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***)

Wales

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This report was produced by JNCC in collaboration with Natural Resources Wales.

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The views and recommendations presented in this resource do not necessarily reflect the views and policies of JNCC.

Important note - Please read

- The information in this document represents the Wales 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 Resources Wales, 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
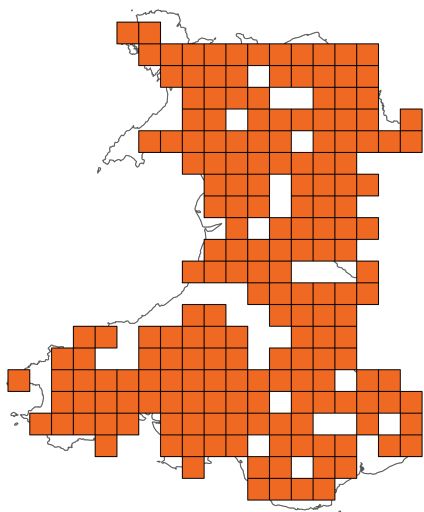
Distribution Map	Range Map

Figure 1: Wales 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)	**Favourable (FV)**
Habitat for the species (see section 7)	**Favourable (FV)**
Future prospects (see section 10)	**Favourable (FV)**

List of Sections

National Level

1. General information

1.1 Country	Wales
1.2 Species code	S1314
1.3 Species scientific name	*Myotis daubentonii*
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)	20,212.65
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	Based mainly on expert opinion with very limited 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 (km²)

b) Pre-defined increment	Current range is less than 2% smaller than the FRR
c) Unknown	No
d) Method used	Reference-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	No
c) Improved knowledge or more accurate data	Yes
d) Different method	Yes
e) No information	No
f) Other reason	
g) Main reason	Use of different method

5.12 Additional information

No additional information

6. Population

6.1 Year or period	2019-2024

6.2 Population size (in reporting unit)

a) Unit	number of individuals
b) Minimum	2,860
c) Maximum	466,000

d) Best single value	108,000
6.3 Type of estimate	Best estimate
6.4 Quality of extrapolation to reporting unit	

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

a) Unit	number of map 1x1 km grid cells
b) Minimum	
c) Maximum	
d) Best single value	262
e) Type of estimate	Best estimate
6.6 Population size; Method used	Based mainly on extrapolation from a limited amount of data
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
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	Current population is less than 5% smaller than the FRP
c) Unknown	No
d) Method used	Reference-based approach
e) Quality of information	moderate

6.16 Change and reason for change in population size

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

6.17 Additional information

No additional information

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 expert opinion with very limited 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	2013-2024
7.7 Long-term trend; Direction	Stable
7.8 Long-term trend; Method used	Based mainly on expert opinion with very limited data

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)
PA21: Active abstraction of water for agriculture	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)
PB23: Physical alteration of water bodies for forestry (including dams)	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)
PF02: Construction or modification (e.g. of housing and settlements) in existing built-up areas	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)
PK01: Mixed source pollution to surface and ground waters (limnic and terrestrial)	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	Medium (M)
MB05: Adapt/change forest management and exploitation practices	High (H)
MC03: Adapt/manage renewable energy installation, facilities and operation (excl. hydropower and abstraction activities)	Medium (M)
ME01: Reduce impact of transport operation and infrastructure	High (H)
MF03: Reduce impact of outdoor sports, leisure and recreational activities (incl. restoration of habitats)	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	High (H)
MF07: Reduce/eliminatepollution (incl. noise, light, heat, soil pollution) from industrial, commercial, residential and recreational areas and activities	High (H)
MF10: Other measures related to residential, commercial, industrial and recreational infrastructures, operations and activities	Medium (M)
MK01: Reduce impact of mixed source pollution	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

No additional information

11. Conclusions

11.1 Range	Favourable (FV)
11.2 Population	Favourable (FV)
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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Main pressures

8.2 Sources of information

No sources of information

15. Explanatory Notes

Field label	Note
2.2: Year or Period	The time period has been selected as distribution has been calculated using data from Mathews et al. 2018, and updated with recent records from Aderyn.
2.4: Distribution map; Method used	Although there have been no structured distribution surveys, Daubenton's bat has been reasonably well recorded by bat workers due to their easy of identification whilst foraging over open water. Some gaps in range in Wales are likely due to a lack of records rather than true absence. Roosts for this species are extremely under recorded.
5.3: Short-term trend; Direction	Myotis daubentonii is a widely distributed species, commonly recorded foraging low over still waterbodies making identification relatively straight forward. Gaps in range in Wales are likely due to a lack of records and the methodology rather than true absence. The short-term range trend is considered stable for this species. Any minor expansions are due to surveyor effort/additional data rather than genuine change.
5.11: Change and reason for change in surface area of range	In the 2019 Article 17 report, the area of land (including unsuitable habitat) contained within the range was given as 20,400 km2 (Mathews et al. 2018).

Mathews et al. 2018, applied an alpha hull value of 20km 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.

This differs from the approach taken in this reporting round, and also the 2013 and 2007 reports, whereby a 45km alpha hull value was used for all species with a starting range unit |

of individual 10km squares.

To produce the range maps JNCC were provided with any additional 10km x 10km grid squares where bats roost records were located between 2018 and 2024, along with the 2019 Article 17 report data. No grid squares have been removed as there have not been any widespread surveys that could indicate loss of a species from any area.

The resulting updated maps produced by JNCC indicate a range of 20,212 km2. The decrease in range indicated is likely mainly due to a change in methodology rather than a genuine change in range.

Whilst the increased use of advanced / full spectrum bat detectors is likely to have resulted in increased detector records of this species, roosts for this species undoubtedly remains significantly under-recorded due to the fact that they are not commonly encountered in houses.

6.5: Additional population size	Based on Mathews et al. 2018 methodology:
	Unit = Individuals
	Minimum = 2,860
	Maximum = 466,000
	Best Single Value: 108,000
	There is no update of this estimate from the previous Article 17 reporting round.
	Mathews et al. 2018 population estimates were derived by first calculating the adult bat density (bats/km2) within poor, average and good habitat and then multiplying this with the total habitable area within their range to give lower, median and upper population estimates.
	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 to be used for population calculations.

Details of calculations are as follows:

Adult bat density (bats/km2)

Median density=[(median n. bats/roost†) x (p♀‡) x (n roosts/typical km2 average habitat)]x 2

Lower limit=[(lower plausible n. bats/roost) x (p♀min) x (plausible n. roosts/typical km2 poor habitat)]x 2

Upper limit = [(upper plausible n. bats/roost) x (p♀max) x (plausible n. roosts/typical km2 good habitat)]x 2

† roost is typical maternity roost in the pre-parturition period. n. is number of adults.

‡ p♀: proportion female. p♀min and p♀max are lowest and highest plausible proportions of adult females in typical maternity roost

Population size

Total Adult Population = Median adult density (bats/km2) x total habitable area within range (km2)

Lower Limit=Lower limit adult density (bats/km2) x total habitable area within range (km2)

Upper Limit=Upper limit adult density (bats/km2) x total habitable area within range (km2)

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 (Lučan 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 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.

6.6: Population size; Method used	The reported figure in 6.2 is based mainly on extrapolation from a limited amount of data.
	The reported figure in 6.5 is based on occupied 1km grid squares and is therefore reliant on existing records.
6.7: Short-term trend; Period	Based on Bat Conservation Trust (2024) NBMP short-term period of 5 years.
6.8: Short-term trend; Direction	There are two long-term trend studies of M. daubentonii coordinated by the NBMP; the hibernation surveys and the Waterway survey.
	Over the last five years, hibernation survey results show the smoothed survey index has increased by 1.7% (95% CI -22.1% to 29.9%), however this change is not statistically significant. Over the last five years, waterway survey results show the smoothed survey index has decreased by 9.9% (95% CI -19% to 3%), however this change is not

	statistically significant and only based on 13 sites as opposed to 55 sites for the hibernation surveys.
6.16: Change and reason for change in population size	The best available population estimate remains unchanged as Mathews et al. 2018 has not been updated, however reported 1km x 1km grid squares have changed due to changes in methodology and surveyor effort between reporting time periods.
6.18: Age structure, mortality and reproduction	There is no evidence to suggest reproduction, mortality or age structure is deviating from normal given the population data.
7.1: Sufficiency of area and quality of occupied habitat	Area 20,400 km2. Habitable area as given by Mathews et al. 2018 has been used as a proxy for occupied habitat and is considered sufficient. The habitable area calculation defined all the area within the range as habitable excluding montane habitat since this is unlikely to include suitable locations for maternity roosts. Quality Whilst we do not have a reliable measure of the quality of the occupied habitat, the population trend is stable and the species continues to be widespread across a mosaic of habitats. It is therefore assumed that quality is sufficient to support a viable population of the species and maintain FCS. M. daubentonii 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. Foraging areas are predominantly at open water bodies and slow flowing rivers. M. daubentonii prefers water bodies, rivers and streams with trees or bushes on the banks to provide shelter from wind. Foraging success is also influenced by the amount of weed cover on the water surface. Sometimes, mainly in springtime, the bats also forage away from water, e.g. woodland clearings.

The use of particular foraging areas generally follows the abundance of Nematocera and Ephemeroptera. When riparian insect abundance is reduced due to windy weather or cold temperatures, M. daubentonii preferentially forages in woodlands. In oak forests individual home ranges were identified with an average size of about 49 hectares. The species can cover distances of 7-8 km between roosting and foraging areas without difficulty. Woodlands are most important as roost sites, especially if they are close to water bodies. Summer roosts are predominantly in trees, sometimes in wall crevices in buildings or underneath bridges. Preferred roosts are in old woodpecker holes, which become enlarged upwards by rotting within a living tree. Fissures in stems, wood crevices, hollow branches, and bird or bat boxes are also used. Most roosts are found in or near the trunk of a broadleaf tree at a height of 1 to 25 metres above the ground with a trunk diameter of at least 30 centimetres. Roost trees are often situated near the forest edge, with more than 40% within 30 metres of the edge. Most males roost alone, and in May and June they also use underground roost sites. Summer roosts are changed frequently. Maternity colonies switch among a network of several roost sites. Winter roosts include caves, mines, cellars and other underground habitats.

In order to obtain an estimate of actual occupied habitat, it would be necessary to first identify all of the foraging and roosting habitat located within the current range boundary; determine whether or not each of these features were being used and subsequently calculate the combined area of all currently used habitats. This process would require very detailed habitat information at a fine scale across the UK. We do not currently have this level of information. However the population trend is increasing and the species is widespread, using a mosaic of habitats; it is therefore assumed that quality is sufficient to support a viable population of the species and maintain FCS.

7.2: Sufficiency of area and quality of occupied habitat; Methods used	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 20,400km2.
8.1: Characterisation of pressures	Pressures can generally be divided into those that affect roosts and those that affect commuting and foraging (including prey availability).

PE01: Roads, paths, railroads and related infrastructure, PB02: Conversion from one type of forestry land use to another, PB05: Logging without replanting or natural regrowth, PF02: Construction or modification (e.g. of housing and settlements) in existing built-up areas: Roosts are in trees, underground places and occasionally in buildings, usually close to water. Human intrusions that eliminate, block up or modify such places or disturb bats whilst hibernating or at mating sites could have a negative effect on the population.

PE01: Roads, paths, railroads and related infrastructure, PA02: Conversion from one type of agricultural land use to another (excluding drainage and burning), PF12: Residential, commercial and industrial activities and structures generating noise, light, heat or other forms of pollution, PF12: Residential, commercial and industrial activities and structures generating noise, light, heat or other forms of pollution, PK01: Mixed source pollution to surface and ground waters (limnic and terrestrial),

PA21: Active abstraction of water for agriculture,

PB23: Physical alteration of water bodies for forestry (including dams), PF17: Active abstraction of water for built-up areas, PA15: Use of other pest control methods in agriculture (excluding tillage): Daubenton's bats forage |

	primarily over water, but also over lowland farmland, woodland, parkland and woodland edges. Water management, alterations to water quality and riparian vegetation management (Abbott et al, 2009; Racey et al, 1998; Vaughn et al, 1996), agricultural or forestry practices that remove, modify or fragment these habitats, or affect the biomass of suitable insect prey through impacts on water quality will all negatively affect populations. The impact of lighting, particularly around bridges and waterways (Mathews et al, 2018) and the negative impact of noise (Shirley et al, 2001) and collisions with vehicles (Fensome & Mathews, 2016) will also impact bats although the significance of such impacts is currently data deficient.
9.5: List of main conservation measures	Legal and administrative measures continue to be required to ensure that the protection provided by the legislation is effective and that protected habitats for the species are managed appropriately. ME01: Reduce impact of transport operation and infrastructure: Road design, construction and operation need to take into account the likely impact on bats, e.g. in relation to the provision of safe crossing structures and the loss of and severance of bat habitat and lighting. MA01: Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land, MF04: Reduce/eliminate pollution to surface or ground waters from commercial, residential and recreational areas and activities, and from industrial activities and structures, MF07: Reduce/eliminate pollution (incl. noise, light, heat, soil pollution) from industrial, commercial, residential and recreational areas and activities, MB05: Adapt/change forest management and exploitation practices, MC03: Adapt/manage renewable energy installation, facilities and operation (excl. hydropower and abstraction activities), MA14: Other measures related to agricultural practices, MK01: Reduce impact of mixed source pollution:

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M. daubentonii mainly forage over water and within woodland. It roosts within trees and built structures, often near water. Environmental land management schemes and appropriate management practices in the agricultural, forestry, and water management sectors are now widely used to ensure these habitats are well-managed and appropriately protect water bodies to ensure pray abundance. Such practices are required to continue in order to achieve conservation goals.

MF10: Other measures related to residential, commercial, industrial and recreational infrastructures, operations and activities:

Planning at landscape scale is required to conserve commuting routes and foraging areas.

MF03: Reduce impact of outdoor sports, leisure and recreational activities (incl. restoration of habitats):

Impacts of recreation (caving) on swarming and hibernation sites need to be limited.

10.1: Future trends and prospects of parameters	Future prospects of range
	The future prospects of range for this species is considered to be overall stable in Wales. M. daubentonii range is widespread through Wales; no specific short-term drivers for expansion or contraction have been identified and therefore there is no reason to assume that range will vary significantly within the next 12 years unless population crashes occur. Future prospects of population The future prospects of population for this species is considered to be overall stable in Wales. The short-term trend drawn from the National Bat Monitoring Programme is stable and it is relatively common and widespread; there is

	no reason to currently assume this will not continue into the future.
	Future prospects of habitat of the species
	The future prospects of habitat of the species is considered to be overall stable in Wales. We do not have a reliable measure of the quality of the occupied habitat, however M. daubentonii is widespread and uses a mosaic of habitats and there are no specific identified drivers of change across these habitats. There is therefore no reason to assume that the current reported trend will not continue over the next 12 years.
11.1: Range	Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is stable; and (ii) the current Range surface area is approximately equal to the Favourable Reference Range.
11.2: Population	Conclusion on Population reached because:(i) the short-term trend direction in Population size is stable; (ii) the current Population size is approximately equal to the Favourable Reference Population; and iii) reproduction, mortality and age structure does not have data available.
11.3: Habitat for the species	Conclusion on Habitat for the species reached because: i) the area of occupied habitat is sufficiently large for the long-term survival of the species (ii) the quality of occupied habitat is suitable for the long-term survival of the species; and (iii) the short-term trend in area of habitat is stable.
11.4: Future prospects	Conclusion on Future prospects reached because: (i) the Future prospects for Range are good; (ii) the Future prospects for Population are good; and (iii) the Future prospects for Habitat for the species are good.
11.5: Overall assessment of Conservation Status	Overall assessment of Conservation Status is Favourable because all of the conclusions are Favourable.
6.15: Favourable Reference Population (FRP)	The UK-level FRV for population was developed by JNCC using an audit trail based on the year the FRV was first established and any changes made in subsequent

reporting rounds. The audit may draw from any combination of the 2007, 2013, or 2019 Habitats Directive reports and reflects the full rationale used for the 2019 Article 17 reporting. This FRV was reviewed by Welsh experts and considered appropriate for use in Wales based on current population trends and abundance.

| 5.10: Favourable Reference Range (FRR) | The UK-level FRV for range was developed by JNCC using an audit trail based on the year the FRV was first established and any changes made in subsequent reporting rounds. The audit may draw from any combination of the 2007, 2013, or 2019 Habitats Directive reports and reflects the full rationale used for the 2019 Article 17 reporting. This FRV was reviewed by Welsh experts and considered appropriate for use in Wales based on current distribution and trends. |