

**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

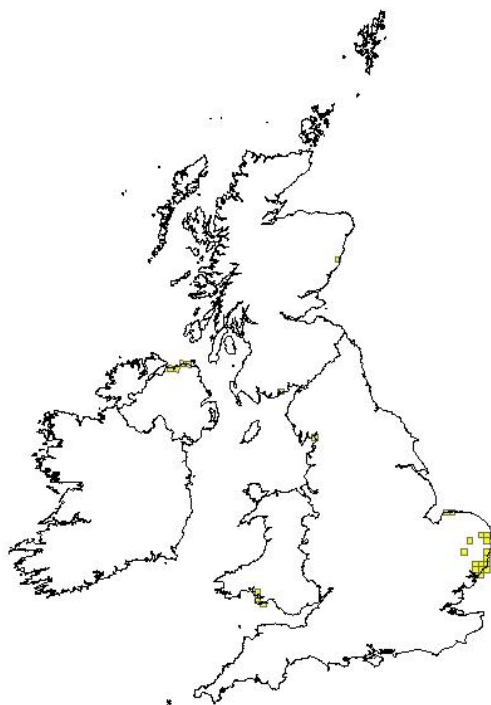
Species:

S1014 - Narrow-mouthed whorl snail (*Vertigo angustior*)

## 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>	
<b>0.2 Species</b>	<b>0.2.1 Species code</b>	<b>S1014</b>
	<b>0.2.2 Species scientific name</b>	<b><i>Vertigo angustior</i></b>
	<b>0.2.3 Alternative species scientific name</b> Optional	
	<b>0.2.4 Common name</b> Optional	

<b>1.1 Maps</b>			
<b>1.1.1 Distribution map</b>	<b>True</b>	<b>Sensitive</b>	<b>False</b>
	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.		



<b>1.1.2 Method used - map</b>	<b>Complete survey/Complete survey or a statistically robust estimate</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information
<b>1.1.3 Year or period</b>	<b>1999-2012</b>
	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.

<b>1.1.4 Additional distribution map</b> Optional	<b>False</b>
<b>1.1.5 Range map</b>	<b>True</b> 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.



<b>2.1 Biogeographical region &amp; marine regions</b>	<b>ATL</b>
<b>2.2 Published sources</b>	<p><b>Abrehart Ecology (2008), Narrow-mouthed whorl snail <i>Vertigo angustior</i> (Jeffreys, 1830) in Suffolk. Survey Data for 2008. Environment Agency report.</b></p> <p><b>Abrehart Ecology (2010). Article 17 reporting project on <i>Vertigo angustior</i> at Deben Estuary SSSI, Suffolk. August 2010. An ecological survey including floral and fauna observations undertaken for Natural England by Abrehart Ecology.</b></p> <p><b>Baker, R. &amp; Howlett, D (2010) Flordon Common: Mollusca. Norfolk &amp; Norwich Nats Soc. Resaearch Group. Trans. Norfolk &amp; Norwich Nat. Soc. 43 (1); 95-99.</b></p> <p><b>Fowles, A. &amp; Guest, D. 2006. Narrow-mouthed whorl snail <i>Vertigo angustior</i> at Whiteford Burrows. In: Monitoring nature conservation in cultural habitats: a practical guide and case studies. Eds. C. Hurford &amp; M. Schneider, pp. 259-270. Dordrecht, Springer.</b></p> <p><b>Harper, J. 2007. Survey of Pembrey Forest, Carmarthenshire, for the narrow-mouthed whorl snail <i>Vertigo angustior</i>. Unpublished report. Countryside Council for Wales.</b></p> <p><b>Holyoak, D.T. &amp; Willing, M.J. 1999. Survey for <i>Vertigo angustior</i> at selected localities in West Glamorgan. CCW</b></p>

Contract Science. 222. Countryside Council for Wales. 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](http://www.jncc.gov.uk/article17)

Killeen, I. (2012) unpublished report

Killeen, I.J. 1993. The distribution and ecology of the snail *Vertigo angustior* at Oxwich and Whiteford Burrows NNRs, Gower, South Wales. CCW Contract Science. 20. Countryside Council for Wales.

KILLEEN, I.J.(2010) A CONDITION ASSESSMENT OF VERTIGO ANGSTIOR AT GAIT BARROWS, CUMBRIA. Report to Natural England.

Marriott & Colville (2011) Buglife report

Moorkens, E.A. & Killeen, I.J. (2011) Monitoring and Condition Assessment of Populations of *Vertigo geyeri*, *Vertigo angustior* and *Vertigo moulinsiana* in Ireland. Irish Wildlife Manuals, No. 55. National Parks and Wildlife Service, Department of Arts, Heritage and Gaeltacht, Dublin, Ireland.

Natural England Article 17 Reporting on *Vertigo* snails in England SAE03-02-362

Preece, R.C. & Willing, M.J. 1984. *Vertigo angustior* living near its type locality in south Wales. *Journal of Conchology*, 31: 340.

SCM report (2011)

Wilkinson, K. 2006. *Vertigo angustior*: Monitoring of Whiteford Burrows, part of Carmarthen Bay Dunes SAC. Unpublished report. Countryside Council for Wales.

Willing MJ (2010) Monitoring populations of *Vertigo angustior* and *Vertigo geyeri* in Norfolk, 2010

Willing, M.S. 1997. A preliminary survey of areas in the vicinity of Pembroke for populations of the Red Data molluscs *Vertigo angustior* and *Pseudamnicola confusa*. Unpublished report. Countryside Council for Wales.

#### UK distribution map data sources

EA Merle. Emailed to JNCC (LH) by David Heaver (Natural England) 21/08/2012

NBN Gateway data: Conchological Society of Great Britain & Ireland - added by Kyle Hunter 28/09/2012

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

NBN Gateway data: Countryside Council for Wales CCWJMP03 Extracted by LH 19/09/2012 UK Biodiversity Action Plan Invertebrate Data for Wales

NBN Gateway data: extracted by LH 11/09/2012 Countryside Council for Wales GA000506 Welsh Invertebrate Database (WID)

NBN Gateway data: Scottish Natural Heritage GA001144 Extracted by LH 19/09/2012 Site Condition Monitoring of Annex II *Vertigo* species in Scotland

NBN Gateway data: Suffolk Biological Records Centre GA000623 Extracted by LH 19/09/2012 Suffolk Biological Records Centre (SBRC) dataset

NE owned Emailed to JNCC (LH) by David Heaver (Natural

	<p><b>England) 21/08/2012</b>  <b>pers comm from Abrehart to David Heaver (Natural England) after an informal survey visit. Sent to JNCC in final spreadsheet 5thOct2012</b></p> <p>UK Distribution Map data sources</p> <p>EA Merle. Emailed to JNCC (LH) by David Heaver (Natural England) 21/08/2012</p> <p>NBN Gateway data: Conchological Society of Great Britain &amp; Ireland - added by Kyle Hunter 28/09/2012</p> <p>NBN Gateway data: Conchological Society of Great Britain &amp; 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 Countryside Council for Wales GA000506 Welsh Invertebrate Database (WID)</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>NBN Gateway data: Suffolk Biological Records Centre GA000623 Extracted by LH 19/09/2012 Suffolk Biological Records Centre (SBRC) dataset</p> <p>NE owned Emailed to JNCC (LH) by David Heaver (Natural England) 21/08/2012</p> <p>pers comm from Abrehart to David Heaver (Natural England) after an informal survey visit. Sent to JNCC in final spreadsheet 5thOct2012</p>
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<b>2.3 Range</b>	
<b>2.3.1 Surface area Range</b>	<p><b>3744.34</b></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>
<b>2.3.2 Method used Surface area of Range</b>	<p><b>Complete survey/ Complete survey or a statistically robust estimate</b></p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information</p>
<b>2.3.3 Short-term trend Period</b>	<p><b>2001-2012</b></p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>
<b>2.3.4 Short term trend Trend direction</b>	<p><b>stable</b></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</p>

	relevant country-level reporting information.	
<b>2.3.5 Short-term trend Magnitude</b> Optional	<b>a) Minimum</b>	
	<b>b) Maximum</b>	
<b>2.3.6 Long-term trend Period</b> Optional	<b>1989-2012</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.3.7 Long-term trend Trend direction</b> Optional	<b>stable</b>	
	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.	
<b>2.3.8 Long-term trend Magnitude</b> Optional	<b>a) Minimum</b>	
	<b>b) Maximum</b>	
<b>2.3.9 Favourable reference range</b>	<b>a) Value in km<sup>2</sup></b>	<b>3744</b>
	The current range has been set as the FRV since this is thought to be a better reflection of the range when the Habitats Directive came into force.	
	<b>b) Operator for FRR</b>	
	<b>c) FRR is unknown (indicated by "true")</b>	<b>False</b>
	<b>d) Method used to set FRR</b>	<b>The current range has been set as the FRV since this is thought to be a better reflection of the range when the Habitats Directive came into force. 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.</b>

	The current range has been set as the FRV since this is thought to be a better reflection of the range when the Habitats Directive came into force. 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.	
<b>2.3.10 Reason for change</b> Is the difference between the reported value in 2.3.1 and the previous reporting round mainly due to...	<b>a) Genuine change?</b>	<b>False</b>
	The decrease in the reported surface area of range is not thought to be genuine but due to change in the method.	
	<b>b) Improved knowledge/more accurate data?</b>	<b>False</b>
	The decrease in the reported surface area of range is not thought to be genuine but due to change in the method.	
	<b>c) Use of different method (e.g. "Range tool")?</b>	<b>True</b>
The decrease in the reported surface area of range is not thought to be genuine but due to change in the method.		

<b>2.4 Population</b>		
<b>2.4.1 Population size estimation</b> (using individuals or agreed exceptions where possible)	<b>a) Unit</b>	
	<b>b) Minimum</b>	
	<b>c) Maximum</b>	
<b>2.4.2 Population size estimation</b> (using population unit other than individuals) Optional ( <i>if 2.4.1 filled in</i> )	<b>a) Unit</b>	<b>number of map 1x1 km grid cells</b>
	The population unit is the same as reported in 2007.	
	<b>b) Minimum</b>	<b>63</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	<b>c) Maximum</b>	<b>63</b>
For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		
<b>2.4.3 Additional information on population estimates / conversion</b> Optional	<b>a) Definition of "locality"</b>	
	<b>b) Method to convert data</b>	
	<b>c) Problems encountered to</b>	<b>The large scale population swings that the <i>Vertigo</i> snails seem to go through</b>

	<b>provide population size estimation</b>	<b>make counts of individuals less than meaningful.</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.4 Year or period</b>	<b>2002-2012</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.5 Method used Population size</b>	<b>Complete survey/Complete survey or a statistically robust estimate</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.6 Short-term trend Period</b>	<b>2001-2012</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.7 Short-term trend Trend direction</b>	<b>stable</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.8 Short-term trend Magnitude</b>	Optional	
	<b>a) Minimum</b>	
	<b>b) Maximum</b>	
	<b>c) Confidence interval</b>	
<b>2.4.9 Short-term trend Method used</b>	<b>Complete survey/Complete survey or a statistically robust estimate</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.10 Long-term trend – Period</b>	Optional	
<b>2.4.11 Long-term trend Trend direction</b>	Optional	
<b>2.4.12 Long-term trend Magnitude</b>	Optional	
	<b>a) Minimum</b>	
	<b>b) Maximum</b>	



	<b>c) Confidence interval</b>	
<b>2.4.13 Long term trend Method used</b>		
Optional		
<b>2.4.14 Favourable reference population</b>	<b>a) Number of individuals/agreed exceptions/other units</b>	<b>63</b>
	The current population has been set as the FRV since this is thought to be a better reflection of the population when the Habitats Directive came into force. For further details please see the 2013 Article 17 UK Approach document.	
	<b>b) Operator</b>	
	<b>c) FRP is unknown (indicated by "true")</b>	<b>False</b>
	<b>d) Method used to set FRP</b>	<b>The current population has been set as the FRV since this is thought to be a better reflection of the population when the Habitats Directive came into force. The value is considered to be large enough 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.</b>
	The current population has been set as the FRV since this is thought to be a better reflection of the population when the Habitats Directive came into force. The value is considered to be large enough 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.	
<b>2.4.15 Reason for change</b>	<b>a) Genuine change?</b>	<b>False</b>
Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	The increase in population estimate is not thought to be genuine but due to better data.	
	<b>b) Improved knowledge/more accurate data?</b>	<b>True</b>
	The increase in population estimate is not thought to be genuine but due to better data.	

	<b>c) Use of different method (e.g. "Range tool")?</b>	<b>False</b>
The increase in population estimate is not thought to be genuine but due to better data.		

<b>2.5 Habitat for the species</b>		
<b>2.5.1 Area estimation</b>	<b>105</b>	
	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.	
<b>2.5.2 Year or period</b>	<b>2006-2012</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.5.3 Method used Habitat for the species</b>	<b>Complete survey/Complete survey or a statistically robust estimate</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.5.4 Quality of the habitat</b>	<b>a) Habitat quality</b>	<b>Moderate</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	<b>b) Assessment method</b>	<b>Surveys of habitat quality and expert opinion.</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.5.5 Short-term trend Period</b>	<b>2001-2012</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.5.6 Short-term trend Trend direction</b>	<b>stable</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.5.7 Long-term trend Period</b>		
	Optional	
<b>2.5.8 Long-term trend Trend direction</b>		
	Optional	
<b>2.5.9 Area of suitable habitat for the species</b>	<b>a) Value in km<sup>2</sup></b>	
	<b>b) Absence of data indicated as '0'</b>	
<b>2.5.10 Reason for change</b>	<b>a) Genuine change?</b>	<b>False</b>
Is the difference between the		

value reported at 2.5.1 and the previous reporting round mainly due to	Surface area of habitat was reported as unknown in 2007 so no comparison is possible.	
	<b>b) Improved knowledge/more accurate data?</b>	<b>True</b>
	Surface area of habitat was reported as unknown in 2007 so no comparison is possible.	
	<b>c) Use of different method (e.g. "Range tool")?</b>	<b>False</b>
Surface area of habitat was reported as unknown in 2007 so no comparison is possible.		

<b>2.6 Main pressures</b>		
<b>a) Pressure</b>	<b>b) Ranking</b>	<b>c) Pollution qualifier</b>
	H = high importance (max 5 entries) M = medium importance L = low importance	
A04: grazing	H	
J02: human induced changes in hydraulic conditions	M	
M01: Changes in abiotic conditions	M	
A05: livestock farming and animal breeding (without grazing)	L	
B01: forest planting on open ground	L	
J03: Other ecosystem modifications	L	
K01: abiotic (slow) natural processes	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.

<b>2.7 Threats</b>		
<b>a) Threat</b>	<b>b) Ranking</b>	<b>c) Pollution qualifier</b>

	H = high importance (max 5 entries) M = medium importance L = low importance	
A04: grazing	M	
J02: human induced changes in hydraulic conditions	M	
M01: Changes in abiotic conditions	M	
A05: livestock farming and animal breeding (without grazing)	L	
B01: forest planting on open ground	L	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	L	
J03: Other ecosystem modifications	L	
K01: abiotic (slow) natural processes	L	
K02: Biocenotic evolution, succession	L	
L08: inundation (natural processes)	L	
M02: Changes in biotic 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**

<b>2.8.3 Trans-boundary assessment</b>	
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<b>2.9 Conclusions (<i>assessment of conservation status at end of reporting period</i>)</b>	
<b>2.9.1 Range</b>	<b>a) Conclusion</b> <b>Favourable</b>
	Range has been assessed as Favourable because surface area of range is equal to the FRV and the short term trend is stable.
	<b>b) Qualifier</b>
<b>2.9.2 Population</b>	<b>a) Conclusion</b> <b>Favourable</b>
	Population has been assessed as Favourable because the population estimate is equal to the FRV and the short term trend is stable. The population estimate reported has increased since the 2007 report, but this is almost certainly due to survey effort increases.
	<b>b) Qualifier</b>
<b>2.9.3 Habitat for the species</b>	<b>a) Conclusion</b> <b>Favourable</b>
	Habitat for species has been assessed as Favourable because there is thought to be sufficient habitat to support a viable population, the habitat quality is moderate and the short term trend is stable.
	<b>b) Qualifier</b>
<b>2.9.4 Future prospects</b>	<b>a) Conclusion</b> <b>Inadequate</b>
	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:  Range future prospects: Poor (there is chance that range may be decreased due to threats such as sea level rise)  Population future prospects: Good  Habitat future prospects: Good  Overall future prospects: Inadequate
	<b>b) Qualifier</b> <b>stable</b>
<b>2.9.5 Overall assessment of Conservation Status</b>	<b>Inadequate</b>
	The overall assessment is Inadequate because future prospects has been assessed Inadequate.
<b>2.9.6 Overall trend in Conservation Status</b>	<b>stable</b>
	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		
<b>3.1.1 Population size</b>  Estimation of population size included in the SAC network	<b>a) Unit</b> <b>number of map 1x1 km grid cells</b>	
	<b>b) Minimum</b> <b>32</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	<b>c) Maximum</b> <b>32</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>3.1.2 Method used</b>	<b>Estimate based on partial data with some extrapolation and/or modelling</b>  For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>3.1.3 Trend of population size within the network</b> (short-term trend)  Optional	<b>stable</b>  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		H			Y		Y	Y			
4.1: Restoring/im proving water quality				Y		L			Y		Y	Y			
4.2: Restoring/im proving the hydrological regime				Y		L			Y		Y	Y			
4.4: Restoring coastal areas				Y		M		Y						Y	
6.1: Establish protected areas/sites	Y					M			Y				Y		

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