

**European Community Directive
on the Conservation of Natural Habitats
and of Wild Fauna and Flora
(92/43/EEC)**

Third Report by the United Kingdom under
Article 17

on the implementation of the Directive
from January 2007 to December 2012
Conservation status assessment for

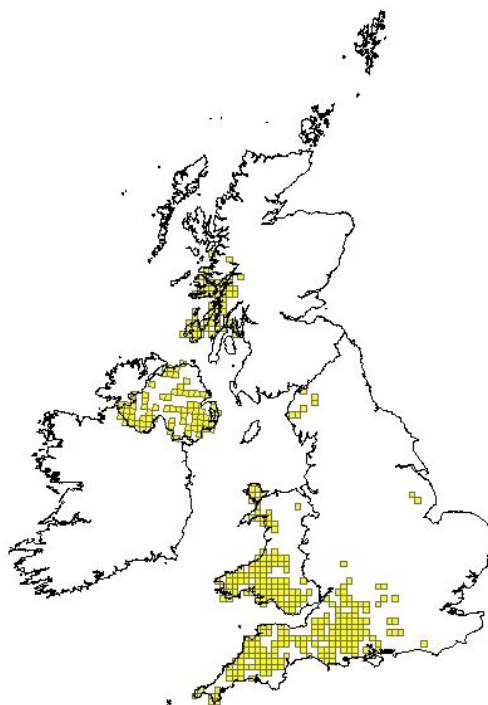
Species:

S1065 - Marsh fritillary butterfly (*Euphydryas aurinia*)

Reporting format on the 'main results of the surveillance under Article 11' for Annex II, IV & V species

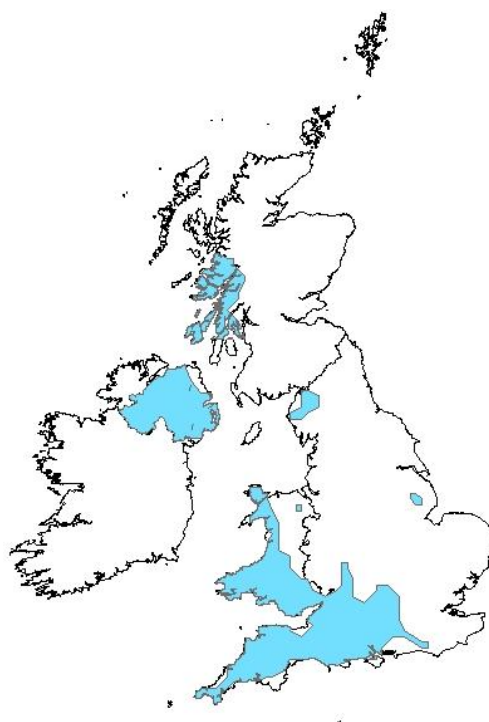
<i>Field name</i>	<i>Brief explanations</i>	
0.2 Species	0.2.1 Species code	S1065
	0.2.2 Species scientific name	<i>Euphydryas aurinia</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	

1.1 Maps			
1.1.1 Distribution map	True	Sensitive	False
	The distribution map is based on species records which are considered to be representative of the range within the current reporting period. For further details see the 2013 Article 17 UK Approach document.		



1.1.2 Method used - map	Estimate based on partial data with some extrapolation and/or modelling
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information
1.1.3 Year or period	1992-2012
	The distribution map is based on species records which are considered to be representative of the range within the current reporting period. For further details see the 2013 Article 17 UK Approach document.

1.1.4 Additional distribution map Optional	False
1.1.5 Range map	True The range map was produced by applying the UK range mapping tool to the distribution map presented in 1.1.4. The alpha value for this species was 20km. For further details see the 2013 Article 17 UK Approach document.



2.1 Biogeographical region & marine regions	ATL
2.2 Published sources	<p>ASHER, J., WARREN, M.S., FOX, R., HARDING, P., JEFFCOATE, G. & JEFFCOATE, S., 2001. The Millennium Atlas of Butterflies in Britain and Ireland. Oxford: Oxford University Press.</p> <p>Biodiversity Action Reporting System (BARS) data - http://ukbars.defra.gov.uk/archive/plans/targets.asp?HAP=&SAP=%7B1C1352D3%2D0BCA%2D4BE0%2DB2B0%2DE1E5AF28930B%7D&M=1</p> <p>Botham et al, CEH. United Kingdom Butterfly Monitoring Scheme for 2009, Annual report 2009, http://www.ukbms.org/ accessed 23rd May 2012.</p> <p>Bullock & Jefferson et al (2011) UK National Ecosystem Assessment: Technical Report, Chapter 6, Semi-natural grasslands. http://uknea.unep-wcmc.org/LinkClick.aspx?fileticket=IfVaZJDoV8c%3D&tabid=82</p> <p>Bulman et al, 2011, The Status of marsh fritillary <i>Euphydryas aurinia</i> in Dorset, 1985 to 2010, Butterfly Conservation report Number S11-20.</p> <p>Bulman, C.R., Wilson, R.J., Holt, A.R., Bravo, L.G., Early, R.I., Warren, M.S. & Thomas, C.D. 2007. Minimum viable</p>

metapopulation size, extinction debt and the conservation of a declining species. *Ecological Applications*, 17: 1460-1473.

Butterflies for the New Millennium webpage - http://butterfly-conservation.org/text/64/butterfly_distribution.html.

Butterfly Conservation and the Biological Records Centre. NBN distribution data: Records for Fife Nature Records Centre; HBRG Insects Dataset; Welsh Invertebrate Database (WID); Butterfly distributions for Great Britain for the period 1690-2004 from Butterfly Conservation and the Biological Records Centre; Butterfly distributions for Great Britain for the period 2005-2009 from Butterfly Conservation and the Biological Records Centre; Butterfly distribution (provisional) records for the UK for the period 2010

Butterfly Conservation trend analysis - www.ukbms.org/docs/reports/2011/UKBMS%20summary%20tables%202011.pdf.

Countryside survey data for England, 2007. <http://www.countryside-survey.org.uk/sites/default/files/pdfs/reports2007/england2007/CS-England-Results2007-Chapter04.pdf>

COWLEY, M., THOMAS, C., THOMAS, J. & WARREN, M. 1999. Flight areas of British butterflies: assessing species status and decline. *Proceedings of the Royal Society of London (Series B)*, 266: 1587-1592.

FOWLES, A.P. & SMITH, R.G. 2006. Mapping the habitat quality of patch networks for the marsh fritillary *Euphydryas aurinia* (Rottemburg, 1775) (Lepidoptera, Nymphalidae) in Wales. *Journal of Insect Conservation*, 10: 161-177.

Fowles, A.P. 2011. Metapopulation studies of the marsh fritillary *Euphydryas aurinia*: the need for interconnected grassland landscapes. In: *Proceedings of a Memorial Conference for Dr David Paul Stevens, 1958-2007. Grassland Ecologist and Conservationist*. CCW Staff Science Report No 10/03/05. Eds. T.H. Blackstock, E.A. Howe, J.P. Rothwell, C.A. Duigan, & P.S. Jones, pp. 43-50. Bangor, Countryside Council for Wales.

Fox et al, Butterfly Conservation & CEH, 2011. *The State of the UK's Butterflies 2011*.

Fox, R., Brereton, T.M., Asher, J., Botham, M.S., Middlebrook, I., Roy, D.B. & Warren, M.S. (2011) *The State of the UK's Butterflies 2011*. Butterfly Conservation and the Centre for Ecology & Hydrology, Wareham, Dorset.

Graham, A. 2005. Marsh fritillary *Euphydryas aurinia* habitat & larval web survey in the Harlech area. CCW Regional Report. CCW/NW/05/1. Countryside Council for Wales.

Hinton, G. Priority BAP NUTS3 SSSI ERDP Analyser v1, unpublished spreadsheet, Natural England

HOBSON, R., BOURN, N.A.D., WARREN, M.S. & BRERETON, T.M. 2001. The marsh fritillary in England: a review of status and habitat condition. S01-31. Butterfly Conservation.

Joint Nature Conservation Committee. 2007. *Second Report by the UK under Article 17 on the implementation of the Habitats Directive from January 2001 to December 2006*. Peterborough: JNCC. Available from: www.jncc.gov.uk/article17

Lewis, O. & Hurford, C. (1997) *Assessing the status of the marsh fritillary butterfly (*Eurodryas aurinia*): An example from*

	<p>Glamorgan. Journal of Insect Conservation, 1, 159-166.</p> <p>Littlewood, N.A. & Stockan, J.A. (2012). Surveillance of priority terrestrial invertebrates in Scotland. SNH unpublished report.</p> <p>Ravenscroft, N.A.M. & McKay, C.R. (2007) The distribution and abundance of the Marsh Fritillary on Islay, 2007. Report from Wildside Ecology to Butterfly Conservation Scotland, Stirling.</p> <p>Sazer, D. 2010. Mynydd Mawr Marsh Fritillary Final Report. Butterfly Conservation Report. S10-06. Butterfly Conservation.</p> <p>THOMAS, C.D. & ABERY, J. C. G., 1995. Estimating rates of butterfly decline from distribution maps: the effect of scale. Biological Conservation, 73, 59-65.</p> <p>THOMAS, J.A. TELFER, M.G., ROY, D.B., PRESTON, C.D., GREENWOOD, J.J.D., ASHER, J., FOX, R., CLARKE, R.T., LAWTON, J.H., 2004. Comparative Losses of British Butterflies, Birds, and Plants and the Global Extinction Crisis. Science, 303, 1879-1880.</p> <p>UK Butterfly Monitoring Scheme data for Marsh Fritillary - www.ukbms.org/SpeciesFactsheets.aspx?speciesId=50#</p> <p>Warren, M.S. (1994) The UK Status and suspected meta-population structure of a threatened European butterfly, the Marsh Fritillary, <i>Eurodryas aurinia</i>. Biological Conservation 67:239-249.</p> <p>UK distribution map data sources</p> <p>Adrian Fowles emailed JNCC (LH) 25/07/2012 and 20/09/2012</p> <p>Adrian Fowles emailed JNCC (LH) 25/07/2012. Jenny Higgins, CCW Senior Conservation Officer</p> <p>BIS CCW Abergavenny SSSI Scientific Data Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW BBNP Miscellaneous Data (Abergavenny) Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Marsh Fritillary in Rhondda Cynon Taff Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Swansea (SEWBREC) Emailed to JNCC (no details) Summer 2012</p> <p>BIS sent directly to JNCC (no details) SurveyName BBNP Additional Species Data</p> <p>BIS sent directly to JNCC (no details) SurveyName BIS Casual Records</p> <p>BIS sent directly to JNCC (no details) SurveyName Breconshire Lepidoptera (Butterfly) Records</p> <p>Butterfly distributions for GB & Ireland: Butterfly Conservation and BRC (1690-1994); Butterfly Conservation (1995-1999); Butterfly Conservation and the Dublin Naturalists' Field Club (1995-1999)</p> <p>Dorset SW Pilot species dataset</p> <p>NBN Gateway data: Butterfly Conservation GA000794 Extracted by LH 19/09/2012 Butterfly distributions for Great Britain for the period 1690-2004 from Butterfly Conservation and the Biological Records Centre</p> <p>NBN Gateway data: Butterfly Conservation GA000832 Extracted by LH 19/09/2012 Butterfly distributions for Great Britain for the period 2005-2009 from Butterfly Conservation and the Biological Records Centre</p>
--	---

	<p>NBN Gateway data: Butterfly Conservation GA000925Extracted by LH 19/09/2012 Butterfly distribution (provisional) records for the UK for the period 2010 from Butterfly Conservation and the Biological Records Centre</p> <p>NBN Gateway data: Butterfly Conservation GA001110Extracted by LH 19/09/2012 Marsh Fritillary distribution (provisional) records for Wales up to 2010 from Butterfly Conservation</p> <p>NBN Gateway data: Cumbria Biodiversity Data Centre GA000868Extracted by LH 19/09/2012 Cumbria Biodiversity Data Centre. Lepidoptera Observation Records. Pre-2010 for Cumbria</p> <p>NBN Gateway data: Dorset Environmental Records Centre GA001010Extracted by LH 19/09/2012 Dorset Important Species 2012 for Natural England use only</p> <p>NBN Gateway data: extracted by LH 11/09/2012 Centre for Environmental Data and Recording GA000926 Northern Ireland Priority Species Data Set</p> <p>NBN Gateway data: Sussex Biodiversity Record Centre GA001076Extracted by LH 19/09/2012 SxBRC Full dataset for Environment Agency and Natural England use only.</p> <p>NBN Gateway data: West Wales Biodiversity Information Centre GA000697Extracted by LH 19/09/2012 CCW Regional Data: all taxa (excluding sensitive species), West Wales</p> <p>NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA000584Extracted by LH 19/09/2012 Wiltshire & Swindon Site-based Survey Records</p> <p>NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA001098Extracted by LH 19/09/2012 Wiltshire and Swindon Habitats Directive (Article 17) Species - Reporting Group Use Only</p> <p>NIEA Emailed to JNCC (LH) 04/09/2012</p> <p>NIEA R101009A.ssf Emailed to JNCC (LH) 04/09/2012</p> <p>NIEA sent to JNCC (LH) 04/09/2012</p> <p>SNH. Ravenscroft, N. (2003) Emailed to JNCC (LH) by Colin McLeod 22/08/2012</p> <p>SW Pilot Project BAP Species Inventory 2002</p> <p>UK Biodiversity Action Plan: Invertebrate data for Ceredigion (1878-2001)</p> <p>Wiltshire BAP Priority Species Distribution Records</p> <p>UK Distribution Map data sources</p> <p>Adrian Fowles emailed JNCC (LH) 25/07/2012 and 20/09/2012</p> <p>Adrian Fowles emailed JNCC (LH) 25/07/2012. Jenny Higgins, CCW Senior Conservation Officer</p> <p>BIS CCW Abergavenny SSSI Scientific Data Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW BBNP Miscellaneous Data (Abergavenny) Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Marsh Fritillary in Rhondda Cynon Taff Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Swansea (SEWBREC) Emailed to JNCC (no details) Summer 2012</p> <p>BIS sent directly to JNCC (no details)SurveyName BBNP Additional</p>
--	--

	<p>Species Data</p> <p>BIS sent directly to JNCC (no details) SurveyName BIS Casual Records</p> <p>BIS sent directly to JNCC (no details) SurveyName Breconshire</p> <p>Lepidoptera (Butterfly) Records</p> <p>Butterfly distributions for GB & Ireland: Butterfly Conservation and BRC (1690-1994); Butterfly Conservation (1995-1999); Butterfly Conservation and the Dublin Naturalists' Field Club (1995-1999)</p> <p>Dorset SW Pilot species dataset</p> <p>NBN Gateway data: Butterfly Conservation GA000794 Extracted by LH 19/09/2012 Butterfly distributions for Great Britain for the period 1690-2004 from Butterfly Conservation and the Biological Records Centre</p> <p>NBN Gateway data: Butterfly Conservation GA000832 Extracted by LH 19/09/2012 Butterfly distributions for Great Britain for the period 2005-2009 from Butterfly Conservation and the Biological Records Centre</p> <p>NBN Gateway data: Butterfly Conservation GA000925 Extracted by LH 19/09/2012 Butterfly distribution (provisional) records for the UK for the period 2010 from Butterfly Conservation and the Biological Records Centre</p> <p>NBN Gateway data: Butterfly Conservation GA001110 Extracted by LH 19/09/2012 Marsh Fritillary distribution (provisional) records for Wales up to 2010 from Butterfly Conservation</p> <p>NBN Gateway data: Cumbria Biodiversity Data Centre GA000868 Extracted by LH 19/09/2012 Cumbria Biodiversity Data Centre. Lepidoptera Observation Records. Pre-2010 for Cumbria</p> <p>NBN Gateway data: Dorset Environmental Records Centre GA001010 Extracted by LH 19/09/2012 Dorset Important Species 2012 for Natural England use only</p> <p>NBN Gateway data: extracted by LH 11/09/2012 Centre for Environmental Data and Recording GA000926 Northern Ireland Priority Species Data Set</p> <p>NBN Gateway data: Sussex Biodiversity Record Centre GA001076 Extracted by LH 19/09/2012 SxBRC Full dataset for Environment Agency and Natural England use only.</p> <p>NBN Gateway data: West Wales Biodiversity Information Centre GA000697 Extracted by LH 19/09/2012 CCW Regional Data: all taxa (excluding sensitive species), West Wales</p> <p>NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA000584 Extracted by LH 19/09/2012 Wiltshire & Swindon Site-based Survey Records</p> <p>NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA001098 Extracted by LH 19/09/2012 Wiltshire and Swindon Habitats Directive (Article 17) Species - Reporting Group Use Only</p> <p>NIEA Emailed to JNCC (LH) 04/09/2012</p> <p>NIEA R101009A.ssf Emailed to JNCC (LH) 04/09/2012</p> <p>NIEA sent to JNCC (LH) 04/09/2012</p> <p>SNH. Ravenscroft, N. (2003) Emailed to JNCC (LH) by Colin McLeod 22/08/2012</p> <p>SW Pilot Project BAP Species Inventory 2002</p> <p>UK Biodiversity Action Plan: Invertebrate data for Ceredigion (1878-2001)</p> <p>Wiltshire BAP Priority Species Distribution Records</p>
--	--

2.3 Range	
2.3.1 Surface area Range	62933 The surface area of the range was calculated from the map presented in 1.1.5. For further details see the 2013 Article 17 UK Approach document.
2.3.2 Method used Surface area of Range	Estimate based on partial data with some extrapolation and/or modelling For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information
2.3.3 Short-term trend Period	1999-2009 For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information
2.3.4 Short term trend Trend direction	decrease 1% or less/year The short term trend direction was derived by comparing the range map in 1.1.5 with the range map produced in the 2007 report, by considering the range trend in the 2007 report, and by considering any further information provided by the UK country conservation agencies. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
2.3.5 Short-term trend Magnitude	9
Optional	a) Minimum
	Based on 'The State of the UK's Butterflies 2011, Fox et al 2011'. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information
	b) Maximum
	Based on 'The State of the UK's Butterflies 2011, Fox et al 2011'. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information
2.3.6 Long-term trend Period	1988-2012 For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information
Optional	
2.3.7 Long-term trend Trend direction	decrease The long term trend direction was derived by comparing the range map in 1.1.5 with the range map produced in the 2007 report, by considering the range trend in the 2007 report, and by considering any further information provided by the UK country conservation agencies. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
Optional	
2.3.8 Long-term trend Magnitude	a) Minimum
Optional	
	b) Maximum

2.3.9 Favourable reference range	a) Value in km²	60883
	The FRV for range is the same as reported in 2007.	
	b) Operator for FRR	
	c) FRR is unknown (indicated by "true")	False
2.3.10 Reason for change Is the difference between the reported value in 2.3.1 and the previous reporting round mainly due to...	a) Genuine change?	False
	The small increase in range is probably due to better data rather than a genuine change.	
	b) Improved knowledge/more accurate data?	True
	The small increase in range is probably due to better data rather than a genuine change.	
	c) Use of different method (e.g. "Range tool")?	False
	Use of a revised UK range mapping tool had little effect on the calculation for surface area of range.	

2.4 Population		
2.4.1 Population size estimation (using individuals or agreed exceptions where possible)	a) Unit	
	b) Minimum	
	c) Maximum	

2.4.2 Population size estimation (using population unit other than individuals) Optional (<i>if 2.4.1 filled in</i>)	a) Unit	number of map 1x1 km grid cells
	The population unit is the same as reported in 2007.	
	b) Minimum	758
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	c) Maximum	812
For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information		
2.4.3 Additional information on population estimates / conversion Optional	a) Definition of "locality"	
	b) Method to convert data	
	c) Problems encountered to provide population size estimation	Large variations expected due to metapopulation dynamics.
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.4 Year or period	2005-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.5 Method used Population size	Complete survey/Complete survey or a statistically robust estimate	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.6 Short-term trend Period	2001-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.7 Short-term trend Trend direction	stable	
	This species naturally experiences large variations due to metapopulation dynamics. The State of the UK's Butterflies Report 2011 (Fox et al 2011) reported a non significant increase for this species, but more recent data from the UK Butterfly Monitoring Scheme shows a non significant decrease. The UK trend is being reported here as stable. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.8 Short-term trend Magnitude Optional	a) Minimum	
	b) Maximum	

	c) Confidence interval	
2.4.9 Short-term trend Method used	Complete survey/ Complete survey or a statistically robust estimate	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.10 Long-term trend – Period	1989-2012	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.11 Long-term trend Trend direction	decrease >1%/year	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.12 Long-term trend Magnitude	a) Minimum	
Optional		
	b) Maximum	
	c) Confidence interval	
2.4.13 Long term trend Method used	Complete survey/ Complete survey or a statistically robust estimate	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	
	b) Operator	approximately equal to
	The FRV has been changed to 'approximately equal to' current because the current population is thought to better reflect the population size when the Habitats Directive came into force in the UK. The current number of known occupied 1km squares has increased but this is thought to be due to better data rather than a genuine increase.	
	c) FRP is unknown (indicated by "true")	False

	d) Method used to set FRP	The FRV has been changed to 'approximately equal to' current because the current population is thought to better reflect the population size when the Habitats Directive came into force in the UK. The current number of known occupied 1km squares has increased but this is thought to be due to better data rather than a genuine increase. The value is considered to be large enough for the population to be viable. For further details please see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
	The FRV has been changed to 'approximately equal to' current because the current population is thought to better reflect the population size when the Habitats Directive came into force in the UK. The current number of known occupied 1km squares has increased but this is thought to be due to better data rather than a genuine increase. The value is considered to be large enough for the population to be viable. For further details please see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.4.15 Reason for change Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	a) Genuine change?	False
	The increase in population estimate is thought to be mostly due to due to better data.	
	b) Improved knowledge/more accurate data?	True
	The increase in population estimate is thought to be mostly due to due to better data.	
	c) Use of different method (e.g. "Range tool")?	False
	The increase in population estimate is thought to be mostly due to due to better data.	

2.5 Habitat for the species	
2.5.1 Area estimation	852 For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. It is unknown whether the amount of habitat in the UK is sufficient to support a viable population of the species.
2.5.2 Year or period	2000-2012 For further details see the 2013 Article 17 UK Approach document and

	relevant country-level reporting information.	
2.5.3 Method used Habitat for the species	Estimate based on partial data with some extrapolation and/or modelling	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.4 Quality of the habitat	a) Habitat quality	Moderate
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	b) Assessment method	Quality assessed during Common Standards Monitoring of protected sites, and specific surveys.
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.5 Short-term trend Period	2001-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.6 Short-term trend Trend direction	stable	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.7 Long-term trend Period	1989-2012	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.8 Long-term trend Trend direction	decrease	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.9 Area of suitable habitat for the species	a) Value in km²	
	b) Absence of data indicated as '0'	
2.5.10 Reason for change Is the difference between the value reported at 2.5.1 and the previous reporting round mainly due to	a) Genuine change?	False
	The apparent increase in area of habitat is not thought to be genuine but is due to better data being used.	
	b) Improved knowledge/more accurate data?	True
	The apparent increase in area of habitat is not thought to be genuine but is due to better data being used.	
	c) Use of different method (e.g. "Range tool")?	False
	The apparent increase in area of habitat is not thought to be genuine but is due to better data being used.	

2.6 Main pressures		
a) Pressure	b) Ranking	c) Pollution qualifier
	H = high importance (max 5 entries) M = medium importance L = low importance	
A04: grazing	H	
A02: modification of cultivation practices	M	
A01: Cultivation	L	
A03: mowing / cutting of grassland	L	
A07: use of biocides, hormones and chemicals	L	TX
A08: Fertilisation	L	NP
B02: Forest and Plantation management & use	L	
D01: Roads, paths and railroads	L	
D06: Other forms of transportation and communication	L	
E01: Urbanised areas, human habitation	L	
G01: Outdoor sports and leisure activities, recreational activities	L	
H04: Air pollution, air-borne pollutants	L	
H05: Soil pollution and solid waste (excluding discharges)	L	NP
I02: problematic native species	L	
J01: fire and fire suppression	L	
J03: Other ecosystem modifications	L	
K02: Biocenotic evolution, succession	L	

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

2.6.1 Method used – Pressures

mainly based on expert judgement and other data

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

2.7 Threats		
a) Threat	b) Ranking	c) Pollution qualifier
	H = high importance (max 5 entries) M = medium importance L = low importance	

A04: grazing	H	
A02: modification of cultivation practices	L	
A03: mowing / cutting of grassland	L	
B02: Forest and Plantation management & use	L	
D01: Roads, paths and railroads	L	
E01: Urbanised areas, human habitation	L	
G01: Outdoor sports and leisure activities, recreational activities	L	
I02: problematic native species	L	
J01: fire and fire suppression	L	
J03: Other ecosystem modifications	L	
K02: Biocenotic evolution, succession	L	
K03: Interspecific faunal relations	L	

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

2.7.1 Method used – Threats

expert opinion

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

2.8 Complementary information

2.8.1 Justification of % thresholds for trends

2.8.2 Other relevant information

This species exists in metapopulations. Populations can show great fluctuations in size from year to year with larvae occasionally reaching great densities. The population fluctuations appear to be driven by parasitoids, and can cause extinction of small isolated colonies.

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

2.8.3 Trans-boundary

assessment

2.9 Conclusions (assessment of conservation status at end of reporting period)

2.9.1 Range	a) Conclusion	Inadequate
	Surface area of range is greater than the FRV but the short term trend is declining slightly - by less than 1% per year.	
	b) Qualifier	declining
2.9.2 Population	a) Conclusion	Favourable
	Population has been assessed as Favourable because the FRP is approximately equal to the FRV and the short term trend is stable. However, this should be interpreted with caution due to the metapopulation dynamics of this species causing large fluctuations in population size.	
	b) Qualifier	
2.9.3 Habitat for the species	a) Conclusion	Unknown
	It is unknown whether there is sufficient habitat for the population to be viable in the long term, although the habitat quality is moderate and the trend is stable.	
	b) Qualifier	
2.9.4 Future prospects	a) Conclusion	Inadequate
	<p>Future prospects is assessed as Inadequate on the basis of assessments of the future prospects of the three parameters, range, population and habitat for species:</p> <p>Range future prospects: Poor</p> <p>Population future prospects: Good</p> <p>Habitat future prospects: Unknown</p> <p>Overall future prospects: Inadequate</p>	
	b) Qualifier	unknown
2.9.5 Overall assessment of Conservation Status	Inadequate	
	The overall assessment is Inadequate because range and future prospects have been assessed as Inadequate.	
2.9.6 Overall trend in	stable	

Conservation Status	On balance, the overall trend is stable.
----------------------------	--

3 Natura 2000 coverage & conservation measures - Annex II species (only applies to species listed under Annex II of the Directive)

3.1 Population		
3.1.1 Population size Estimation of population size included in the SAC network	a) Unit	
	b) Minimum	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) Maximum	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
3.1.2 Method used	Absent data For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
3.1.3 Trend of population size within the network (short-term trend) Optional	unknown	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	

3.2 Conservation measures													
Conservation measures taken (i.e. already being implemented) within the reporting period and provided information about their importance, location and evaluation.													
3.2.1 Measure	3.2.2 Type					3.2.3 Ranking H = high importance M = medium importance L = low importance	3.2.4 Location where the measure is PRIMARILY applied			3.2.5 Broad evaluation of the measure			
	a) Legal/statutory	b) Administrative	c) Contractual	d) Recurrent	e) One-off		a) Inside	b) Outside	c) Both inside & outside	a) Maintain	b) Enhance	c) Long term	d) No effect

2.1: Maintaining grasslands and other open habitats	Y		Y	Y		H			Y		Y	Y			
4.2: Restoring/improving the hydrological regime	Y			Y		L			Y		Y	Y			
6.0: Other spatial measures	Y			Y		L			Y		Y	Y			
6.1: Establish protected areas/sites	Y	Y		Y		H			Y		Y	Y			
6.3: Legal protection of habitats and species	Y				Y	M			Y		Y			Y	
6.4: Manage landscape features	Y	Y		Y		H			Y		Y	Y			
8.2: Specific management of traffic and energy transport systems		Y				L		Y			Y				

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.