

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

**2019-2024**

Conservation status assessment for the species:

**S1058 - Large blue butterfly**

***(Maculinea arion)***

**England**



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

- The information in this document represents the England Report under The Conservation of Habitats and Species Regulations 2017 (as amended), Regulation 9A, for the period 2019-2024.
- It is based on supporting information provided by Natural England, which is documented separately.
- The Habitats Regulations reporting 2019-2024 Approach Document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.
- Maps showing the distribution and range of the species are included.
- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the assessments. Further underpinning explanatory notes are available in the related country reports.
- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; (ii) completion of the field was not obligatory; and/or (iii) the field was not relevant to this species (section 12 National Site Network coverage for Annex II species).

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

## Assessment Summary: Large blue butterfly

### Distribution Map



### Range Map



**Figure 1:** England distribution and range map for S1058 - Large blue butterfly (*Maculinea arion*). 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 S1058 - Large blue butterfly (*Maculinea arion*). 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-inadequate (U1)**

### Breakdown of Overall Conservation Status

**Range** (see section 5)

**Favourable (FV)**

**Population** (see section 6)

**Unfavourable-inadequate (U1)**

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

**Favourable (FV)**

**Future prospects** (see section 10)

**Favourable (FV)**

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## National Level

### 1. General information

1.1 Country	England
1.2 Species code	S1058
1.3 Species scientific name	<i>Maculinea arion</i>
1.4 Alternative species scientific name	
1.5 Common name	Large blue butterfly
Annex(es)	IV

### 2. Maps

2.1 Sensitive species	No
2.2 Year or period	2010-2019
2.3 Distribution map	Yes
2.4 Distribution map; Method used	Complete survey or a statistically robust estimate

#### 2.5 Additional information

The dataset used to compile the maps is known to be incomplete as we could only use those data for which we were able to confirm a licence. We are aware from the Large Blue Steering Group of site occupancy that would increase the number of UK hectads occupied by one.

### 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

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

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

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

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

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

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**Other measures**

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**Other measures description**

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

**a) Unit**

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**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>	-	-	-	-	-	-

---

**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 (km<sup>2</sup>) 700

5.2 Short-term trend; Period 2013-2024

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 Complete survey or a statistically robust estimate used

5.6 Long-term trend; Period

5.7 Long-term trend; Direction

5.8 Long-term trend;  
Magnitude

a) Minimum

b) Maximum

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**c) Rate of decrease**

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**5.9 Long-term trend; Method used****5.10 Favourable Reference Range (FRR)****a) Area (km<sup>2</sup>)**

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<b>b) Pre-defined increment</b>	Current range is less than 2% smaller than the FRR
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<b>c) Unknown</b>	No
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<b>d) Method used</b>	Expert opinion
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**e) Quality of information****5.11 Change and reason for change in surface area of range**

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

Although the net range area reported is the same as the previous reporting round, it is known to be based on incomplete data. Discussions with the Large Blue Steering Group indicate that the species is continuing to slowly increase in range as it colonises new sites, hence expert opinion is that a trend of increasing range is sustaining. Details of this are not publicised due to sensitivities of increased public pressure at fragile sites or where numbers are low could be detrimental to the populations.

## **6. Population**

<b>6.1 Year or period</b>	2019-2024
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## 6.2 Population size (in reporting unit)

a) Unit number of map 1x1 km grid cells

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b) Minimum

---

c) Maximum

---

d) Best single value 24

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6.3 Type of estimate Best estimate

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## 6.4 Quality of extrapolation to reporting unit

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

a) Unit

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b) Minimum

---

c) Maximum

---

d) Best single value

---

e) Type of estimate

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

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6.7 Short-term trend; Period 2013-2024

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6.8 Short-term trend; Direction Increasing

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## 6.9 Short-term trend; Magnitude

a) Estimated minimum

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b) Estimated maximum

---

c) Pre-defined range Increasing 0 - 12%

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d) Unknown No

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e) Type of estimate Best 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**

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**6.12 Long-term trend;  
Direction**

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**6.13 Long-term trend;  
Magnitude**

**a) Minimum**

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**b) Maximum**

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**c) Confidence interval**

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**d) Rate of decrease**

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**6.14 Long-term trend; Method  
used**

**6.15 Favourable Reference Population (FRP)**

**ai) Population size**

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**aii) Unit** number of map 1x1 km grid cells

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**b) Pre-defined increment** Current population is between 5% and 25%  
smaller than the FRP

---

**c) Unknown** No

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**d) Method used** Expert opinion

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**e) Quality of information**

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

**a) Change** Yes

---

**b) Genuine change** Yes

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**c) Improved knowledge or  
more accurate data** No

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**d) Different method** No

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**e) No information** No

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**f) Other reason** No

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**g) Main reason** Genuine change

## 6.17 Additional information

The reporting unit for population has been changed from number of colonies to number of 1x1 km grid cells. This reduces confusion over assessing what constitutes a colony as separate from another colony. There has been a genuine change in the population; the Large Blue Steering Group holds unpublished data that shows the number of 1x1km squares to have increased.

The approach to setting a parameter for favourable reference population has been changed since 2019 from number of localities to a pre-defined increment. The increment has been set to reflect the red list status of the species, requiring an increase in the current measure of population of between 5 and 25%.

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

## 7. Habitat for the species

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

a) Is area of occupied habitat sufficient?      Yes

b) Is quality of occupied habitat sufficient?      Yes

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

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

a) Sufficiency of area of occupied habitat; Method used      Based mainly on expert opinion with very limited data

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

7.3 Short-term trend; Period      2013-2024

7.4 Short-term trend; Direction      Increasing

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**7.5 Short-term trend; Method used**

Based mainly on expert opinion with very limited data

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**7.6 Long-term trend; Period**

---

**7.7 Long-term trend; Direction**

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**7.8 Long-term trend; Method used****7.9 Additional information**

The habitat for the species has steadily increased as the reintroduction programme continues and more sites are brought into suitable condition. Area of habitat is sufficiently large and increasing and habitat quality is suitable for the long-term survival of the species. However management does change over time and is not secured in the long term.

## 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
PA06: Mowing or cutting of grasslands	Ongoing and likely to be in the future	Medium (M)
PA07: Intensive grazing or overgrazing by livestock	Ongoing and likely to be in the future	Medium (M)
PA08: Extensive grazing or undergrazing by livestock	Ongoing and likely to be in the future	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) Indicate the status of measures	Measures identified and taken
9.2 Main purpose of the measures taken	Expand the current range of the species (related to 'Range')
9.3 Location of the measures taken	Both inside and outside National Site Network
9.4 Response to measures	Short-term results (within the current reporting period, 2019–2024)

### 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
MA03: Maintain existing extensive agricultural practices and agricultural landscape features	High (H)
MA04: Reinstate appropriate agricultural practices to address abandonment, including mowing, grazing, burning or equivalent measures	High (H)
MA05: Adapt mowing, grazing and other equivalent agricultural activities (e.g. burning)	High (H)

### 9.6 Additional information

Large Blue will always require conservation action in the form of habitat management of chalk grasslands to maintain positive conditions for the larval foodplants (Marjoram and Wild Thyme) and the ant species that hosts the larvae in its later stages.

## 10. Future prospects

### 10.1a Future trends of parameters

<b>ai) Range</b>	Positive - increasing $\leq 1\%$ (one percent or less) per year on average
<b>bi) Population</b>	Very Positive - increasing $> 1\%$ (more than one percent) per year on average
<b>ci) Habitat for the species</b>	Positive - slight/moderate improvement

### 10.1b Future prospects of parameters

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

### 10.2 Additional information

The main threats to the species are not significant; pressures are being alleviated through positive habitat management; there is a project to introduce the species to a separate geographical landscape in Wiltshire and this will further increase the range and population; the species will remain viable in the long-term.

## 11. Conclusions

<b>11.1 Range</b>	Favourable (FV)
<b>11.2 Population</b>	Unfavourable-inadequate (U1)
<b>11.3 Habitat for the species</b>	Favourable (FV)
<b>11.4 Future prospects</b>	Favourable (FV)
<b>11.5 Overall assessment of Conservation Status</b>	Unfavourable-inadequate (U1)
<b>11.6 Overall trend in Conservation Status</b>	Improving

### 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

Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is increasing and (ii) the current Range surface area is approximately equal to the Favourable Reference Range.

Conclusion on Population reached because: (i) the short-term trend direction in Population size is increasing but (ii) the current Population size is less than the Favourable Reference Population.

Conclusion on Habitat for the species reached because: (i) the area of occupied habitat is sufficiently large and (ii) the habitat quality is suitable for the long-term survival of the species; and (iii) the short-term trend in area of habitat is increasing.

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.

Overall assessment of Conservation Status is Unfavourable Inadequate because the conclusion on Population is Unfavourable Inadequate.

Overall trend in Conservation Status is based on the combination of the shortterm trends for Range - improving, Population - improving, and Habitat for the species - improving.

Overall assessment of conservation status has not changed between 2019 and 2025.

Overall trend in Conservation Status has changed since 2019 due to a revised approach to setting the favourable reference population.

## 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

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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

Contains UK Butterfly Monitoring Scheme (UKBMS) data © copyright and database right (2024) Butterfly Conservation, the UK Centre for Ecology and Hydrology, British Trust for Ornithology, and the Joint Nature Conservation Committee

Simcox, D. (2024) 1km grid square records for Large Blue (unpublished)

Simcox, D., Meredith, S. (2023) First Year Report to Natural England, March 2023 (unpublished). Contract reference: Ecm\_65886

### Main pressures

#### 8.2 Sources of information

No sources of information

## 15. Explanatory Notes

Field label	Note
5.3: Short-term trend; Direction	Due to sensitivities of locations one of the occupied hectads for Large Blue is not mapped. This presents an increasing trend, as this new site is part of continued natural colonisation. Intensive annual surveys by the Large Blue Steering Group show this to be the case and was reported in the annual Steering Group meeting in March 2025.
5.5: Short-term trend; Method used	Dedicated monitoring is undertaken annually by the Large Blue Steering Group and data from this has been used to deduce that the range is increasing. Due to sensitivities of newly occupied sites, not every site has been mapped.
5.10: Favourable Reference Range (FRR)	There is not a Favourable Conservation Status definition for Large Blue in England. Therefore we have retained the Operator from the previous reporting round rather than give an area figure.
6.6: Population size; Method used	Intensive annual surveys are carried out by the Large Blue Steering Group and so we know the occupancy of 1x1km squares. This data has been shared with Natural England, but is unpublished due to sensitivities of the species.
6.8: Short-term trend; Direction	It is unknown how the figure of 28 was arrived at for the previous reporting round. Unpublished data from the Large Blue Steering Group shows the number of 1x1km squares occupied in 2024 to be 24 and maps showing dates of colonisation of sites show that some of these 1x1km squares were colonised between 2013 and 2024. Thus there has been an increase.
6.9: Short-term trend; Magnitude	Precise figures for 1x1 km square occupancy from 2013 were not available for this round so it is not possible to give a precise figure of %age change. The maps of colonisation from the Large Blue Steering Group show that at least 2 1x1km squares out of the 24 reported were colonised since 2013. This implies an increase of 7-8%.
11.7: Change and reasons for change in	The FRP was changed from number of colonies to number of 1km grid cells. This has caused an change to the overall

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conservation status and  
conservation status  
trend

conservation status. Now the number of 1x1 grid cells  
comes out as below the FRP and so the status has to be  
unfavourable.