

**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

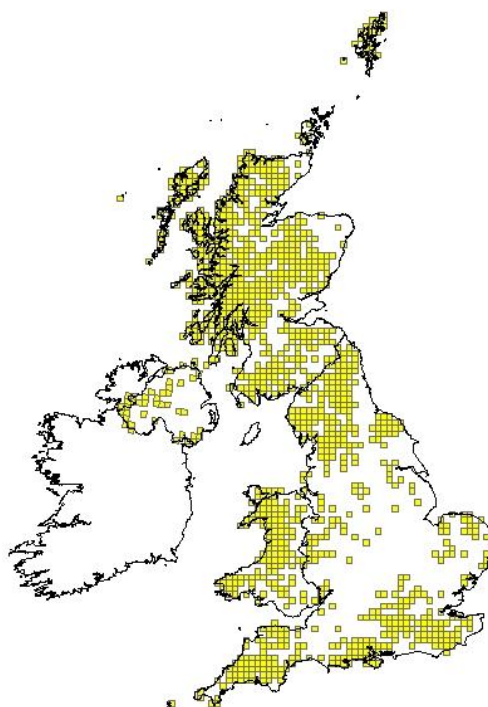
Species:

S1400 - Large white-moss (*Leucobryum glaucum*)

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

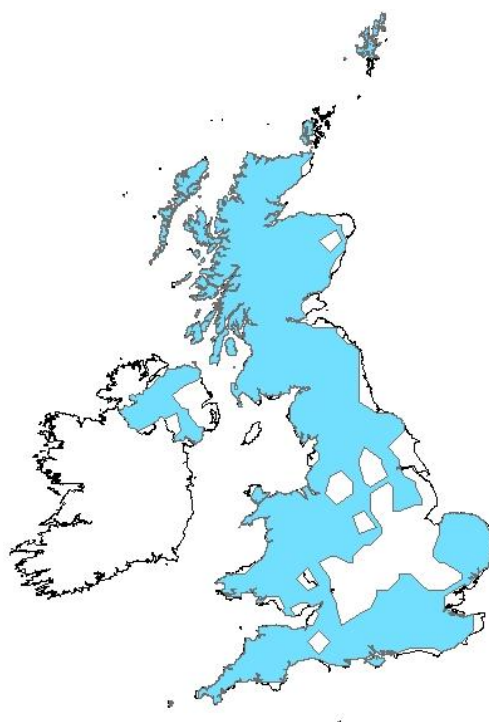
<i>Field name</i>	<i>Brief explanations</i>	
0.2 Species	0.2.1 Species code	S1400
	0.2.2 Species scientific name	<i>Leucobryum glaucum</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	

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	1989-2011
	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>Atherton, I., Bosanquet, S., and Lawley, M. 2010. Mosses and Liverworts of Britain and Ireland- a field guide. British Bryological Society, Plymouth.</p> <p>BLACKSTOCK, T.H. et al. 2008, Habitats of Wales. University of Wales Press.</p> <p>British Bryological Society data, Suffolk Biological Records Centre, Sussex Biodiversity Records Centre, Hampshire Biodiversity Information Centre and Dr Francis Rose Field Note Books and accessed via the NBN Gateway.</p> <p>HILL, M. O., PRESTON, C. D. & SMITH A. J. E. 1992. Atlas of the Bryophytes of Britain and Ireland; Volume 2, Mosses (Except Diplolepidae). Harley Books</p> <p>Holyoak, D.T. 2003. The Distribution of Bryophytes in Ireland. Broadleaf Books, Glamorgan.</p> <p>Rothero, G.P. (2012) Surveillance of priority bryophytes in Scotland 2010-2013: Leucobryum glaucum. Unpublished report to Scottish Natural Heritage. Inverness.</p> <p>STEVENS, D.P. et al. 2008, Grasslands of Wales. University of Wales Press.</p> <p>VANDERPOORTEN, A., BOLES, S., SHAW, A.J. 2003. Patterns of</p>

	<p>molecular and morphological variation in <i>Leucobryum albidum</i>, <i>L. glaucum</i>, and <i>L. juniperoideum</i> (Bryopsida). <i>Systematic Botany</i> 28: 651-656.</p> <p>UK distribution map data sources</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 Grassland Survey Data Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Lowland Heathland Survey of Wales: Brecknock and Carmarthenshire, 2000 Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Lowland Heathlands of Wales: Powys, 1999 Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Montgomeryshire Potential SSSI Files Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Newtown SSSI Scientific Data Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Powys & BBNP Lichen Files (Ray Woods' Files) Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Radnor and North Brecknock-SSSI Scientific Data Emailed to JNCC (no details) Summer 2012</p> <p>BIS sent directly to JNCC (no details) SurveyName BBNP Species Database</p> <p>BIS sent directly to JNCC (no details) SurveyName Bryophyte records 2010</p> <p>BIS sent directly to JNCC (no details) SurveyName MWT Miscellaneous Surveys</p> <p>NBN Gateway data: British Bryological Society GA000144 Extracted by LH 13/09/2012 Bryophyte data for Great Britain from the British Bryological Society held by BRC</p> <p>NBN Gateway data: extracted by LH 11/09/2012 British Bryological Society GA000144 Bryophyte data for Great Britain from the British Bryological Society held by BRC</p> <p>NBN Gateway data: extracted by LH 11/09/2012 National Trust GA001105 Extract of National Trust species database covering Article 17 species</p> <p>NBN Gateway data: extracted by LH 11/09/2012 Northern Ireland Environment Agency GA000079 EHS Species Datasets</p> <p>New Atlas of the British & Irish Flora 2002</p> <p> </p> <p>UK Distribution Map data sources</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 Grassland Survey Data Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Lowland Heathland Survey of Wales: Brecknock and Carmarthenshire, 2000 Emailed to JNCC (no details) Summer 2012</p>
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2.3 Range	
2.3.1 Surface area Range	<p>191477.97</p> <p>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.</p>
2.3.2 Method used Surface area of Range	<p>Estimate based on partial data with some extrapolation and/or modelling</p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information</p>
2.3.3 Short-term trend Period	<p>2001-2012</p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>
2.3.4 Short term trend Trend direction	<p>stable</p> <p>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.</p>
2.3.5 Short-term trend Magnitude	<p>a) Minimum</p>

Optional		
	b) Maximum	
2.3.6 Long-term trend Period	1989-2012	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.3.7 Long-term trend Trend direction	stable	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.3.8 Long-term trend Magnitude	a) Minimum	
	b) Maximum	
2.3.9 Favourable reference range	a) Value in km²	
	b) Operator for FRR	approximately equal to
	The FRV has been set as approximately equal to current since this is believed to be large enough to support a viable population and is no smaller than the surface area of range when the Habitats Directive came into force in the UK. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) FRR is unknown (indicated by "true")	False
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	d) Method used to set FRR	
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
	This species was not reported in 2007 so no comparison is possible.	
	b) Improved knowledge/more accurate data?	False
	This species was not reported in 2007 so no comparison is possible.	

	c) Use of different method (e.g. "Range tool")?	False
	This species was not reported in 2007 so no comparison is possible.	

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 10x10 km grid cells
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	b) Minimum	1055
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) Maximum	1065
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	10km squares is the most appropriate unit we are able to report for this widespread species, although population fluctuations of such a tiny plant could be masked by the scale of assessment.
2.4.4 Year or period	1989-2012	
	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	stable	

Trend direction	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	Estimate based on expert opinion with no or minimal sampling For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.4.10 Long-term trend – Period Optional	1989-2012	
	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 Optional	decrease	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.4.12 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
	c) Confidence interval	
2.4.13 Long term trend Method used Optional	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.	
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	

	b) Operator	approximately equal to
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) FRP is unknown (indicated by "true")	False
	d) Method used to set FRP	The FRV has been set as approximately equal to current since this is believed to be large enough to be a viable population and is no smaller than the population when the Habitats Directive came into force in the UK. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
	The FRV has been set as approximately equal to current since this is believed to be large enough to be a viable population and is no smaller than the population when the Habitats Directive came into force in the UK. For further details 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
	Population was reported as unknown in 2007 so no comparison is possible.	
	b) Improved knowledge/more accurate data?	False
	Population was reported as unknown in 2007 so no comparison is possible.	
	c) Use of different method (e.g. "Range tool")?	False
Population was reported as unknown in 2007 so no comparison is possible.		

2.5 Habitat for the species	
2.5.1 Area estimation	The specific area of habitat occupied by this species in the UK is unknown.
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
	There is thought to be a sufficient amount of habitat in the UK to support a viable population of the species.
2.5.2 Year or period	1960-2012

	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.3 Method used	Absent data	
Habitat for the species	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	Estimate based on wide distribution of species, compared with habitat assessments from SSSIs and priority habitats associated with the species
	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	unknown	
	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	unknown	
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
	Surface area of habitat is unknown so no comparison is possible.	
	b) Improved knowledge/more accurate data?	False
	Surface area of habitat is unknown so no comparison is possible.	
	c) Use of different method (e.g. "Range tool")?	False
	Surface area of habitat is unknown so no comparison is possible.	

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	
J01: fire and fire suppression	H	
B01: forest planting on open ground	M	
C03: Renewable abiotic energy use	M	
F03: Hunting and collection of wild animals (terrestrial)	M	
H04: Air pollution, air-borne pollutants	M	N
I02: problematic native species	M	
B06: grazing in forests/ woodland	L	
F04: Taking / Removal of terrestrial plants, general	L	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	L	
J02: human induced changes in hydraulic conditions	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

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	
J01: fire and fire suppression	H	
B01: forest planting on open ground	M	
C03: Renewable abiotic energy use	M	
F03: Hunting and collection of wild animals (terrestrial)	M	

H04: Air pollution, air-borne pollutants	M	N
I02: problematic native species	M	
B06: grazing in forests/ woodland	L	
F04: Taking / Removal of terrestrial plants, general	L	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	L	
J02: human induced changes in hydraulic conditions	L	
M01: Changes in abiotic conditions	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

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. Supporting information for this species provided by CCW.

2.8.3 Trans-boundary assessment

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

2.9.1 Range

a) Conclusion

Favourable

Range has been assessed as Favourable because the FRV is approximately equal to the current surface area of range and the short term range trend is stable.

b) Qualifier

2.9.2 Population	a) Conclusion	Favourable
	The population has been assessed as Favourable because the FRV is approximately equal to the current population estimate and the short term trend is thought to be stable at the UK level.	
	b) Qualifier	
2.9.3 Habitat for the species	a) Conclusion	Favourable
	Habitat is considered large enough to support a viable population, quality is moderate. Trend is unknown but range and population are favourable for this widespread species, which suggests that habitat is not a major problem.	
	b) Qualifier	
2.9.4 Future prospects	a) Conclusion	Favourable
	<p>Future prospects is assessed as Favourable on the basis of assessments of the future prospects of the three parameters, range, population and habitat for species:</p> <p>Range future prospects: Good</p> <p>Population future prospects: Good</p> <p>Habitat future prospects: Good</p> <p>Overall future prospects: Favourable.</p> <p>The main threats are from inappropriate grazing regimes, and invasive species; it is considered that improvements to wider countryside conservation, will mitigate these impacts.</p>	
	b) Qualifier	
2.9.5 Overall assessment of Conservation Status	Favourable	
	The overall assessment is Favourable because all parameters have been assessed as Favourable.	
2.9.6 Overall trend in Conservation Status		

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	
	c) Maximum	
3.1.2 Method used		
3.1.3 Trend of population size within the network (short-term trend) Optional		

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	e) Unknown	f) Not evaluated

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