

**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

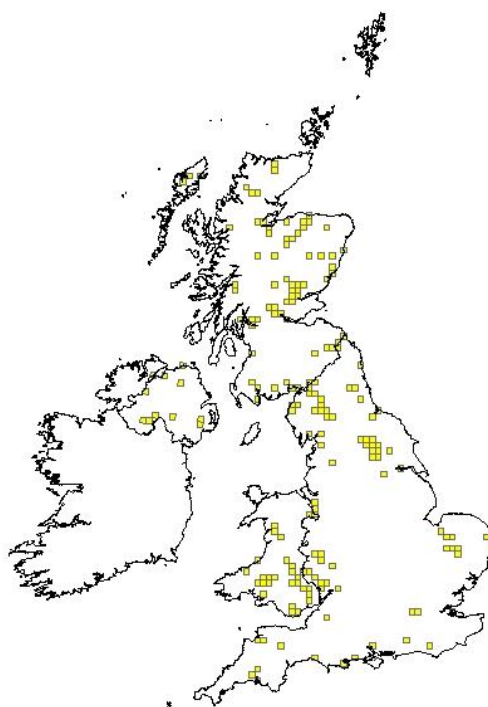
Species:

S1095 - Sea lamprey (*Petromyzon marinus*)

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

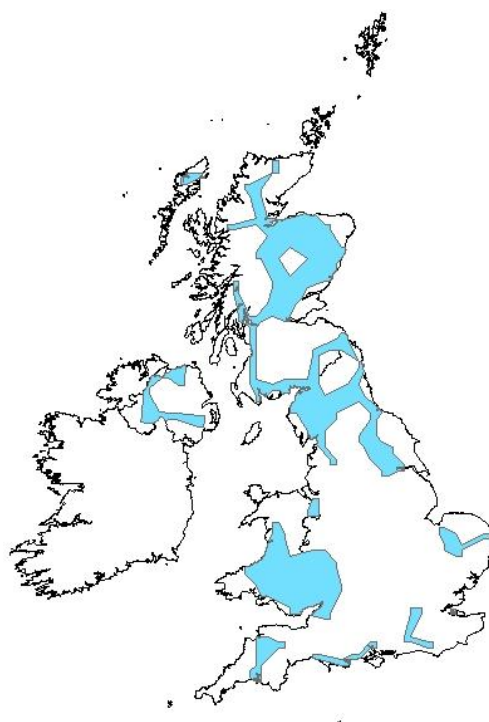
<i>Field name</i>	<i>Brief explanations</i>	
0.2 Species	0.2.1 Species code	S1095
	0.2.2 Species scientific name	<i>Petromyzon marinus</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	

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	1990-2012
	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>Joint Nature Conservation Committee (JNCC). (2005) Common Standards Monitoring Guidance for Freshwater Fauna. Peterborough, Joint Nature Conservation Committee.</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>Laughton R, Burns, S. 2003. Assessment of sea lamprey distribution and abundance in the River Spey: Phase III. Scottish Natural Heritage Commissioned Report No. 043 www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=469</p> <p>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&09/11.</p> <p>Loughs Agency (2011). Water Framework Directive Fish in Rivers Classification Report. Loughs Agency of the Foyle Carlingford and Irish Lights Commission. Report Ref:</p>

	<p>LA/WFDFIRNI/11.</p> <p>Mainstone C.P. (2008) The role of specially designated wildlife sites in freshwater conservation - an English perspective. <i>Freshwater Reviews</i>, 1, 89-98.</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. <i>Freshwater Reviews</i>, 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. <i>Aquatic Conservation: Marine and Freshwater Ecosystems</i>. 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. <i>Journal of Hydrology</i>, 350, 131-143.</p> <p>Maitland PS, Lyle AA. 2000. Distribution of lampreys in the River Teith. Scottish Natural Heritage Commissioned Report.</p> <p>MAITLAND, PS. 1980. Review of the ecology of lampreys in northern Europe. <i>Canadian Journal of Fisheries and Aquatic Sciences</i>. 37, 1944-1952.</p> <p>MAITLAND, PS. 2003. Ecology of the River, Brook and Sea Lamprey. <i>Conserving Natura 2000 Rivers, Ecology Series No. 5</i>. English Nature, Peterborough. Http://www.english-nature.org.uk/LIFEinUKRivers/publications/lamprey.pdf</p> <p>Natural England (2012) England Catchment Sensitive Farming Initiative. Http://www.naturalengland.org.uk/ourwork/farming/csf/default.aspx.</p> <p>North East Scotland Biological Records Centre: NE Scotland fish records 1800-2010.</p> <p>O'Keefe N, Williams A. (2008) Review of Recently Gathered Information on Lamprey Stocks and Conservation Issues in Britain: Sea Lamprey. Report to Environment Agency, North East Region.</p> <p>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.</p> <p>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.</p> <p>Watt J, Brown L, Bull C. 2011. Lamprey Site Condition Monitoring of the River Spey SSSI and SAC. Scottish Natural Heritage Commissioned Report.</p> <p>Watt J, Bull C, Ravenscroft NOM. 2012. Lamprey site condition monitoring of the River Tweed SSSI and SAC 2011. Scottish Natural Heritage Commissioned Report.</p> <p>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 www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-</p>
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	<p>detail/?id=1337</p> <p>West, R. 2004. River Dee Candidate Special Area of Conservation Lamprey Survey 2003. Environment Agency Wales Report NEAT/04/17. Environment Agency Wales.</p> <p>West, R. 2005. River Dee Candidate Special Area of Conservation Lamprey Survey 2004. Environment Agency Wales Report & CCW Review of Consents Report NEAT/04/33 or CCW Review of Consents Report No. 18. Environment Agency Wales, Bangor.</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>Art Niven/Loughs Agency Emailed to JNCC (LH) by Kyle Hunter 18/10/2012</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 BIS Casual records - unverified</p> <p>BIS sent directly to JNCC (no details) SurveyName BIS Casual Records 2010 - unconfirmed</p> <p>BIS sent directly to JNCC (no details) SurveyName Miscellaneous records in BIS area</p> <p>Butterfly distributions for GB & Ireland: Butterfly Conservation and BRC (1690-1994); Butterfly Conservation (1995-1999); Butterfly Conservation and the Dublin Naturalists' Field Club (1995-1999)</p> <p>JNCC Report 312 (Dataset, CEDAR)</p> <p>NBN Gateway data: Biological Records Centre GA000174 Database for the Atlas of Freshwater Fishes</p> <p>NBN Gateway data: Bristol Regional Environmental Records Centre GA001100 BRERC JNCC May 2012</p> <p>NBN Gateway data: Countryside Council for Wales GA000488 Freshwater Lamprey Survey Data</p> <p>NBN Gateway data: Countryside Council for Wales GA001146 CCW Freshwater Fish ad hoc Records for Article 17 Reporting</p> <p>NBN Gateway data: Countryside Council for Wales GA001146. Emailed to JNCC (LH) by CCW (THE) 19/11/2012 CCW Freshwater Fish ad hoc Records for Article 17 Reporting</p> <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: Herefordshire Biological Records Centre GA001084 Herefordshire Biological Records Centre Species Records</p> <p>NBN Gateway data: Kent & Medway Biological Records Centre GA001015 Fish: Records for Kent.</p> <p>NBN Gateway data: Norfolk Biodiversity Information Service GA000908 Norfolk Environment Agency Priority Species Records</p>
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	<p>NBN Gateway data: North & 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 Natural Heritage GA001145 SNH Species Repository</p> <p>NBN Gateway data: Scottish Natural Heritage GA001148 Site Condition Monitoring Records from surveys of lamprey species in five river SACs in Scotland</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: West Wales Biodiversity Information Centre GA000697 CCW Regional Data: all taxa (excluding sensitive species), West Wales</p> <p>NBN Gateway data: Worcestershire Biological Records Centre GA000777 WBRC Species data for Worcestershire collated by species group</p> <p>NIEA Emailed to JNCC (LH) by Kyle Hunter 18/10/2012</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 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 BIS Casual records - unverified</p> <p>BIS sent directly to JNCC (no details) SurveyName BIS Casual Records 2010 - unconfirmed</p> <p>BIS sent directly to JNCC (no details) SurveyName Miscellaneous records in BIS area</p> <p>Butterfly distributions for GB & Ireland: Butterfly Conservation and BRC (1690-1994); Butterfly Conservation (1995-1999); Butterfly Conservation and the Dublin Naturalists' Field Club (1995-1999)</p> <p>JNCC Report 312 (Dataset, CEDAR)</p> <p>NBN Gateway data: Biological Records Centre GA000174 Database for the Atlas of Freshwater Fishes</p> <p>NBN Gateway data: Bristol Regional Environmental Records Centre GA001100 BRERC JNCC May 2012</p> <p>NBN Gateway data: Countryside Council for Wales GA000488 Freshwater Lamprey Survey Data</p> <p>NBN Gateway data: Countryside Council for Wales GA001146 CCW Freshwater Fish ad hoc Records for Article 17 Reporting</p> <p>NBN Gateway data: Countryside Council for Wales GA001146. Emailed to JNCC (LH) by CCW (THE) 19/11/2012 CCW Freshwater Fish ad hoc Records for Article 17 Reporting</p> <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</p>
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	<p>Agency Rare and Protected Species records v1</p> <p>NBN Gateway data: Herefordshire Biological Records Centre GA001084 Herefordshire Biological Records Centre Species Records</p> <p>NBN Gateway data: Kent & Medway Biological Records Centre GA001015 Fish: Records for Kent.</p> <p>NBN Gateway data: Norfolk Biodiversity Information Service GA000908 Norfolk Environment Agency Priority Species Records</p> <p>NBN Gateway data: North & 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 Natural Heritage GA001145 SNH Species Repository</p> <p>NBN Gateway data: Scottish Natural Heritage GA001148 Site Condition Monitoring Records from surveys of lamprey species in five river SACs in Scotland</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: West Wales Biodiversity Information Centre GA000697 CCW Regional Data: all taxa (excluding sensitive species), West Wales</p> <p>NBN Gateway data: Worcestershire Biological Records Centre GA000777 WBRC Species data for Worcestershire collated by species group NIEA Emailed to JNCC (LH) by Kyle Hunter 18/10/2012</p>
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2.3 Range	
2.3.1 Surface area Range	<p>63046.95</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>increase</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		
2.3.7 Long-term trend Trend direction Optional		
2.3.8 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
2.3.9 Favourable reference range	a) Value in km²	63046.95
	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 please 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 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.
	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.	
2.3.10 Reason for change Is the difference between the	a) Genuine change?	False

reported value in 2.3.1 and the previous reporting round mainly due to...	It is likely that most of the apparent increase in range is due to increased recording effort, although there has probably been a slight genuine increase in range too.	
	b) Improved knowledge/more accurate data?	True
	It is likely that most of the apparent increase in range is due to increased recording effort, although there has probably been a slight genuine increase in range too.	
	c) Use of different method (e.g. "Range tool")?	False
It is likely that most of the apparent increase in range is due to increased recording effort, although there has probably been a slight genuine increase in range too.		

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	305
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) Maximum	
	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	It was not possible to estimate the total number of individuals as the species is very widespread and we do not yet understand the extent to which lamprey populations vary on an annual basis and / or are spatially distributed. Surveyor error may also be an issue. <i>Petromyzon ammocoetes</i> are relatively difficult to detect using standard techniques, partly because they are much less abundant

		than <i>Lampetra ammocoetes</i>, which occupy similar habitat.
		For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
2.4.4 Year or period		1990-2012
		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		1998-2012
Period		For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
2.4.7 Short-term trend		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 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 –		1989-2012
Period	Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.
2.4.11 Long-term trend		unknown
Trend direction	Optional	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	Absent data	
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
	There is insufficient information available to set a FRV.	
	d) Method used to set FRP	
2.4.15 Reason for change	a) Genuine change?	False
Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	The population was reported as unknown in 2007 so no comparison is possible.	
	b) Improved knowledge/more accurate data?	False
	The population was reported as unknown in 2007 so no comparison is possible.	
	c) Use of different method (e.g. "Range tool")?	False
	The population was reported as unknown in 2007 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	1990-2012	
	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	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	unknown	
	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	unknown	
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. "Range tool")?	False
	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	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	H	OPTX
J02: human induced changes in hydraulic conditions	H	X
J03: Other ecosystem modifications	H	
I01: invasive non-native species	M	
A01: Cultivation	L	N
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	N
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	X
E03: Discharges	L	
F02: Fishing and harvesting aquatic resources	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

mainly based on expert judgement and other data

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

2.7 Threats		
a) Threat	b) Ranking	c) Pollution qualifier
	H = high importance (max 5 entries) M = medium importance L = low importance	
J02: human induced changes in hydraulic conditions	H	X
J03: Other ecosystem modifications	H	
E03: Discharges	M	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	M	X
M01: Changes in abiotic conditions	M	
A01: Cultivation	L	N
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	N
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, marine constructions	L	
E01: Urbanised areas, human habitation	L	X

E06: Other urbanisation, industrial and similar activities	L	
F02: Fishing and harvesting aquatic resources	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

The accuracy of the assessment is limited by the paucity of information on the distribution and abundance of *P. marinus* outwith the sites designated for the species. Populations in many rivers are limited by a combination of access and habitat quality issues. Whilst many measures to improve habitat conditions in SAC rivers and the ecological status of the wider river network are in place or under development (see 3.2), it will be important that such measures are adequately cogniscent of the requirements of sea lamprey. For instance, fish passes are often designed to resolve access difficulties for salmon and are often not appropriate for sea lamprey. If it is possible, removal of artificial barriers is the best way to resolve access difficulties for all species. Barrier removal (to restore natural river morphology and hydraulics and free movement for all species) is a major objective on SAC rivers but can be more difficult to achieve in the wider river network where the use of fish passes is more common (particularly for salmon). In relation to exploitation, if sea lamprey numbers start to improve there may be interest in commercial exploitation - however, the regulatory measures now in place (see 3.2) should ensure that any future exploitation is on a sustainable basis.

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 it is thought there probably been a small genuine increase in range due to improvements to fish access in Wales.	
	b) Qualifier	
2.9.2 Population	a) Conclusion	Unknown
	Population has been assessed as unknown because the FRV is unknown, although the population is thought to be probably stable.	
	b) Qualifier	
2.9.3 Habitat for the species	a) Conclusion	Unknown
	Habitat for species has been assessed as unknown because although there is thought to be sufficient area of habitat to support a viable population and the quality is moderate, the habitat trend is unknown. In-channel structures are a critical issue for the species and need to be tackled as a priority.	
	b) Qualifier	
2.9.4 Future prospects	a) Conclusion	Unknown
	Future prospects is assessed as Unknown 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: Unknown Habitat future prospects: Unknown Overall future prospects: Unknown	
	b) Qualifier	
2.9.5 Overall assessment of Conservation Status	Unknown	
	The overall assessment is unknown because population, habitat for species and future prospects are unknown.	
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	number of map 1x1 km grid cells
	b) Minimum	219
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) Maximum	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
3.1.2 Method used	Estimate based on expert opinion with no or minimal sampling	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
3.1.3 Trend of population size within the network (short-term trend) Optional	unknown	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	

3.2 Conservation measures

Conservation measures taken (i.e. already being implemented) within the reporting period and provided information about their importance, location and evaluation.

3.2.1 Measure	3.2.2 Type					3.2.3 Ranking H = high importance M = medium importance L = low importance	3.2.4 Location where the measure is PRIMARILY applied			3.2.5 Broad evaluation of the measure					
	a) Legal/statutory	b) Administrative	c) Contractual	d) Recurrent	e) One-off		a) Inside	b) Outside	c) Both inside & outside	a) Maintain	b) Enhance	c) Long term	d) No effect	e) Unknown	f) Not evaluated
1.2: Measures needed, but not implemented				Y	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	M		Y			Y	Y	Y			
4.1: Restoring/improving water quality	Y	Y	Y	Y	Y	M				Y	Y	Y	Y			Y
4.2: Restoring/improving the hydrological regime	Y	Y			Y	H				Y	Y	Y	Y			Y
4.3: Managing water abstraction	Y					M				Y	Y	Y	Y			
6.3: Legal protection of habitats and species	Y					M				Y			Y			Y
7.2: Regulation/Management of fishery in limnic systems	Y					L				Y						Y
7.4: Specific single species or species group management measures	Y					L				Y			Y			
8.0: Other measures	Y					L				Y	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.