

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

**2019-2024**

Conservation status assessment for the species:

**S1849 - Butcher's broom**

***(Ruscus aculeatus)***

**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: S1849 Butcher's broom (*Ruscus aculeatus*).

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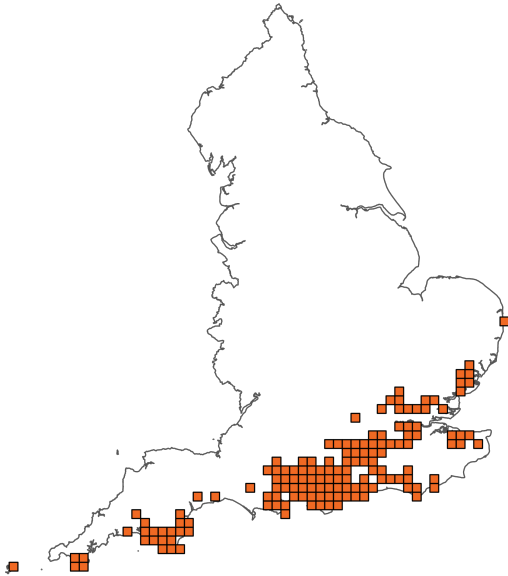
### **Important note - Please read**

- 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).

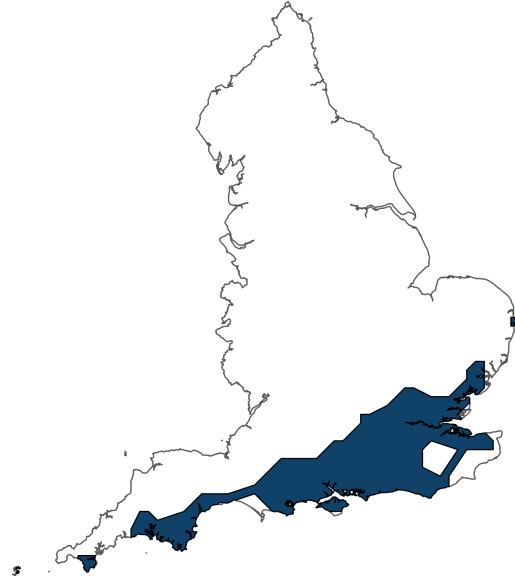
Further details on the approach to the Habitats Regulations Reporting 2019-2024 are available on the [JNCC website](#).

## Assessment Summary: Butcher's broom

### Distribution Map



### Range Map



**Figure 1:** England distribution and range map for S1849 - Butcher's broom (*Ruscus aculeatus*). 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 S1849 - Butcher's broom (*Ruscus aculeatus*). 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)	Unknown (XX)

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## National Level

### 1. General information

1.1 Country	England
1.2 Species code	S1849
1.3 Species scientific name	<i>Ruscus aculeatus</i>
1.4 Alternative species scientific name	
1.5 Common name	Butcher's broom
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	Complete survey or a statistically robust estimate

#### 2.5 Additional information

The distribution map in this report includes only those records which were considered native, or plausibly native with the native range (primarily the south and south east coastal regions), and for this reason shows a more restricted distribution than that reported in 2019.

### 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

<b>c) Regulation of the periods and/or methods of taking specimens</b>	No
<b>d) Application of hunting and fishing rules which take account of the conservation of such populations</b>	No
<b>e) Establishment of a system of licences for taking specimens or of quotas</b>	No
<b>f) Regulation of the purchase, sale, offering for sale, keeping for sale, or transport for sale of specimens</b>	No
<b>g) Breeding in captivity of animal species as well as artificial propagation of plant species</b>	No
<b>Other measures</b>	No

**Other measures description**

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

**a) Unit**                      number of map 10x10 km grid cells

**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>	-	-	-	Yes	-	-

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

**3.5: Additional information**

Ruscus aculeatus is harvested for herbal and decorative purposes in Europe but this is likely to be only very small scale in Britain.

## 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>) 21,884.8

5.2 Short-term trend; Period 2013-2024

5.3 Short-term trend; Direction Stable

5.4 Short-term trend;  
Magnitude

a) Estimated minimum

b) Estimated maximum

c) Pre-defined range

d) Unknown

e) Type of estimate

f) Rate of decrease

5.5 Short-term trend; Method used Complete survey or a statistically robust estimate used

5.6 Long-term trend; Period 2000-2024

5.7 Long-term trend; Direction Stable

5.8 Long-term trend;  
Magnitude

a) Minimum

---

**b) Maximum**

---

**c) Rate of decrease**

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

**5.10 Favourable Reference Range (FRR)****a) Area (km<sup>2</sup>)**

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**b) Pre-defined increment** Current range is less than 2% smaller than the FRR

---

**c) Unknown** No

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

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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** Yes

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**b) Genuine change** No

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**c) Improved knowledge or more accurate data** Yes

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**d) Different method**

---

**e) No information**

---

**f) Other reason**

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**g) Main reason** Improved knowledge/more accurate data

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**5.12 Additional information**

The current range in England has been calculated as 21884.8 km<sup>2</sup> (time period 2010-2024) based on BSBI data (2010-2024), excluding known or suspected alien occurrences even within the native range and this more strict interpretation of native range has resulted in a non genuine decrease. The UK favourable reference range (26,322km<sup>2</sup>) was set as equal to the presumed native range as in 1987-1999, which covers the period when the Directive came into force. The range surface area in 2019 was estimated to be 66268.4km<sup>2</sup> and was considered to be an underestimate and actually more likely to be similar to 2013 value of 104,434.15km<sup>2</sup>, with no England only values given at that time. Regardless of which is the more accurate value, the range

surface area in 2019 was considerably above the UK FRR and the increase was attributable to more records both within and outside the native range. The increase in records has continued through to this reporting period, with the difference between native and non-native occurrences increasingly blurred, but overall the distribution appears stable (Stroh et al. 2023). The favourable reference range values for Wales and England have not yet been disaggregated but it is estimated that at least 98% of the UK range for the species is within England so the operator not 'less than 2% smaller' has been applied.

## 6. Population

**6.1 Year or period** 2010-2024

### 6.2 Population size (in reporting unit)

**a) Unit** number of map 10x10 km grid cells

**b) Minimum**

**c) Maximum**

**d) Best single value** 145

**6.3 Type of estimate** Best estimate

**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** Complete survey or a statistically robust estimate

**6.7 Short-term trend; Period** 2013-2024

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

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**6.9 Short-term trend;  
Magnitude**

**a) Estimated minimum**

**b) Estimated maximum**

**c) Pre-defined range**

**d) Unknown**

**e) Type of estimate**

**f) Rate of decrease**

---

**6.10 Short-term trend; Method used** Complete survey or a statistically robust estimate used

---

**6.11 Long-term trend; Period** 2000-2024

---

**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**

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**6.15 Favourable Reference Population (FRP)**

**ai) Population size** 205

**a ii) Unit** number of map 10x10 km grid cells

**b) Pre-defined increment**

**c) Unknown** No

**d) Method used** Expert opinion

**e) Quality of information** moderate

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

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

### 6.17 Additional information

The UK FRP in 2013 and 2019 was considered to be 206 hectads (10x10 km grid cells), a value considered to be large enough to support a viable population and no less than when the Habitats Directive came into force in the UK. There is no reason to believe that this is not a viable population in the long term and has been retained here.

Disaggregation to England only level was made as follows: based on 2019 reporting (trend stable) England FRP: 205 (10x10km<sup>2</sup>), Wales FRP: 1 (10x10km<sup>2</sup>). The current population in England in this reporting round has been estimated as 145 hectads (2010-2024) which at first sight looks like a decrease. However, the differences between this population size (time period 2013-2024) and previous reports is largely explained by reclassification of records as native or non-native following Plant Atlas 2020 (Stroh et al. 2023), which states that overall distribution appears to be stable (notwithstanding difficulties of distinguishing between native and alien occurrences even within the native range).

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

## 7. Habitat for the species

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

<b>a) Is area of occupied habitat sufficient?</b>	Yes
<b>b) Is quality of occupied habitat sufficient?</b>	Yes

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**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**

<b>a) Sufficiency of area of occupied habitat; Method used</b>	Based mainly on extrapolation from a limited amount of data
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<b>b) Sufficiency of quality of occupied habitat; Method used</b>	Based mainly on extrapolation from a limited amount of data
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<b>7.3 Short-term trend; Period</b>	2013-2024
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<b>7.4 Short-term trend; Direction</b>	Stable
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<b>7.5 Short-term trend; Method used</b>	Based mainly on extrapolation from a limited amount of data
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## **7.6 Long-term trend; Period**

## **7.7 Long-term trend; Direction**

## **7.8 Long-term trend; Method used**

## **7.9 Additional information**

Habitat area and quality are assumed to be sufficient for the long-term survival of the species since there has been no decline in the species, but in fact a large increase in range outside of the historic native range, in many places becoming naturalised and regenerating naturally in its new environments. The species is readily able to establish from bird-dispersed berries and due to creeping, rhizomatous growth, including from fragments of garden throw-outs. This implies that there is further suitable unoccupied habitat. There may be some element of its increase in the UK due to natural dispersal, perhaps facilitated by a warming climate

# **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
No pressures		

## 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? No

b) Indicate the status of measures

9.2 Main purpose of the measures taken

9.3 Location of the measures taken

9.4 Response to measures

## 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
No conservation measures	

## 9.6 Additional information

No additional information

## 10. Future prospects

### 10.1a Future trends of parameters

ai) Range	Unknown
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bi) Population	Unknown
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ci) Habitat for the species	Unknown
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### 10.1b Future prospects of parameters

aii) Range	Unknown
------------	---------

bii) Population	Unknown
-----------------	---------

cii) Habitat for the species	Unknown
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### 10.2 Additional information

No additional information

## 11. Conclusions

11.1 Range	Favourable (FV)
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11.2 Population	Favourable (FV)
-----------------	-----------------

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

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b) Minimum

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c) Maximum

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d) Best single value

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### **12.2 Type of estimate**

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**12.3 Population size inside the network; Method used**

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

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

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

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**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

BSBI Distribution database (Accessed January 2025)

JNCC, 2019a 'Fourth Report by the United Kingdom under Article 17 on the implementation of the Directive from January 2013 to December 2018, Conservation status assessment for the species: S1849 - Butcher's Broom (*Ruscus aculeatus*) ENGLAND'. European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC) 2019 <https://jncc.gov.uk/jncc-assets/Art17/S1849-EN-Habitats-Directive-Art17-2019.pdf>

JNCC, 2019b 'Fourth Report by the United Kingdom under Article 17 on the implementation of the Directive from January 2013 to December 2018, Conservation status assessment for the species: S1849 - Butcher's Broom (*Ruscus aculeatus*) UNITED KINGDOM'. European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC) 2019 <https://jncc.gov.uk/jncc-assets/Art17/S1849-UK-Habitats-Directive-Art17-2019.pdf>

JNCC, 2024 NE\_FRVs\_2019-2024 Habs Regs reporting\_V3.xlsx

JNCC, 2025 'UK guidance to be used when undertaking the 'Habitat Regulations reporting' of UK species' For use by statutory nature conservation body staff undertaking the UK Terrestrial and Marine Habitat Regulations Reporting 9a/3z. NON-BIRD SPECIES (Habitats Directive Annexes II, IV and V) Guidance for use for the Habitat Regulations reporting round, 2019-2024. JNCC, Peterborough, UK.

Stroh, P.A., Humphrey, T.A., Burkmar, R.J., Pescott, O.L., Roy, D.B., & Walker, K.J., 2023 *Ruscus aculeatus* L. in BSBI Online Plant Atlas 2020, <https://plantatlas2020.org/atlas/2cd4p9h.fy3> (accessed January 2025)

### Main pressures

#### 8.2 Sources of information

No sources of information

## 15. Explanatory Notes

Field label	Note
2.1: Sensitive species	Although collected for use elsewhere in Europe for herbal and medicinal purposes this species is not known to have been significantly affected by foraging, or by collectors for herbal or medicinal use in the UK or England and, as in previous reporting rounds, is therefore not considered sensitive.
2.2: Year or Period	The time period 2010-2024 has been used to provide a more representative current distribution for plant species in this reporting round. This is because the national dataset of botanical records (BSBI) could for many species show a dip in records post 2020, an artefact of the relaxation in recording effort post-production of the Plant Atlas 2020.
2.3: Distribution map	There has been no targeted survey for this species during this reporting period (2019-2024) and general botanical survey effort may have declined somewhat during this time due to relaxation of recording effort post-completion of Plant Atlas 2020, after which recording effort is assumed to have fallen back towards average levels. For this reason the time period 2010-2024 was selected for records to provide a more representative distribution for the species in this report. There is a marked difference with the 2019 map (JNCC 2019a) which showed a wider distribution, and this is due to the narrower selection of records utilised in this reporting round, focussing on those adhering more closely to the definition of native, or considered native within the native range, where it was possible to distinguish.
2.4: Distribution map; Method used	The distribution map is derived from the BSBI Distribution Database data (BSBI, 2025), utilising only those records which were native, or were within the native range and were considered plausibly native, as opposed to deliberately planted, or likely escapes from gardened situations even within the native range. Therefore the distribution map for this reporting round shows a much narrower distribution, more tightly confined to the native

	range of the south and south east coasts, than that reported in 2019.
2.5: Additional information	It is increasingly difficult to distinguish between native and alien occurrences even within the mapped native range as it is popular as an ornamental shrub and game bird cover, and can be bird-dispersed by berries or readily establish from garden throw-outs by virtue of its creeping rhizomatous growth.
3.1: Is the species taken in the wild/ exploited	There is no evidence of commercial exploitation in the wild. The species is mentioned online in UK foraging, herbal and medicinal fora, but there is no evidence of exploitation at a scale that poses any threat to the species living in the wild, or semi-natural situations within the native range.
5.1: Surface area	The current range in England has been calculated as 21884.8 km <sup>2</sup> (time period 2010-2024) based on BSBI data (2010-2024), excluding known or suspected alien occurrences even within the native range. In 2019 the UK surface area range value was given as 66268.4km <sup>2</sup> (but was thought more likely to be similar to the 2013 value of 104,434.15km <sup>2</sup> (JNCC 2019b)). There was no range value given in 2019 for England only and in any case it would be difficult to compare trends in surface area between this reporting round and previous reports due to a narrower definition of eligible records used in this report. Looking at the species records overall there has been a significant increase in records inside and outside the assumed native range over the last two to three decades, which may be in part be due to ongoing introductions and increased diligence in reporting non-natives, but the overall distribution (and range) appears relatively stable (Stroh et al. 2023).
5.2: Short-term trend; Period	2013-2024 (two reporting periods, as in previous reporting rounds).
5.3: Short-term trend; Direction	In the 2019 report the UK surface area range value was given as 66268.4km <sup>2</sup> (but with the caveat given that this was not considered representative and was more likely to be similar to the 2013 value of 104,434.15km <sup>2</sup> (JNCC 2019b)), but no value was given for England-only. Even if a

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range value from 2019 had been available for England, it would be difficult to compare current surface area with the previous report due to a narrower definition of eligible records utilised in this report. Leaving this issue aside in order to make a judgement on trends, by just looking at the species distribution overall, there has been a significant increase in records inside and outside the assumed native range over the last two to three decades, which may be in part be due to ongoing introductions and increased diligence in reporting non-natives, and overall distribution (and related to this, range) appears relatively stable (Stroh et al. 2023). Expert opinion concludes that this trend and reason for change remains applicable over the short term trend period (2013-2024) such that declining trend observed here is non genuine due to methodology, and the trend is more likely stable or increasing.

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5.5: Short-term trend;  
Method used

Direct comparison was not possible due to the difference in the interpretation of native/alien records between reporting rounds, so a view was taken on the overall dataset for the species, within and outside of native range (BSBI, 2025), a dataset which is considered to be reasonably complete and representative.

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5.7: Long-term trend;  
Direction

Looking at the species distribution overall there has been a significant increase in records inside and outside the assumed native range over the last two to three decades, which may be in part be due to ongoing introductions and increased diligence in reporting non-natives, whilst the overall distribution (and related this, range) appears relatively stable (Stroh et al. 2023). The decision in 2019 that the long term trend was increasing was based on the following: 'the historic extent of occurrence (1930-1969), calculated at 93,301 km<sup>2</sup> (using Alpha Hull software with an alpha value of 21.4 km). A comparison of this, and the current extent of occurrence (105,374 km<sup>2</sup>), suggests an increase of 13% over this period. The median points of the records for the two date classes 1930-69 and 1987-99 are approximately 40 years apart. This evidence of increase is used as contextual evidence that the range is increasing

	<p>and continues to do so.' (JNCC, 2024). This is thought to also apply to the long-term time period here (2000-2024), albeit with some uncertainty as to whether the trend is stable or increasing, i.e. any decrease is a non-genuine change due to a difference in methodology and dataset used.</p>
5.10: Favourable Reference Range (FRR)	<p>The FRR for the UK used in 2013 and 2019 was 26322km<sup>2</sup>, the value was considered to be large enough to support a viable population and no lower than the native range estimate when the Habitats Directive came into force in the UK. It was set as equal to the presumed native range present in 1987-1999, this date class covering the period when the Directive came into force. The UK range in 2019 (66268.4km<sup>2</sup>) exceeded the UK FRR (26322km<sup>2</sup>) by some margin, probably due to inclusion of records in the dataset that were not within the native range but it is not possible to resolve this issue here. The FRR has not yet been disaggregated between contributing countries England and Wales, but the vast majority of native records occur in England, probably more than 98%, hence an operator suggested by JNCC 'less than 2% smaller' could be used for England. In which case an FRR value for England would be 25795.56km<sup>2</sup> (being 98% of UK FRR value 26322km<sup>2</sup>).</p>
5.11: Change and reason for change in surface area of range	<p>The difference in range map in 2019 and for this reporting round has already been explained as being due to the methods used for extracting assumed native records to derive current surface area (range). This is also likely to apply to the data and methods utilised in 2013 to derive UK FRR, albeit based on broadly similar principles. Therefore the current range value for England 21884.8km<sup>2</sup> is not directly comparable with former figures, but does give an indication. The current range is 83% of the UK value 26322km<sup>2</sup> and 85% of the England derived FRR of 25795.56km<sup>2</sup>.</p>
5.12: Additional information	<p>There are inherent difficulties in comparing directly the range values derived from the dataset used here (BSBI, 2025) and the datasets utilised in previous reporting, which</p>

	<p>also derived from the BSBI, not because the records are different but because a tighter definition of native or presumed native within the native range has been used for this reporting round. Therefore the non-genuine changes are instead explained by expert opinion deployed on observations and evaluations made in Plant Atlas 2020 (Stroh et al. 2023) and by previous experts reporting on this species (JNcc 2019a, 2019b).</p>
6.1: Year or Period	<p>2010-2024, time period selected to provide a representative dataset for the species to mitigate against the possible effect of relaxation in recorder effort after completion of recording for Plant Atlas 2020.</p>
6.2: Population size	<p>10km x 10km grid squares (hectads) has been adopted here for the main unit of measuring population, the species being widespread and numerous, and hectads being the unit of measure utilised for setting FRP. This is in contrast to 2019 reporting when on population size was based on 1km x 1km squares at UK and England level, with the additional population measure of 10km x 10km squares (hectads).</p>
6.12: Long-term trend; Direction	<p>It is not possible to compare directly the current value of 145 occupied 10 x 10km squares for England (time period 2010-2024) directly with previous reports, as datasets could have differed slightly based on how native records were distinguished from alien, plus there is the difficulty of differing time periods. The apparent decline since 2019 (336 10-km<sup>2</sup>) is attributed to a non genuine change due to methodological differences. Viewing the data overall for the long term time period (2000-2024), expert opinion regards the species as more or less stable with perhaps a moderate increase (Stroh et al., 2023).</p>
6.15: Favourable Reference Population (FRP)	<p>In 2013 and 2019 the FRP was 206 (10x10km<sup>2</sup>), the value was considered to be large enough to support a viable population and no less than when the Habitats Directive came into force in the UK, determined as the presumed native population present in 1987-1999. This FRP value for the UK has been retained in this reporting round. The FRP was not disaggregated between countries England and</p>

	<p>Wales at the time, but the following method has been recommended here (JNCC, 2025). This is based on the fact that the population in 2019 was reported as 336 (10x10km<sup>2</sup> - minimum) for England, and 2 (10x10km - best estimate) for Wales. The combination of minimum and best estimate makes disaggregation less accurate, however JNCC recommend disaggregation based on 2019 reporting (trend stable) as follows: England FRP: 205 (10x10km<sup>2</sup>) and Wales FRP: 1 (10x10km<sup>2</sup>).</p>
<p>6.16: Change and reason for change in population size</p>	<p>The difference in methodology (tighter definition of native used for this report) indicates a non-genuine decrease in range and population. The same dataset analysed by other means (Stroh et al., 2023) concludes overall the species is stable, or with a moderate increase, over the short and long term time periods. This can be explained by the fact that the species remains popular as an ornamental shrub and game bird cover, and can be bird-dispersed by berries or readily established from garden throw-outs by virtue of creeping rhizomatous growth, which although serves to confuse the native vs non native occurrences, probably largely explains the increase in records both within and outside the native range. There could be other reasons why there have been increases due to natural expansion but it is rather difficult to ascertain.</p>
<p>11.8: Additional information</p>	<p>Habitat area and quality are assumed to be sufficient for the long-term survival of the species since there has been no decline in the species, but in fact a large increase in range outside of the historic native range, in many places becoming naturalised and regenerating naturally in its new environments. The species is readily able to establish from bird-dispersed berries and due to creeping, rhizomatous growth, including from fragments of garden throw-outs. This implies that there is further suitable unoccupied habitat. There may be some element of its increase in the UK which is due to natural dispersal, perhaps facilitated by a warming climate.</p>
<p>8.1: Characterisation of pressures</p>	<p>Although the species may be of some interest in the UK to foragers, for herbal and medicinal use, there is no evidence</p>

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of threat to the population in the wild and no evidence of commercial exploitation.

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9.6: Additional information

Conservation measures are not required for this species which is able to spread readily, and appears to be still experiencing a moderate increase both within and outside its historic native range.