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

Fourth Report by the United Kingdom
under Article 17

on the implementation of the Directive
from January 2013 to December 2018

Conservation status assessment for the species:

S1323 - Bechstein's bat (*Myotis bechsteinii*)

UNITED KINGDOM

IMPORTANT NOTE - PLEASE READ

- The information in this document represents the UK Report on the conservation status of this species, submitted to the European Commission as part of the 2019 UK Reporting under Article 17 of the EU Habitats Directive.

- It is based on supporting information provided by the geographically-relevant Statutory Nature Conservation Bodies, which is documented separately.

- The 2019 Article 17 UK Approach document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.

- The reporting fields and options used are aligned to those set out in the European Commission guidance.

- Maps showing the distribution and range of the species are included (where available).

- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the UK assessments. Further underpinning explanatory notes are available in the related country-level reports.

- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; (ii) completion of the field was not obligatory; and/or (iii) the field was not relevant to this species (section 12 Natura 2000 coverage for Annex II species).

- The UK-level reporting information for all habitats and species is also available in spreadsheet format.

Visit the JNCC website, https://jncc.gov.uk/article17, for further information on UK Article 17 reporting.

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NATIONAL LEVEL	

1. General information

1.1 Member State	**UK**
1.2 Species code	**1323**
1.3 Species scientific name	**Myotis bechsteinii**
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Bechstein's bat

2. Maps

2.1 Sensitive species	No
2.2 Year or period	1995-2016
2.3 Distribution map	Yes
2.4 Distribution map Method used	Based mainly on extrapolation from a limited amount of data
2.5 Additional maps	No

3. Information related to Annex V Species (Art. 14)

3.1 Is the species taken in the wild/exploited?	No	
3.2 Which of the measures in Art. 14 have been taken?	a) regulations regarding access to property	No
	b) temporary or local prohibition of the taking of specimens in the wild and exploitation	No
	c) regulation of the periods and/or methods of taking specimens	No
	d) application of hunting and fishing rules which take account of the conservation of such populations	No
	e) establishment of a system of licences for taking specimens or of quotas	No
	f) regulation of the purchase, sale, offering for sale, keeping for sale or transport for sale of specimens	No
	g) breeding in captivity of animal species as well as artificial propagation of plant species	No
	h) other measures	No

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3.3 Hunting bag or quantity taken in the wild for Mammals and Acipenseridae (Fish)	a) Unit						
	b) Statistics/ quantity taken	Provide statistics/quantity per hunting season or per year (where season is not used) over the reporting period					
		Season/ year 1	Season/ year 2	Season/ year 3	Season/ year 4	Season/ year 5	Season/ year 6
	Min. (raw, ie. not rounded)						
	Max. (raw, ie. not rounded)						
	Unknown	No	No	No	No	No	No

3.4. Hunting bag or quantity taken in the wild Method used

3.5. Additional information

BIOGEOGRAPHICAL LEVEL

4. Biogeographical and marine regions

4.1 Biogeographical or marine region where the species occurs	**Atlantic (ATL)**
4.2 Sources of information	England

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5. Range

5.1 Surface area (km²)	23550
5.2 Short-term trend Period	2013-2018

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5.3 Short-term trend Direction	Increasing (+)	
5.4 Short-term trend Magnitude	a) Minimum	b) Maximum
5.5 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
5.6 Long-term trend Period		
5.7 Long-term trend Direction		
5.8 Long-term trend Magnitude	a) Minimum	b) Maximum
5.9 Long-term trend Method used		
5.10 Favourable reference range	a) Area (km²)	23550
	b) Operator	
	c) Unknown	
	d) Method	The FRR has changed since 2013. The new value is considered to be large enough to support a viable population and no lower than the range estimate when the Habitats Directive came into force in the UK. For further information see the 2019 Article 17 UK Approach document. The 2013 FRR value has been revised and is equal to the current range. The current range surface area has been calculated using the method outlined in Mathews et. al., (2018) and is based on presence data collected between 1995-2016. Areas that contain very isolated records may not have been included in the area of distribution. The new, more robust method of calculating range has reduced estimated range size for this species since 2013. This does not represent a real reduction in range.
5.11 Change and reason for change in surface area of range	Genuine change Improved knowledge/more accurate data Use of different method The change is mainly due to: Use of different method	
5.12 Additional information	Trend in range has been assessed by using the 2019 distribution data and the 2013 method for calculating range and comparing the result with range surface area in 2013. Expert opinion that the range is increasing in England, where the largest population occurs, has also been included. For further information see the 2019 Article 17 UK Approach document and country assessments. The FRR value is considered to be large enough to support a viable population.	

6. Population

6.1 Year or period	1995-2017	
6.2 Population size (in reporting unit)	a) Unit	number of individuals (i)
	b) Minimum	10300
	c) Maximum	55600
	d) Best single value	
6.3 Type of estimate	95% confidence interval	

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6.4 Additional population size (using population unit other than reporting unit)	a) Unit	
	b) Minimum	
	c) Maximum	
	d) Best single value	
6.5 Type of estimate		
6.6 Population size Method used	Based mainly on extrapolation from a limited amount of data	
6.7 Short-term trend Period	2006-2018	
6.8 Short-term trend Direction	Unknown (x)	
6.9 Short-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
6.10 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
6.11 Long-term trend Period		
6.12 Long-term trend Direction		
6.13 Long-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
6.14 Long-term trend Method used		
6.15 Favourable reference population (using the unit in 6.2 or 6.4)	a) Population size	
	b) Operator	
	c) Unknown	x
	d) Method	The FRP for this species is unknown because there is insufficient information to set an FRP value. For further information see the 2019 Article 17 UK Approach document. The FRP in 2013 was 2000 bats. A new method for calculating population size (Mathews et. al., 2018) has increased the population estimate substantially. However, the confidence limits for the population estimate are extremely wide and methodologies have changed and there is uncertainty concerning the true population size. The current population is, therefore, unknown
6.16 Change and reason for change in population size	Genuine change	
	Improved knowledge/more accurate data	
	Use of different method	
	The change is mainly due to:	Use of different method
6.17 Additional information	The population estimate in 2013 was 1,500 bats and the FRP was 2000 bats. The difference in population size between reporting rounds is most attributable to a change in methodology, although more data are also available and there has possibly been a genuine change. The estimates for the previous reporting rounds were based on expert judgement and extrapolation from limited field surveys. The new estimate (in individuals), taken from Mathews et. al. (2018) is considered to be more robust. However, uncertainty around the population and trend information make it difficult to draw a population status conclusion for this	

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species. The conclusion is therefore currently unknown.

7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat	a) Are area and quality of occupied habitat sufficient (for long-term survival)?	Unknown
	b) Is there a sufficiently large area of unoccupied habitat of suitable quality (for long-term survival)?	Unknown
7.2 Sufficiency of area and quality of occupied habitat Method used	Insufficient or no data available	
7.3 Short-term trend Period	1995-2018	
7.4 Short-term trend Direction	Unknown (x)	
7.5 Short-term trend Method used	Insufficient or no data available	
7.6 Long-term trend Period		
7.7 Long-term trend Direction		
7.8 Long-term trend Method used		
7.9 Additional information	Although the habitat requirements for this species are fairly well established, ground truthing of the estimated population and range from Mathews et. al., 2018, has not yet been undertaken and the quality of the indicated habitats have not been assessed. The short term trend direction is unknown, and the overall status for habitat for the species is unknown.	

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Removal of small landscape features for agricultural land parcel consolidation (hedges, stone walls, rushes, open ditches, springs, solitary trees, etc.) (A05)	M
Conversion to other types of forests including monocultures (B02)	H
Logging (excluding clear cutting) of individual trees (B06)	H
Removal of dead and dying trees, including debris (B07)	H
Removal of old trees (excluding dead or dying trees) (B08)	H
Clear-cutting, removal of all trees (B09)	H
Application of synthetic fertilisers in forestry, including liming of forest soils (B19)	M
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	M
Interspecific relations (competition, predation, parasitism, pathogens) (L06)	M

Threat	Ranking
Removal of small landscape features for agricultural land parcel consolidation (hedges, stone walls, rushes, open	M

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ditches, springs, solitary trees, etc.) (A05)

Conversion to other types of forests including monocultures (B02)	H
Logging (excluding clear cutting) of individual trees (B06)	H
Removal of dead and dying trees, including debris (B07)	H
Removal of old trees (excluding dead or dying trees) (B08)	H
Clear-cutting, removal of all trees (B09)	H
Application of synthetic fertilisers in forestry, including liming of forest soils (B19)	M
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	M
Interspecific relations (competition, predation, parasitism, pathogens) (L06)	M

8.2 Sources of information

8.3 Additional information

9. Conservation measures

9.1 Status of measures	a) Are measures needed?	Yes
	b) Indicate the status of measures	Measures identified and taken
9.2 Main purpose of the measures taken	Maintain the current range, population and/or habitat for the species	
9.3 Location of the measures taken	Both inside and outside Natura 2000	
9.4 Response to the measures	Long-term results (after 2030)	

9.5 List of main conservation measures

Restore small landscape features on agricultural land (CA02)

Prevent conversion of (semi-) natural habitats into forests and of (semi-)natural forests into intensive forest plantation (CB01)

Adapt/manage reforestation and forest regeneration (CB04)

Adapt/change forest management and exploitation practices (CB05)

Stop forest management and exploitation practices (CB06)

Manage the use of chemicals for fertilisation, liming and pest control in forestry (CB09)

Reduce impact of transport operation and infrastructure (CE01)

9.6 Additional information

10. Future prospects

10.1 Future prospects of parameters	a) Range	Good
	b) Population	Unknown
	c) Habitat of the species	Unknown
10.2 Additional information	Future trend in Range is Overall stable; Future trend in Population is Unknown;	

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and Future trend in Habitat for the species is Unknown. For further information on how future trends inform the Future Prospects conclusion see the 2019 Article 17 UK Approach document.

11. Conclusions

11.1. Range	Favourable (FV)
11.2. Population	Unknown (XX)
11.3. Habitat for the species	Unknown (XX)
11.4. Future prospects	Unknown (XX)
11.5 Overall assessment of Conservation Status	Unknown (XX)
11.6 Overall trend in Conservation Status	
11.7 Change and reasons for change in conservation status and conservation status trend	**a) Overall assessment of conservation status**
	Improved knowledge/more accurate data
	Use of different method
	The change is mainly due to: Improved knowledge/more accurate data
	b) Overall trend in conservation status
	No change
	The change is mainly due to:
11.8 Additional information	Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is increasing; and (ii) the current Range surface area is approximately equal to the Favourable Reference Range.
	Conclusion on Population reached because: (i) the short-term trend direction in Population size is unknown; and (ii) the Favourable Reference Population is unknown.
	Conclusion on Habitat for the species reached because: (i) the area of occupied habitat is unknown and (ii) the habitat quality is unknown; and (iii) the short-term trend in area and quality of habitat is unknown.
	Conclusion on Future prospects reached because: (i) the Future prospects for Range are good; (ii) the Future prospects for Population are unknown: and (iii) the Future prospects for Habitat for the species are unknown.
	Overall assessment of Conservation Status is Favourable because three of the conclusions are Unknown.
	Overall trend in Conservation Status is based on the combination of the short-term trends for Range – increasing, Population – unknown, and Habitat for the species – unknown.
	Overall assessment of conservation status has changed since 2013 from Unfavourable Inadequate to Unknown.
	Overall trend in Conservation Status has not changed since 2013.

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12. Natura 2000 (pSCIs, SCIs and SACs) coverage for Annex II species

12.1 Population size inside the pSCIs, SCIs and SACs network (on the biogeographical/marine level including all sites where the species is present)	a) Unit b) Minimum c) Maximum d) Best single value
12.2 Type of estimate	
12.3 Population size inside the network Method used	Insufficient or no data available
12.4 Short-term trend of population size within the network Direction	Unknown (x)
12.5 Short-term trend of population size within the network Method used	Insufficient or no data available
12.6 Additional information	This species is monitored within the protected sites where it occurs, but there is currently only sufficient information to record species presence rather than populations or any changes in trend.

13. Complementary information

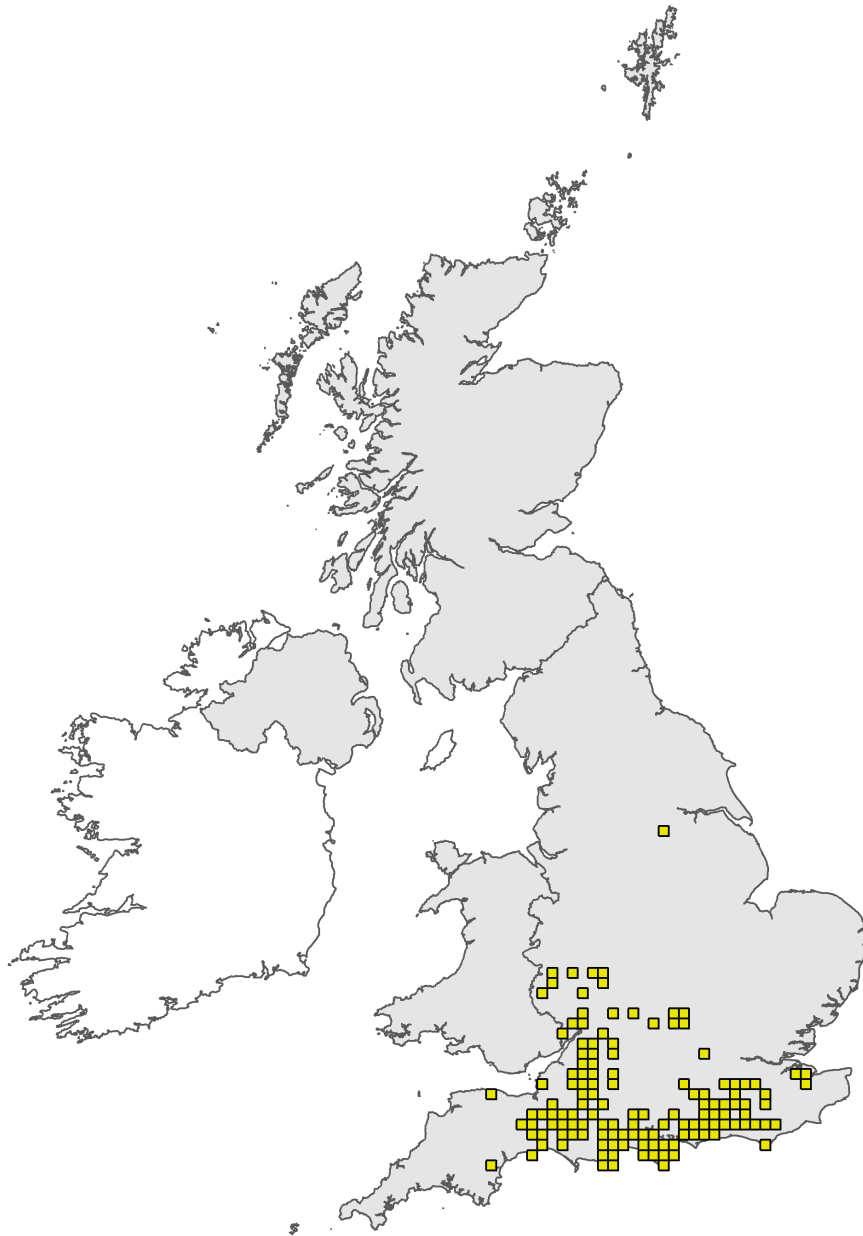|	
13.1 Justification of % thresholds for trends	
13.2 Trans-boundary assessment	
13.3 Other relevant Information	

Distribution Map

Figure 1: UK distribution map for S1323 - Bechstein's bat (*Myotis bechsteinii*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The 10km grid square distribution map is based on available species records within the current reporting period. For further details see the 2019 Article 17 UK Approach document.
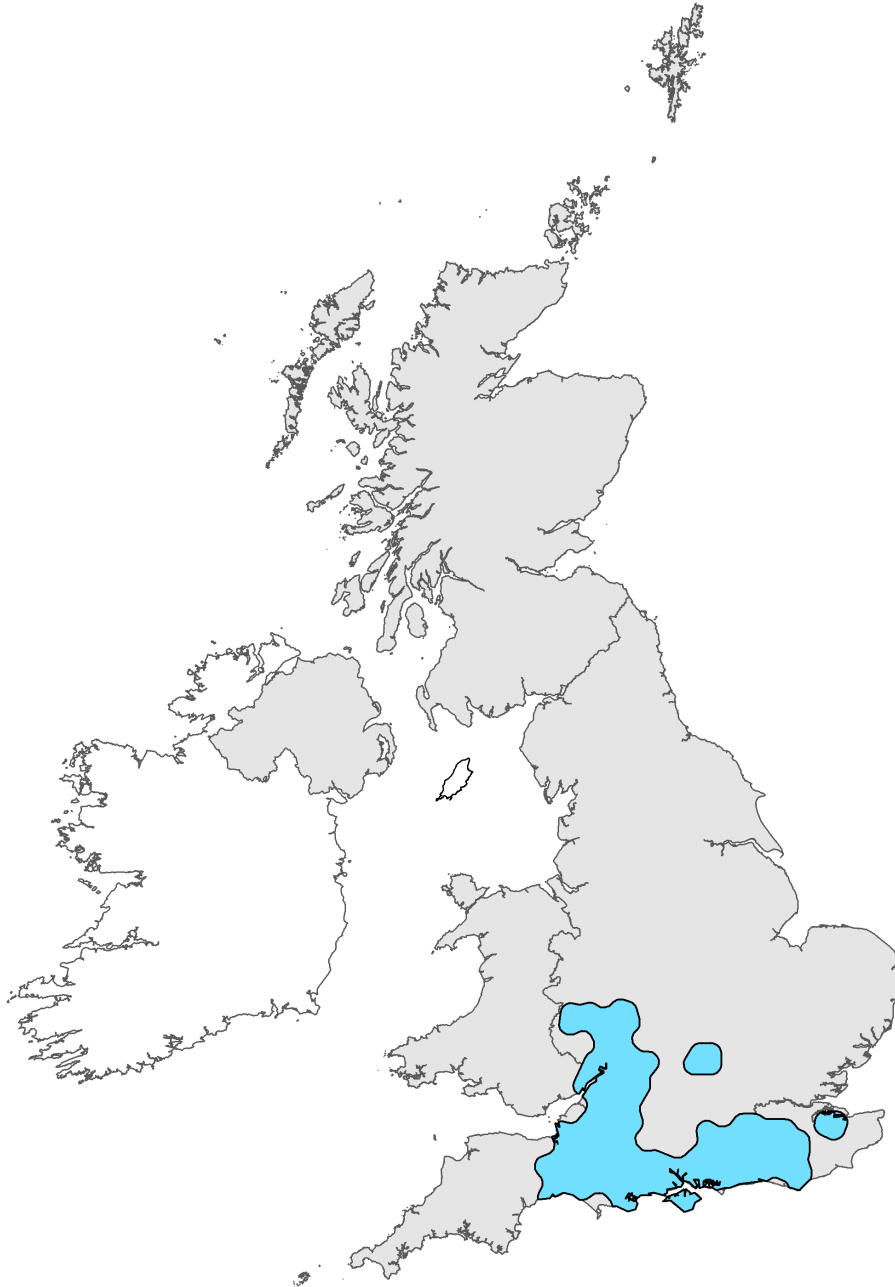
Range Map

Figure 2: UK range map for S1323 - Bechstein's bat (*Myotis bechsteinii*).Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The range map has been produced by The Mammal Society applying a range mapping tool as outlined in Matthews et al. (2018), to the 10km grid square distribution map presented in Figure 1. The alpha value for this species was 20km. For further details see the 2019 Article 17 UK Approach document.