

**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

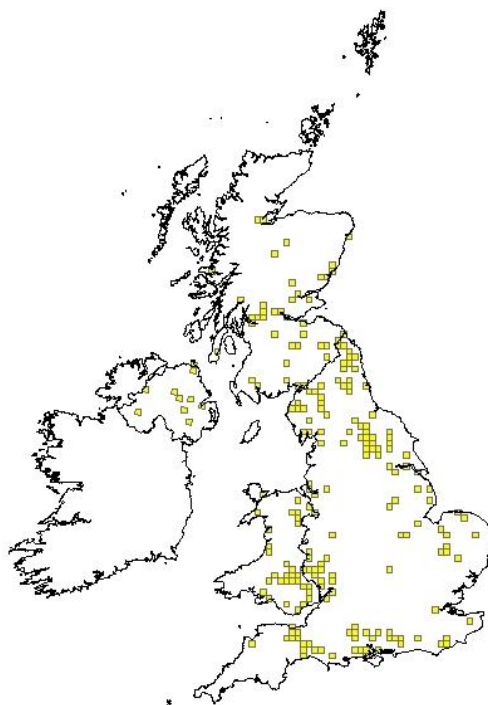
Species:

S1099 - River lamprey (*Lampetra fluviatilis*)

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

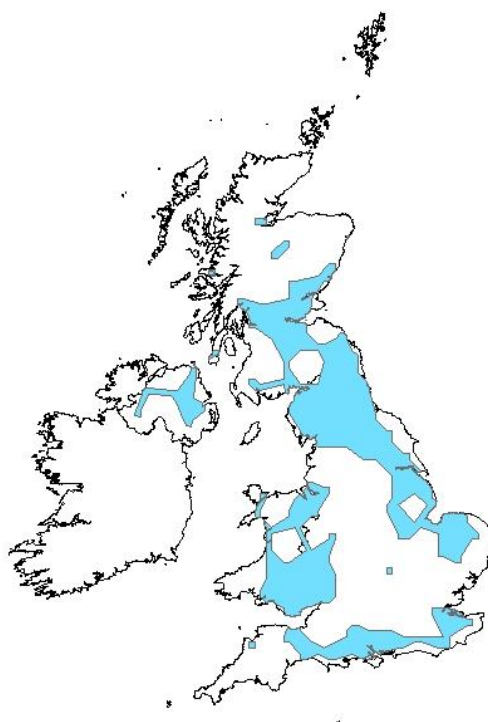
<i>Field name</i>	<i>Brief explanations</i>	
<b>0.2 Species</b>	<b>0.2.1 Species code</b>	<b>S1099</b>
	<b>0.2.2 Species scientific name</b>	<b><i>Lampetra fluviatilis</i></b>
	<b>0.2.3 Alternative species scientific name</b> Optional	
	<b>0.2.4 Common name</b> Optional	

<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>1990-2011</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 by applying the UK range mapping tool to the distribution map presented in 1.1.4. The alpha value for this species was 25km. 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>A.D. NUNN*, J.P. HARVEY, R.A.A. NOBLE and I.G. COWX (2008) Condition assessment of lamprey populations in the Yorkshire Ouse catchment, north-east England, and the potential influence of physical migration barriers. Aquatic Conservation: Marine and Freshwater Ecosystems 18: 175-189.</b></p> <p><b>APEM (1996) A survey of selected English rivers for lamprey 112 pp APEM Stockport Manchester UK</b></p> <p><b>APEM (1997) A survey of the upper River Avon for lamprey. 35 pp English Nature, Peterborough</b></p> <p><b>APEM (1997) Proposed Carlisle northern relief road: lamprey habitat survey and population survey 25 pp APEM Stockport Manchester UK</b></p> <p><b>APEM (1998) A survey of the western arm of the upper River Avon for lamprey. 17 pp English Nature, Peterborough</b></p> <p><b>APEM (1998) Lamprey survey of the River Nadder 21 pp APEM Stockport Manchester UK</b></p> <p><b>APEM. 2004. Distribution of sea, brook and river lampreys on the River Tay. Scottish Natural Heritage Commissioned Report No. 032 <a href="http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-">www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-</a></b></p>

	<p>detail/?id=200.</p> <p><b>Biological Records Centre: Database and Atlas of Freshwater Fishes.</b> (<a href="http://www.brc.ac.uk/DAFF/daff.htm">http://www.brc.ac.uk/DAFF/daff.htm</a>)</p> <p><b>Bull C, Watt J. 2012. Site condition monitoring of lamprey in the River Teith Special Area of Conservation 2011. Scottish Natural Heritage Commissioned Report.</b></p> <p><b>Campbell D, Clarke S, Williams AE. (2005) Lamprey Survey on the Rivers Tywi, Teifi and Cleddau. CCW Review of Consents Report No. 7. Bangor, CCW / EAW.</b></p> <p><b>Campbell R, Corson P. 2005. The assessment of lamprey distribution and abundance in the River Tweed cSAC/SSSI. Scottish Natural Heritage Commissioned Report.</b></p> <p><b>Chris Mainstone &amp; Alastair Burn (2011) Relationships between ecological objectives and associated decision-making under the Habitats and Water Framework Directives. Discussion paper, Natural England.</b></p> <p><b>DAVIES, CE, SHELLEY, J, HARDING, PT, MCLEAN, IFG, GARDINER, R AND PEIRSON, G (eds.). 2004. Freshwater fishes in Britain. The species and their distribution. Harley Books, Colchester.</b></p> <p><b>Ecological Research Associates. 2005. A national lamprey survey of Scotland. Report for Scottish Natural Heritage, Clydebank.</b></p> <p><b>Environment Agency (2012) Summary of outcomes of the Review of Consents on water-related SACs. Excel spreadsheet.</b></p> <p><b>Forth Fisheries Foundation. 2004. River and brook lamprey monitoring of the Endrick Water cSAC/SSSI. Scottish Natural Heritage Commissioned Report No. 057</b>  <a href="http://www.snh.org.uk/pdfs/publications/commissioned_reports/F03AC607.pdf">www.snh.org.uk/pdfs/publications/commissioned_reports/F03AC607.pdf</a></p> <p><b>Gardiner R.(2003) Identifying Lamprey. Conserving Natura 2000 Rivers Techniques Series No. 4. Peterborough, English Nature.</b></p> <p><b>Garrett H, Thomas Rh, Hatton-Ellis TW (2012) River Usk Population Attribute Condition Assessment for Brook, River and Sea Lamprey 2007-12. CCW Staff Science Report No. 11/8/6. Bangor, Countryside Council for Wales.</b></p> <p><b>Goodwin CE, Dick JTA, Rogowski DL, Elwood RW. Lamprey (<i>Lampetra fluviatilis</i> and <i>Lampetra planeri</i>) ammocoete habitat associations at regional, catchment and microhabitat scales in Northern Ireland. <i>Ecology of Freshwater Fish</i> 2008; 17: 542-553. 2008.</b></p> <p><b>Goodwin, C.E., Dick, J.T.A., Elwood, R.W. 2009. A preliminary assessment of the distribution of the sea lamprey (<i>Petromyzon marinus</i> L.), river lamprey (<i>Lampetra fluviatilis</i> (L.)) and brook lamprey (<i>Lampetra planeri</i> (Bloch)) in Northern Ireland. <i>Biology and Environment: Proceedings of the Royal Irish Academy</i> 109B, 4752; DOI: 10.3318/BIOE.2009. 109.1.47.</b></p> <p><b>Harvey JP &amp; Cowx IG. (2003). Monitoring the River, Brook and Sea Lamprey, <i>Lampetra fluviatilis</i>, L. <i>planeri</i> and <i>Petromyzon marinus</i>. Conserving Natura 2000 Rivers Monitoring Series No. 5, English Nature, Peterborough</b>  <a href="http://publications.naturalengland.org.uk/file/118009">http://publications.naturalengland.org.uk/file/118009</a></p> <p><b>Harvey JP, Noble RAA, Cowx IG, Nunn AD, Taylor R. (2007) Monitoring of lamprey in the rivers Wye and Usk SACs. CCW Environmental Monitoring Report No. 41. Bangor, Countryside</b></p>
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	<p><b>Council for Wales.</b></p> <p><b>Hatton-Ellis TW (2012a) The Taxonomic Status of River Lamprey (<i>Lampetra fluviatilis</i> L.) and Brook Lamprey (<i>Lampetra planeri</i> Bloch) in Britain: summary of current understanding and advice for Article 17 reporting. CCW advice to JNCC. DCT-12-395837</b></p> <p><b>Hatton-Ellis TW (2012b) Population Parameters for River Lamprey <i>Lampetra fluviatilis</i> and Sea Lamprey <i>Petromyzon marinus</i> in Wales, 1992-2012. Supplementary information for Article 17 Reporting. CCW Advice to JNCC. DCT-12-399809</b></p> <p><b>Hume JB. 2011. Adult lamprey survey of the Endrick Water SSSI and SAC 2009-2010. Scottish Natural Heritage Commissioned Report No.480 <a href="http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=1848">www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=1848</a>.</b></p> <p><b>Joint Nature Conservation Committee (JNCC). (2005) Common Standards Monitoring Guidance for Freshwater Fauna. Peterborough, Joint Nature Conservation Committee.</b></p> <p><b>Loch Lomond Fishery Trust. 2005. River and brook lamprey monitoring of Endrick Water cSAC/SSSI.</b></p> <p><b>Loughs Agency (2010). Lamprey Baseline Surveys: River Finn and River Dee Co Donegal. Loughs Agency of the Foyle Carlingford and Irish Lights Commission. Report Ref: LA/Lamprey/04&amp;09/11.</b></p> <p><b>Loughs Agency (2011). Water Framework Directive Fish in Rivers Classification Report. Loughs Agency of the Foyle Carlingford and Irish Lights Commission. Report Ref: LA/WDFIRNI/11.</b></p> <p><b>Mainstone C.P. (2008) The role of specially designated wildlife sites in freshwater conservation - an English perspective. <i>Freshwater Reviews</i>, 1, 89-98.</b></p> <p><b>Mainstone, C.P. and Clarke, S.J. (2008) Managing multiple stressors on sites with special protection for freshwater wildlife - the concept of Limits of Liability. <i>Freshwater Reviews</i>, 1, 175-187.</b></p> <p><b>Mainstone, C.P. and Holmes, N.T. (2010) Embedding a strategic approach to river restoration in operational management processes - experiences in England. <i>Aquatic Conservation: Marine and Freshwater Ecosystems</i>. Published online in Wiley InterScience (<a href="http://www.interscience.wiley.com">www.interscience.wiley.com</a>). DOI: 10.1002/aqc.1095</b></p> <p><b>Mainstone, C.P., Dils, R.M. and Withers, P.J.A. (2008). Controlling sediment and phosphorus transfer to receiving waters - A strategic management perspective for England and Wales. <i>Journal of Hydrology</i>, 350, 131-143.</b></p> <p><b>Maitland PS, Lyle AA. 2000. Distribution of lampreys in the River Teith. Scottish Natural Heritage Commissioned Report.</b></p> <p><b>Maitland, P.S. 2004. Keys to the Freshwater Fish of Britain and Ireland, with notes on their distribution and ecology. FBA Scientific Publication No. 62.</b></p> <p><b>MAITLAND, PS. 1980. Review of the ecology of lampreys in northern Europe. <i>Canadian Journal of Fisheries and Aquatic Sciences</i>. 37, 1944-1952.</b></p> <p><b>MAITLAND, PS. 2003. Ecology of the River, Brook and Sea Lamprey. <i>Conserving Natura 2000 Rivers, Ecology Series No. 5</i>. English Nature, Peterborough. <a 115="" 689="" 903="" 931"="" data-label="Page-Footer" href="http://www.english-&lt;/a&gt;&lt;/b&gt;&lt;/p&gt; &lt;/td&gt; &lt;/tr&gt; &lt;/table&gt; &lt;/div&gt; &lt;div data-bbox="> <p>Third Report by the United Kingdom under Article 17 on the implementation of the Directive from January 2007 to December 2012</p> </a></b></p>
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	<p><a href="http://nature.org.uk/LIFEinUKRivers/publications/lamprey.pdf">nature.org.uk/LIFEinUKRivers/publications/lamprey.pdf</a>  <b>Natural England (2012) England Catchment Sensitive Farming Initiative.</b>  <a href="http://www.naturalengland.org.uk/ourwork/farming/csf/default.aspx">Http://www.naturalengland.org.uk/ourwork/farming/csf/default.aspx</a>.  <b>North East Scotland Biological Records Centre: NE Scotland fish records 1800-2010.</b>  <b>Teague N, Webb H, Allen V, Cesar CP, Thomas Rh, Hatton-Ellis T. (2012) Lamprey monitoring on the River Dee Special Area of Conservation (SAC) CCW Contract Science Report 975. Bangor, Countryside Council for Wales.</b>  <b>Thomas Rh, Garrett H. (2012) Afon Tywi Population Attribute Condition Assessment for Brook, River and Sea Lamprey 2011. CCW Staff Science Report 11/8/5. Bangor, Countryside Council for Wales.</b>  <b>Thomas Rh, Hatton-Ellis TW, Garrett H (in prep) Water Quality Assessments for River Special Areas of Conservation: Third Habitats Directive Reporting Round 2007-2012). CCW Staff Science Report No. 12/8/2. CCW, Bangor.</b>  <b>Watt J, Bull C, Ravenscroft NOM, Seed M. 2011. Lamprey Survey of the Endrick Water SSSI/SAC 2008. Scottish Natural Heritage Commissioned Report No. 320</b>  <a href="http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=1849">www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=1849</a>.  <b>Watt J, Bull C, Ravenscroft NOM. 2012. Lamprey site condition monitoring of the River Tweed SSSI and SAC 2011. Scottish Natural Heritage Commissioned Report.</b>  <b>Watt J, Ravenscroft NOM, Seed M. 2008. Site condition monitoring of lamprey in the River Tay Special Area of Conservation. Scottish Natural Heritage Commissioned Report No. 292</b>  <a href="http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=1337">www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=1337</a>.  <b>West, R (2005). River Dee candidate special area of conservation lamprey survey 2004. CCW Review of Consents Report No.18</b>  <b>Wheeldon, J (2012) River Restoration Planning and implementation on River Sites of Special Scientific Interest in England. Internal Natural England paper.</b></p> <p><b>UK distribution map data sources</b></p> <p><b>Art Niven/Loughs Agency Emailed to JNCC (LH) by Kyle Hunter 18/10/2012</b>  <b>BIS CCW Abergavenny SSSI Scientific Data Emailed to JNCC (no details) Summer 2012</b>  <b>BIS CCW Radnor and North Brecknock-SSSI Scientific Data Emailed to JNCC (no details) Summer 2012</b>  <b>BIS sent directly to JNCC (no details) SurveyName BBNP Species Database</b>  <b>BIS sent directly to JNCC (no details) SurveyName Miscellaneous records in BIS area</b>  <b>CEDaR Emailed to JNCC (LH) by Kyle Hunter 18/10/2012</b>  <b>NBN Gateway data: Biological Records Centre GA000174 Database for the Atlas of Freshwater Fishes</b></p>
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	<p><b>NBN Gateway data: Countryside Council for Wales GA000488 Freshwater Lamprey Survey Data</b></p> <p><b>NBN Gateway data: Cumbria Biodiversity Data Centre GA000871 Cumbria Biodiversity Data Centre. Vertebrate Observation Records, other than Birds. Pre-2010 for Cumbria</b></p> <p><b>NBN Gateway data: Environment Agency GA001129 Environment Agency Rare and Protected Species records v1</b></p> <p><b>NBN Gateway data: extracted by LH 11/09/2012 Centre for Environmental Data and Recording GA000926 Northern Ireland Priority Species Data Set</b></p> <p><b>NBN Gateway data: Herefordshire Biological Records Centre GA001084 Herefordshire Biological Records Centre Species Records</b></p> <p><b>NBN Gateway data: Joint Nature Conservation Committee GA000190 Marine Nature Conservation Review (MNCR) and associated benthic marine data held and managed by JNCC</b></p> <p><b>NBN Gateway data: Kent &amp; Medway Biological Records Centre GA001015 Fish: Records for Kent.</b></p> <p><b>NBN Gateway data: Merseyside BioBank GA000980 North Merseyside Fish (unverified)</b></p> <p><b>NBN Gateway data: North &amp; East Yorkshire Ecological Data Centre GA000839 North and East Yorkshire Ecological Data Centre - Non-sensitive Records from all taxonomic groups.</b></p> <p><b>NBN Gateway data: North East Scotland Biological Records Centre GA000801 NE Scotland fish records 1800-2010</b></p> <p><b>NBN Gateway data: Scottish Environment Protection Agency GA001089 Selected Scottish freshwater fish records from 2008-2011 (collected by SEPA)</b></p> <p><b>NBN Gateway data: South East Wales Biodiversity Records Centre GA000823 CCW Regional Data : South East Wales Non-sensitive Species Records</b></p> <p><b>NBN Gateway data: Suffolk Biological Records Centre GA000623 Suffolk Biological Records Centre (SBRC) dataset</b></p> <p><b>NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA000584 Wiltshire &amp; Swindon Site-based Survey Records</b></p> <p>UK Distribution Map data sources</p> <p>Art Niven/Loughs Agency Emailed to JNCC (LH) by Kyle Hunter 18/10/2012</p> <p>BIS CCW Abergavenny SSSI Scientific Data Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Radnor and North Brecknock-SSSI Scientific Data Emailed to JNCC (no details) Summer 2012</p> <p>BIS sent directly to JNCC (no details) SurveyName BBNP Species Database</p> <p>BIS sent directly to JNCC (no details) SurveyName Miscellaneous records in BIS area</p> <p>CEDaR Emailed to JNCC (LH) by Kyle Hunter 18/10/2012</p> <p>NBN Gateway data: Biological Records Centre GA000174 Database for the Atlas of Freshwater Fishes</p> <p>NBN Gateway data: Countryside Council for Wales GA000488 Freshwater Lamprey Survey Data</p>
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	<p>NBN Gateway data: Cumbria Biodiversity Data Centre GA000871 Cumbria Biodiversity Data Centre. Vertebrate Observation Records, other than Birds. Pre-2010 for Cumbria</p> <p>NBN Gateway data: Environment Agency GA001129 Environment Agency Rare and Protected Species records v1</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: Herefordshire Biological Records Centre GA001084 Herefordshire Biological Records Centre Species Records</p> <p>NBN Gateway data: Joint Nature Conservation Committee GA000190 Marine Nature Conservation Review (MNCR) and associated benthic marine data held and managed by JNCC</p> <p>NBN Gateway data: Kent &amp; Medway Biological Records Centre GA001015 Fish: Records for Kent.</p> <p>NBN Gateway data: Merseyside BioBank GA000980 North Merseyside Fish (unverified)</p> <p>NBN Gateway data: North &amp; East Yorkshire Ecological Data Centre GA000839 North and East Yorkshire Ecological Data Centre - Non-sensitive Records from all taxonomic groups.</p> <p>NBN Gateway data: North East Scotland Biological Records Centre GA000801 NE Scotland fish records 1800-2010</p> <p>NBN Gateway data: Scottish Environment Protection Agency GA001089 Selected Scottish freshwater fish records from 2008-2011 (collected by SEPA)</p> <p>NBN Gateway data: South East Wales Biodiversity Records Centre GA000823 CCW Regional Data : South East Wales Non-sensitive Species Records</p> <p>NBN Gateway data: Suffolk Biological Records Centre GA000623 Suffolk Biological Records Centre (SBRC) dataset</p> <p>NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA000584 Wiltshire &amp; Swindon Site-based Survey Records</p>
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<b>2.3 Range</b>	
<b>2.3.1 Surface area Range</b>	<b>77968</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.
<b>2.3.2 Method used Surface area of Range</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>2.3.3 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>2.3.4 Short term trend Trend direction</b>	<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.	
<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>77968</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. For further details see the 2013 Article 17 UK Approach document.	
	<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</b>

		<b>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 increase in surface area of range 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 surface area of range 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 surface area of range is not thought to be genuine but due to better data.

<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>
	<b>b) Minimum</b>	<b>310</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	<b>c) Maximum</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 provide population size estimation</b>	<b>It is not possible to distinguish between river lamprey and brook lamprey at the ammocoetes life stage. Although ammocoete density measures are available for many rivers, ammocoetes cannot be identified to species.</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>1990-2012</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>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>Estimate based on expert opinion with no or minimal sampling</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>b) Operator</b>	<b>more than</b>
	<b>c) FRP is unknown (indicated by "true")</b>	<b>False</b>
	There is insufficient information available to set a FRV.	
	<b>d) Method used to set FRP</b>	
<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 population was reported as unknown in 2007 so no comparison is possible.	
	<b>b) Improved knowledge/more accurate data?</b>	<b>False</b>
	The population 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>
The population was reported as unknown in 2007 so no comparison is possible.		

**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>There is thought to be a sufficient amount of habitat in the UK to support a viable population of the species.</p>	
<b>2.5.2 Year or period</b>	<b>1990-2012</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>Condition assessment of SAC rivers, wider assessment of ecological status under the Water Framework Directive.</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>increase</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>increase</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 was reported as unknown in 2007 so no comparison is possible.	
	<b>b) Improved knowledge/more accurate data?</b>	<b>False</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	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	H	NX
J02: human induced changes in hydraulic conditions	H	X
J03: Other ecosystem modifications	H	
F02: Fishing and harvesting aquatic resources	M	
A01: Cultivation	L	NX
A02: modification of cultivation practices	L	
A04: grazing	L	
A06: annual and perennial non-timber crops	L	
A07: use of biocides, hormones and chemicals	L	O
A08: Fertilisation	L	NX
B02: Forest and Plantation management & use	L	
C01: Mining and quarrying	L	
C03: Renewable abiotic energy use	L	
D01: Roads, paths and railroads	L	X
E01: Urbanised areas, human habitation	L	NX
E03: Discharges	L	
I01: invasive non-native species	L	
M01: Changes in abiotic conditions	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>based exclusively or to a larger extent on real data from sites/occurrences or other data sources</b>
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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	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	H	X
J02: human induced changes in hydraulic conditions	H	X
J03: Other ecosystem modifications	H	
F02: Fishing and harvesting aquatic resources	M	
M01: Changes in abiotic conditions	M	
A01: Cultivation	L	NX
A02: modification of cultivation practices	L	
A04: grazing	L	
A06: annual and perennial non-timber crops	L	
A07: use of biocides, hormones and chemicals	L	O
A08: Fertilisation	L	NX
B02: Forest and Plantation management & use	L	
C01: Mining and quarrying	L	
C03: Renewable abiotic energy use	L	
D01: Roads, paths and railroads	L	X
D03: shipping lanes, ports,	L	

marine constructions		
E01: Urbanised areas, human habitation	L	X
E03: Discharges	L	
E06: Other urbanisation, industrial and similar activities	L	
I01: invasive non-native species	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**

**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 surface area of range is equal to the FRV and the short term trend is stable.

**b) Qualifier**

**2.9.2 Population**

**a) Conclusion**

**Inadequate**

Population has been assessed as Inadequate because the FRV is more than current, although the population is thought to be stable.

**b) Qualifier**

**stable**

The population trend is stable.

**2.9.3 Habitat for the species**

**a) Conclusion**

**Favourable**

Habitat for species has been assessed as Favourable because there is thought to be sufficient area of habitat to support a viable population, the habitat quality is moderate and the habitat trend is improving.



	<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: Good Population future prospects: Poor Habitat future prospects: Good Overall future prospects: Inadequate  Habitat quality likely to continue to improve as a result of water legislation actions, although access is likely to continue to be a problem.	
	<b>b) Qualifier</b>	<b>improving</b>
	Improved awareness of the requirements for this species and improved habitat quality likely to allow recovery to continue.	
<b>2.9.5 Overall assessment of Conservation Status</b>	<b>Inadequate</b>	
	The overall assessment is Inadequate because population and future prospects are Inadequate.	
<b>2.9.6 Overall trend in Conservation Status</b>	<b>improving</b>	
	On balance, the overall trend is increasing.	

### 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>	<b>a) Unit</b>	<b>number of map 1x1 km grid cells</b>
Estimation of population size included in the SAC network		
	<b>b) Minimum</b>	<b>163</b>
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	<b>c) Maximum</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>unknown</b>
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

<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
1.2: Measures needed, but not implemented					Y	L			Y		Y				
2.0: Other agriculture-related measures	Y					L			Y		Y				
4.0: Other wetland-related measures	Y	Y	Y	Y	Y	H			Y		Y	Y			
4.1: Restoring/improving water quality	Y	Y	Y	Y		M			Y		Y	Y		Y	
4.2: Restoring/improving the hydrological regime	Y	Y			Y	H			Y		Y	Y		Y	

4.3: Managing water abstraction	Y				Y	H			Y		Y	Y			
6.3: Legal protection of habitats and species	Y					L			Y			Y			
7.2: Regulation/ Management of fishery in limnic systems	Y			Y		M			Y		Y				
7.4: Specific single species or species group management measures	Y					L			Y			Y			
8.0: Other measures	Y					L			Y		Y				
8.1: Urban and industrial waste management	Y					L			Y			Y			
8.2: Specific management of traffic and energy transport systems	Y					L			Y			Y			

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