

**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

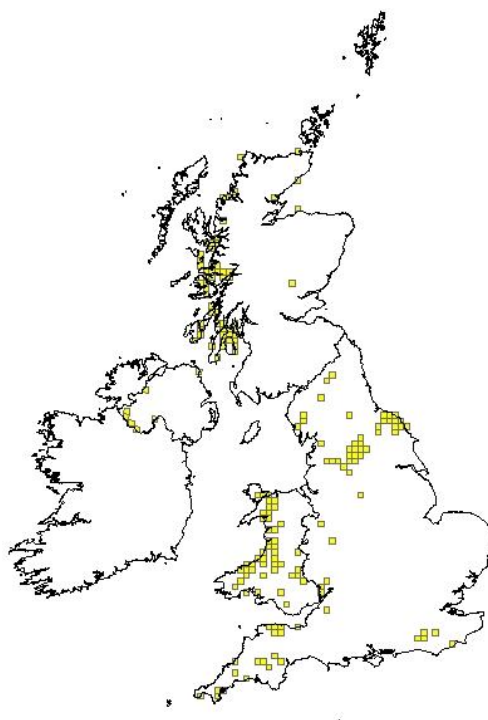
Species:

S1421 - Killarney fern (*Trichomanes speciosum*)

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

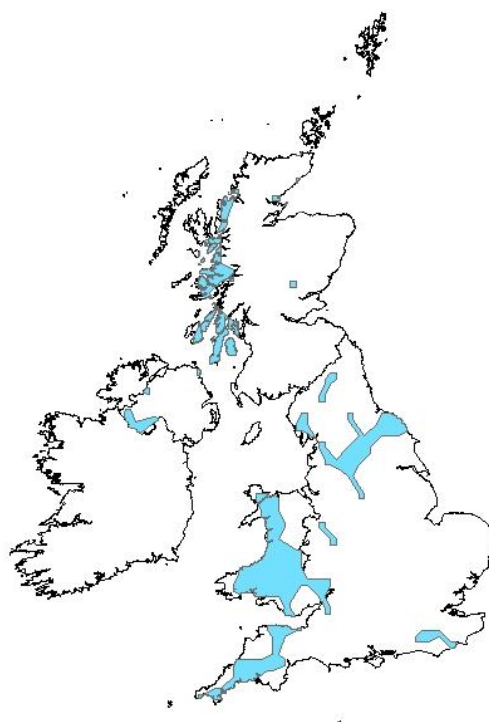
<i>Field name</i>	<i>Brief explanations</i>	
0.2 Species	0.2.1 Species code	S1421
	0.2.2 Species scientific name	<i>Trichomanes speciosum</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	

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.		



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	1990-2012		
	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 using by applying the alpha hull range 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>Allen, D.E. (1969) <i>The Victorian Fern Craze</i>. Hutchinson, London.</p> <p>Chater, A.O. (2010) <i>Flora of Cardiganshire</i>. Aberystwyth. 798pp.</p> <p>Colgan, N. & Scully, R.W. (1898) <i>Contributions towards a Cybele Hibernica</i>. 2nd Ed. Edward Ponsonby, Dublin.</p> <p>Curtis, T.G.F. & McGough, H.N. (1988) <i>The Irish Red Data Book 1: Vascular Plants</i>. Stationery Office, Dublin.</p> <p>Doyle, G.J. (1987) A new station for the Killarney fern (<i>Trichomanes speciosum</i> Willd.) in Killarney oakwoods (<i>Blechno-Quercetum</i>). <i>Irish Naturalists' Journal</i> 22: 353-356</p> <p>Gibby, M. (1997) <i>Workshop on Trichomanes speciosum, the Killarney fern</i>. Confidential report of proceedings. (Unpublished) Natural History Museum, London.</p> <p>IUCN (2001) <i>IUCN Red List Categories & Criteria</i>. Version 3.1. IUCN, Gland.</p> <p>Jermy, A.C. (1994) <i>Trichomanes speciosum and its gametophyte in Ireland</i>. Unpublished Report, Natural History Museum, London</p> <p>Johnson, G.N., Rumsey, F.J., Headley, A.D. & Sheffield, E.</p>

	<p>(2000) Adaptations to extreme low light in the fern <i>Trichomanes speciosum</i>. <i>New Phytologist</i> 148: 423-431</p> <p>Kingston, N. & Hayes, C. (2005) The ecology and conservation of the gametophyte generation of the Killarney Fern (<i>Trichomanes speciosum</i> Willd.) in Ireland. <i>Biology and Environment: Proceedings of the Royal Irish Academy</i> 105B(2): 71-79</p> <p>Krippel, Y. (2001) Aire de répartition et statut de <i>Trichomanes speciosum</i> Willd. (Hymenophyllaceae) au Luxembourg. <i>Bulletin des Naturalistes Luxembourgeois</i> 102: 3-13</p> <p>NPWS (2008) Conservation Status in Ireland of Habitats and Species listed in the European Council Directive on the Conservation of Habitats, Flora and Fauna 92/43/EEC. <i>Brunswick Press Limited, Dublin.</i></p> <p>Preston, C.D., Pearman, D.A. & Dines, T.D. (2002) <i>New Atlas of the British & Irish Flora</i>. Oxford University Press, Oxford.</p> <p>Ratcliffe, D.A. (2000) <i>In Search of Nature</i>. Peregrine Press.</p> <p>Ratcliffe, D.A., Birks, H.J.B. & Birks, H.H. (1993) The ecology and conservation of the Killarney Fern <i>Trichomanes speciosum</i> Willd. in Britain and Ireland. <i>Biological Conservation</i> 66: 231-247.</p> <p>Rumsey, F. (2012) <i>Vandenboschia speciosa</i> (Killarney fern) http://www.nhm.ac.uk/nature-online/species-of-the-day/biodiversity/endangered-species/vandenboschia-speciosa/index.html</p> <p>Rumsey, F.J. (1994) The distribution and population biology of the Killarney fern (<i>Trichomanes speciosum</i> Willd.). Unpublished PhD thesis, University of Manchester.</p> <p>Rumsey, F.J., Gibby, M. & Vogel, J.C. (2002a) The UK Biodiversity Action Plan (BAP) process in action: the Killarney fern, <i>Trichomanes speciosum</i> Willd. - a case study. <i>Fern Gazette</i> 16: 344-349</p> <p>Rumsey, F.J., Headley, A.D., Farrar, D.R. & Sheffield, E. (1991) The Killarney fern (<i>Trichomanes speciosum</i>) in Yorkshire. <i>Naturalist</i> 116: 41-43</p> <p>Rumsey, F.J., Jermy, A.C. & Sheffield, E. (1998a) The independent gametophytic stage of <i>Trichomanes speciosum</i> Willd. (Hymenophyllaceae), the Killarney Fern and its distribution in the British Isles. <i>Watsonia</i> 22: 1-19</p> <p>Rumsey, F.J., Vogel, J.C., Russell, S.J., Barrett, J.A. & Gibby, M. (1998b) Climate, colonization and celibacy: population structure in Central European <i>Trichomanes speciosum</i> (Pteridophyta). <i>Botanica Acta</i> 111: 481-489</p> <p>Rumsey, F.J., Vogel, J.C., Russell, S.J., Barrett, J.A. & Gibby, M. (1999) Population structure and conservation biology of the endangered fern <i>Trichomanes speciosum</i> Willd. (Hymenophyllaceae) at its northern distributional limit. <i>Biological Journal of the Linnean Society</i> 66: 333-344</p> <p>Rumsey, F.J., Vogel, J.C., Russell, S.J., Barrett, J.A. & Gibby, M. (2002b) A review of progress towards the conservation of the Killarney fern (<i>Trichomanes speciosum</i> Willd.) in the British Isles. <i>Botanical Journal of Scotland</i> 54: 37-47</p> <p>'Sentinel' (2003) Killarney Fern Conservation. <i>Pteridologist</i> 4 (2) pp58-61</p> <p>Stace, C. A. (1997) <i>New Flora of the British Isles</i>, 2nd Ed. Cambridge University Press, Cambridge.</p>
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TREWREN, K., 2008. Status of *Trichomanes* at the site in Cumbria found by Derek Ratcliffe. Internal report to NE Botanical Society of the British Isles (BSBI), Vascular Plant Database (via the NBN Gateway www.searchnbn.net for the date range 1987 - 1999). Since the 2007 report there have not been additional records submitted to the NBN (2000 onwards). However BSBI has received some records which are on its unpublished Distributional Database. bsbidb.org.uk Vogel, J.C., Jessen, S., Gibby, M., Jermy, A.C. & Ellis, L. (1993) Gametophytes of *Trichomanes speciosum* (Hymenophyllaceae: Pteridophyta) in Central Europe. *Fern Gazette* 14: 227-232

UK distribution map data sources

BSBI BSBI:Vascular Plant Database Welsh Plant Records: 2005-2008 Emailed to JNCC (LH) by Tom Humphrey 24/07/2012

BSBI BSBI:Vascular Plant Database. Bryophyte records from field cards: Digitised Sept 2003, Part 1 Emailed to JNCC (LH) by Tom Humphrey 24/07/2012

BSBI BSBI:Vascular Plant Database. Martin Wigginton's Red Data Book data Emailed to JNCC (LH) by Tom Humphrey 24/07/2012

BSBI BSBI:Vascular Plant Database. New altitude records from David Pearman. Emailed to JNCC (LH) by Tom Humphrey 24/07/2012

BSBI BSBI:Vascular Plant Database. Vascular Plant records published in *Watsonia* Plant records 2004 *Watsonia* :539-579 Emailed to JNCC (LH) by Tom Humphrey 24/07/2012

**BSBI BSBI:VPDB: Atlas2000 records on disc via Trevor Dines
BSBI BSBI:VPDB: vascular plants records collected during the New Atlas working period.**

BSBI MAPMATE database (includes import from several data centres)

BSBI Threatened Plant Database - Rumsey, F.J., Jermy, A.C. & Sheffield, E. (1998) Sent to JNCC 24/07/2012

BSBI Vascular Plant Database Atlas2000 records supplied to JNCC on 24/07/2012

BSBI Vascular Plant Database. Atlas2000 - updated records from December 1995 onwards. Sent to JNCC 24/7/2012

BSBI Vascular Plant Database. Welsh Plant Records 1999-2004. Welsh Plant records - 2003-4 2005 B.S.B.I. Welsh Bulletin :17-50. Sent to to JNCC 24/07/2012

BSBI Vascular Plant Database. Welsh Plant Records 1999-2004 Welsh Plant Records - 2002-2003 2005 B.S.B.I. Welsh Bulletin :13-50 Sent to JNCC 24/07/2012

BSBI Vascular Plant Database. Welsh Plant Records 1999-2004 Welsh Plant records - 2003-4 2005 B.S.B.I. Welsh Bulletin :17-50. Sent to to JNCC 24/07/2012

BSBI VC57 Data up to 2010; DBRC RP3/SK14G Emailed to JNCC (LH) by Tom Humphrey 24/07/2012

BSBI:Vascular Plant Database Atlas2000 - updated records from December 1995 onwards

BSBI:Vascular Plant Database BSBI Local Change database (2002-2004) Sent to JNCC 24/07/2012

NBN Gateway data: extracted by LH 11/09/2012 Centre for

	<p>Environmental Data and Recording GA000926 Northern Ireland Priority Species Data Set New Atlas of the British & Irish Flora 2002</p> <p>UK Distribution Map data sources</p> <p>BSBI BSBI:Vascular Plant Database Welsh Plant Records: 2005-2008 Emailed to JNCC (LH) by Tom Humphrey 24/07/2012</p> <p>BSBI BSBI:Vascular Plant Database. Bryophyte records from field cards: Digitised Sept 2003, Part 1 Emailed to JNCC (LH) by Tom Humphrey 24/07/2012</p> <p>BSBI BSBI:Vascular Plant Database. Martin Wigginton's Red Data Book data Emailed to JNCC (LH) by Tom Humphrey 24/07/2012</p> <p>BSBI BSBI:Vascular Plant Database. New altitude records from David Pearman. Emailed to JNCC (LH) by Tom Humphrey 24/07/2012</p> <p>BSBI BSBI:Vascular Plant Database. Vascular Plant records published in WatsoniaPlant records 2004 Watsonia :539-579 Emailed to JNCC (LH) by Tom Humphrey 24/07/2012</p> <p>BSBI BSBI:VPDB: Atlas2000 records on disc via Trevor Dines</p> <p>BSBI BSBI:VPDB: vascular plants records collected during the New Atlas working period.</p> <p>BSBI MAPMATE database (includes import from several data centres)</p> <p>BSBI Threatened Plant Database - Rumsey, F.J., Jermy, A.C. & Sheffield, E. (1998) Sent to JNCC 24/07/2012</p> <p>BSBI Vascular Plant Database Atlas2000 records supplied to JNCC on 24/07/2012</p> <p>BSBI Vascular Plant Database. Atlas2000 - updated records from December 1995 onwards. Sent to JNCC 24/7/2012</p> <p>BSBI Vascular Plant Database. Welsh Plant Records 1999-2004. Welsh Plant records - 2003-4 2005 B.S.B.I. Welsh Bulletin :17-50. Sent to to JNCC 24/07/2012</p> <p>BSBI Vascular Plant Database. Welsh Plant Records 1999-2004Welsh Plant Records - 2002-2003 2005 B.S.B.I. Welsh Bulletin :13-50 Sent to JNCC 24/07/2012</p> <p>BSBI Vascular Plant Database. Welsh Plant Records 1999-2004Welsh Plant records - 2003-4 2005 B.S.B.I. Welsh Bulletin :17-50. Sent to to JNCC 24/07/2012</p> <p>BSBI VC57 Data up to 2010;DBRC RP3/SK14G Emailed to JNCC (LH) by Tom Humphrey 24/07/2012</p> <p>BSBI:Vascular Plant Database Atlas2000 - updated records from December 1995 onwards</p> <p>BSBI:Vascular Plant Database BSBI Local Change database (2002-2004) Sent to JNCC 24/07/2012</p> <p>NBN Gateway data: extracted by LH 11/09/2012 Centre for Environmental Data and Recording GA000926 Northern Ireland Priority Species Data Set New Atlas of the British & Irish Flora 2002</p>
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2.3 Range

2.3.1 Surface area

33619.93

Range	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	2001-2012	
	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	unknown	
	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 Optional	a) Minimum	
	b) Maximum	
2.3.6 Long-term trend Period Optional	1989-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.3.7 Long-term trend Trend direction Optional	unknown	
	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.	
2.3.8 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
2.3.9 Favourable reference range	a) Value in km²	30630
	The FRV reported in 2007 has been updated by running the data used for reporting in 2007 through the revised UK range mapping tool. For further details see the 2013 Article 17 UK Approach document.	
	b) Operator for FRR	

	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	The FRV reported in 2007 has been updated by running the data used for reporting in 2007 through the revised UK range mapping tool. The value is considered to be large enough to support a viable population and no lower than the range estimate from when the Habitats Directive came into force in the UK.
	The FRV reported in 2007 has been updated by running the data used for reporting in 2007 through the revised UK range mapping tool. The value is considered to be large enough to support a viable population and no lower than the range estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document.	
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 slight increase in range is not thought to be genuine but as a result of better data.	
	b) Improved knowledge/more accurate data?	True
	The slight increase in range is not thought to be genuine but as a result of better data.	
	c) Use of different method (e.g. "Range tool")?	False
The slight increase in range is not thought to be genuine but as a result of better data.		

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
	The population unit is the same as reported in 2007.	
	b) Minimum	126
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	

	c) Maximum	181
	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	
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	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.	
2.4.6 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	unknown	
	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	unknown	
	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 expert opinion with no or minimal sampling	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	162
	The FRV for population is the same as reported in 2007. The value is considered to be large enough for the population to be viable and no lower than the population estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	b) Operator	
	c) FRP is unknown (indicated by "true")	False
	For further details please see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	d) Method used to set FRP	The favourable reference value is the same as used in the 2007 Article 17 report. The value is considered to be large enough for the population to be viable and no lower than the population estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
The favourable reference value is the same as used in the 2007 Article 17 report. The value is considered to be large enough for the population to be viable and no lower than the population estimate from when the Habitats Directive came into force in the UK. 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 population reported in 2007 is within the range of the population estimate reported now.	
	b) Improved knowledge/more accurate data?	False
	The population reported in 2007 is within the range of the population estimate reported now.	
	c) Use of different method (e.g. "Range tool")?	False
	The population reported in 2007 is within the range of the population estimate reported now.	

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	1989-2012 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	Absent data 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 Good
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
	b) Assessment method The area of habitat is believed to be stable, and is sufficient to maintain the favourable reference range and favourable reference population. It seems reasonable to conclude that the quality of the habitat is good, but it has not been measured directly.
	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 Optional	1989-2012	
	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 Optional	unknown	
	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	
B02: Forest and Plantation management & use	M	
F04: Taking / Removal of terrestrial plants, general	M	
E03: Discharges	L	
G02:	L	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	L	
H02: Pollution to groundwater	L	NP

(point sources and diffuse sources)		
I02: problematic native species	L	
J02: human induced changes in hydraulic conditions	L	
K05: reduced fecundity/ genetic depression	L	
M01: Changes in abiotic conditions	L	

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

2.6.1 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	
F04: Taking / Removal of terrestrial plants, general	M	
B02: Forest and Plantation management & use	L	
C03: Renewable abiotic energy use	L	
F03: Hunting and collection of wild animals (terrestrial)	L	
G02:	L	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	L	
H02: Pollution to groundwater (point sources and diffuse sources)	L	NP
I02: problematic native species	L	
J02: human induced changes in hydraulic conditions	L	
K05: reduced fecundity/ genetic	L	

depression		
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

There is no particular reason to believe that the current sporophyte to gametophyte ratio is unusual or detrimental to the long-term viability of the species, and hence this aspect of the biology does not affect the conclusions.

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 range is greater than the FRV, and although the short term trend direction is unknown, there is no evidence of a decline.

b) Qualifier
2.9.2 Population
a) Conclusion
Favourable

FRV with in the range of population estimates; this is considered to be an adequate viable population, and although the short term trend direction is unknown, there is no evidence of a decline.

b) Qualifier
2.9.3 Habitat for the species
a) Conclusion
Favourable

Habitat has been assessed as Favourable because there is thought to be sufficient amount of habitat for the species to be viable, quality is good, and although trend is unknown, the fact that range and population are favourable suggests that habitat is not a major problem for this species.

	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>FP for range = good FP for population = good FP for habitat= good Overall FP = Favourable</p> <p>The habitat is not considered likely to change detrimentally for the species in the time period; climate change may benefit it across its current range. The threats are not considered to be significant, and there are conservation measures for the species in place.</p>	
	b) Qualifier	
2.9.5 Overall assessment of Conservation Status	Favourable	
	Overall assessment is Favourable because all parameter assessments are 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	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	14
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) Maximum	27
For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		
3.1.2 Method used	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.
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	e) Unknown	f) Not evaluated
3.1: Restoring/improving forest habitats				Y		L		Y		Y	Y				
3.2: Adapt forest management	Y	Y				L			Y	Y					
4.0: Other wetland-related measures				Y		L		Y		Y	Y				
4.1: Restoring/improving water quality	Y			Y		L			Y	Y	Y	Y			
6.0: Other spatial measures	Y	Y				M			Y					Y	

6.1: Establish protected areas/sites	Y	Y				L			Y	Y				
6.3: Legal protection of habitats and species	Y	Y				H			Y	Y		Y		Y
7.1: Regulation/ Management of hunting and taking	Y			Y		L			Y	Y				
7.4: Specific single species or species group management measures	Y			Y		L			Y	Y	Y	Y		

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