

**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

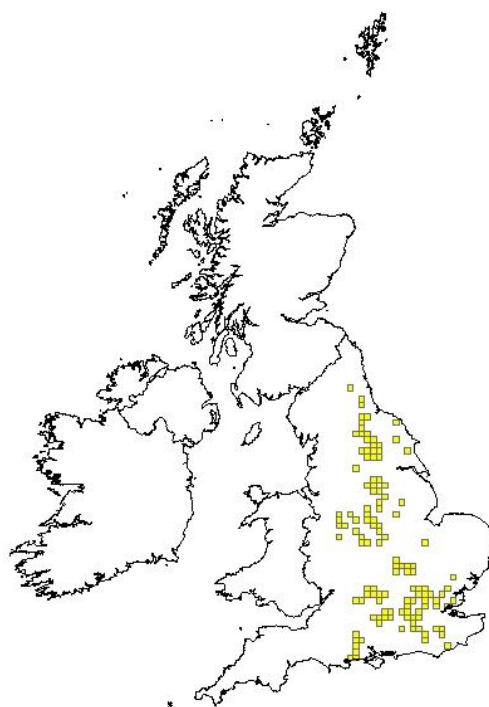
Species:

S5085 - Barbel (*Barbus barbus*)

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	S5085
	0.2.2 Species scientific name	<i>Barbus barbus</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	Estimate based on partial data with some extrapolation and/or modelling
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
1.1.3 Year or period	2000-2011
	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>DAVIES, C. E., SHELLEY, J., HARDING, P. T., MCLEAN, I. F. G., GARDINER, R. & PEIRSON, G., eds. 2004. Freshwater fishes in Britain - the species and their distribution. Colchester: Harley Books.</p> <p>Environment Agency (2012) Summary of outcomes of the Review of Consents on water-related SACs. Excel spreadsheet.</p> <p>Mainstone C.P. (2008) The role of specially designated wildlife sites in freshwater conservation - an English perspective. Freshwater Reviews, 1, 89-98.</p> <p>Mainstone, C. & Burn, A. (2011) Relationships between ecological objectives and associated decision-making under the Habitats and Water Framework Directives. Discussion paper, Natural England.</p> <p>Mainstone, C.P. (2010) An evidence base for setting flow targets to protect river habitat. Natural England Research Reports, Number 035. Available at: http://publications.naturalengland.org.uk/publication/9025?category=440349</p> <p>Mainstone, C.P. (2010) An evidence base for setting nutrient targets to protect river habitat. Natural England Research</p>

	<p>Reports, Number 034. Available at: http://publications.naturalengland.org.uk/publication/30027?category=440349</p> <p>Mainstone, C.P. (2010) An evidence base for setting organic pollution targets to protect river habitat. Natural England Technical Information Note 076. Available at: http://publications.naturalengland.org.uk/publication/33008?category=440349</p> <p>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. Freshwater Reviews, 1, 175-187.</p> <p>Mainstone, C.P. and Holmes, N.T. (2010) Embedding a strategic approach to river restoration in operational management processes - experiences in England. Aquatic Conservation: Marine and Freshwater Ecosystems. Published online in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/aqc.1095</p> <p>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. Journal of Hydrology, 350, 131-143.</p> <p>MAITLAND, P. S. & CAMPBELL, R. N. 1992. Freshwater Fishes of the British Isles. London: HarperCollins.</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, pp.245.</p> <p>Natural England (2012) England Catchment Sensitive Farming Initiative. Http://www.naturalengland.org.uk/ourwork/farming/csf/default.aspx.</p> <p>Wheeldon, J (2012) River Restoration Planning and implementation on River Sites of Special Scientific Interest in England. Internal Natural England paper.</p> <p>UK distribution map data sources</p> <p>Database for the Atlas of Freshwater Fishes (1637-2003) NBN Gateway data: Bedfordshire and Luton Biodiversity Recording and Monitoring Centre GA000704 Bedfordshire Fish (BNHS) - 1800-2011 NBN Gateway data: Biological Records Centre GA000174 Database for the Atlas of Freshwater Fishes NBN Gateway data: Rotherham Biological Records Centre GA000843 Rotherham Biological Records Centre - Non-sensitive Records from all taxonomic groups NBN Gateway data: Sheffield Biological Records Centre GA000878 Sheffield Biological Records Centre- Non-sensitive Records from all taxonomic groups. NBN Gateway data: Sussex Biodiversity Record Centre GA001076 SxBRC Full dataset for Environment Agency and Natural England use only. NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA000584 Wiltshire & Swindon Site-based Survey Records Wales LRC Priority & Protected Species layer. Bat roosts</p>
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	<p>database, Pembrokeshire WWBIC. Sent to JNCC 21/08/2012</p> <p>UK Distribution Map data sources</p> <p>Database for the Atlas of Freshwater Fishes (1637-2003)</p> <p>NBN Gateway data: Bedfordshire and Luton Biodiversity Recording and Monitoring Centre GA000704 Bedfordshire Fish (BNHS) - 1800-2011</p> <p>NBN Gateway data: Biological Records Centre GA000174 Database for the Atlas of Freshwater Fishes</p> <p>NBN Gateway data: Rotherham Biological Records Centre GA000843 Rotherham Biological Records Centre - Non-sensitive Records from all taxonomic groups</p> <p>NBN Gateway data: Sheffield Biological Records Centre GA000878 Sheffield Biological Records Centre- Non-sensitive Records from all taxonomic groups.</p> <p>NBN Gateway data: Sussex Biodiversity Record Centre GA001076 SxBRC Full dataset for Environment Agency and Natural England use only.</p> <p>NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA000584 Wiltshire & Swindon Site-based Survey Records</p> <p>Wales LRC Priority & Protected Species layer. Bat roosts database, Pembrokeshire WWBIC. Sent to JNCC 21/08/2012</p>
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2.3 Range	
2.3.1 Surface area Range	<p>35236</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>Estimate based on partial data with some extrapolation and/or modelling</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	<p>a) Minimum</p>
Optional	

	b) Maximum	
2.3.6 Long-term trend Period Optional	1989-2012	
	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	35236
	The FRV has been updated to exclude areas which are not in the native range of the species. It has been set as equal to the currently reported surface area of range. For further details see the 2013 Article 17 UK Approach document.	
	b) Operator for FRR	
	c) FRR is unknown (indicated by "true")	False
	d) Method used to set FRR	The FRV has been updated to exclude areas which are not in the native range of the species. It has been set as equal to the currently reported surface area of range. 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 has been updated to exclude areas which are not in the native range of the species. It has been set as equal to the currently reported surface area of range. 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 mainly due to...	a) Genuine change?	False
	The decrease in reported surface area of range is mostly due to exclusion of records that are considered to outside the native range of the species.	
	b) Improved knowledge/more accurate data?	False
	The decrease in reported surface area of range is mostly due to exclusion of records that are considered to outside the native range of the species.	
	c) Use of different method (e.g. "Range tool")?	True
	The decrease in reported surface area of range is mostly due to exclusion of records that are considered to outside the native range of the species.	

2.4 Population		
2.4.1 Population size estimation (using individuals or agreed exceptions where possible)	a) Unit	
	b) Minimum	
	c) Maximum	
2.4.2 Population size estimation (using population unit other than individuals) Optional (<i>if 2.4.1 filled in</i>)	a) Unit	number of map 1x1 km grid cells
	b) Minimum	151
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) Maximum	
	The maximum population estimate is unknown. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.4.3 Additional information on population estimates / conversion Optional	a) Definition of "locality"	
	b) Method to convert data	
	c) Problems encountered to provide population size estimation	

2.4.4 Year or period	2000-2011	
	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	2001-2012	
Period	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.4.7 Short-term trend	unknown	
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 expert opinion with no or minimal sampling	
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 –	Optional	1989-2012
Period		For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
2.4.11 Long-term trend	Optional	unknown
Trend direction		For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
2.4.12 Long-term trend	Optional	a) Minimum
Magnitude		
		b) Maximum

	c) Confidence interval	
2.4.13 Long term trend Method used	Estimate based on expert opinion with no or minimal sampling	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	
	b) Operator	
	c) FRP is unknown (indicated by "true")	True
	It has not been possible to estimate the favourable reference population.	
	d) Method used to set FRP	
2.4.15 Reason for change Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	a) Genuine change?	False
	The population unit has changed since the 2007 report so no comparison is possible.	
	b) Improved knowledge/more accurate data?	False
	The population unit has changed since the 2007 report so no comparison is possible.	
	c) Use of different method (e.g. "Range tool")?	False
	The population unit has changed since the 2007 report so no comparison is possible.	

2.5 Habitat for the species

2.5.1 Area estimation

The specific area of habitat occupied by this species in the UK is unknown.

For further details see the 2013 Article 17 UK Approach document and

	relevant country-level reporting information.	
	There is thought to be a sufficient amount of habitat in the UK to support a viable population of the species.	
2.5.2 Year or period	N/A	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.3 Method used Habitat for the species	Absent data	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.4 Quality of the habitat	a) Habitat quality	Moderate
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	b) Assessment method	Condition assessment of SAC rivers, wider assessment of ecological status under the Water Framework Directive. See Article 17 report on H3260.
	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	increase	
	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	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.8 Long-term trend Trend direction	increase	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.9 Area of suitable habitat for the species	a) Value in km²	
	b) Absence of data indicated as '0'	
2.5.10 Reason for change Is the difference between the value reported at 2.5.1 and the previous reporting round mainly due to	a) Genuine change?	False
	Surface area of habitat was reported as unknown in 2007 so no comparison is possible.	
	b) Improved knowledge/more accurate data?	False
	Surface area of habitat was reported as unknown in 2007 so no comparison is possible.	
	c) Use of different method (e.g.	False

	"Range tool"?)	
	Surface area of habitat was reported as unknown in 2007 so no comparison is possible.	

2.6 Main pressures		
a) Pressure	b) Ranking	c) Pollution qualifier
	H = high importance (max 5 entries) M = medium importance L = low importance	
A01: Cultivation	M	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	M	X
J02: human induced changes in hydraulic conditions	M	
J03: Other ecosystem modifications	M	
F02: Fishing and harvesting aquatic resources	L	
K03: Interspecific faunal relations	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	
A01: Cultivation	M	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	M	X
J02: human induced changes in hydraulic conditions	M	
J03: Other ecosystem modifications	M	

F02: Fishing and harvesting aquatic resources	L	
M01: Changes in abiotic conditions	L	

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

2.7.1 Method used – Threats

expert opinion

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

2.8 Complementary information

2.8.1 Justification of % thresholds for trends

2.8.2 Other relevant information

There are significant gaps in occurrence within the species natural range which may or may not be due to natural habitat suitability. Beyond its natural range, the species appears to be thriving where it has been introduced - although these populations have not been included in this assessment. This said, the extension of range is to optimal habitat within neighbouring catchments, of the sort that might be conceivably occur through infrequent and unusual natural circumstances. As climate change proceeds, it may be that such species are assisted in moving with their climate space, and so a rigid interpretation of natural range in the case of barbel is perhaps not appropriate.

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

b) Qualifier

2.9.2 Population

a) Conclusion

Unknown

Population has been assessed as unknown because FRV is unknown, and the short term trend is unknown. There are indications of a possible decline of population within the native range of the species, but the species is flourishing in nearby river catchments outside of its native range, so overall the species population is not of particular conservation

	concern.	
	b) Qualifier	
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 amount of habitat for the species to be viable, the habitat quality is moderate and the short term trend is increasing.	
	b) Qualifier	
2.9.4 Future prospects	a) Conclusion	Favourable
	<p>Future prospects is assessed as Favourable on the basis of assessments of the future prospects of the three parameters, range, population and habitat for species:</p> <p>Range future prospects: Good</p> <p>Population future prospects: Unknown</p> <p>Habitat future prospects: Good</p> <p>Overall future prospects: Favourable.</p> <p>Although there are threats in the future at the same time there are conservation management activities and general trends in water quality have been improving in the UK so it seems likely that the situation is unlikely to get worse. However, future prospects for population has been assessed as unknown due to the current status of population being unknown.</p>	
	b) Qualifier	
2.9.5 Overall assessment of Conservation Status	Favourable	
	The overall assessment is Favourable because range, habitat and future prospects have been assessed as Favourable.	
2.9.6 Overall trend in Conservation Status		

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

3.1 Population

3.1.1 Population size

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		

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