

**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

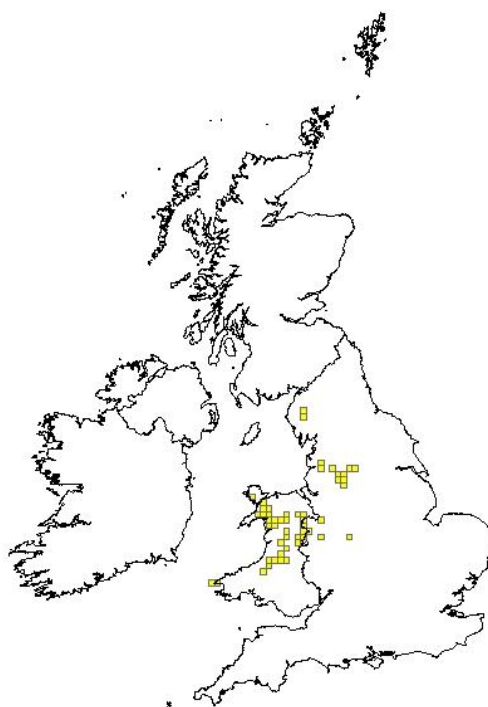
Species:

S1831 - Floating water-plantain (*Luronium natans*)

**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>S1831</b>
	<b>0.2.2 Species scientific name</b>	<b><i>Luronium natans</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>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>1.1.3 Year or period</b>	<b>1994-2011</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 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.



<b>2.1 Biogeographical region &amp; marine regions</b>	<b>ATL</b>
<b>2.2 Published sources</b>	<p><b>ANDERSON, B. &amp; LEIGH, S., 2010. Rochdale Canal Review 2009/2010. British Waterways unpublished report</b></p> <p><b>Anon. (2009). CSM reports for Derwent Water and Bassenthwaite Lake. NE internal documents.</b></p> <p><b>Biological Records Centre, Online Atlas of the British Flora. <i>Luronium natans</i> (Floating Water-plantain) <a href="http://www.brc.ac.uk/plantatlas/index.php?q=node/1">http://www.brc.ac.uk/plantatlas/index.php?q=node/1</a></b></p> <p><b>Botanical Society of the British Isles Distribution Database <a href="http://bsbidb.org.uk">bsbidb.org.uk</a></b></p> <p><b>Burgess, A., Goldsmith, B. &amp; Hatton-Ellis, T. (2006) Site Condition Assessments of Welsh SAC and SSSI Standing Water Features. Countryside Council for Wales Contract Science Report No: 705</b></p> <p><b>Burgess, A., Goldsmith, B., Hatton-Ellis, T., Hughes, M. &amp; Shilland, E. (2008) CCW Standing Waters SSSI Monitoring 2007-08. Countryside Council for Wales Contract Science Report No. 855</b></p> <p><b>CARVALHO, L. &amp; MOSS, B. 1998. Lake SSSIs subject to eutrophication - an environmental audit. English Nature Freshwater Series, No. 3</b></p>

	<p>Chater, A.O. (2010) Flora of Cardiganshire. Aberystwyth 730pp</p> <p>Clarke S., (2009) A SUMMARY OF THREE DIFFERENT APPROACHES TO THE TREATMENT OF THE NON-NATIVE INVASIVE SPECIES CRASSULA HELMSII AT PROTECTED SITES. Abstracts/Proceedings of 41st Robson Meeting. Aquatic Plant Management Group.</p> <p>Creer J. (2007) Draft Monitoring report of <i>Luronium Natans</i> within Afon Gwyrfai and Llyn Cwellyn SAC. CCW internal report.</p> <p>Duigan CA, Monteith DT, Carvalho L, Bennion H, Hutchinson J, Seda JM, Evans F. (2003) The current ecological and conservation status of Llyn Tegid (Bala Lake), Snowdonia National Park, and aspects of its management. In: Llyn Tegid Symposium - The ecology, conservation and environmental history of the largest natural lake in Wales, 27-48, University of Liverpool.</p> <p>ECUS Environment Consultancy (2010), Montgomery Canal Monitoring Report 2009. Unpublished Report to British Waterways. Ellesmere.</p> <p>Evans F, Benoit PM. (2003) Wetland and aquatic plants on the margins of Llyn Tegid. In: Llyn Tegid Symposium - The ecology, conservation and environmental history of the largest natural lake in Wales, 79-92, University of Liverpool</p> <p>Evans, D. &amp; Jones, D. (1994) Vegetation in Llyn Glasfryn, 1994. Internal Report, Countryside Council for Wales.</p> <p>Gill A, Pepper A, Eaton JW, McAllister H, Neame C. (2005) Restoring the Afon Teifi at Cors Caron National Nature Reserve: a Project Plan. 685. 2005. Bangor, Countryside Council for Wales.</p> <p>HATTON, J., 2009. Interim Report on the Effects of Exposure Tolerance on <i>Luronium natans</i> (L.) Raf. Report prepared for British Waterways and Natural England by Univeristy of Bolton.</p> <p>Hatton-Ellis, T. (.2005) Llyn Glasfryn Site Visit. Internal report to Countryside Council for Wales</p> <p>JACKSON, D.L. &amp; McLEOD, C.R. (Eds.) 2002. Handbook on the UK status of EC Habitats Directive interest features: provisional data on the UK distribution and extent of Annex I habitats and the UK distribution and population size of Annex II species. Revised 2002 JNCC Report No. 312</p> <p>JOHN, C., 2008. CANNOCK EXTENSION SSSI/SAC STATUS 2007. British Waterways unpublished report</p> <p>JOHN, C., 2010. TRANSLOCATION OF LURONIUM NATANS. British Waterways unpublished report</p> <p>Jones RA. (1996) <i>Luronium natans</i> (Floating water-plantain) at Llyn Tegid SSSI. Unpublished report to Countryside Council for Wales</p> <p>LANSDOWN, R. V. &amp; WADE, P. M., 2000. Ecology of the Floating Water-plantain. Conserving Natura 2000 Rivers Ecology Series No. 9. English Nature, Peterborough.</p> <p>LOCKTON, A.J. (1 October 2012). Species account: <i>Luronium natans</i>. Botanical Society of the British Isles, <a href="http://www.bsbi.org.uk">www.bsbi.org.uk</a>.</p> <p>McCarthy, W. &amp; Dines, T.D. (2008) Rare Plant Register for Caernarfonshire. Botanical Society of the British Isles</p> <p>Miller J. (1999) A Study of the Habitat and Ecology of Floating Water-Plantain (<i>Luronium natans</i> (L.) Raf.) in Two Welsh Lakes, Comparing the use of Diving with Conventional Aquatic</p>
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	<p><b>Macrophyte Survey Techniques.</b></p> <p><b>Miller J. A. Study of the Habitat and Ecology of Floating Water-Plantain (<i>Luronium natans</i> (L.) Raf.) in Two Welsh Lakes, Comparing the use of Diving with Conventional Aquatic Macrophyte Survey Techniques. 1999.</b></p> <p><b>Newbold, C (2001) The Montgomery Canal a Macrophyte Survey. Unpublished report for British Waterways.</b></p> <p><b>NIELSON, U. N., RIIS, T. &amp; BRIX, H., 2006. Short communication - The importance of vegetative and sexual dispersal of <i>Luronium natans</i>. Aquatic Botany 84: 165-170.</b></p> <p><b>PRESTON, C.D., PEARMAN, D.A. &amp; DINES, T.D. 2002. New Atlas of the British &amp; Irish Flora. Oxford University Press.</b></p> <p><b>Southey J, Broughton-Scott D. Development of monitoring methods to assess the condition of the 'Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and / or of the Isoeto-Nanojuncetea' Natura 2000 habitats and the <i>Luronium natans</i> population at Afon Teifi SAC. 13. 2004. Bangor, Countryside Council for Wales.</b></p> <p><b>Southey, J. &amp; Broughton-Scott D. (2004) Development of monitoring methods to assess the condition of the 'Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and / or of the Isoeto-Nanojuncetea' Natura 2000 habitats and the <i>Luronium natans</i> population at Afon Teifi SAC. 13. Bangor, Countryside Council for Wales.</b></p> <p><b>STEWART, A., PEARMAN, D.A. &amp; PRESTON, C.D. 1994. Scarce Plants in Britain. Peterborough: Joint Nature Conservation Committee</b></p> <p><b>Thorne, A.K. &amp; Wainwright, M. (2009) The Rare Plants of Montgomeryshire. Botanical Society of the British Isles. 107pp</b></p> <p><b>Willby NJ, Abernethy VJ, Demars BOL. (2000) Attribute-based classification of European hydrophytes and its relationship to habitat utilization. Freshwater Biology, 43, 43-74.</b></p> <p><b>Willby NJ, Eaton JW. (1993) The distribution, ecology and conservation of <i>Luronium natans</i> (L.) in Britain. Journal of Aquatic Plant Mangement Society, 31, 70-76.</b></p> <p><b>UK distribution map data sources</b></p> <p><b>BIS CCW - HQ Terr - Rare Flowering Plants and Fern Data Emailed to JNCC (no details) Summer 2012</b></p> <p><b>BIS CCW Licence Returns Data Emailed to JNCC (no details) Summer 2012</b></p> <p><b>BIS CCW Montgomeryshire BAP Species Files Emailed to JNCC (no details) Summer 2012</b></p> <p><b>BIS CCW Radnorshire Rare Vascular Plant Species Emailed to JNCC (no details) Summer 2012</b></p> <p><b>BIS sent directly to JNCC (no details) SurveyName Montgomeryshire Vascular Plants VC47 June 2011</b></p> <p><b>BSBI BSBI:VPDB: Atlas2000 records on disc via Trevor Dines</b></p> <p><b>BSBI MAPMATE database (includes import from several data centres)</b></p> <p><b>BSBI vascular plants database</b></p> <p><b>BSBI: Chater, A.O. (1998-2008) 2008 Sent to JNCC 18/7/2012</b></p>
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	<p><b>BSBI: Halliday, G. (1997) 1997 Sent to JNCC 18/7/2012</b>  <b>BSBI: Selby, P.J. (2000-2003) 2003 Sent to JNCC 18/7/2012</b>  <b>BSBI: Threatened Plant Database (1836-2010)) 2010 Sent to JNCC 18/7/2012</b>  <b>BSBI:British Waterways (2002-2008) 2008 Sent to JNCC 18/7/2012</b>  <b>BSBI:Hatton, K. (2003) 2003 Sent to JNCC 18/7/2012</b>  <b>BSBI:Hawksford, J.E. (2001-2008) 2008 Sent to JNCC 18/7/2012</b>  <b>BSBI:Vascular Plant Database Sent to JNCC 18/7/2012</b>  <b>BSBI:Vascular Plant Database, Atlas2000 master cards. Sent to JNCC 18/07/2012</b>  <b>BSBI:Vascular Plant Database, Threatened Plant Databaserecords from Alex Lockton Sent to JNCC 18/7/2012</b>  <b>BSBI:Vascular Plant Database. Vascular Plant records published in WatsoniaPlant records 2006 Watsonia :71-100 Sent to JNCC 18/7/2012</b>  <b>CCW Macrophyte records from Welsh lakes Emailed to JNCC (DC) by TH 18/07/2012</b>  <b>Flora of Cardiganshire Emailed to JNCC (DC) by TH 18/07/2012</b>  <b>NBN Gateway data: Shropshire Ecological Data Network GA000693 Extracted by LH 13/09/2012 Shropshire Ecological Data Network Database pers. comm. Environment Agency surveyor (no name given). Sent to JNCC (LH) by Andy Jones 18/10/2012</b>  <b>South Lancashire VC59 data from David Earl Emailed to JNCC (DC) by TH 18/07/2012</b></p> <p>UK Distribution Map data sources</p> <p>BIS CCW - HQ Terr - Rare Flowering Plants and Fern Data Emailed to JNCC (no details) Summer 2012  BIS CCW Licence Returns Data Emailed to JNCC (no details) Summer 2012  BIS CCW Montgomeryshire BAP Species Files Emailed to JNCC (no details) Summer 2012  BIS CCW Radnorshire Rare Vascular Plant Species Emailed to JNCC (no details) Summer 2012  BIS sent directly to JNCC (no details)SurveyName Montgomeryshire Vascular Plants VC47 June 2011  BSBI BSBI:VPDB: Atlas2000 records on disc via Trevor Dines  BSBI MAPMATE database (includes import from several data centres)  BSBI vascular plants database  BSBI: Chater, A.O. (1998-2008) 2008 Sent to JNCC 18/7/2012  BSBI: Halliday, G. (1997) 1997 Sent to JNCC 18/7/2012  BSBI: Selby, P.J. (2000-2003) 2003 Sent to JNCC 18/7/2012  BSBI: Threatened Plant Database (1836-2010)) 2010 Sent to JNCC 18/7/2012  BSBI:British Waterways (2002-2008) 2008 Sent to JNCC 18/7/2012  BSBI:Hatton, K. (2003) 2003 Sent to JNCC 18/7/2012  BSBI:Hawksford, J.E. (2001-2008) 2008 Sent to JNCC 18/7/2012  BSBI:Vascular Plant Database Sent to JNCC 18/7/2012  BSBI:Vascular Plant Database, Atlas2000 master cards. Sent to JNCC</p>
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	<p>18/07/2012                  BSBI:Vascular Plant Database, Threatened Plant Databaserecords from Alex Lockton Sent to JNCC 18/7/2012                  BSBI:Vascular Plant Database. Vascular Plant records published in WatsoniaPlant records 2006 Watsonia :71-100 Sent to JNCC 18/7/2012                  CCW Macrophyte records from Welsh lakes Emailed to JNCC (DC) by TH 18/07/2012                  Flora of Cardiganshire Emailed to JNCC (DC) by TH 18/07/2012                  NBN Gateway data: Shropshire Ecological Data Network GA000693 Extracted by LH 13/09/2012 Shropshire Ecological Data Network Database                  pers. comm. Environment Agency surveyor (no name given). Sent to JNCC (LH) by Andy Jones 18/10/2012                  South Lancashire VC59 data from David Earl Emailed to JNCC (DC) by TH 18/07/2012</p>

2.3 Range					
<b>2.3.1 Surface area Range</b>	<p><b>9995</b>                  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>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.</p>				
<b>2.3.3 Short-term trend Period</b>	<p><b>2001-2012</b>                  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>                  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>				
<b>2.3.5 Short-term trend Magnitude</b>	<table border="1" style="width: 100%;"> <tr> <td style="width: 30%;"><b>a) Minimum</b></td> <td></td> </tr> <tr> <td><b>b) Maximum</b></td> <td></td> </tr> </table> <p style="text-align: right;">Optional</p>	<b>a) Minimum</b>		<b>b) Maximum</b>	
<b>a) Minimum</b>					
<b>b) Maximum</b>					
<b>2.3.6 Long-term trend Period</b>	<p><b>1989-2012</b>                  For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p> <p style="text-align: right;">Optional</p>				
<b>2.3.7 Long-term trend</b>	<p><b>decrease</b></p>				

<p><b>Trend direction</b></p> <p>Optional</p>	<p>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.</p>	
<p><b>2.3.8 Long-term trend Magnitude</b></p> <p>Optional</p>	<p><b>a) Minimum</b></p>	
	<p><b>b) Maximum</b></p>	
<p><b>2.3.9 Favourable reference range</b></p>	<p><b>a) Value in km<sup>2</sup></b></p>	
	<p><b>b) Operator for FRR</b></p>	<p><b>approximately equal to</b></p>
	<p><b>c) FRR is unknown (indicated by "true")</b></p>	<p><b>False</b></p>
	<p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>	
	<p><b>d) Method used to set FRR</b></p>	
<p><b>2.3.10 Reason for change</b></p> <p>Is the difference between the reported value in 2.3.1 and the previous reporting round mainly due to...</p>	<p><b>a) Genuine change?</b></p>	<p><b>False</b></p>
	<p>There is negligible difference between the current range and the range reported in 2007. The slight decrease is due to the use of a different range mapping tool.</p>	
	<p><b>b) Improved knowledge/more accurate data?</b></p>	<p><b>False</b></p>
	<p>There is negligible difference between the current range and the range reported in 2007. The slight decrease is due to the use of a different range mapping tool.</p>	
	<p><b>c) Use of different method (e.g. "Range tool")?</b></p>	<p><b>True</b></p>
	<p>There is negligible difference between the current range and the range reported in 2007. The slight decrease is due to the use of a different range mapping tool.</p>	

<p><b>2.4 Population</b></p>		
<p><b>2.4.1 Population size estimation</b></p>	<p><b>a) Unit</b></p>	



(using individuals or agreed exceptions where possible)	<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 localities</b>
	The population unit is the same as reported in 2007.	
	<b>b) Minimum</b>	<b>54</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	<b>c) Maximum</b>	<b>68</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>Individual localities in canals and rivers are defined as colonies separated by more than 1km. This clarifies the definition used in 2007 (where river and canal populations were treated as single localities) and more accurately reflects the discontinuous distribution of this plant in specific parts of occupied watercourses.</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	<b>b) Method to convert data</b>	
	<b>c) Problems encountered to provide population size estimation</b>	
<b>2.4.4 Year or period</b>	<b>2001-2012</b>	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.5 Method used Population size</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>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>decrease</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>	<b>a) Minimum</b>	

Optional		
	<b>b) Maximum</b>	
	<b>c) Confidence interval</b>	
<b>2.4.9 Short-term trend 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>2.4.10 Long-term trend – Period</b>	<b>1989-2012</b>	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.11 Long-term trend Trend direction</b>	<b>decrease</b>	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.12 Long-term trend Magnitude</b>	<b>a) Minimum</b>	
	<b>b) Maximum</b>	
	<b>c) Confidence interval</b>	
<b>2.4.13 Long term trend Method used</b>	<b>Estimate based on partial data with some extrapolation and/or modelling</b>	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.4.14 Favourable reference population</b>	<b>a) Number of individuals/agreed exceptions/other units</b>	<b>50</b>
	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>b) Operator</b>	
	<b>c) FRP is unknown (indicated by "true")</b>	<b>False</b>
	For further details please see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	<b>d) Method used to set FRP</b>	<b>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>
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>2.4.15 Reason for change</b> Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	<b>a) Genuine change?</b>	<b>False</b>
	The change in population reported is not thought to be genuine but as a result of better data.	
	<b>b) Improved knowledge/more accurate data?</b>	<b>True</b>
	The change in population reported is not thought to be genuine but as a result of better data.	
	<b>c) Use of different method (e.g. "Range tool")?</b>	<b>False</b>
	The change in population reported is not thought to be genuine but as a result of better data.	

<b>2.5 Habitat for the species</b>	
<b>2.5.1 Area estimation</b>	<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>

	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>2001-2012</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>Absent data</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>Luronium has a relatively wide ecological amplitude and its presence is the best indicator of habitat condition. The quality of habitats is therefore assessed, in the first instance, on presence - absence data, with more detailed distribution and abundance records to provide finer-grained habitat assessment.</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>decrease</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>	<b>1989-2012</b>	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<b>2.5.8 Long-term trend Trend direction</b>	<b>decrease</b>	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
<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> Is the difference between the value reported at 2.5.1 and the previous reporting round mainly due to	<b>a) Genuine change?</b>	<b>False</b>
	Surface area of habitat is unknown so no comparison is possible.	
	<b>b) Improved knowledge/more accurate data?</b>	<b>False</b>
	Surface area of habitat is unknown so no comparison is possible.	
	<b>c) Use of different method (e.g.</b>	<b>False</b>

	<b>"Range tool"?)</b>	
	Surface area of habitat is unknown 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	
G01: Outdoor sports and leisure activities, recreational activities	H	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	M	P
F02: Fishing and harvesting aquatic resources	L	P
H04:	L	
I01: invasive non-native species	L	
J02:	L	

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

<b>2.6.1 Method used – Pressures</b>	<b>mainly based on expert judgement and other data</b> For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
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<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	
G01: Outdoor sports and leisure activities, recreational activities	H	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	M	P
H04:	L	
H07: Other forms of pollution	L	N
I01: invasive non-native species	L	
J02:	L	

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

<b>2.7.1 Method used – Threats</b>	<b>expert opinion</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

**2.8 Complementary information**

**2.8.1 Justification of % thresholds for trends**

**2.8.2 Other relevant information**

This species is protected through site designation and wildlife law. For example, SACs designated for this species in England include: Brown Moss; Cannock Extension Canal; River Derwent and Bassenthwaite Lake (which includes two of the plant's 17 'localities': Derwent Water and Bassenthwaite Lake); and Rochdale Canal. *Luronium* is a notified feature of Chasewater and the Southern Staffordshire Coalfield Heaths SSSI. The species is protected under the Wildlife and Countryside Act 1981 (Schedule 8) - plants which are protected from intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b). Source: Source: Wildlife and Countryside Act Schedules 1,5 and 8 (protected birds, animals and plants). Threats of this kind are believed to be limited. Specific conservation work on the plant at various sites includes: investigation of propagation techniques (now successful - CRT) and augmentation exercises to re-introduce plants to some canal sites; treatment to attempt removal of *Crassula helmsii* at Brown Moss led to *Luronium* reappearing in 2006 - *Crassula* subsequently re-colonised but work provided anecdotal evidence on resilience (Clarke, 2009); CRT project to improve habitat and translocate *Luronium* on the Wyrley and Essington and Cannock Extension canal (a boat counter was also installed on the Cannock Extension Canal); CRT secured funding for a similar project on the Huddersfield Narrow Canal; CRT worked with Chester Zoo to raise awareness of this species and to develop a *Luronium* nursery; CRT worked with Chester Zoo and Oldham Countryside service to re-introduce plants to Daisy Nook Country Park, from which they had recently been lost; CRT augmented existing populations on the Rochdale Canal; CRT monitored Brunclough Reservoir, the subject of a recent translocation project (under a development licence).

**2.8.3 Trans-boundary assessment**

<b>2.9 Conclusions (assessment of conservation status at end of reporting period)</b>		
<b>2.9.1 Range</b>	<b>a) Conclusion</b>	<b>Favourable</b>
	Range has been assessed as Favourable because range is approximately equal to the FRV and the short term range trend is stable.	
	<b>b) Qualifier</b>	
<b>2.9.2 Population</b>	<b>a) Conclusion</b>	<b>Inadequate</b>
	Population has been assessed as Inadequate because although the population is greater than the FRV the trend is declining slightly.	
	<b>b) Qualifier</b>	<b>declining</b>
<b>2.9.3 Habitat for the species</b>	<b>a) Conclusion</b>	<b>Inadequate</b>
	Habitat for species has been assessed as Inadequate because although there is thought to be enough habitat area to support a viable population and the quality is moderate, the habitat trend is declining.	
	<b>b) Qualifier</b>	<b>declining</b>
<b>2.9.4 Future prospects</b>	<b>a) Conclusion</b>	<b>Inadequate</b>
	<p>Future prospects is assessed as Inadequate on the basis of assessments of the future prospects of the three parameters, range, population and habitat for species:</p> <p>Range future prospects: Good</p> <p>Population future prospects: Poor</p> <p>Habitat future prospects: Poor</p> <p>Overall future prospects: Inadequate.</p> <p>There are continuing difficulties maintaining and restoring habitats in the lowlands, and some sites contain non-native competitive water plants, but it is improving with conservation efforts on some rivers, canals and upland lake sites.</p>	
	<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 population, habitat and future prospects have been assessed as 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)**

<b>3.1 Population</b>													
<b>3.1.1 Population size</b>  Estimation of population size included <u>in the SAC network</u>	<table border="1"> <tr> <td><b>a) Unit</b></td> <td><b>number of localities</b></td> </tr> <tr> <td colspan="2">For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</td> </tr> <tr> <td><b>b) Minimum</b></td> <td><b>24</b></td> </tr> <tr> <td colspan="2">For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</td> </tr> <tr> <td><b>c) Maximum</b></td> <td><b>35</b></td> </tr> <tr> <td colspan="2">For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</td> </tr> </table>	<b>a) Unit</b>	<b>number of localities</b>	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		<b>b) Minimum</b>	<b>24</b>	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.		<b>c) Maximum</b>	<b>35</b>	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	<b>a) Unit</b>	<b>number of localities</b>											
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.												
	<b>b) Minimum</b>	<b>24</b>											
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.												
<b>c) Maximum</b>	<b>35</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)	<b>decrease</b>  For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.												
Optional													

<b>3.2 Conservation measures</b>															
Conservation measures taken (i.e. already being implemented) within the reporting period and provided information about their importance, location and evaluation.															
<b>3.2.1 Measure</b>	<b>3.2.2 Type</b>					<b>3.2.3 Ranking</b>  H = high importance M = medium importance L = low importance	<b>3.2.4 Location</b>  where the measure is PRIMARILY applied			<b>3.2.5 Broad evaluation of the measure</b>					
	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



4.1: Restoring/improving water quality	Y	Y		Y		H			Y		Y	Y			
4.3: Managing water abstraction	Y		Y			M	Y				Y	Y			
6.1: Establish protected areas/sites	Y					H			Y		Y	Y			
6.3: Legal protection of habitats and species	Y					H			Y		Y	Y			
7.4: Specific single species or species group management measures			Y	Y	Y	L			Y		Y				

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