

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

2019-2024

Conservation status assessment for the species:

S1314 - Daubenton's bat

(Myotis daubentonii)

England



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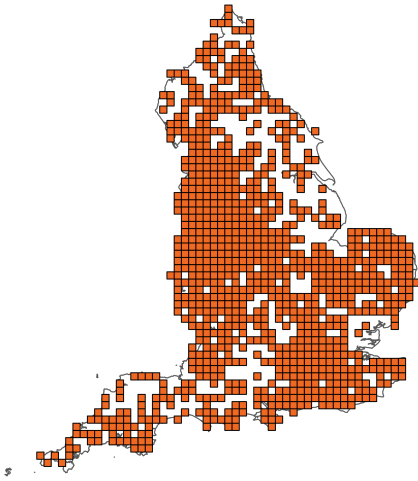
Important note - Please read

- 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: Daubenton's bat

Distribution Map



Range Map



Figure 1: England distribution and range map for S1314 - Daubenton's bat (*Myotis daubentonii*). 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 S1314 - Daubenton's bat (*Myotis daubentonii*). 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	S1314
1.3 Species scientific name	<i>Myotis daubentonii</i>
1.4 Alternative species scientific name	
1.5 Common name	Daubenton'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	Based mainly on extrapolation from a limited amount of data

2.5 Additional information

No additional information

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) 128,332.88

5.2 Short-term trend; Period 1995-2024

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 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

c) Rate of decrease

5.9 Long-term trend; Method used**5.10 Favourable Reference Range (FRR)**

a) Area (km ²)	128,332.88
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b) Pre-defined increment	
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c) Unknown	No
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d) Method used	Expert opinion
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e) Quality of information	moderate
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5.11 Change and reason for change in surface area of range

a) Change	No
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b) Genuine change	
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c) Improved knowledge or more accurate data	
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d) Different method	
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e) No information	
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f) Other reason	
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g) Main reason	
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5.12 Additional information

No additional information

6. Population

6.1 Year or period	1995-2024
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6.2 Population size (in reporting unit)

a) Unit	number of individuals
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b) Minimum	18,100
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c) Maximum	2,950,000
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d) Best single value	682,000
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6.3 Type of estimate	95% confidence interval
6.4 Quality of extrapolation to reporting unit	high
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	1995-2024
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
6.11 Long-term trend; Period	1995-2024
6.12 Long-term trend; Direction	Stable
6.13 Long-term trend; Magnitude	
a) Minimum	

b) Maximum

c) Confidence interval

d) Rate of decrease

6.14 Long-term trend; Method used Complete survey or a statistically robust estimate 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

Although no population level assessment has been conducted since Mathews et al 2018, the population stability reported here is based on trend information from the following: Bat Conservation Trust. 2024. The National Bat Monitoring Programme. Annual Report 2023. Bat Conservation Trust, London. Available at (www.bats.org.uk/pages/nbmp_annual_report.html)

6.18 Age structure, mortality and reproduction deviation Unknown

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 Unknown

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

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	High (H)
PF02: Construction or modification (e.g. of housing and settlements) in existing built-up areas	Ongoing and likely to be in the future	High (H)
PA15: Use of other pest control methods in agriculture (excluding tillage)	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	Medium (M)
PK01: Mixed source pollution to surface and ground waters (limnic and terrestrial)	Ongoing and likely to be in the future	Medium (M)
PL05: Modification of hydrological flow (mixed or unknown drivers)	Ongoing and likely to be in the future	Medium (M)
PJ10: Change of habitat location, size, and / or quality due to climate change	Ongoing and likely to be in the future	High (H)
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	Long-term results (after 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	High (H)
MA14: Other measures related to agricultural practices	High (H)
MB04: Adapt/manage reforestation and forest regeneration	Medium (M)
ME01: Reduce impact of transport operation and infrastructure	Medium (M)
MF04: Reduce/eliminate pollution to surface or ground waters from commercial, residential and recreational areas and activities, and from industrial activities and structures	Medium (M)
MF07: Reduce/eliminate pollution (incl. noise, light, heat, soil pollution) from industrial, commercial, residential and recreational areas and activities	High (H)
MK01: Reduce impact of mixed source pollution	High (H)
MC03: Adapt/manage renewable energy installation, facilities and operation (excl. hydropower and abstraction activities)	Medium (M)

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

Although no population level assessment has been conducted since Mathews et al (2018), the stable population projected here is based on ongoing trends from the following: Bat Conservation Trust (2024). The National Bat Monitoring Programme. Annual Report 2023. Bat Conservation Trust, London. Available at (www.bats.org.uk/pages/nbmp_annual_report.html).

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

Abbott, I. M., Sleeman, D. P. & Harrison, S. (2009). Bat activity affected by sewage effluent in Irish rivers. *Biological Conservation*, 142, 2904-2914.

Bat Conservation Trust (BCT). 2024. The National Bat Monitoring Programme. Annual Report 2023. Bat Conservation Trust, London. Available at (www.bats.org.uk/pages/nbmp_annual_report.html)

Fensome, A. G. & Mathews, F. (2016). Roads and bats: a meta-analysis and review of the evidence on vehicle collisions and barrier effects. *Mammal Review*, 46, 311-323.

JNCC, 2019. 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. Species S1314 - Daubenton's bat (*Myotis daubentonii*) ENGLAND, Peterborough: JNCC, Available from: www.jncc.gov.uk/article17.

Langton, S. D., P. A. Briggs and K. A. Haysom (2010). Daubenton's bat distribution along rivers - developing and testing a predictive model. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 20(S1), S45-S54.

Lucan, R. K. & Radil, J. (2010). Variability of foraging and roosting activities in adult females of Daubenton's bat (*Myotis daubentonii*) in different seasons. *Biologia*, 65, 1072-1080

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.

Racey, P. R., Swift, S. M., Rydell, J. & Brodie, L. (1998). Bats and insects over two Scottish rivers with contrasting nitrate status. *Animal Conservation*, 1, 195-202

Shirley, M. D. F., Armitage, V. L., Barden, T. L., Gough, M., Lurz, P. W. W., Oatway, D. E., South, A. B. & Rushton, S. P. (2001). Assessing the impact of a music festival on the emergence behaviour of a breeding colony of Daubenton's bats (*Myotis daubentonii*). *Journal of Zoology*, 254, 367-373.

Vaughan, N., Jones, G. & Harris, S. (1996). Effects of sewage effluent on the activity of bats (Chiroptera: Vespertilionidae) foraging along rivers. *Biological Conservation*, 78, 337-343.

Warren, R. D., Waters, D. A., Altringham, J.D., and Bullock, D.J. (2000). The distribution of Daubenton's bats (*Myotis daubentonii*) and pipistrelle bats (*Pipistrellus pipistrellus*) (Vespertilionidae) in relation to small-scale variation in riverine habitat. *Biological Conservation*, 92 (1), 85-91

Main pressures

8.2 Sources of information

No sources of information

15. Explanatory Notes

Field label	Note
1.5: Common name	<p><i>Myotis daubentonii</i> is strongly associated with riparian habitats and prefers large waterways with abundant woodland (Langton et al, 2010). In upland riverine environments it appears to select locations with trees on both banks (Warren et al, 2000). Maternity roosts are usually located in trees, most commonly in broadleaved woodland, but also solitary trees, bat boxes, buildings, bridges and other artificial structures. Roosts are usually, although not always, located close to riparian habitats.</p>
6.1: Year or Period	<p>This time period (1995-2024) has been selected as distribution has been partially calculated using data from Mathews et al 2018.</p>
6.2: Population size	<p>These estimates are the same as those reported by Mathews et al., 2018 due to a lack of updated data analysis. Mathews et al (2018) gives estimates of 18,100 individuals (lower plausible limit) to 2,950,000 (upper plausible limit) in England, with a main estimate of 682,000. The overall 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 as 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 Daubenton's bats is extremely wide. This is partly because of uncertainty about roost size. The median roost size was 40 but the 95% confidence intervals were 20-143 individuals. It appears likely, based on data from elsewhere in Europe, that Daubenton's bats have a fission-fusion social structure and frequently move roosts (Lucan and Radil, 2010). Not only do colonies switch roosts very frequently, but the group can also divide across multiple sites before re-joining. It is possible that there is some over-estimation caused by smaller subunits of the colony not being counted and a tendency for observers to report large</p>

	<p>roosts only, biasing the data towards the roost containing greater numbers of individuals. However, this bias may be counteracted by the difficulty of performing complete exit counts. The roost density estimates are likely to be underestimated in both the published literature and expert opinion since a relatively low proportion of all roosts are in houses, and it is difficult to find roosts in trees, bridges and tunnels. Therefore the true population size is likely to be somewhat higher than the lower limit. Reliability scores for the habitat density estimates were assigned to give an indication of the reliability of the data underpinning the population estimate. The habitat density estimates and occupancy data used for this species population estimate were given a reliability score of 1 from a maximum of 5.</p>
5.3: Short-term trend; Direction	<p>There are two long-term Bat Conservation Trust National Bat Monitoring Programme studies of <i>M. daubentonii</i>; the hibernation surveys and the Waterway Survey. These surveys show no significant change since the baseline year of monitoring (1999) or between 2017 - 2022, regarding both the United Kingdom and England (BCT, 2024).</p>
7.1: Sufficiency of area and quality of occupied habitat	<p>This species is strongly associated with riparian habitats. It prefers large waterways with abundant woodland within the local vicinity (Langton et al, 2010) and, at least in upland areas, appears to favour locations with trees on both banks (Warren et al, 2000). Maternity roosts are usually located in trees, most commonly in broadleaved woodland, but also within solitary trees, bat boxes, buildings, bridges etc. Roosts are usually near riparian habitats, although not always.</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 129,000km² (Mathews et al., 2018).</p>

7.4: Short-term trend; Direction	Although the estimated area of suitable habitat for this species appears to have decreased slightly since the last Article 17 report, it is likely that this results from the previous exercise mapping species records at a finer scale, using an alpha hull value of 20km and adding an additional 10km buffer to the final hull polygon to provide smoothing to ensure that the hull covered the areas recorded. It is assumed that this species which can occupy a wide variety of habitat types could be present throughout the entire area, except for montane areas.
8.1: Characterisation of pressures	Drivers of change to <i>M. daubentonii</i> , including pressures and threats, include: the loss of roosts during works to bridges, tunnels and other structures; alterations to water quality and riparian vegetation management, resulting in an alteration in the abundance of prey (Abbott et al, 2009; Racey et al, 1998; Vaughn et al, 1996); the impact of lighting, particularly around bridges and waterways (Mathews et al, 2018); the negative impact of noise (Shirley et al, 2001) and collisions with vehicles (Fensome & Mathews, 2016). There are data deficiencies in areas such as the effect of lighting around riparian habitats; the impact of road casualties and habitat fragmentation in Britain; impacts of agricultural changes; and the impact of aquatic pollution.
5.10: Favourable Reference Range (FRR)	It is not possible to compare historical records to identify any change in range and distribution because of changes in acoustic monitoring techniques and observer effort. However, historical records are scattered throughout the current range. It is considered that the range has not changed significantly over time and therefore the current range is considered to be the favourable range.
2.2: Year or Period	This time period (1995-2024) has been selected as distribution has been partially calculated using data from Mathews et al 2018.
2.3: Distribution map	Range is based on presence data collected between 1995 and 2024. Areas that contain very isolated records may not have been included in the area of distribution.

2.4: Distribution map; Method used	Range is based on presence data collected between 1995 and 2024. Areas that contain very isolated records may not have been included in the area of distribution.
6.8: Short-term trend; Direction	The National Bat Monitoring Programme (BCT 2024) England trend from both the Daubenton's bat hibernation survey and the waterway survey shows no significant change in the smoothed index between 2017 and 2022. Therefore, the population of Daubenton's bat in England is currently considered to be stable.
5.11: Change and reason for change in surface area of range	The English range stated by Mathews et al (2018) is 129,000 square kilometres. The JNCC provided current range (2025) is 128,332.88 square kilometres (using the same methodology as for 2007 and 2013), which is deemed similar enough to constitute 'no change'.
11.2: Population	The existing population estimate for <i>M. daubentonii</i> is 682,000 (plausible intervals = 18,100 - 2,950,000; Mathews et al, 2018).
6.15: Favourable Reference Population (FRP)	It is generally accepted that <i>M. daubentonii</i> is likely to have suffered a historical decline, but there is a lack of data available on the scale of this decline. Given the wide intervals around the population estimate and the uncertainty around historical trends it has not been possible to set a Favourable Reference Value for Population at this time. Further research e.g. into historic population declines including novel genetic techniques, regional variations in trends and improved population estimates are required to establish the FRV for population.