live or dead, whole or part.	1981	Wildlife and Countryside Act Schedules 1,5 and 8 (protected birds, animals and plants)	Geographic constraint=Designation does not apply in Scotland since 15/02/2007.
WACA:Sch5_sect9.5b	Wildlife and Countryside Act 1981	Schedule 5 Section 9.5b	Section 9.5 Animals which are protected from being published or advertised as being for sale.	1981	Wildlife and Countryside Act Schedules 1,5 and 8 (protected birds, animals and plants)	Geographic constraint=Designation does not apply in Scotland since 15/02/2007.

ConsRegsNI:Sch2	The Conservation (Nature Habitats, etc.) Regulations (NI) 1995	Schedule 2	Schedule 2: European protected species of animals.	1995	The Conservation (Nature Habitats, etc.) Regulations (Northern Ireland) 1995, amended 2004	
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UK BAP 2008 reporting^{viii}

(nb this only applies to species on the original 1997 UK BAP priority species list)

11 General status

Country	Attribute	Value
England		
	Date	2008
	Status unknown	No
	Value	73
	Units	Occupied 10 km squares
	Accuracy	Partial survey
	Adequate data	No but likely by 2011
	Data on NBN	No
	Refer to LBAP data	Yes
	Data source / comments	Data collated from Barbastelle & Bechstein's Technical Advisory Group, National Bat Monitoring Programme, records supplied by bat workers, local bat groups and records centres, National Trust records, and LBAP data on BARS. This is a minimum figure based on available data from 2005-2008 and does not constitute a systematic survey to determine complete range. The data may include occasional records of bats in suboptimal habitat and therefore the figure should not be interpreted as being the breeding range of this species. In the 2005 BAP reporting round a population estimate was given but at present an assessment of minimum number of occupied 10km squares is considered the most meaningful approach in lieu of an up to date population estimate.
	Edits made by reporting group	
UK		
	Date	2008
	Status unknown	No
	Value	86

	Units	Occupied 10 km squares
	Accuracy	Partial survey
	Adequate data	No but likely by 2011
	Data on NBN	No
	Refer to LBAP data	Yes
	Data source / comments	Data collated from Barbastelle & Bechstein's Technical Advisory Group, National Bat Monitoring Programme, records supplied by bat workers, local bat groups and records centres, National Trust records, and LBAP data on BARS. This is a minimum figure based on available data from 2005-2008 and does not constitute a systematic survey to determine complete range. The data may include occasional records of bats in suboptimal habitat and therefore the figure should not be interpreted as being the breeding range of this species. In the 2005 BAP reporting round a population estimate was given but at present an assessment of minimum number of occupied 10km squares is considered the most meaningful approach in lieu of an up to date population estimate.
	Edits made by reporting group	
Wales		
	Date	2008
	Status unknown	No
	Value	13
	Units	Occupied 10 km squares
	Accuracy	Partial survey
	Adequate data	No but likely by 2011
	Data on NBN	No
	Refer to LBAP data	Yes
	Data source / comments	Data collated from Barbastelle & Bechstein's Technical Advisory Group, National Bat Monitoring Programme, records supplied by bat workers, local bat groups and records centres, and LBAP data on BARS. This is a minimum figure based on available data from 2005-2008 and does not constitute a systematic survey to determine complete range. The data may include occasional records of bats in suboptimal habitat and therefore the figure should not be interpreted as being the breeding range of this species. In the 2005 BAP reporting round a population estimate was given but at present an

		assessment of minimum number of occupied 10km squares is considered the most meaningful approach in lieu of an up to date population estimate.
	Edits made by reporting group	

8 Trends

Country	Attribute	Value
Wales		
	Status unknown	Yes
	Adequate data	No and not likely by 2011
	Data on NBN	No
	Refer to LBAP data	No
	Data source / comments	This species is being monitored in the NBMP Woodland Survey which currently mainly focuses on SAC sites for barbastelle. The survey has been rolled out to non-SAC sites to some extent but this is currently restricted by limited resources. Greater site coverage and a longer data run will be needed before a UK barbastelle trend can be produced and this is not expected by 2011.
	Edits made by reporting group	
England		
	Status unknown	Yes
	Adequate data	No and not likely by 2011
	Data on NBN	No
	Refer to LBAP data	No
	Data source / comments	This species is being monitored in the NBMP Woodland Survey which currently mainly focuses on SAC sites for barbastelle. The survey has been rolled out to non-SAC sites to some extent but this is currently restricted by limited resources. Greater site coverage and a longer data run will be needed before a UK barbastelle trend can be produced and this is not expected by 2011.
	Edits made by reporting group	

UK		
	Status unknown	Yes
	Trend	Unknown
	Accuracy	Unknown
	Adequate data	No and not likely by 2011
	Data on NBN	No
	Refer to LBAP data	No
	Data source / comments	This species is being monitored in the NBMP Woodland Survey which currently mainly focuses on SAC sites for barbastelle. The survey has been rolled out to non-SAC sites to some extent but this is currently restricted by limited resources. Greater site coverage and a longer data run will be needed before a UK barbastelle trend can be produced and this is not expected by 2011.
	Edits made by reporting group	Changed accuracy to unknown based on trend

9 Successes

Success text	Success category 1	Success category 2	England	NI	Scotland	Wales	Edits by reporting group
Some progress has been made on designing more effective survey designs to determine the presence of this species for example techniques used within BCT's Woodland Survey. Volunteers that are trained in the use of specialist equipment can and do make a significant contribution to our knowledge with appropriate funding support	Research, survey and information	Monitoring techniques improved	Yes	No	No	Yes	

<p>The Bechstein's and barbastelle Technical Advisory Group (BBTAG) is co-ordinated by the lead partner and has continued to meet, exchange research findings and proposals and comment on issues of concern (e.g. a co-ordinated response from all experts to the Forestry Commission's interim guidance on managing woodlands for bats in England in February 2008).</p>	<p>Action plan process</p>	<p>Country Group/Forum - useful role</p>	<p>Yes</p>	<p>No</p>	<p>No</p>	<p>Yes</p>	
<p>Establishment of bats as indicators at the UK level using data from the National Bat Monitoring Programme</p>	<p>Communication</p>	<p>Raised awareness / profile among general public</p>	<p>Yes</p>	<p>No</p>	<p>No</p>	<p>Yes</p>	
<p>Greater information on habitat preferences has been determined through recent research</p>	<p>Research, survey and information</p>	<p>Autecology - improved knowledge</p>	<p>Yes</p>	<p>No</p>	<p>No</p>	<p>Yes</p>	
<p>Barbastelles have been located in many new areas in recent years and there are a number of local studies on this species (for example work undertaken by Teifi bat group, the Gloucestershire Bat Group, on the Isle of Wight and in the New Forest). The establishment of local record centres is an important step to ensuring records of barbastelles are available to all stakeholders that have the potential to impact bats in that area (e.g. developers and woodland managers).</p>	<p>Research, survey and information</p>	<p>Other</p>	<p>Yes</p>	<p>No</p>	<p>No</p>	<p>Yes</p>	
<p>Increased awareness of land managers through promotion of BCT's 'Woodland Management Guidance' and courses for arborists and woodland management booklets.</p>	<p>Communication</p>	<p>Best practice guidance</p>	<p>Yes</p>	<p>No</p>	<p>No</p>	<p>Yes</p>	

10 Threats

Threat category 1	Threat category 2	England	NI	Scotland	Wales	Edits made by reporting group
Global warming	Climate change	Yes	No	No	Yes	
Habitat loss / degradation - management practice	Inappropriate water channel / river bank management	Yes	No	No	Yes	
Habitat loss / degradation - woodlands/forestry	Felling / loss of trees (general)	Yes	No	No	Yes	
Habitat loss / degradation - woodlands/forestry	Felling / loss of trees (specific host trees / ancient trees)	Yes	No	No	Yes	
Habitat loss / degradation - woodlands/forestry	Inappropriate timing of forestry rotation	Yes	No	No	Yes	
Habitat loss / degradation - woodlands/forestry	Lack of dead wood	Yes	No	No	Yes	

Human disturbance	Interference / displacement	Yes	No	No	Yes	
Human disturbance	Other recreation / tourism	Yes	No	No	Yes	
Pollution - freshwater	Agricultural (nutrient enrichment)	Yes	No	No	Yes	
Pollution - land	Agricultural (other agro-chemicals)	Yes	No	No	Yes	
Habitat loss / degradation - infrastructure development	Transport infrastructure	Yes	No	No	Yes	
Habitat loss / degradation - woodlands/forestry	Lack of woodland regeneration	Yes	No	No	Yes	
Habitat loss / degradation - agriculture	Loss of hedgerows	Yes	No	No	Yes	

Accidental mortality	Road kills	Yes	No	No	Yes	
Habitat loss / degradation - agriculture	Intensive crop regimes	Yes	No	No	Yes	
Habitat loss / degradation - agriculture	Intensive grassland management	Yes	No	No	Yes	
Habitat loss / degradation - infrastructure development	Restoration works on old buildings / walls	Yes	No	No	Yes	
Habitat loss / degradation - drainage/abstraction	Drainage (for agriculture)	Yes	No	No	Yes	
Habitat loss / degradation - freshwater	River/ in-channel engineering works	Yes	No	No	Yes	
Habitat loss / degradation - infrastructure development	Housing infrastructure	Yes	No	No	Yes	

Habitat loss / degradation - infrastructure development	Industrial infrastructure	Yes	No	No	Yes	
Habitat loss / degradation - infrastructure development	Infilling (e.g. of lakes / ponds / quarries)	Yes	No	No	Yes	
Habitat loss / degradation - infrastructure development	Landfill (for waste)	Yes	No	No	Yes	
Habitat loss / degradation - agriculture	Conversion to arable	Yes	No	No	Yes	

15 Constraints

Rank	Constraint category 1	Constraint category 2	Constraint summary	England	NI	Scotland	Wales	Solution category	Solution summary

1	Research, survey and information	Species is difficult to find or survey	Incomplete knowledge of current distribution of this species, previous survey methods have not given good results hence they are considered to be under recorded.	Yes	No	No	Yes	Survey/monitoring	There is a need for a co-ordinated survey using autobats throughout the current known range of the barbastelle.
1	Communication	Land managers / owners - lack of advice	The lack of knowledge on the true distribution of this species results in a lack of consideration during land management	Yes	No	No	Yes	Communication/publicity	Continued promotion of best practice to land managers and owners (principally woodland) via leaflets / advice / seminars. There is also a need to ensure woodlands with barbastelle colonies are not accidentally or deliberately damaged. Bat workers need to ensure they pass on records of barbastelles to their local records centres regularly. It is important to work with the Forestry Commission in England and Wales to overcome this constraint.

2	Species and habitat management	Woodland / forestry management - causing problems	Some current woodland management practices pose a threat to this species which is sensitive to particular woodland management practices including understory / regeneration management. This threat is often increased by inadequate survey of woodland areas prior to forestry management operations	Yes	No	No	Yes	Funding, resources and incentive schemes	The production of the 'Woodland management for Bats' guide needs to be widely disseminated and woodland managers need support in terms of training and costs for survey and management for bats. Training given also needs follow-up to see if practices/ attitudes are changing in the forestry sector. All this work requires funding.
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2	Research, survey and information	Baseline survey - required	Detailed studies are required of barbastelle colonies not already researched. There is a need to ensure that all current studies on barbastelles are collated and co-ordinated at a national level and that studies are peer reviewed to ensure scientific validity. This should include submission of records to local records centres. Time and resources to co-ordinate data is limited and currently dependant on a volunteer. Lead partner currently has difficulty accessing some data on this species for reporting and recording	Yes	No	No	Yes	Funding, resources and incentive schemes	Support for bat groups and bat workers to collect baseline data on known but unresearched colonies including local trapping and radio-tagging projects for barbastelles. It is important that there is information exchange between all those stakeholders involved with existing and on-going work including local bat workers, academics, NGOs and land owners. The results of studies need to be written up and peer reviewed so all can contribute to the national knowledge base on this species. Currently time and resources to co-ordinate data at a national level is limited and dependant on a volunteer.
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2	Policy, legislation and designation	Woodland and forestry	There is a need to ensure that all woodland policy on bats adequately considers the needs of this species	Yes	No	No	Yes	Communication/publicity	Ensure that appropriate advice is sought (e.g. from the Bechstein's and barbastelle Technical Advisory Group BBTAG) regarding guidelines for managing bats and woodlands prior to publication for woodland managers
2	Funding and incentives	General lack of resources	Funding for targeted research on aspects of the barbastelle ecology is often not available	Yes	No	No	Yes	Funding, resources and incentive schemes	Funding of targeted research

2	Action plan process	Other	A strategic landscape approach to the delivery of conservation for this species at the local and regional landscapes level is needed to deliver wide-ranging conservation species for this species.	Yes	No	No	Yes	Management	A joint approach is needed for this landscape species within strategic management plans to ensure the requirements of this species are considered. There is a need to get integrated working groups up and running at the district level, where the barbastelles are present to consider necessary action and incorporate the requirements into plans (e.g. ensuring these species are considered within local, regional and national landscape scale projects and initiatives)
3	Species and habitat management	Conflict with other uses	This species roosts in ancient woodland that cannot be recreated	Yes	No	No	Yes	Site protection/designation	It is important to ensure that the quality of ancient woodland habitat supporting barbastelles is not compromised by management operations within or around the periphery of the woodland

3	Research, survey and information	Specialist expertise required	The number of surveyors with skills to confidentially identify this species using bat sound analysis techniques is limited. Voluntary surveys that are undertaken are often focused around the location of that surveyor and more strategic national approach to surveying is required. Research and survey of this species is constrained as it requires expensive equipment and a certain level of training.	Yes	No	No	Yes	Funding, resources and incentive schemes	Additional funding / support is require for appropriate training in areas required ideally through a co-ordinated programme lead by the lead partner.
3	Funding and incentives	General lack of resources	Funding for targeted research on aspects of the barbastelle ecology is often not available	Yes	No	No	Yes	Funding, resources and incentive schemes	Funding of targeted research

11 State of Knowledge

State of knowledge category	Notes	Edits made by reporting group
Knowledge insufficient but	THIS SECTION IS TOO LONG AND THE FULL VERSION HAS	

<p>research currently underway</p>	<p>BEEN EMAILED TO ANT MADDOCK OF JNCC AND JOHN BEDFORD OF NATURAL ENGLAND TO BE INCLUDED IN THE ANALYSIS A number of studies have been undertaken on barbastes since the last reporting round: 1) The Isle of Wight (IoW) Woodland bat project commenced in May 2006 and was funded by the People’s Trust for Endangered Species, The Environment Agency, Michael Poland and ID Wildlife Ltd. The aim of the project was to systematically investigate the bat assemblages of a variety of woodland types on the Isle of Wight (with particular reference to the rare woodland bat species the Bechstein’s and barbastelle bats). A total of 42 woodlands were sampled including the full range of woodland types found on the IoW. The study has discovered 6 breeding colonies of barbatelle bat and the largest known barbastelle breeding tree roosts on record. The study concluded that Ancient Semi-Natural Woodland remains the most important woodland type for rare woodland bat species and argues that the IoW is a centre for the UK’s rare woodland bat species. 2) A PhD by Zeale at the University of Bristol is currently underway researching dietary and roosting ecology of the barbastelle. . The main focus of the work is to highlight habitat preferences associated with barbastelle foraging and roosting habitats to inform conservation management. This will include analysing specific roost features important for barbastes and developing a predictive computer based-model to identify larger scale habiat features associated with barbastelle colony sites. The study also involves a diet analysis of droppings and development of novel molecular approaches to The study is looking at habitat and roost tree selection and methods to help with the identification of insect species eaten from DNA fragments in droppings. 3) A study was undertaken by Greenaway on Barbastelle bats in The Sussex West Weald between 1997 and 2008 funded by the BBC Wildlife Fund, the</p>	
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ENDNOTES

ⁱ An explanation of these criteria is included at Annex 3 of [UK Biodiversity Action Plan: Report on the Species and Habitat Review](#). BRIG (ed. Ant Maddock) 2007. This review was organised in two stages. Stage 1 looked at the scientific evidence for selecting the UK List of Priority Species and Habitats while stage 2 considered the conservation action needed for these species and habitats and provided signposts to the means of implementing action.

ⁱⁱ The information on evidence and the species distribution is as presented on the UK BAP website. Users can download a spreadsheet of the [Stage 1 species evidence](#) from the home page of the UK BAP website.

ⁱⁱⁱ Actions were assigned to each and every priority species by expert groups convened at Stage 2 of the Review process. These were subsequently categorised into “signpost categories”. This information is as shown on the UK BAP website See the link for [categorisation \(signposting\) of UK priority species](#).

^{iv} Where a species action is clearly linked to a BAP priority habitat, the name of the relevant habitat or habitats was identified by the stage 2 expert group.

^v This information has been derived from Stage 1 of the priority species review, and is presented in the “marine”, “terrestrial invertebrates” and “other terrestrial species” sheets within the spreadsheet of the [Stage 1 species evidence](#). The information presented here varies according to the taxonomic group. Please note that some of these data have been written for other Expert Group members and may not be of great value to a wider audience.

^{vi} This is only applicable to Species listed under the Annexes 2 4 and 5 of the Habitats Directive. The information presented here was collated by the UK Government in fulfilment of the requirement under Article 17 of the Habitats Directive. For further information see the [2nd UK Report](#) on the implementation of the Habitats Directive.

^{vii} Information on conservation designations has been extracted from JNCC’s collation of information on [species designations](#). The designations shown in version 2 of these pages are as at December 2010.

^{viii} As part of the 2008 UK BAP reporting round lead partners of national plans were asked to answer a number of specific questions. The data will be analysed and used for the UK and country level reports. All of the responses provided through BARS as part of the 2008 reporting exercise are available to [download](#). Note that in the December 2010 version of these pages (version 2) includes corrections to previously truncated text fields.