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:

S1317 - Nathusius' pipistrelle (*Pipistrellus nathusii*)

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.

Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

NATIONAL LEVEL

1. General information

1.1 Member State	**UK**
1.2 Species code	**1317**
1.3 Species scientific name	**Pipistrellus nathusii**
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Nathusius' pipistrelle

2. Maps

2.1 Sensitive species	No
2.2 Year or period	1994-2018
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

Barlow, K., D. Hargreaves and F. Mathews (2016). Understanding the ecology, current status and conservation threats for Nathusius' pipistrelle in Great Britain - a pilot study. Final Report to the People's Trust for Endangered Species, People's Trust for Endangered Species.

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Hutson, A.M., F. Spitzenberger, J.Juste, S. Aulagnier, J. Palmeirim, A. Karatas and Paunovic (2008) Pipistrellus nathusii. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013. 1.

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Mathews, F., Kubasiewicz, L.M., Gurnell, J., Harrower, C., McDonald, R.A., Shore, R.F (2018). A review of the population and conservation status of British Mammals. A report by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage.

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Scotland
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5. Range

5.1 Surface area (km²)	90231	
5.2 Short-term trend Period	2013-2018	
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)	90231
	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	Short term 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 and also on expert opinion that the range is increasing in England, where the largest population occurs. For further details please 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	1995-2018	
6.2 Population size (in reporting unit)	a) Unit	number of map 1x1 km grid cells (grids1x1)
	b) Minimum	
	c) Maximum	
	d) Best single value	793
6.3 Type of estimate	Minimum	
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	2007-2018	
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		

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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.
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:	Improved knowledge/more accurate data
6.17 Additional information	The 1km square count has been calculated from the UK count of 1km squares where the species has been recorded. This is a minimum count because it only includes number of recorded occupied 1km squares. In 2013 this species population was recorded as unknown. Due to increased observer effort, records of Nathusius' pipistrelle have increased to an extent, which would infer a genuine increase. However, it is unclear the extent to which records reflect individual migrants and vagrants rather than larger populations. The population is, therefore, currently still reported as 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	Habitat for the species is unknown because there are insufficient data to make an assessment.	

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8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Conversion from one type of agricultural land use to another (excluding drainage and burning) (A02)	M
Removal of small landscape features for agricultural land parcel consolidation (hedges, stone walls, rushes, open ditches, springs, solitary trees, etc.) (A05)	M
Use of plant protection chemicals in agriculture (A21)	M
Drainage for use as agricultural land (A31)	H
Modification of hydrological flow or physical alteration of water bodies for agriculture (excluding development and operation of dams) (A33)	M
Conversion to other types of forests including monocultures (B02)	M
Logging without replanting or natural regrowth (B05)	M
Clear-cutting, removal of all trees (B09)	M
Wind, wave and tidal power, including infrastructure (D01)	H
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	H

Threat	Ranking
Conversion from one type of agricultural land use to another (excluding drainage and burning) (A02)	M
Removal of small landscape features for agricultural land parcel consolidation (hedges, stone walls, rushes, open ditches, springs, solitary trees, etc.) (A05)	M
Use of plant protection chemicals in agriculture (A21)	M
Drainage for use as agricultural land (A31)	H
Modification of hydrological flow or physical alteration of water bodies for agriculture (excluding development and operation of dams) (A33)	M
Conversion to other types of forests including monocultures (B02)	M
Logging without replanting or natural regrowth (B05)	M
Clear-cutting, removal of all trees (B09)	M
Wind, wave and tidal power, including infrastructure (D01)	H
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01)	H

8.2 Sources of information

8.3 Additional information

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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

Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land (CA01)
Restore small landscape features on agricultural land (CA02)
Manage the use of natural fertilisers and chemicals in agricultural (plant and animal) production (CA09)
Manage drainage and irrigation operations and infrastructures in agriculture (CA15)
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)
Adapt/manage renewable energy installation, facilities and operation (CC03)
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 Positive - increasing <=1% (one percent or less) per year on average; Future trend in Population is Unknown; 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	

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11.7 Change and reasons for change in conservation status and conservation status trend	a) Overall assessment of conservation status No change The change is mainly due to: 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 current Population size is unknown. Conclusion on Habitat for the species reached because: (i) the area of occupied habitat is unknown (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 Unknown 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 not changed since 2013. Overall trend in conservation status was not reported for this species in 2013. However, from the information available the overall trend would have been unknown in 2013 and so there has been no change since the last reporting round.

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	
12.4 Short-term trend of population size within the network Direction	

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12.5 Short-term trend of population size within the network Method used

12.6 Additional information

13. Complementary information

13.1 Justification of % thresholds for trends

13.2 Trans-boundary assessment

13.3 Other relevant Information

Distribution Map

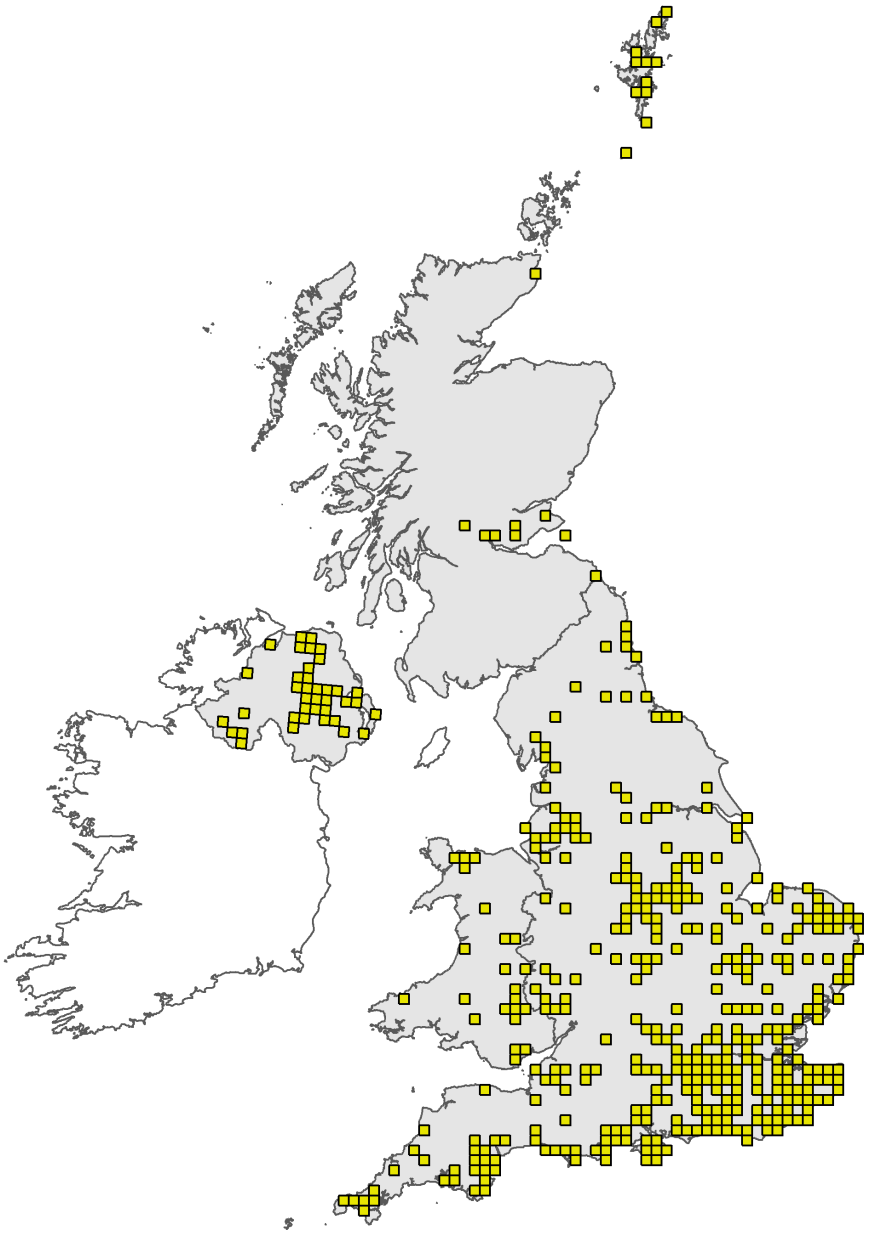

Figure 1: UK distribution map for S1317 - Nathusius' pipistrelle (*Pipistrellus nathusii*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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

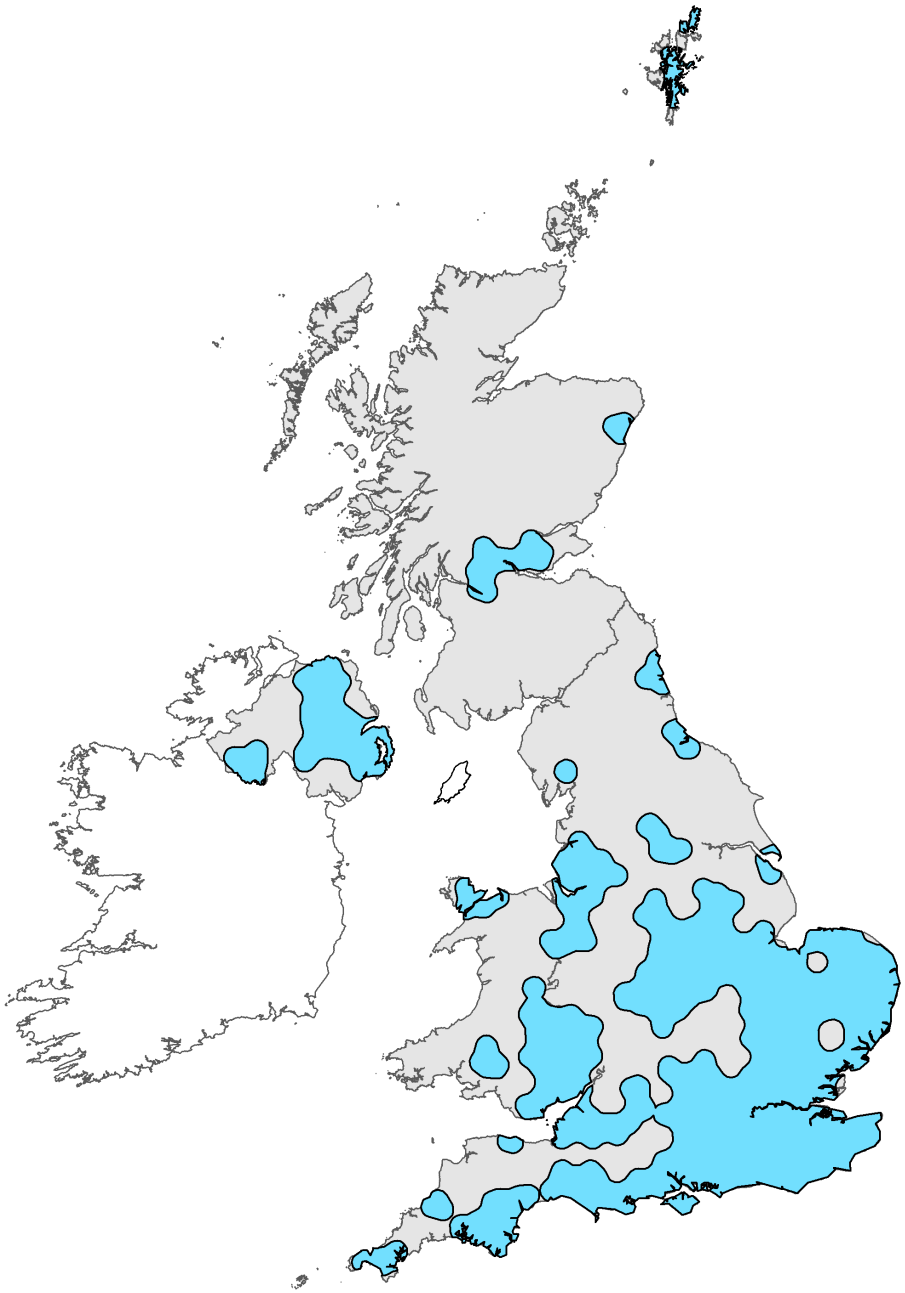

Figure 2: UK range map for S1317 - Nathusius' pipistrelle (*Pipistrellus nathusii*).Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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.