

**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

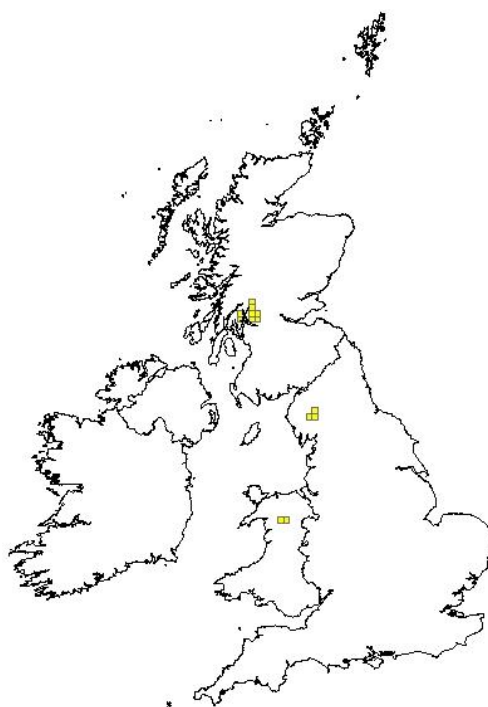
Species:

S2494 - Whitefish (*Coregonus lavaretus*)

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

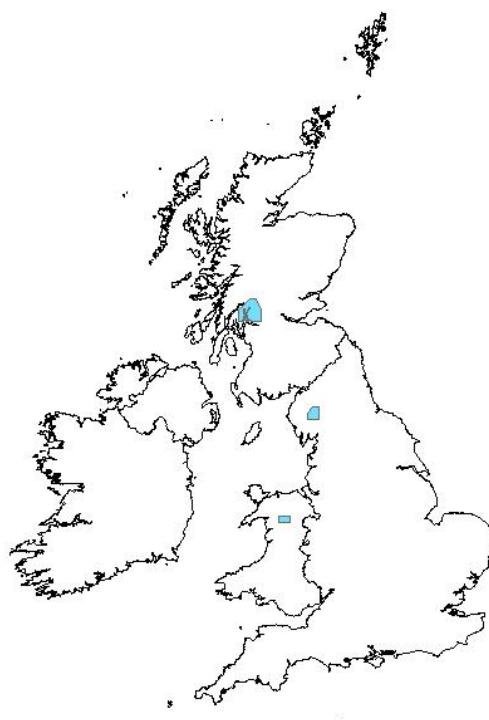
<i>Field name</i>	<i>Brief explanations</i>	
0.2 Species	0.2.1 Species code	S2494
	0.2.2 Species scientific name	<i>Coregonus lavaretus</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	

1.1 Maps			
1.1.1 Distribution map	True	Sensitive	False
	The distribution map is based on species records which are considered to be representative of the range within the current reporting period. For further details see the 2013 Article 17 UK Approach document.		



1.1.2 Method used - map	Complete survey/Complete survey or a statistically robust estimate
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
1.1.3 Year or period	2008-2010
	The distribution map is based on species records which are considered to be representative of the range within the current reporting period. For further details see the 2013 Article 17 UK Approach document.

1.1.4 Additional distribution map Optional	False
1.1.5 Range map	True The range map was produced by applying the UK range mapping tool to the distribution map presented in 1.1.4. The alpha value for this species was 25km. For further details see the 2013 Article 17 UK Approach document.



2.1 Biogeographical region & marine regions	ATL
2.2 Published sources	<p>Bean, C.W. 2003, A Standardised Survey and Monitoring Protocol for the Assessment of Whitefish <i>Coregonus albula</i> (L) and <i>Coregonus lavaretus</i> (L) Populations in the UK. Scottish Natural Heritage Research, Survey and Monitoring Report</p> <p>Beaumont A. (2003) The genetics of the gwyniad (<i>Coregonus lavaretus</i> (L.)) in Llyn Tegid in relation to other coregonid fishes in the United Kingdom. In: Llyn Tegid Symposium - The ecology, conservation and environmental history of the largest natural lake in Wales, p.139-152, University of Liverpool, Liverpool.</p> <p>DAVIES, CE, SHELLY, J, HARDING, PT, MCLEAN, IFG, GARDINER, R & PEIRSON, G (eds.) 2004. Freshwater fishes in Britain. The species and their distribution. Colchester: Harley Books</p> <p>Etheridge EC, Adams CE, Bean CW, Durie NC, Gowans ARD, Harrod C, Lyle AA, Maitland PS, Winfield IJ. (2012) Are phenotypic traits useful for differentiating among a priori <i>Coregonus</i> taxa? <i>Journal of Fish Biology</i>, 80, 387-407.</p> <p>Etheridge EC. 2010. Aspects of the conservation biology of <i>Coregonus lavaretus</i> in Britain. PhD thesis, University of</p>

	<p>Glasgow.</p> <p>ETHERIDGE, E. Aspects of the conservation biology of <i>Coregonus lavaretus</i> in Britain. Unpublished PhD Thesis, University of Glasgow 2009</p> <p>ETHERIDGE, E. C., BEAN, C.W., MAITLAND P. S. & ADAMS C. E. (2010) Morphological and ecological responses to a conservation translocation of powan (<i>Coregonus lavaretus</i>) in Scotland. <i>Aquatic Conservation: Marine & Freshwater Ecosystems</i> 20, 274-281.</p> <p>ETHERIDGE, E.C., BEAN, C.W. & ADAMS, C.E. 2011. An experimental approach to estimating vulnerability of European whitefish (<i>Coregonus lavaretus</i>) ova to predation by invasive ruffe (<i>Gymnocephalus cernuus</i>). <i>Ecology of Freshwater Fish</i>.</p> <p>ETHERIDGE, E.C., BEAN, C.W. & ADAMS, C.E. (2011) Substrate specific vulnerability of Scottish powan (<i>Coregonus lavaretus</i>) ova to predation by invasive ruffe (<i>Gymnocephalus cernuus</i>). <i>Ecology of Freshwater Fish</i> 20, 299-307.</p> <p>ETHERIDGE, E.C., HARROD, C., BEAN, C.W. & ADAMS, C.E. (2010) Has habitat heterogeneity promoted phenotypic and ecological sub-structuring among a <i>Coregonus lavaretus</i> population in a large Scottish lake? <i>J. Fish Biol.</i> 77, 2391-2404.</p> <p>Happey-Wood CM. (2003) A study of the composition and seasonal dynamics of the algae of Llyn Tegid. In: <i>Llyn Tegid Symposium - The ecology, conservation and environmental history of the largest natural lake in Wales</i>, 59-78, University of Liverpool.</p> <p>Ian J. Winfield, Colin W. Bean , John Gorst , Andrew R. D. Gowans , Maggie Robinson and Rhian Thomas (In Draft) Assessment and conservation of whitefish (<i>Coregonus lavaretus</i> (L.)) in the U.K. Paper to be submitted to relevant peer-reviewed journal.</p> <p>Joint Nature Conservation Committee. 2007. Second Report by the UK under Article 17 on the implementation of the Habitats Directive from January 2001 to December 2006. Peterborough: JNCC. Available from: www.jncc.gov.uk/article17</p> <p>Maberly, S.C et al. 2011 A survey of the lakes of the English Lake District: The Lakes Tour 2010. NERC/Centre for Ecology & Hydrology, (CEH Project Number: C04357) http://nora.nerc.ac.uk/14563/2/N014563CR.pdf</p> <p>MAITLAND P.S. & LYLE, A.A. 1990. Practical conservation of British fishes: current action on six declining species. <i>Journal of Fish Biology (Suppl. A)</i> 1, 25-54.</p> <p>MAITLAND, P.S. 1994. Fish. In: <i>The Fresh Waters of Scotland: A National resource of International Significance.</i> (eds. P.S. Maitland, P.J. Boon & D.S. McLusky), pp.191-208. Wiley & Sons Publ. Ltd. 639pp.</p> <p>MAITLAND, P.S. 2004 Keys to the Freshwater Fish of Britain and Ireland with notes on their distribution and ecology . Freshwater Biological Association , Scientific Publication No. 62, 245pp.</p> <p>Millband H, Thomas IP, Westerberg K. (2003) A study of the nutrient status of Llyn Tegid (Bala Lake) in 1995-1997. In: <i>Llyn Tegid Symposium - The ecology, conservation and environmental history of the largest natural lake in Wales</i>, p.189-203, University of Liverpool, Liverpool.</p> <p>University College London. Common Standards for Monitoring</p>
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	<p>assessment of Brothers Water 2008. (for Natural England) (unpublished) University College London. Common Standards for Monitoring assessment of Red Tarn 2007. (University College London for Natural England) (unpublished) University College London. Common Standards for Monitoring assessment of Ullswater 2008. (University College London for Natural England) (unpublished) Winfield IJ, Fletcher JM, James BJ. (2008) A review of recent research and translocation activities concerned with the gwyniad of Llyn Tegid. CCW Contract Science Report No. 840. CCW, Bangor. Winfield IJ, Fletcher JM, James BJ. (2008a) Llyn Tegid Hydroacoustic Surveys 2007. CCW Contract Science No. 814. CCW, Bangor. Winfield IJ, Fletcher JM, James BJ. (2008b) Long-Term monitoring plan for Llyn Arenig Fawr. CCW Contract Science no. 815. CCW, Bangor. Winfield IJ, Fletcher JM, James BJ, Duigan CA, Bean CW, Durie NC. (2007) Long-term case histories of ruffe (<i>Gymnocephalus cernus</i>) introductions to four UK lakes containing native vendace (<i>Coregonus albula</i>) or whitefish (<i>C. lavaretus</i>) populations. <i>Archiv fur Hydrobiologie, Official Journal of the International Association for Theoretical and Applied Limnology. Special Issues: Ergebnisse der Limnologie</i>, 60, 301-309. Winfield IJ, Fletcher JM, James JB. (2003) Gwyniad Translocation Project: Phase One - a condition assessment of the potential donor population in Llyn Tegid. CCW Contract Science Report 597. Bangor, Countryside Council for Wales. Winfield IJ, Fletcher JM, James JB. (2006) Llyn Tegid Hydroacoustic Surveys 2005. CCW Contract Science Report No. 713. CCW, Bangor. Winfield IJ, Fletcher JM, James JB. (2010a) Llyn Tegid Hydroacoustic Survey 2009. CCW Contract Science report no. 903. CCW, Bangor. Winfield IJ, Fletcher JM, James JB. (2010b) Llyn Arenig Fawr Hydroacoustic Survey 2009. CCW Contract Science Report no. 904. CCW, Bangor. WINFIELD, I. J., ADAMS, C. E. & FLETCHER, J. M. 1996. Recent introductions of the ruffe (<i>Gymnocephalus cernuus</i>) to three United Kingdom lakes containing <i>Coregonus</i> species. <i>Annales Zoologici Fennici</i> 33, 459-466. Winfield, I. J., Fletcher, J. M. & James, J. B. (2004c). The impact of cormorants on the fish community of Haweswater. Final Report. Report to Environment Agency, LA/C00152/8. 44 pp. Winfield, I. J., Fletcher, J. M. & James, J. B. 2004) Modelling the impacts of water level fluctuations on the population dynamics of whitefish (<i>Coregonus lavaretus</i> (L.)) in Haweswater, U.K. <i>Ecohydrology & Hydrobiology</i> 4, 409-416. Winfield, I. J., Fletcher, J. M. & James, J. B. 2007. Modelling the impacts of water level fluctuations and predation by cormorants (<i>Phalacrocorax carbo</i>) on the population dynamics of whitefish (<i>Coregonus lavaretus</i>) in Haweswater, U.K. <i>Archiv fur Hydrobiologie, Official Journal of the International</i></p>
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	<p>Association for Theoretical and Applied Limnology. Special Issues: Ergebnisse der Limnologie 60, 277-284.</p> <p>WINFIELD, I. J., FLETCHER, J. M., & JAMES, J. B. 2005. SCM of fish in Loch Eck. Final Report. Report to Scottish Natural Heritage. LA/C02852/1. 22 pp.</p> <p>WINFIELD, I. J., FLETCHER, J. M., & JAMES, J. B. 2005. SCM of fish in standing waters (Phase II). Final Report. Report to Scottish Natural Heritage. LA/C02256/4. 40 pp.</p> <p>WINFIELD, I. J., FLETCHER, J. M., JAMES, J. B., BEAN, C. W. & DUGAN, C. (submitted). Setting reference values for lake fish abundance: observations from unexploited or lightly exploited vendace (<i>Coregonus albula</i>), whitefish (<i>C. lavaretus</i>) and Arctic charr (<i>Salvelinus alpinus</i>) populations in the U.K. In: Cowx, I. G. (editor) Assessing the Ecological Status of Rivers, Lakes and Transitional Waters. Oxford: Fishing News Books, Blackwell Scientific Publications,</p> <p>WINFIELD, I.J. FLETCHER, J.M AND JAMES, B. (2008). Site Condition Monitoring of Fish in Standing Waters: Phase I (2007/8). Scottish Natural Heritage Commissioned Report ROAME No. R07AC611</p> <p>WINFIELD, I.J., CRAWSHAW, D.H. & DURIE, N.C. (2003b): Management of the cormorant, <i>Phalacrocorax carbo</i>, and endangered whitefish, <i>Coregonus lavaretus</i>, populations of Haweswater, UK. - In: COWX, I.G. (Ed.): Interactions between Fish and Birds: Implications for Management, pp. 335-344 Fishing News Books, Blackwell Scientific Publications, Oxford.</p> <p>WINFIELD, I.J., FLETCHER, J.M. & CRAGG-HINE, D. 1994. Status of Rare Fish: A Literature Review of Freshwater Fish in the UK. National Rivers Authority R&D Report No. 18, 58pp.</p> <p>WINFIELD, I.J., FLETCHER, J.M., JAMES, B.J., DUGAN, C.A., BEAN, C.W., & N.C. DURIE (2007) Long-term case histories of ruffe (<i>Gymnocephalus cernuus</i>) introductions to four U.K. lakes containing native vendace (<i>Coregonus albula</i>) or whitefish (<i>C. lavaretus</i>) populations. <i>Advances in Limnology</i> 60, 301-309.</p> <p>Winfield, I.J.; Fletcher, J.M.; James, J.B. 2011 Monitoring of the schelly of Haweswater April 2009 to March 2010. Final Report to United Utilities (Unpublished)</p> <p>Winfield, I.J.; Fletcher, J.M.; James, J.B. 2011 Monitoring of the schelly of Haweswater April 2010 to March 2011. Final Report to United Utilities</p> <p>http://nora.nerc.ac.uk/14020/1/Monitoring_of_the_schelly_of_Haweswater_Final_Report_2011.pdf</p> <p>Winfield, Ian J.; Fletcher, Janice M.; James, J. Ben 2010. Rare Fish Monitoring Final Report , Centre for Ecology and Hydrology,</p> <p>http://nora.nerc.ac.uk/13743/1/Rare_fish_monitoring_Final_Report.pdf</p> <p>Winfield, Ian J.; Fletcher, Janice M.; James, J. Ben. 2009 Monitoring of the schelly of Haweswater, April 2005 to March 2006. Final Report. To United Utilities (Unpublished)</p> <p>Winfield, Ian J.; Fletcher, Janice M.; James, J. Ben. 2009 Monitoring of the schelly of Haweswater, April 2006 to March 2007. Final Report. To United Utilities (Unpublished)</p> <p>Winfield, Ian J.; Fletcher, Janice M.; James, J. Ben. 2009 Monitoring of the schelly of Haweswater, April 2007 to March</p>
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	<p>2008. Final Report. To United Utilities (Unpublished) Winfield, Ian J.; Fletcher, Janice M.; James, J. Ben. 2009 Monitoring of the schelly of Haweswater, April 2008 to March 2009. Final Report. To United Utilities (Unpublished)</p> <p>UK distribution map data sources</p> <p>NBN Gateway data: Countryside Council for Wales GA001146 CCW Freshwater Fish ad hoc Records for Article 17 Reporting NBN Gateway data: Environment Agency GA001129 Environment Agency Rare and Protected Species records v1</p> <p>UK Distribution Map data sources</p> <p>NBN Gateway data: Countryside Council for Wales GA001146 CCW Freshwater Fish ad hoc Records for Article 17 Reporting NBN Gateway data: Environment Agency GA001129 Environment Agency Rare and Protected Species records v1</p>
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2.3 Range					
2.3.1 Surface area Range	<p>1782</p> <p>The surface area of the range was calculated from the map presented in 1.1.5. For further details see the 2013 Article 17 UK Approach document.</p>				
2.3.2 Method used Surface area of Range	<p>Complete survey/ Complete survey or a statistically robust estimate</p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>				
2.3.3 Short-term trend Period	<p>2001-2012</p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>				
2.3.4 Short term trend Trend direction	<p>stable</p> <p>The short term trend direction was derived by comparing the range map in 1.1.5 with the range map produced in the 2007 report, by considering the range trend in the 2007 report, and by considering any further information provided by the UK country conservation agencies. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>				
2.3.5 Short-term trend Magnitude	<table border="1" style="width: 100%;"> <tr> <td style="background-color: #e0e0e0;">a) Minimum</td> <td></td> </tr> <tr> <td style="background-color: #e0e0e0;">b) Maximum</td> <td></td> </tr> </table> <p style="text-align: right;">Optional</p>	a) Minimum		b) Maximum	
a) Minimum					
b) Maximum					

2.3.6 Long-term trend Period Optional	1986-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.3.7 Long-term trend Trend direction Optional	stable	
	The long term trend direction was derived by comparing the range map in 1.1.5 with the range map produced in the 2007 report, by considering the range trend in the 2007 report, and by considering any further information provided by the UK country conservation agencies. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.3.8 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
2.3.9 Favourable reference range	a) Value in km²	1782
	The FRV reported in 2007 has been updated by running the data used for reporting in 2007 through the revised UK range mapping tool. For further details see the 2013 Article 17 UK Approach document.	
	b) Operator for FRR	
	c) FRR is unknown (indicated by "true")	False
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	d) Method used to set FRR	The FRV reported in 2007 has been updated by running the data used for reporting in 2007 through the revised UK range mapping tool. The value is considered to be large enough to support a viable population and no lower than the range estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document.
The FRV reported in 2007 has been updated by running the data used for reporting in 2007 through the revised UK range mapping tool. The value is considered to be large enough to support a viable population and no lower than the range estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document.		
2.3.10 Reason for change Is the difference between the reported value in 2.3.1 and the previous reporting round	a) Genuine change?	False
	There is negligible difference between the current range and the range reported in 2007. The slight increase is due to the use of a different	

mainly due to...	range mapping tool.	
	b) Improved knowledge/more accurate data?	False
	There is negligible difference between the current range and the range reported in 2007. The slight increase is due to the use of a different range mapping tool.	
	c) Use of different method (e.g. "Range tool")?	True
	There is negligible difference between the current range and the range reported in 2007. The slight increase is due to the use of a different range mapping tool.	

2.4 Population		
2.4.1 Population size estimation (using individuals or agreed exceptions where possible)	a) Unit	
	b) Minimum	
	c) Maximum	
2.4.2 Population size estimation (using population unit other than individuals) Optional (<i>if 2.4.1 filled in</i>)	a) Unit	number of localities
	The population unit is the same as reported in 2007.	
	b) Minimum	7
	UK minimum population estimates: E=4;S=2, W=1. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) Maximum	7
		UK maximum population estimates: E=4;S=2, W=1. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
2.4.3 Additional information on population estimates / conversion Optional	a) Definition of "locality"	Lakes.
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	b) Method to convert data	
	c) Problems encountered to provide population size estimation	Coregonids (such as <i>C. lavaretus</i>) exhibit highly variable inter-annual recruitment pattern and one-off surveys may give an entirely wrong impression of actual population size (as the absolute number of individuals).
For further details see the 2013 Article 17 UK Approach document and		

	relevant country-level reporting information.	
2.4.4 Year or period	2003-2011	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.4.5 Method used	Estimate based on partial data with some extrapolation and/or modelling	
Population size	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.4.6 Short-term trend	2001-2011	
Period	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.4.7 Short-term trend	stable	
Trend direction	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.4.8 Short-term trend	Optional	a) Minimum
Magnitude		
		b) Maximum
		c) Confidence interval
2.4.9 Short-term trend	Estimate based on partial data with some extrapolation and/or modelling	
Method used	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.4.10 Long-term trend –		
Period	Optional	
2.4.11 Long-term trend		
Trend direction	Optional	
2.4.12 Long-term trend	Optional	a) Minimum
Magnitude		
		b) Maximum
		c) Confidence

	interval	
2.4.13 Long term trend Method used		
Optional		
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	
	b) Operator	more than
	c) FRP is unknown (indicated by "true")	False
2.4.15 Reason for change Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	a) Genuine change?	False
	There has been no change; the number of localities is the same as recorded in 2007.	
	b) Improved knowledge/more accurate data?	False
	There has been no change; the number of localities is the same as recorded in 2007.	
	c) Use of different method (e.g. "Range tool")?	False
	There has been no change; the number of localities is the same as recorded in 2007.	

2.5 Habitat for the species	
2.5.1 Area estimation	96.19
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. It is unknown whether the amount of habitat in the UK is sufficient to support a viable population of the species.
2.5.2 Year or period	2001-2012
	For further details see the 2013 Article 17 UK Approach document and

	relevant country-level reporting information.	
2.5.3 Method used Habitat for the species	Complete survey/Complete survey or a statistically robust estimate	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.4 Quality of the habitat	a) Habitat quality	Moderate
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	b) Assessment method	Water quality monitoring and condition assessment of protected sites.
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.5 Short-term trend Period	2001-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.6 Short-term trend Trend direction	decrease	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.7 Long-term trend Period	1989-2012	
Optional		
2.5.8 Long-term trend Trend direction	decrease	
Optional		
2.5.9 Area of suitable habitat for the species	a) Value in km²	
	b) Absence of data indicated as '0'	
2.5.10 Reason for change Is the difference between the value reported at 2.5.1 and the previous reporting round mainly due to	a) Genuine change?	False
	There is negligible difference between the current habitat area and the area reported in 2007.	
	b) Improved knowledge/more accurate data?	False
	There is negligible difference between the current habitat area and the area reported in 2007.	
	c) Use of different method (e.g. "Range tool")?	True
	There is negligible difference between the current habitat area and the area reported in 2007. The marginal difference is due to only reporting area of lake >5m depth this time.	

2.6 Main pressures		
a) Pressure	b) Ranking	c) Pollution qualifier
	H = high importance (max 5 entries) M = medium importance L = low importance	
I02: problematic native species	H	
J02: human induced changes in hydraulic conditions	M	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	L	NP
I01: invasive non-native species	L	
K01: abiotic (slow) natural processes	L	
K03: Interspecific faunal relations	L	
M01: Changes in abiotic conditions	L	
M02: Changes in biotic conditions	L	

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

2.6.1 Method used – Pressures

based exclusively or to a larger extent on real data from sites/occurrences or other data sources

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

2.7 Threats		
a) Threat	b) Ranking	c) Pollution qualifier
	H = high importance (max 5 entries) M = medium importance L = low importance	
I01: invasive non-native species	H	
I02: problematic native species	H	
J02: human induced changes in hydraulic conditions	M	
M01: Changes in abiotic conditions	M	
M02: Changes in biotic conditions	M	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	L	NP

K01: abiotic (slow) natural processes	L	
K03: Interspecific faunal relations	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**

Several refuge sites have been established and fish translocated into them. These sites have not been reported in the population estimate. More sites are in the process of being established.

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

2.8.3 Trans-boundary assessment**2.9 Conclusions (*assessment of conservation status at end of reporting period*)****2.9.1 Range****a) Conclusion****Favourable**

Range has been assessed as Favourable because range is greater than FRV and the short term range 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 number of localities, although the the short term trend is stable.

b) Qualifier**stable****2.9.3 Habitat for the species****a) Conclusion****Inadequate**

Habitat for species has been assessed as Inadequate because it is uncertain whether there is sufficient area of habitat to support a viable population, the habitat quality is moderate, but the trend is declining.

b) Qualifier**declining**

2.9.4 Future prospects	a) Conclusion Inadequate
	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: Poor Overall future prospects: Inadequate There are translocation refuge sites for this species being established, although existing populations are at risk from climate change and a lack of ability to naturally disperse.
	b) Qualifier declining
	Threatened by invasive species and changes in conditions; limited dispersal abilities; translocation sites are small.
2.9.5 Overall assessment of Conservation Status	Inadequate
	The overall assessment is Inadequate because habitat for species and population have been assessed as Inadequate.
2.9.6 Overall trend in Conservation Status	declining
	On balance, the overall trend is declining.

3 Natura 2000 coverage & conservation measures - Annex II species
(only applies to species listed under Annex II of the Directive)

3.1 Population	
3.1.1 Population size Estimation of population size included in the SAC network	a) Unit
	b) Minimum
	c) Maximum
3.1.2 Method used	
3.1.3 Trend of population size within the network	

(short-term trend)	Optional	
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3.2 Conservation measures															
Conservation measures taken (i.e. already being implemented) within the reporting period and provided information about their importance, location and evaluation.															
3.2.1 Measure	3.2.2 Type					3.2.3 Ranking H = high importance M = medium importance L = low importance	3.2.4 Location where the measure is PRIMARILY applied			3.2.5 Broad evaluation of the measure					
	a) Legal/statutory	b) Administrative	c) Contractual	d) Recurrent	e) One-off		a) Inside	b) Outside	c) Both inside & outside	a) Maintain	b) Enhance	c) Long term	d) No effect	e) Unknown	f) Not evaluated

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