

**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

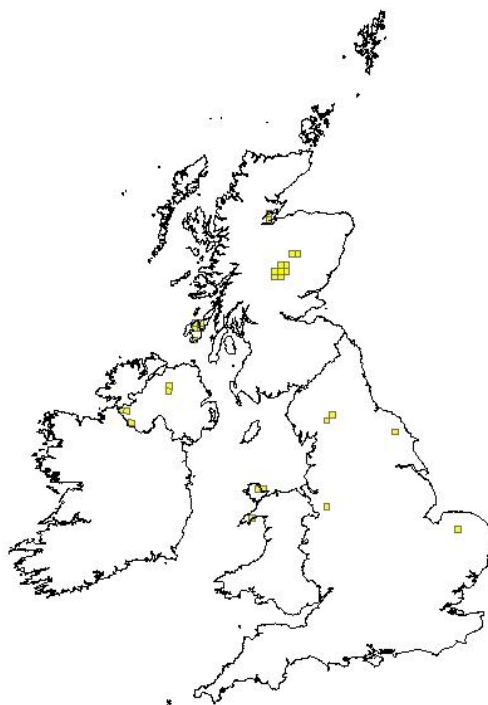
Species:

S1013 - Geyer's whorl snail (*Vertigo geyeri*)

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

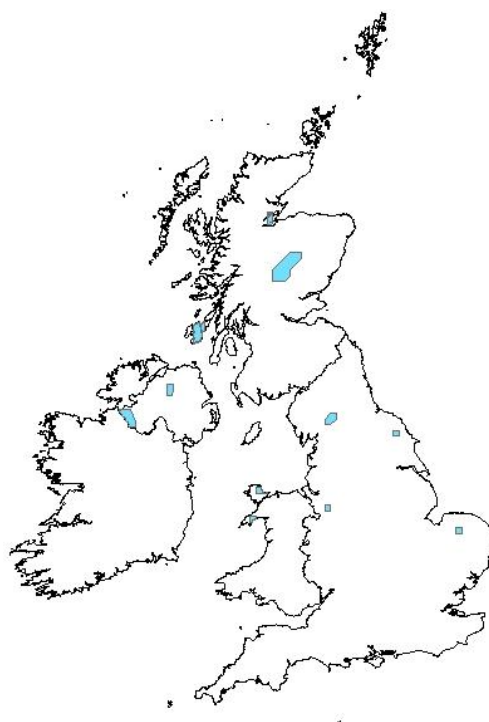
<i>Field name</i>	<i>Brief explanations</i>	
0.2 Species	0.2.1 Species code	S1013
	0.2.2 Species scientific name	<i>Vertigo geyeri</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	

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	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.
1.1.3 Year or period	1999-2012
	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>Abrehart Ecology (2010). Article 17 Reporting cycle on <i>Vertigo geyeri</i> at Sand Dale SSSI/SAC and Jugger Howe Moor (North York Moors SSSI) August 2010. An ecological survey including floral and fauna observations undertaken for Natural England by Abrehart Ecology.</p> <p>Colville 1996 (SNH report)</p> <p>Ian J Killeen, (2010) A CONDITION ASSESSMENT OF VERTIGO GEYERI IN SUNBIGGIN TARN & MOORS, CUMBRIA, MALACOLOGICAL SERVICES.</p> <p>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</p> <p>Killeen & Colville 1999 (SNH report)</p> <p>Killeen 2012 (unpublished report)</p> <p>Killeen, I.J. & Moorkens, E. 2004. Condition monitoring of <i>Vertigo geyeri</i> on Cors Erddreiniog & Waun Eurad, Corsydd Môn/Anglesey Fens candidate Special Area of Conservation, Wales. CCW Contract Science. 625. Countryside Council for Wales.</p>

	<p>Killeen, I.J. & Moorkens, E. 2008. Condition monitoring of <i>Vertigo geyeri</i> on Waun Eurad and Cors Erddreiniog SAC. CCW Environmental Monitoring Report. 42. Countryside Council for Wales.</p> <p>Lloyd, D. 2005. The condition of <i>Vertigo geyeri</i> on Corsydd Llyn / Lleyf Fens SAC. CCW File note, 17 October 2005.</p> <p>Lloyd, D. 2008. The condition of <i>Vertigo geyeri</i> on Corsydd Llyn / Lleyf Fens SAC. CCW File note, 10 October 2008.</p> <p>Moorkens, E.A. & Killeen, I.J. (2011) Monitoring and Condition Assessment of Populations of <i>Vertigo geyeri</i>, <i>Vertigo angustior</i> and <i>Vertigo moulinsiana</i> in Ireland. Irish Wildlife Manuals, No. 55. National Parks and Wildlife Service, Department of Arts, Heritage and Gaeltacht, Dublin, Ireland.</p> <p>Sharland, E. 2000. Autecology of <i>Vertigo angustior</i> and <i>Vertigo geyeri</i> in Wales. CCW Contract Science. 392. Countryside Council for Wales.</p> <p>Sharland, E.C. 2001. Autecology of <i>Vertigo angustior</i> and <i>Vertigo geyeri</i> in Wales. Ph.D., University of Sheffield.</p> <p>Willing (2010) Monitoring populations of <i>Vertigo angustior</i> and <i>Vertigo geyeri</i> in Norfolk, 2010. Natural England commissioned report.</p> <p>Willing 1988 (SNH report)</p> <p>Willing 2012 (unpublished report)</p> <p>UK distribution map data sources</p> <p>A. Fowles (pers. comm.), CCW Mollusc (non-marine) data for Great Britain and Ireland (1670-1999)</p> <p>Natural England - commissioned by David Heaver. Emailed to JNCC (LH) by David Heaver (NE) 21/08/2012</p> <p>NBN Gateway data: Cofnod (North Wales Environmental Information Service) GA000747 Extracted by LH 19/09/2012</p> <p>CCW Regional Data: North Wales</p> <p>NBN Gateway data: Conchological Society of Great Britain & Ireland GA000159 Extracted by LH 19/09/2012 Mollusc (non-marine) data for Great Britain and Ireland</p> <p>NBN Gateway data: Countryside Council for Wales CCWJMP03 Extracted by LH 19/09/2012 UK Biodiversity Action Plan Invertebrate Data for Wales</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: Scottish Natural Heritage GA001144 Extracted by LH 19/09/2012 Site Condition Monitoring of Annex II <i>Vertigo</i> species in Scotland</p> <p>SNH dataset emailed to JNCC (LH) by Colin McLeod 21/08/2012</p> <p>UK Distribution Map data sources</p> <p>A. Fowles (pers. comm.), CCW Mollusc (non-marine) data for Great Britain and Ireland (1670-1999)</p> <p>Natural England - commissioned by David Heaver. Emailed to JNCC</p>
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	<p>(LH) by David Heaver (NE) 21/08/2012</p> <p>NBN Gateway data: Cofnod (North Wales Environmental Information Service) GA000747 Extracted by LH 19/09/2012 CCW Regional Data: North Wales</p> <p>NBN Gateway data: Conchological Society of Great Britain & Ireland GA000159 Extracted by LH 19/09/2012 Mollusc (non-marine) data for Great Britain and Ireland</p> <p>NBN Gateway data: Countryside Council for Wales CCWJMP03 Extracted by LH 19/09/2012 UK Biodiversity Action Plan Invertebrate Data for Wales</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: Scottish Natural Heritage GA001144 Extracted by LH 19/09/2012 Site Condition Monitoring of Annex II Vertigo species in Scotland</p> <p>SNH dataset emailed to JNCC (LH) by Colin McLeod 21/08/2012</p>

2.3 Range					
2.3.1 Surface area Range	<p>3591.66</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>Complete survey/ Complete survey or a statistically robust estimate</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	<table border="1"> <tr> <td>a) Minimum</td> <td></td> </tr> <tr> <td>b) Maximum</td> <td></td> </tr> </table> <p>Optional</p>	a) Minimum		b) Maximum	
a) Minimum					
b) Maximum					
2.3.6 Long-term trend Period	<p>1989-2012</p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p> <p>Optional</p>				

2.3.7 Long-term trend Trend direction	unknown	
	Optional	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	
	b) Operator for FRR	approximately equal to
	c) FRR is unknown (indicated by "true")	False
	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?	True
	The very slight decline in surface area of range is probably thought to be genuine, although overall the trend is thought to be stable. A marginal 10km square was included in the range map last time, where only 1 snail was ever found; it was not found in a resurvey so has not been included in the current range, although there is a possibility it is still present.	
	b) Improved knowledge/more accurate data?	False
	The very slight decline in surface area of range is probably thought to be genuine, although overall the trend is thought to be stable. A marginal 10km square was included in the range map last time, where only 1 snail was ever found; it was not found in a resurvey so has not been included in the current range, although there is a possibility it is still present.	
	c) Use of different method (e.g. "Range tool")?	False

	The very slight decline in surface area of range is probably thought to be genuine, although overall the trend is thought to be stable. A marginal 10km square was included in the range map last time, where only 1 snail was ever found; it was not found in a resurvey so has not been included in the current range, although there is a possibility it is still present.
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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	65
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) Maximum	65
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	1996-2012	
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	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	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.	
2.4.10 Long-term trend – Period Optional		
2.4.11 Long-term trend Trend direction Optional		
2.4.12 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
	c) Confidence interval	
2.4.13 Long term trend Method used Optional		
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	59
	The FRV for population is the same as reported in 2007. 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
	d) Method used to set FRP	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.
	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.	
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 slight increase in population is thought to be due to better data rather than a genuine increase.	
	b) Improved knowledge/more accurate data?	True
	The slight increase in population is thought to be due to better data rather than a genuine increase.	
	c) Use of different method (e.g. "Range tool")?	False
	The slight increase in population is thought to be due to better data rather than a genuine increase.	

2.5 Habitat for the species	
2.5.1 Area estimation	<p>The specific area of habitat occupied by this species in the UK is unknown.</p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p> <p>It is unknown whether the amount of habitat in the UK is sufficient to support a viable population of the species.</p>

2.5.2 Year or period	2003-2012	
	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	Quality assessed through habitat surveys and consideration of pressures and threats.
	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 Optional		
2.5.8 Long-term trend Trend direction Optional		
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 was reported as unknown in 2007 so no comparison is possible.	
	b) Improved knowledge/more accurate data?	False
	Surface area of habitat was reported as unknown in 2007 so no comparison is possible.	
	c) Use of different method (e.g. "Range tool")?	False
	Surface area of habitat was reported as unknown in 2007 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	
A02: modification of cultivation practices	L	
A05: livestock farming and animal breeding (without grazing)	L	
B01: forest planting on open ground	L	
J02: human induced changes in hydraulic conditions	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	
A05: livestock farming and animal breeding (without grazing)	L	
A08: Fertilisation	L	
B01: forest planting on open ground	L	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	L	

J02: human induced changes in hydraulic conditions	L	
J03: Other ecosystem modifications	L	
K02: Biocenotic evolution, succession	L	
L08: inundation (natural processes)	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

In NI, the current population is known only to the west of the province, however, there is thought to be potential for undiscovered populations to exist where there is suitable habitat.

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

Favourable

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

b) Qualifier

2.9.2 Population

a) Conclusion

Favourable

	Population has been assessed as Favourable because the population is greater than the FRV and the short term trend is stable.	
	b) Qualifier	
2.9.3 Habitat for the species	a) Conclusion	Favourable
	Habitat quality is good and trend is stable. Range and population are both favourable, which 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>Range future prospects: Good Population future prospects: Good Habitat future prospects: Good Overall future prospects: Favourable</p> <p>The various conservation measures are expected to minimise the impact of the current pressures and potential threat risks to this species.</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	a) Unit	number of map 1x1 km grid cells
Estimation of population size included in the SAC network		

	b) Minimum	12
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) Maximum	12
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
3.1.2 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.	
3.1.3 Trend of population size within the network (short-term trend)	stable	
Optional	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
2.1: Maintaining grasslands and other open habitats			Y	Y		H			Y	Y	Y	Y		
4.1: Restoring/improving water quality				Y		L			Y	Y	Y	Y		

4.2: Restoring/im proving the hydrological regime				Y		L			Y	Y	Y	Y			
6.1: Establish protected areas/sites				Y		L			Y	Y	Y	Y			

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