

Report under The Conservation of Habitats and
Species Regulations 2017 (as amended),
Regulation 9A

2019-2024

Conservation status assessment for the species:

S1322 - Natterer's bat

(Myotis nattereri)

England



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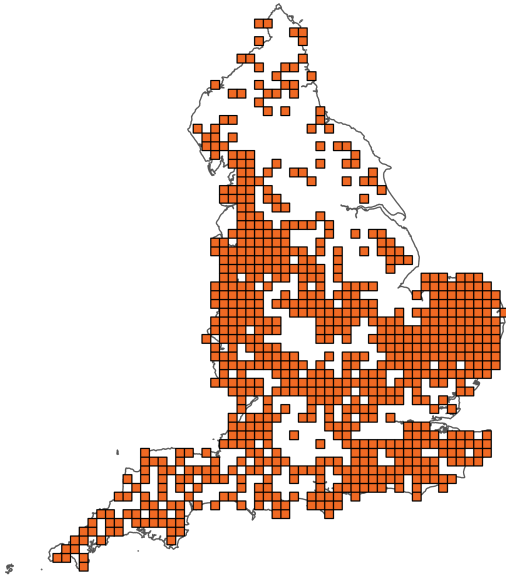
Important note - Please read

- The information in this document represents the England Report under The Conservation of Habitats and Species Regulations 2017 (as amended), Regulation 9A, for the period 2019-2024.
- It is based on supporting information provided by Natural England, which is documented separately.
- The Habitats Regulations reporting 2019-2024 Approach Document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.
- Maps showing the distribution and range of the species are included.
- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the assessments. Further underpinning explanatory notes are available in the related country 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 National Site Network coverage for Annex II species).

Further details on the approach to the Habitats Regulations Reporting 2019-2024 are available on the [JNCC website](#).

Assessment Summary: Natterer's bat

Distribution Map



Range Map

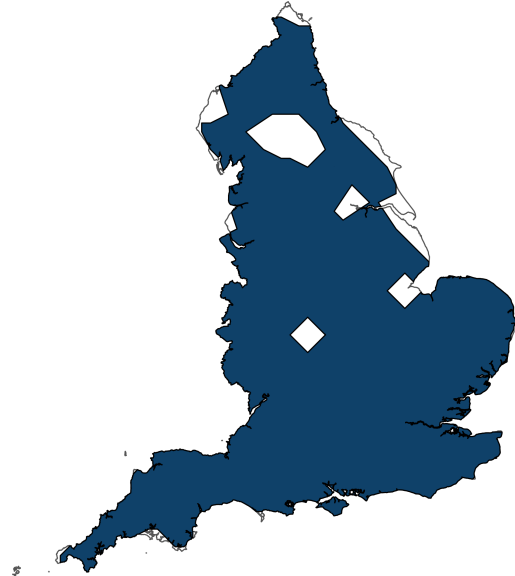


Figure 1: England distribution and range map for S1322 - Natterer's bat (*Myotis nattereri*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority. The 10km grid square distribution map is based on available species records within the current reporting period.

Table 1: Table summarising the conservation status for S1322 - Natterer's bat (*Myotis nattereri*). Overall conservation status for species is based on assessments of range, population, habitat for the species, and future prospects.

Overall Conservation Status (see section 11)

Favourable (FV)

Breakdown of Overall Conservation Status

Range (see section 5)

Favourable (FV)

Population (see section 6)

Unknown (XX)

Habitat for the species (see section 7)

Favourable (FV)

Future prospects (see section 10)

Favourable (FV)

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National Level

1. General information

1.1 Country	England
1.2 Species code	S1322
1.3 Species scientific name	<i>Myotis nattereri</i>
1.4 Alternative species scientific name	
1.5 Common name	Natterer's bat
Annex(es)	IV

2. Maps

2.1 Sensitive species	No
2.2 Year or period	1995-2024
2.3 Distribution map	Yes
2.4 Distribution map; Method used	Complete survey or a statistically robust estimate

2.5 Additional information

The range map has been produced following the same methodology that was used in 2007 and 2013 whereby a 45km alpha hull value has been used for all species with a starting range unit of individual 10km squares. In 2018 range was taken from Mathews et al, whereby an alpha hull value of 20km was drawn around the presence records, which represented the best balance between the inclusion of unoccupied sites (i.e. where records are sparse but close enough for inclusion) and the exclusion of occupied areas due to gaps in the data (i.e. where records exist but are too isolated for inclusion). An additional 10km buffer was added to the final hull polygon to provide smoothing to the hull and to ensure that the hull covered the areas recorded rather than intersecting them. That process led to the production of much finer detailed maps being produced.

Additionally, for the 2026 Regulation 9A reporting round the distribution datasets reported for all features have been created using existing Natural England source data and additional datasets made available to Natural England for Regulation 9a reporting under Open Government (OGL) or Creative Commons (CC-BY) licence. The

reinterpretation of source data is a methodological change which has resulted in changes to mapped distribution and hence range for some features. In a few cases the available data is known to not reflect the full distribution of a feature. In order to attempt to overcome this issue, the date range for the collection of presence data for this species has been set at 1995-2024. Where apparent change is an artefact of the mapping approach, rather than real change in distribution it will be highlighted, and associated changes in range explained, in the assessment text.

3. Information related to Annex V Species

3.1 Is the species taken in the wild / exploited?

3.2 What measures have been taken?

a) Regulations regarding access to property

b) Temporary or local prohibition on the taking of specimens in the wild and exploitation

c) Regulation of the periods and/or methods of taking specimens

d) Application of hunting and fishing rules which take account of the conservation of such populations

e) Establishment of a system of licences for taking specimens or of quotas

f) Regulation of the purchase, sale, offering for sale, keeping for sale, or transport for sale of specimens

g) Breeding in captivity of animal species as well as artificial propagation of plant species

Other measures

Other measures description

3.3: Hunting bag or quantity taken in the wild for Mammals and Acipenseridae (Fish)

a) Unit

Table 2: Quantity taken from the wild during the reporting period (see 3.3a for units). For species with defined hunting seasons, Season 1 refers to 2018/2019 (autumn 2018 to spring 2019), and Season 6 to 2023/2024. For species without hunting seasons, data are reported by calendar year: Year 1 is 2019, and Year 6 is 2024.

	Season/ year 1	Season/ year 2	Season/ year 3	Season/ year 4	Season/ year 5	Season/ year 6
b) Minimum	-	-	-	-	-	-
c) Maximum	-	-	-	-	-	-
d) Unknown	-	-	-	-	-	-

3.4: Hunting bag or quantity taken in the wild; Method used

3.5: Additional information

No additional information

Biogeographical Level

4. Biogeographical and marine regions

4.1 Biogeographical or marine region where the species occurs ATL

4.2 Sources of information

See section 14 References

5. Range

5.1 Surface area (km²) 120,602

5.2 Short-term trend; Period 2013-2024

5.3 Short-term trend; Direction Stable

5.4 Short-term trend; Magnitude

a) Estimated minimum

b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	
5.5 Short-term trend; Method used	Complete survey or a statistically robust estimate used
5.6 Long-term trend; Period	
5.7 Long-term trend; Direction	
5.8 Long-term trend; Magnitude	
a) Minimum	
b) Maximum	
c) Rate of decrease	
5.9 Long-term trend; Method used	
5.10 Favourable Reference Range (FRR)	
a) Area (km²)	120,601
b) Pre-defined increment	
c) Unknown	No
d) Method used	Model-based approach
e) Quality of information	moderate
5.11 Change and reason for change in surface area of range	
a) Change	Yes
b) Genuine change	Yes
c) Improved knowledge or more accurate data	Yes
d) Different method	Yes

e) No information	No
f) Other reason	No
g) Main reason	Use of different method

5.12 Additional information

The new FRR value is equal to the current range and 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.

6. Population

6.1 Year or period 1995-2024

6.2 Population size (in reporting unit)

a) Unit	number of individuals
b) Minimum	11,700
c) Maximum	2,040,000
d) Best single value	321,000
6.3 Type of estimate	95% confidence interval
6.4 Quality of extrapolation to reporting unit	low

6.5 Additional population size (using population unit other than reporting unit)

a) Unit	
b) Minimum	
c) Maximum	
d) Best single value	
e) Type of estimate	

6.6 Population size; Method used Complete survey or a statistically robust estimate

6.7 Short-term trend; Period 2017-2022

6.8 Short-term trend; Direction	Stable
6.9 Short-term trend; Magnitude	
a) Estimated minimum	
b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	
6.10 Short-term trend; Method used	Complete survey or a statistically robust estimate used
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	
d) Rate of decrease	
6.14 Long-term trend; Method used	
6.15 Favourable Reference Population (FRP)	
ai) Population size	
aii) Unit	
b) Pre-defined increment	
c) Unknown	Yes
d) Method used	
e) Quality of information	

6.16 Change and reason for change in population size

a) Change No

b) Genuine change

c) Improved knowledge or more accurate data

d) Different method

e) No information

f) Other reason

g) Main reason

6.17 Additional information

No additional information

6.18 Age structure, mortality and reproduction deviation No deviation from normal

7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat (for long-term survival)

a) Is area of occupied habitat sufficient? Yes

b) Is quality of occupied habitat sufficient? Yes

c) If No or Unknown, is there a sufficiently large area of unoccupied habitat of suitable quality?

7.2 Sufficiency of area and quality of occupied habitat; Method used

a) Sufficiency of area of occupied habitat; Method used Based mainly on extrapolation from a limited amount of data

b) Sufficiency of quality of occupied habitat; Method used Based mainly on extrapolation from a limited amount of data

7.3 Short-term trend; Period	2013-2024
7.4 Short-term trend; Direction	Stable
7.5 Short-term trend; Method used	Based mainly on extrapolation from a limited amount of data
7.6 Long-term trend; Period	
7.7 Long-term trend; Direction	
7.8 Long-term trend; Method used	
7.9 Additional information	

No additional information

8. Main pressures

8.1 Characterisation of pressures

Table 3: Pressures affecting the species, including timing and importance/impact ranking. Pressures are defined as factors acting currently and/or during the reporting period (2019–2024). Rankings are: High (direct/immediate influence and/or large spatial extent) and Medium (moderate direct/immediate influence, mainly indirect and/or regional extent).

Pressure	Timing	Ranking
PA02: Conversion from one type of agricultural land use to another (excluding drainage and burning)	Ongoing and likely to be in the future	Medium (M)
PA15: Use of other pest control methods in agriculture (excluding tillage)	Ongoing and likely to be in the future	Medium (M)
PA04: Removal of small landscape features for agricultural land parcel consolidation (hedges, stone walls, rushes, open ditches, springs, solitary trees, etc.)	Ongoing and likely to be in the future	Medium (M)
PB02: Conversion from one type of forestry land use to another	Ongoing and likely to be in the future	Medium (M)
PB05: Logging without replanting or natural regrowth	Ongoing and likely to be in the future	Medium (M)

PE01: Roads, paths, railroads and related infrastructure	Ongoing and likely to be in the future	High (H)
PB17: Use of plant protection chemicals in forestry	Ongoing and likely to be in the future	Medium (M)
PK01: Mixed source pollution to surface and ground waters (limnic and terrestrial)	Ongoing and likely to be in the future	Medium (M)
PJ01: Temperature changes and extremes due to climate change	Ongoing and likely to be in the future	Medium (M)
PF12: Residential, commercial and industrial activities and structures generating noise, light, heat or other forms of pollution	Ongoing and likely to be in the future	High (H)

8.2 Sources of information

See section 14 References

8.3 Additional information

No 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 National Site Network
9.4 Response to measures	Medium-term results (within the next two reporting periods, 2025–2036)

9.5 List of main conservation measures

Table 4: Key conservation measures addressing current pressures and/or anticipated threats during the next two reporting periods (2025–2036). Measures are ranked by importance/impact: High (direct/immediate influence and/or large spatial extent) and Medium (moderate direct/immediate influence, mainly indirect and/or regional extent).

Conservation measure	Ranking
MA01: Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land	Medium (M)
MF02: Habitat restoration of areas impacted by residential, commercial, industrial and recreational infrastructure, operations and activities	Medium (M)
MA03: Maintain existing extensive agricultural practices and agricultural landscape features	Medium (M)
MB01: Prevent conversion of (semi-) natural habitats into forests and of (semi-) natural forests into intensive forest plantation	Medium (M)
MA14: Other measures related to agricultural practices	Medium (M)
MB09: Manage the use of natural and synthetic fertilisers, liming and pest control in forestry	Medium (M)
MB10: Reduce diffuse or point source pollution to surface or ground waters (incl. marine) from forestry activities	Medium (M)
ME05: Manage/reduce/eliminate noise, light and other forms of pollution from transport	High (H)
MF07: Reduce/eliminate pollution (incl. noise, light, heat, soil pollution) from industrial, commercial, residential and recreational areas and activities	High (H)

9.6 Additional information

No additional information

10. Future prospects

10.1a Future trends of parameters

ai) Range Overall stable

bi) Population Overall stable

ci) Habitat for the species Overall stable

10.1b Future prospects of parameters

aii) Range Good

bii) Population	Good
cii) Habitat for the species	Good

10.2 Additional information

The future prospects for range for this species is thought to be stable and any changes since the previous report are likely to be due to changes in methodology. The NBMP data (BCT, 2024) shows a significant increase in the hibernation survey index between 1999 and 2023. Between 2017-2022 the index increased by 2.6% (95% CI –14.5% to 14.3%), however this change is not significantly significant. In England, the population of Natterer’s bat is considered to have increased in the long-term (since 1999) and to have been stable in the short-term (2017-2022).

Increased interests in afforestation means that the total area of broadleaved woodland is likely to continue to increase. However, the current trajectory of increase is modest once the loss of existing woodlands is taken into account and the available statistics do not adjust for woodland recently converted into another land use (Forestry Commission 2017; Forestry Commission 2016). The rate of new planting of woodland (conifer and broadleaved combined) has fallen over the past 20 years, whilst the rate of restocking has remained approximately stable in all countries. Climate change may also impact on habitat availability and quality for this species. Overall, the future prospects for habitat for this species are thought to be stable.

11. Conclusions

11.1 Range	Favourable (FV)
11.2 Population	Unknown (XX)
11.3 Habitat for the species	Favourable (FV)
11.4 Future prospects	Favourable (FV)
11.5 Overall assessment of Conservation Status	Favourable (FV)
11.6 Overall trend in Conservation Status	Stable

11.7 Change and reason for change in conservation status

This field is not reported as the period 2019-2024 marks the first instance in which conservation status has been assessed at the national level, meaning no comparisons to previous reports can be drawn.

11.7 Change and reason for change in conservation status trend

This field is not reported as the period 2019-2024 marks the first instance in which conservation status has been assessed at the national level, meaning no comparisons to previous reports can be drawn.

11.8 Additional information

No additional information

12. UK National Site Network (pSCIs, SCIs, SACs) coverage for Annex II species

12.1 Population size inside the pSCIs, SCIs and SACs network

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

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

12.6 Short-term trend of habitat for the species inside the pSCIs, SCIs and SACs network; Direction

12.7 Short-term trend of habitat for the species inside the pSCIs, SCIs and SACs network; Method used

12.8 Additional information

No additional information

13. Complementary information

13.1 Justification of percentage thresholds for trends

No justification information

13.2 Trans-boundary assessment

No trans-boundary assessment information

13.2 Other relevant information

No other relevant information

14. References

Biogeographical and marine regions

4.2 Sources of information

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Parsons, K.N. and Jones, G. (2003). Dispersion and habitat use by *Myotis daubentonii* and *Myotis nattereri* during the swarming season: implications for conservation. *Animal conservation*, 6, 283-290

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Smith, P.G. (2001). Habitat preference, range use and roosting ecology of Natterer's bats (*Myotis nattereri*) in a grassland-woodland landscape. PhD, University of Aberdeen

Smith, P.G. and Racey, P.A. (2005). The itinerant Natterer: physical and thermal characteristics of summer roosts of *Myotis nattereri* (Mammalia: Chiroptera). *Journal of Zoology*, 266, 171-180

Smith, P.G. and Racey, P.A. (2008). Natterer's bats prefer foraging in broad-leaved woodlands and river corridors. *Journal of Zoology*, 275, 314-322

Swift, S.M. (1997). Roosting and foraging behaviour of Natterer's bats (*Myotis nattereri*) close to the northern border of their distribution. *Journal of Zoology*, 242, 375-384

Zeale, M.R., Bennett, E., Newson, S.E., Packman, C., Browne, W.J., Harris, S., Jones, G. and Stone, E. (2016). Mitigating the Impact of Bats in Historic Churches: The Response of Natterer's Bats *Myotis nattereri* to Artificial Roosts and Deterrence. *PLoS One*, 11, e0146782

Main pressures

8.2 Sources of information

No sources of information

15. Explanatory Notes

Field label	Note
1.5: Common name	<p><i>Myotis natterii</i> is commonly associated with trees, particularly broadleaved woodland, but also tree-lined river corridors, parkland and hedgerows adjacent to pasture (Parsons and Jones, 2003; Smith and Racey, 2008; Zeale et al, 2016). They have also been observed along roadsides (Swift, 1997) and using mature Corsican pinbe plantations in Scotland (Mortimer, 2006). Maternity roosts are located in trees, bat boxes and buildings and tend to be located close to woodland habitats (Smith and Racey, 2005; Boughey et al, 2011). Underground sites, including tunnels, caves and ice-houses are used for hibernation and the extent of use of trees is unclear (Dietz and Keifer, 2016; Smith, 2001).</p>
5.5: Short-term trend; Method used	<p>Range is based on presence data collected between 1995 and 2024. Areas that contain very isolated records may not have been included in the distribution. The range map has been produced following the same methodology that was used in 2007 and 2013 whereby a 45km alpha hull value has been used for all species with a starting range unit of individual 10km squares. In 2018, range was taken from Mathews et al, whereby an alpha hull value of 20km was drawn around the presence records, which represented the best balance between the inclusion of unoccupied sites (i.e. where records sparse but close enough for inclusion) and the exclusion of occupied areas due to gaps in the data (i.e. where records exist but are too isolated for inclusion). An additional 10km buffer was added to the final hull polygon to provide smoothing to the hull and to ensure that the hull covered the areas recorded, rather than intersecting them. That process led to the production of much finer detailed maps being produced. However, this approach to mapping was not an option for this reporting round (2018-2024).</p>
6.2: Population size	<p>Mathews et al (2018) gives estimates of 11,700 individuals (lower plausible) to 2,040,000 (upper plausible limit) in England, with a main estimate of 321,000. The overall</p>

	<p>estimate was based on information on adult population density across mixed habitat types and multiplied by the available habitable area within the range of the species. Habitable area, are defined as all habitats within the range, excluding montane habitats, since these are unlikely to provide suitable locations for roosts. The plausible range of the estimated population size for Natterer's bats is extremely wide. This is partly because of uncertainty about roost density.</p>
6.8: Short-term trend; Direction	<p>The NBMP (BCT, 2024) data shows a stable short-term trend direction (2017-2022) for the population of <i>M. nattereri</i> in England. Hibernation Survey data indicates that the smoothed index has increased by 2.6% (95% CI -14.5% to 14.3%), however this change is not statistically significant.</p>
6.18: Age structure, mortality and reproduction	<p>There is no evidence to suggest any deviation from the normal age structure, mortality, or reproduction rates. However, this assessment is primarily based on anecdotal observations from bat workers in the field and stable trends in the NBMP bat hibernation surveys. No formal studies have been conducted to confirm these findings.</p>
7.1: Sufficiency of area and quality of occupied habitat	<p><i>M. nattereri</i> is commonly associated with trees, particularly broadleaved woodland, but also tree-lined river corridors, parkland and hedgerows adjacent to pasture (Parsons and Jones, 2003; Smith and Racey, 2008; Zeale et al, 2016). They have also been observed along roadsides (Swift, 1997) and using mature Corsican pine plantations in Scotland (Mortimer, 2006). During the spring most foraging activity is in open habitats such as orchards, fields and pastures with hedgerows and trees, or near water bodies. However, in summer, foraging activity moves more to woodlands, including dense coniferous forests (Boye and Dietz, 2005). Maternity roosts are located in trees, bat boxes and buildings, and tend to be located close to woodland habitats (Smith and Racey, 2005; Boughey et al, 2011). Underground sites, including tunnels, caves and ice-houses are used for hibernation and the extent of use of trees is unclear (Dietz and Keifer, 2016; Smith, 2001).</p>

7.2: Sufficiency of area and quality of occupied habitat; Methods used	<p>Habitable area was defined as all habitats within the range, excluding montane habitats since these are unlikely to provide suitable locations for roosts. Because of the landscape-wide movements of bats and their dependency on a matrix of habitats and roosting locations, it is not currently possible to make more refined estimates of the area of suitable habitat within the range. The habitable area within the range is estimated to be 126,502km².</p>
8.1: Characterisation of pressures	<p>Drivers of change to the population include, the loss of viable roosts during barn and other building conversions (Briggs, 2000); urban development encroaching on traditional roost sites (Boughey et al, 2011); the negative impact of transport infrastructure; artificial night lighting potentially impacting on commuting routes and prey availability (Zeale et al, 2016; Plummer et al, 2016); and changes to the agricultural landscape, including the impact of avermectins on dung flora (Swift, 1997).</p>
8.3: Additional information	<p>There is limited current evidence on the risks or potential benefits to bats from the desynchronisation of biological and ecological processes due to climate change. While some changes, such as longer foraging seasons or increased prey availability in certain regions, could have positive effects, there is insufficient evidence to confirm this. Many bat species rely on precise seasonal cues for hibernation and foraging, and disruptions in food availability, such as shifts in insect emergence, could negatively impact their survival. Hibernating bats depend on stored energy and the predictable availability of prey upon emergence. Therefore, despite the uncertainty, it is important to consider this factor when assessing the broader impacts of climate change on bats.</p>