

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

**2019-2024**

Conservation status assessment for the species:

**S1357 - Pine marten**

***(Martes martes)***

**England**



**For further information please contact:**

Natural England, Foss House, Kings Pool, 1-2 Peasholme Green, York, YO1 7PX.  
<https://www.gov.uk/government/organisations/natural-england>

JNCC, Quay House, 2 East Station Road, Fletton Quays, Peterborough, PE2 8YY.  
<https://jncc.gov.uk>

This report was produced by JNCC in collaboration with Natural England.

**This document should be cited as:**

Natural England and JNCC. (2026). Conservation status assessment for the species: S1357 Pine marten (*Martes martes*).

This resource is published by Natural England under the [Open Government Licence v3.0](#) for public sector information. You are encouraged to use and reuse information subject to certain conditions. Note that some images, maps or tables may not be copyright Natural England; please check sources for conditions of re-use. © Natural England 2026.

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

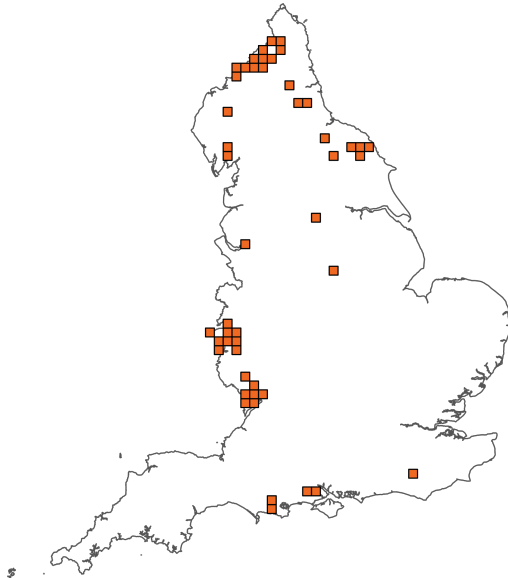
### **Important note - Please read**

- The information in this document represents the 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).

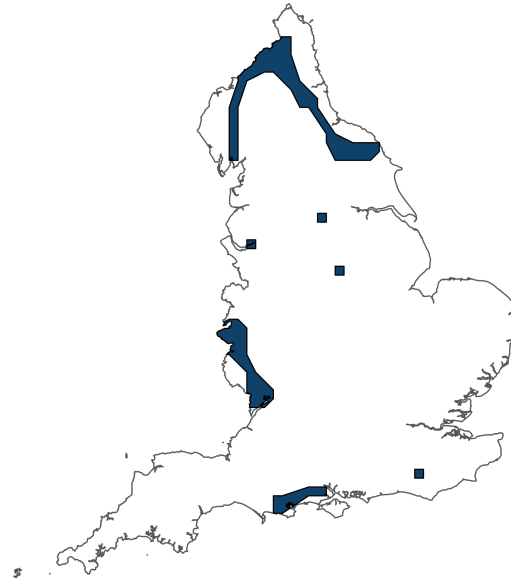
Further details on the approach to the Habitats Regulations Reporting 2019-2024 are available on the [JNCC website](#).

## Assessment Summary: Pine marten

### Distribution Map



### Range Map



**Figure 1:** England distribution and range map for S1357 - Pine marten (*Martes martes*). 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 S1357 - Pine marten (*Martes martes*). 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)

**Unfavourable-bad (U2)**

### Breakdown of Overall Conservation Status

**Range** (see section 5)

**Unfavourable-bad (U2)**

**Population** (see section 6)

**Unfavourable-bad (U2)**

**Habitat for the species** (see section 7)

**Unknown (XX)**

**Future prospects** (see section 10)

**Unknown (XX)**

## List of Sections

National Level .....	5
1. General information .....	5
2. Maps .....	5
3. Information related to Annex V Species .....	6
Biogeographical Level .....	7
4. Biogeographical and marine regions .....	7
5. Range .....	7
6. Population .....	9
7. Habitat for the species .....	12
8. Main pressures .....	13
9. Conservation measures .....	13
10. Future prospects .....	15
11. Conclusions .....	15
12. UK National Site Network (pSCIs, SCIs, SACs) coverage for Annex II species .....	16
13. Complementary information .....	17
14. References .....	18
Biogeographical and marine regions .....	18
Main pressures .....	19
15. Explanatory Notes .....	21

## National Level

### 1. General information

1.1 Country	England
1.2 Species code	S1357
1.3 Species scientific name	<i>Martes martes</i>
1.4 Alternative species scientific name	
1.5 Common name	Pine marten
Annex(es)	V

### 2. Maps

2.1 Sensitive species	No
2.2 Year or period	2010-2024
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

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) license. 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. 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?** No

#### 3.2 What measures have been taken?

**a) Regulations regarding access to property** No

**b) Temporary or local prohibition on 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

**Other measures** No

#### Other measures description

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

**a) Unit** number of individuals

**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>b) Minimum</b>	-	-	-	-	-	-
<b>c) Maximum</b>	-	-	-	-	-	-
<b>d) Unknown</b>	No	No	No	No	No	No

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

### 3.5: Additional information

Illegal persecution, or accidental capture/killing may be a threat if rising pine marten populations bring it into conflict with hunting interests. Persecution is thought to be one of the factors which resulted in pine martens only persisting at very low numbers in England at present.

## 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 (km<sup>2</sup>) 8,202.64

5.2 Short-term trend; Period 2010-2024

5.3 Short-term trend; Direction Increasing

#### 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<sup>2</sup>)**      103,340

---

**b) Pre-defined increment**

---

**c) Unknown**      No

---

**d) Method used**      Model-based approach

---

**e) Quality of information**      high

---

**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

---

<b>e) No information</b>	No
<b>f) Other reason</b>	Yes
<b>g) Main reason</b>	Use of different method

## 5.12 Additional information

Range is based on presence data collected between 2010-2024. 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 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. However, this approach to mapping was not an option for this reporting round (2018-2024). This has resulted in an apparent reduction in range from 12400km to 8202.64km. The range however, is known to have increased due to recent reintroduction exercises particularly in the Forest of Dean, Gloucestershire which took place between 2019-2021. These range increases cannot be fully assessed at this point in time to account for all factors due to the very recent nature of the latest reintroduction exercises in Devon and Cumbria in 2024. However, the range differences are also an artefact of the differing methodologies used to produce the range map as set out above.

## 6. Population

**6.1 Year or period** 2010-2024

### 6.2 Population size (in reporting unit)

<b>a) Unit</b>	number of individuals
<b>b) Minimum</b>	100
<b>c) Maximum</b>	200
<b>d) Best single value</b>	

**6.3 Type of estimate** Minimum

---

**6.4 Quality of extrapolation to reporting unit**      moderate

**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**      Based mainly on expert opinion with very limited data

---

**6.7 Short-term trend; Period**      2010-2024

---

**6.8 Short-term trend; Direction**      Increasing

---

**6.9 Short-term trend; Magnitude**

**a) Estimated minimum**

---

**b) Estimated maximum**

---

**c) Pre-defined range**

---

**d) Unknown**      Yes

---

**e) Type of estimate**

---

**f) Rate of decrease**

---

**6.10 Short-term trend; Method used**      Insufficient or no data available

---

**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)**

<b>ai) Population size</b>	9,600
<b>aii) Unit</b>	number of individuals
<b>b) Pre-defined increment</b>	
<b>c) Unknown</b>	No
<b>d) Method used</b>	Model-based approach
<b>e) Quality of information</b>	moderate

**6.16 Change and reason for change in population size**

<b>a) Change</b>	Yes
<b>b) Genuine change</b>	Yes
<b>c) Improved knowledge or more accurate data</b>	Yes
<b>d) Different method</b>	No
<b>e) No information</b>	No
<b>f) Other reason</b>	Yes
<b>g) Main reason</b>	Other reasons

**6.17 Additional information**

A figure has been generated for population size due partially to the recent reintroduction exercise in the Forest of Dean where there has been evidence of breeding from those founder individuals combined with known other records of the species in Northern England, Shropshire and Hampshire. The trend for the species will be increasing based on these known records and evidence of breeding and also due to more recent reintroduction exercises in Devon and South Cumbria in 2024. However, it is too early to factor in these very recent reintroductions into any population estimate.

**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?**      Unknown

**b) Is quality of occupied habitat sufficient?**      Unknown

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

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

**a) Sufficiency of area of occupied habitat; Method used**      Insufficient or no data available

**b) Sufficiency of quality of occupied habitat; Method used**      Insufficient or no data available

**7.3 Short-term trend; Period**      2010-2024

**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
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	High (H)
PB06: Logging or thinning (excluding clear cutting)	Ongoing and likely to be in the future	High (H)
PB07: Removal of dead and dying trees (including debris)	Ongoing and likely to be in the future	High (H)
PB09: Clear-cutting, removal of all trees	Ongoing	High (H)
PE01: Roads, paths, railroads and related infrastructure	Ongoing and likely to be in the future	High (H)
PG08: Hunting	Ongoing	Medium (M)
PG11: Illegal shooting/killing	Ongoing	Medium (M)

### 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>b) Indicate the status of measures</b>	Measures identified and taken
<b>9.2 Main purpose of the measures taken</b>	Increase the population size and/or improve population dynamics (related to 'Population')
<b>9.3 Location of the measures taken</b>	Both inside and outside National Site Network
<b>9.4 Response to measures</b>	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
MB01: Prevent conversion of (semi-) natural habitats into forests and of (semi-) natural forests into intensive forest plantation	High (H)
MB04: Adapt/manage reforestation and forest regeneration	High (H)
MB05: Adapt/change forest management and exploitation practices	High (H)
MB06: Stop forest management and exploitation practices	High (H)
ME01: Reduce impact of transport operation and infrastructure	Medium (M)
MG02: Management of hunting, recreational fishing, and the recreational or commercial harvesting or collection of plants and fungi (incl. restoration of habitats)	Medium (M)
MG04: Control/eradication of illegal killing, fishing and harvesting of wild plants, fungi and animals	Medium (M)
MS01: Reinforce populations of species from the directives	High (H)

### 9.6 Additional information

Reinforcing pine marten populations through reintroduction exercises is an essential measure needed to recover the species to a viable, long-term, self-sustaining population. However, as populations are being re-established in some parts of England by translocations or captive release, it is possible that limited genetic diversity of smaller founding populations may be a constraint to establishing favourable populations. Ensuring suitable provision of habitat through additional woodland planting, allowing

natural regenerative processes combined with improving the connectivity between woodlands and additional supporting habitats is necessary to enable pine martens to re-colonise suitable areas, provide resting, denning and breeding sites and a suitable prey resource.

## 10. Future prospects

### 10.1a Future trends of parameters

<b>ai) Range</b>	Very Negative - decreasing >1% (more than one percent) per year on average
<b>bi) Population</b>	Very Negative - decreasing >1% (more than one percent) per year on average
<b>ci) Habitat for the species</b>	Unknown

### 10.1b Future prospects of parameters

<b>aii) Range</b>	Unknown
<b>bii) Population</b>	Unknown
<b>cii) Habitat for the species</b>	Unknown

### 10.2 Additional information

The species is listed as Critically Endangered in England on the GB red list for Mammals (Mathews and Harrower, 2020). The pine marten was once widespread across Britain but populations have declined dramatically and consequently its range has also reduced. This decline in range and reduction in population has largely been due to the combined effects of the loss of suitable woodland habitat and targeted persecution which intensified throughout the 19th century (MacPherson et al, In prep). Whilst, there are sustained efforts to reintroduced the species which has and will increase the species range these reintroduction efforts are at their very early stages. It is therefore too early to state what the future range, population and habitat prospects for the species are.

## 11. Conclusions

<b>11.1 Range</b>	Unfavourable-bad (U2)
<b>11.2 Population</b>	Unfavourable-bad (U2)
<b>11.3 Habitat for the species</b>	Unknown (XX)

---

**11.4 Future prospects** Unknown (XX)

**11.5 Overall assessment of Conservation Status** Unfavourable-bad (U2)

**11.6 Overall trend in Conservation Status** Unknown

**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

Balharry, D. (1993). Factors affecting the distribution and population density of pine martens (*Martes martes*) in Scotland. Ph.D. dissertation. University of Aberdeen.

Birks, J. (2017). The pine marten. Stansted. Whittet

Brainerd, S.M. and Rolstad, J., (2002). Habitat selection by Eurasian pine martens *Martes martes* in managed forests of southern boreal Scandinavia. *Wildlife biology*, 8(4), pp.289-297.

Caryl, F.M., Quine, C.P., and Park, K.J. (2012a). Martens in the matrix: the importance of nonforested habitats for forest carnivores in fragmented landscapes. *Journal of Mammology*. 93, 464-474

Caryl, F.M., Raynor, R., Quine, C.P., and Park, K.J. (2012b). The seasonal diet of British pine marten determined from genetically identified scats. *Journal of Zoology*. 288, 252-259

Croose, E., Birks, J.D.S., and Schofield, H.W. (2013). Expansion zone survey of pine marten (*Martes martes*) distribution in Scotland. Scottish Natural Heritage Commissioned Report, No.520

Croose, E., Birks, J.D.S., Schofield, H.W. and O'Reilly, C. (2014). Distribution of the pine marten (*Martes martes*) in southern Scotland in 2013. Scottish Natural Heritage Commissioned Report, No.740

Croose, E., Birks, J.D.S., O'Reilly, C., Turner, P., Martin, J., and MacLeod, E.T. (2016). Sample diversity adds value to non-invasive genetic assessment of pine marten (*Martes martes*) population in Galloway Forest, southwest Scotland. *Mammal Research*. 61, 131-139

Halliwell, E. (1997). The Ecology of Red Squirrels in Scotland in relation to Pine Marten Predation. PhD. Dissertation. University of Aberdeen.

Joint Nature Conservation Committee (2019). Fourth Report by the UK under Article 17 on the implementation of the Habitats Directive from January 2013 to December 2018. Peterborough: JNCC.

Langley, P.J.W. and Yalden, D.W., (1977). The decline of the rarer carnivores in Great Britain during the nineteenth century. *Mammal Review*, 7(3-4), pp.95-116.

MacPherson, J., and Wright, P. (2021). A Long term strategic recovery plan for pine marten *Martes martes* in Britain. Ledbury, Herefordshire, Vincent Wildlife Trust.

MacPherson, J., Wright, P. and Crosse, L. (In Prep). Definition of Favourable Conservation Status for Pine Marten. Natural England.

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

Mathews, F. and Harrower, C. (2020). IUCN compliant red list for Britain's Terrestrial Mammals. Assessment by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage, Natural England, Peterborough.

Mergey, M., Helder, R. and Roeder, J.J., (2011). Effect of forest fragmentation on space-use patterns in the European pine marten (*Martes martes*). *Journal of Mammalogy*, 92(2), pp.328-335.

Mergey, M., Larroque, J., Ruelle, S., Vandiel, J.M., Helder, R., Queney, G. and Devillard, S., (2012). Linking habitat characteristics with genetic diversity of the European pine marten (*Martes martes*) in France. *European Journal of Wildlife Research*, 58, pp.909-922.

O'Mahony, D.T., Turner, P. and O'Reilly, C., (2015). Pine marten (*Martes martes*) abundance in an insular mountainous region using non-invasive techniques. *European Journal of Wildlife Research*, 61, pp.103-110.

Pereboom, V., Mergey, M., Villerette, N., Helder, R., Gerard, J.F. and Lode, T., 2008. Movement patterns, habitat selection, and corridor use of a typical woodland-dweller species, the European pine marten (*Martes martes*), in fragmented landscape. *Canadian Journal of Zoology*, 86(9), pp.983-991.

RSPB 2020. Bird Crime 2020.

Tapper, S.C. (1992). Game Heritage. An Ecological Review from Shooting and Gamekeeping Records. The Game Conservancy, Fordingbridge, Hants, 140pp

Twining, J.P., Montgomery, W.I., Reid, N., Marks, N., Tosh, D.G. and Scantlebury, D.M., 2020. All forests are not equal: population demographics and denning behaviour of a recovering small carnivore in human modified landscapes. *Wildlife Biology*, 2020(4), pp.1-10.

## Main pressures

### 8.2 Sources of information

No sources of information

## 15. Explanatory Notes

Field label	Note
1.5: Common name	<p>Pine martens were once prevalent throughout mainland Britain. By the 19th and early 20th centuries the population suffered severe declines in numbers and distribution due to predator control combined with the historical effects of loss and fragmentation of woodland habitat (Langley and Yalden 1977; Tapper 1992; MacPherson and Wright 2021). By the beginning of the 20th century, pine martens were extinct in almost all of southern Britain, the majority of the remnant population was restricted to the north west highlands in Scotland and much smaller areas in the uplands of northern England and Wales (Langley and Yalden 1977). Habitat improvement and legal protection initially through the Wildlife &amp; Countryside Act (1981) as amended, has led to the partial recovery of the pine martens range in Scotland over the last few decades (Crosse et al., 2013, Crosse et al., 2014) combined with re-introductions in Dumfries &amp; Galloway. The species has increased in number and range in Wales and the Forest of Dean, Gloucestershire as a result of species reinforcement exercises. Additional reinforcement exercises took place in Devon and South Cumbria in 2024.</p>
5.5: Short-term trend; Method used	<p>Range is based on presence data collected between 2010-2024. 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 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</p>

---

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). This has resulted in an apparent reduction in range from 12400km<sup>2</sup> to 8202.64km<sup>2</sup>. The range however, is known to have increased due to recent reintroduction exercises particularly in the Forest of Dean, Gloucestershire which took place between 2019-2021. These range increases cannot be fully assessed at this point in time to account for all factors due to the very recent nature of the latest reintroduction exercises in Devon and Cumbria in 2024. However, the range differences are also an artefact of the differing methodologies used to produce the range map as set out above.

---

6.2: Population size

A minimum and maximum value have been given, however, it is partially based on the recent reintroduction exercise in the Forest Dean, originating from 35 founder animals, thought likely to have increased to 50-70 individuals by 2022. Monitoring of pine marten records in Northumberland and Cumbria between 2017-2020 resulted in over 50 pine marten records but there are currently no population size estimates. The size of the pine marten populations in Shropshire and Hampshire are unknown but recent evidence of breeding in Shropshire suggested the population was increasing. There are a few, scattered, sporadic records in Northern counties of England which may be dispersing animals from Scotland. There are other records which may be the result of unofficial releases. (MacPherson et al, In prep). In 2024 a reintroduction exercise took place in Devon and Cumbria. However, as these are recent reintroductions they have not been accounted for in this population estimate.

---

6.8: Short-term trend;  
Direction

The short term trend direction has been recorded as increasing due to recent reintroduction exercises as set out in the audit under 6.2. However, it is not possible to calculate the degree to which the population is increasing

	due to the very recent nature of these reintroduction exercises.
6.15: Favourable Reference Population (FRP)	The favourable reference population has been based on density estimates from Mathews et al 2018. This figure is the product of the average density in occupied suitable habitat (0.3 individuals/km <sup>2</sup> - 95%CI 0.2-0.8) and the set FRR of 32,000km <sup>2</sup> .
7.1: Sufficiency of area and quality of occupied habitat	Sufficiency of habitat and quality of habitat has not been determined for this report as was the case for the last reporting round, 2013 - 2018. Pine martens are considered a forest specialist and use both coniferous and deciduous woodland. In some regions, they show a preference for old-growth forests and the structural elements within them (Brainerd 1990; Halliwell 1997). In others, they occupy managed, commercial plantations (O'Mahony 2014; Croose et al 2016) fragmented forests (Mergey et al 2011, 2012; Pereboom et al 2008) and non-forested habitats such as scrub heath (Twining et al 2020). Woodland edges and hedgerows may also be used for foraging (Pereboom et al 2008). Pine martens generally avoid open tree-less habitats such as moorland, agricultural land and parkland (Balharry 1993; Brainerd and Rolstad 2002; Caryl et al 2012a; Twining et al 2020), likely to reduce risk of predation by foxes. However, in some circumstances pine martens will utilise open areas if they provide sufficient 3 dimensional structure as protective cover. This behaviour has been shown in Scotland i.e. habitat outside of forests where there is protective cover on the ground and overhead (such as dense gorse thickets, rhododendron and willow scrub), providing connectivity, foraging opportunities and safe denning sites, including natal sites (Caryl et al 2012, a, b). Pine martens in Ireland, where forest cover is the lowest in Europe, utilise non-forested habitats with good ground cover such as the rocky landscape with extensive hazel scrub of the Burren, in Co. Clare (Birks 2017)(MacPherson et al, In prep).

7.4: Short-term trend; Direction	As the area and quality of known occupied and unknown habitat cannot be assessed the short term trend direction is unknown.
7.5: Short-term trend; Method used	There is insufficient information to assess the trend.
8.1: Characterisation of pressures	The main limitations to continued pine marten expansion are a lack of suitable woodland and poor connectivity between woodland fragments. The high density of roads and traffic in some parts of England could present a barrier to pine marten range expansion due to vulnerability to road traffic accidents. The effect of road networks is likely to be most pronounced in south and south-east England and in the conurbations around Middlesborough, Darlington, Newcastle and Sunderland, which will likely limit the spread of pine martens south from Northumberland and into Durham and Yorkshire (MacPherson and Wright 2021). We do not know the threshold at which road density leads to a non-self-sustaining pine marten population. This will also be highly variable, with populations in areas of higher productivity able to live alongside a higher density of roads. Accidental or intentional trapping and illegal killing may prevent pine martens spreading into and establishing in some areas, such as the Pennines and the Peak District, where bird of prey mortality is particularly high (RSPB 2020). In these areas and others with high levels of predator control, pine martens may be vulnerable to being injured or killed in tunnel traps or similar (MacPherson et al, In Prep).
9.5: List of main conservation measures	Illegal persecution or accidental capture/killing may be a threat with increasing pine marten populations.
11.5: Overall assessment of Conservation Status	The overall assessment in conservation status has been determined as unfavourable bad due to the current estimated population size being more than 25% below the favourable reference population. The current range is also more than 10% below the favourable reference range for the species.