

**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

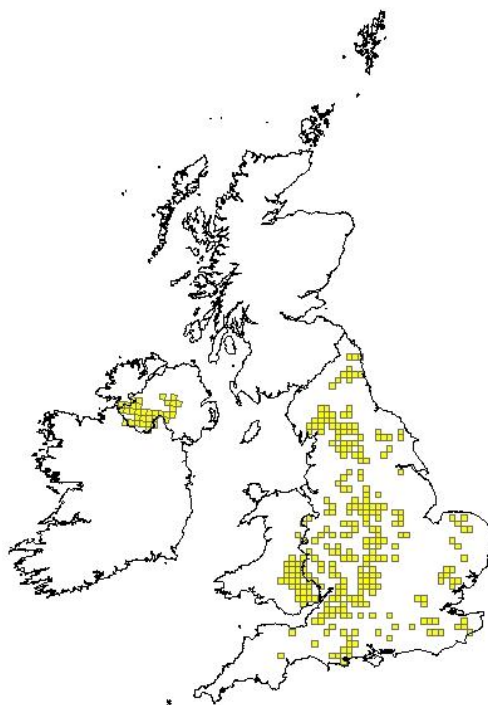
Species:

S1092 - White-clawed crayfish (*Austropotamobius pallipes*)

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

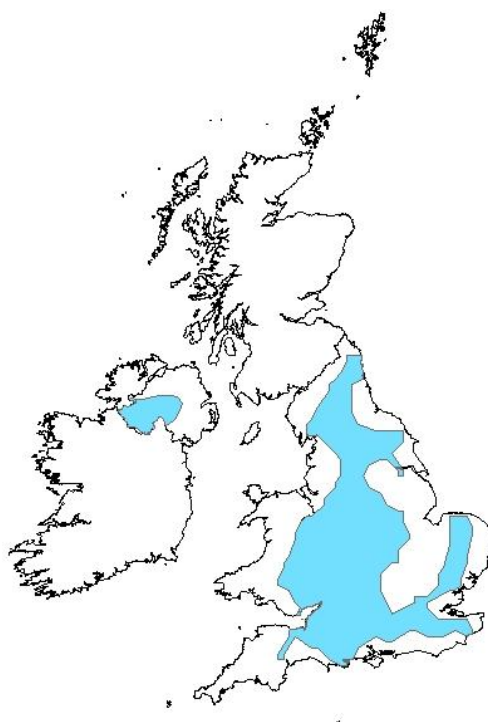
<i>Field name</i>	<i>Brief explanations</i>	
0.2 Species	0.2.1 Species code	S1092
	0.2.2 Species scientific name	<i>Austropotamobius pallipes</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	

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	2000-2012
	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>AERC (1998). Surveys of the distribution of freshwater crayfish (<i>Austropotamobius pallipes</i>) in Northern Ireland. Unpublished report to Environment and Heritage Service (DoE Northern Ireland) (now NIEA), May 1998. AERC ref. B8202.</p> <p>ADAS. 2007. South Sebastopol white-clawed crayfish survey report 2007.</p> <p>Adrian HUTCHINGS, Monitoring <i>Austropotamobius pallipes</i> (<i>Lereboullet</i>) in a chalk stream in southern England, Crayfish Conservation in the British Isles 2009, http://iz.carnegiemnh.org/crayfish/IAA/docs/2009_Crayfish_Conservation_in_the_British_Isles_LR.pdf</p> <p>Bradley, P. (2008) Population status of white-clawed crayfish (<i>Austropotamobius pallipes</i> <i>Lereboullet</i>) at Magheraveely Marl Loughs SAC. Unpublished report for Bioscape Ltd. To ENSIS Ltd. And the Northern Ireland Environment Agency (NI).</p> <p>Buglife (undated). Criteria for selecting ark sites for white-clawed crayfish weblink: http://www.buglife.org.uk/Resources/Buglife/criteria%20for%20whiteclaw%20ark%20site%20v1a%2005April2009.xls</p> <p>Buglife Ark site selection tool at:</p>

	<p>"http://www.buglife.org.uk/conservation/currentprojects/Species+Action/Conserving+our+Crayfish/Crayfish+Ark+Site+Selection+Criteria"</p> <p>Buglife. undated. Ark sites for crayfish. Leaflet published by Buglife - The Invertebrate Conservation Trust.</p> <p>David Rogers Associates, Control of crayfish plague in England and Wales, 2010, DEFRA Project FC1196.</p> <p>Füreder, L., Gherardi, F., Holdich, D., Reynolds, J., Sibley, P. & Souty-Grosset, C. (2010). <i>Austropotamobius pallipes</i>. In: IUCN (2011) 2011 IUCN Red Lists of Threatened Species. Version 2011.2</p> <p>Gallagher, M.B., Dick, J.T.A., Elwood, R.W. (2006) Riverine habitat requirements of the white-clawed crayfish, <i>Austropotamobius pallipes</i>. <i>Biology and Environment: Proceedings of the Royal Irish Academy</i> 106(1):1 - 8.</p> <p>Gouin, N.F., Grandjean F., Pain S., Souty-Grosset J. and Reynolds J., (2003). Origin and Colonisation history of the White-clawed crayfish, <i>Austropotamobius pallipes</i>, in Ireland. <i>Heredity</i>, 91, 70-77.</p> <p>Holdich D.M., Palmer M. and Sibley P.J., (2009). The indigenous status of <i>Austropotamobius pallipes</i> (Lereboullet) in Britain. In: Brickland, J., Holdich D.M. and Imhoff E.M., (EDS), <i>Crayfish Conservation in the British Isles. Proceedings of Conference held in Leeds</i>, 1-11.</p> <p>Holdich, D.M. (2003) Ecology of the White-clawed Crayfish. <i>Conserving Natura 2000 Rivers Ecology Series No.1 English Nature, Peterborough.</i></p> <p>Holdich, D.M., Reynolds, J.D., Souty-Grosset, C., and Sibley, P.J. (2009). A review of the ever increasing threat to European crayfish species. <i>Knowledge and Management of Aquatic Ecosystems</i>, Issue 394-395, 11.</p> <p>Holditch & Reeve (1989) Status of native crayfish with particular reference to crayfish plague, alien introductions and pollution, Update September 1989, Nature Conservancy Council contract HF3-03-432. CSD Report 999.</p> <p>Howells, M. 2003. Conservation of the native white-clawed crayfish, <i>Austropotamobius pallipes</i> in the uplands of mid-Wales. Unpublished 2nd year report for PhD thesis. Cardiff University.</p> <p>Howells, M., Slater, F.M., Gaweda, A., Lee, R., Jenkins, R. & Smith, J. 2004. Measurement of siltation levels in the Afon Edw. CCW Contract Science. 622. Countryside Council for Wales & Cardiff University.</p> <p>Water Framework Directive (WFD) classification results. http://www.environment-agency.gov.uk/research/library/data/97343.aspx</p> <p>IUCN (2003). Guidelines for Application of IUCN Red List Criteria at Regional Levels, Version, 3.0, IUCN Species Survival Commission, IUCN, Gland, Cambridge.</p> <p>IUCN (2011). IUCN Red List of Threatened Species. Version 2011.2. <www.iucnredlist.org>. Downloaded on 12 November 2011.</p> <p>JNCC (2005). Common Standards Monitoring Guidance for Freshwater Fauna. Joint Nature Conservation Committee, Peterborough.</p> <p>Johnsen, S.I. and Taugbøl, T. (2010): NOBANIS - Invasive Alien</p>
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Jones, C. 2008. Draft mitigation report white-clawed crayfish South Sebastopol. ADAS.

Mainstone, C, 2012, Natural England Article 17 report, in draft. Report on the main results of the surveillance under article 17 for annex I , CODE: 3260, Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation.

Matthews, M. & Reynolds, J.D. (1992) Ecological impact of crayfish plague in Ireland. *Hydrobiologia*, 234, 1-6.

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Preston, S. J. and Stone, R. (1998) Survey Assessment and Site Boundary Delineation of the Fury River in Co. Tyrone. Unpublished report to Environment and Heritage Service (DoE Northern Ireland) (now NIEA), December 1998.

Reynolds, J.D. (2002) Growth and Reproduction. In *Biology of Freshwater Crayfish*. (ed D.M. Holdich), pp152-191. Blackwell Science Ltd., Oxford.

Rogers, D. & Watson, E. 2003. The status of the white-clawed crayfish *Austropotamobius pallipes* in the mid-Wye catchment, 2002. CCW Contract Science. 543. Countryside Council for Wales.

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Rogers, D. & Watson, E. (2010) Distribution database for

	<p>crayfish in England and Wales. In Species Survival Conference, Securing White-clawed Crayfish in a Changing Environment. Bristol, November 2010</p> <p>Rogers, W.D. 2005a. Painscastle: recommendations for the prevention of transfer of crayfish plague. CCW Regional Report. Countryside Council for Wales.</p> <p>Rogers, W.D. 2005b. Painscastle: results of trapping and recommendations for further management to eradicate signal crayfish. CCW Regional Report. Countryside Council for Wales.</p> <p>RPS. 2005. Native white-clawed crayfish survey report South Sebastopol, Cwmbran. RPS Chepstow.</p> <p>Sibley, P.J. (2003). The distribution of crayfish in Britain. In Management and Conservation of Crayfish. Proceedings of a conference held on 7th November 2002, Nottingham, UK (eds D.M. Holdich & P.J. Sibley), pp. 64-72. Environment Agency, Bristol.</p> <p>Slater, F.M. & House, E.V. 2001. The current status of the white-clawed crayfish <i>Austropotamobius pallipes</i> in the Afon Edw and the impact of recent land use change on populations. CCW Contract Science. 454. Countryside Council for Wales.</p> <p>Slater, F.M. & Howells, M. 2003. The causes of decline of the white-clawed crayfish <i>Austropotamobius pallipes</i> on the Afon Edw: preliminary report into the effects of sedimentation. CCW Contract Science. 551. Countryside Council for Wales.</p> <p>Slater, F.M. 2012. The status and distribution of the white-clawed crayfish <i>Austropotamobius pallipes</i> in the Mounton Brook catchment, Chepstow in 2011. A report for the Countryside Council for Wales. Countryside Council for Wales.</p> <p>Slater, F.M., Davidson, K., James, C., Ross, F., Sherrard-Smith, E., Chen, J., Phillips, A. & Tombs, V. 2007a. The status and distribution of the white-clawed crayfish <i>Austropotamobius pallipes</i> in water courses in Torfaen County Borough Council in 2005 & 2006. CCW Contract Science. 724. Countryside Council for Wales & Environment Agency Wales.</p> <p>Slater, F.M., Davidson, K., James, C., Sherrard-Smith, E., Ross, F., Chen, J., Phillips, A. & Tombs, V. 2007b. The status of the white-clawed crayfish <i>Austropotamobius pallipes</i> in tributaries of the River Usk on Mynydd Eppynt in Breconshire in 2005 & 2006. CCW Contract Science. 725. Countryside Council for Wales.</p> <p>Slater, F.M., Howells, M., Gaweda, A., Jenkins, R., Lee, R., Smith, J. & Smith, R. 2003. Crayfish survey of watercourses in Torfaen, Sept - Oct 2003. Phase 1. Llysdimam Field Centre, Cardiff University.</p> <p>Slater, F.M., Mallindine, K. & Cesarini, S. 2001. The status of the white-clawed crayfish <i>Austropotamobius pallipes</i> in the Brecon & Monmouthshire Canal and associated stretches and tributaries of the River Usk. CCW Contract Science. 495. Countryside Council for Wales.</p> <p>Smith, G.R.T., Learner, M.A., Slater, F.M. and Foster, J. (1996). Habitat features important for the conservation of the native crayfish <i>Austropotamobius pallipes</i> in Britain. <i>Biological Conservation</i> 75, 239-46.</p> <p>State of the Natural Environment Report, 3, Biodiversity, 3.7, Open Water, Natural England, 2008.</p> <p>Vicky KINDEMBA and Andrew WHITEHOUSE, Using GIS to</p>
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	<p>identify and prioritise regional ark sites for white-clawed crayfish: aggregate and mineral extraction sites in South-west England, Crayfish Conservation in the British Isles 2009 Water Management Unit, Environmental Protection, NIEA. (DoE, NI). Unpublished Data (1990-2011) Surrogate information gathered during Invertebrate Sampling for the Water Framework Directive and surveys pre-dating this legislation.</p> <p>Whitehouse, A.T., Peay, S. & Kindemba, V. 2009. Ark sites for white-clawed crayfish - guidance for the aggregates industry. Buglife - The Invertebrate Conservation Trust.</p> <p>Wilkins, C. 1998. An investigation of the Sgithwen Brook to assess recovery of the fauna following a sheep dip pollution incident on 24 October 1996. Unpublished report. EASE/YM/98/19. Environment Agency.</p> <p>Wilson, N. (2008) Assessing the Riparian Habitat Requirements of the White-clawed Crayfish, <i>Austropotamobius pallipes</i> (Lereboullet, 1858) in Northern Ireland. Crayfish News Vol 30 Issue 4 Pg. 1. Part of PhD Thesis for QUB.</p> <p>UK distribution map data sources</p> <p>AHVLA data emailed to JNCC (LH) by Scott Sellers under licence 19/09/2012; David Rogers Associates</p> <p>BIS CCW Abergavenny SSSI Scientific Data Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Cardiff Miscellaneous records (SEWBReC) - CCW Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Priority Invertebrate Records 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 BIS Casual Records</p> <p>Crayfish dataset (1650-2003)</p> <p>Devon incidental species records 1950-2002</p> <p>NBN Gateway data: Biological Records Centre GA000154 Extracted by LH 19/09/2012 Crayfish (Crustacea; Astacura) data for Britain and Ireland to 2003</p> <p>NBN Gateway data: Biological Records In Essex GA000951 Extracted by LH 19/09/2012 White-Clawed Crayfish <i>Austropotamobius pallipes</i> Records for Essex from 1971-2010</p> <p>NBN Gateway data: Bristol Regional Environmental Records Centre GA001100 Extracted by LH 19/09/2012 BRERC JNCC May 2012</p> <p>NBN Gateway data: Countryside Council for Wales CCWJMP03 Extracted by LH 19/09/2012 UK Biodiversity Action Plan Invertebrate Data for Wales</p> <p>NBN Gateway data: Derbyshire Biological Records Centre GA000622 Extracted by LH 19/09/2012 Derbyshire & Peak District Protected Species Database (Summary of available records 1970- 2008)</p> <p>NBN Gateway data: Dorset Environmental Records Centre GA001010 Extracted by LH 19/09/2012 Dorset Important Species 2012 for Natural England use only</p> <p>NBN Gateway data: Environment Agency GA001129 Extracted</p>
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	<p>by LH 19/09/2012 Environment Agency Rare and Protected Species records v1</p> <p>NBN Gateway data: extracted by LH 11/09/2012 Biological Records Centre GA000154 Crayfish (Crustacea; Astacura) data for Britain and Ireland to 2003</p> <p>NBN Gateway data: extracted by LH 11/09/2012 Northern Ireland Environment Agency GA000079 EHS Species Datasets</p> <p>NBN Gateway data: Herefordshire Biological Records Centre GA001084Extracted by LH 19/09/2012 Herefordshire Biological Records Centre Species Records</p> <p>NBN Gateway data: Norfolk Biodiversity Information Service GA000908Extracted by LH 19/09/2012 Norfolk Environment Agency Priority Species Records</p> <p>NBN Gateway data: Nottinghamshire Biological and Geological Records Centre GA000540Extracted by LH 19/09/2012 NBGR Crayfish Dataset</p> <p>NBN Gateway data: Shropshire Ecological Data Network GA000693Extracted by LH 19/09/2012 Shropshire Ecological Data Network Database</p> <p>NBN Gateway data: Suffolk Biological Records Centre GA000623Extracted by LH 19/09/2012 Suffolk Biological Records Centre (SBRC) dataset</p> <p>NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA001098Extracted by LH 19/09/2012 Wiltshire and Swindon Habitats Directive (Article 17) Species - Reporting Group Use Only</p> <p>NBN Gateway data: Worcestershire Biological Records Centre GA000712Extracted by LH 19/09/2012 WBRC Species data for Worcestershire collated by date.</p> <p>NBN Gateway data: Yorkshire Wildlife Trust GA000837Extracted by LH 19/09/2012 Yorkshire Wildlife Trust - Non-sensitive records from all taxonomic groups</p> <p>NIEA emailed to JNCC (LH by Kyle Hunter 17/09/2014 Records held on CCW's invertebrate database - added by Mike Howe (CCW) 02/10/2012 SW Pilot Project BAP Species Inventory 2002</p> <p>UK Distribution Map data sources</p> <p>AHVLA data emailed to JNCC (LH) by Scott Sellers under licence 19/09/2012; David Rogers Associates</p> <p>BIS CCW Abergavenny SSSI Scientific Data Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Cardiff Miscellaneous records (SEWBReC) - CCW Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Priority Invertebrate Records 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 BIS Casual Records Crayfish dataset (1650-2003)</p> <p>Devon incidental species records 1950-2002</p> <p>NBN Gateway data: Biological Records Centre GA000154Extracted by LH 19/09/2012 Crayfish (Crustacea; Astacura) data for Britain and</p>
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	<p>Ireland to 2003</p> <p>NBN Gateway data: Biological Records In Essex GA000951Extracted by LH 19/09/2012 White-Clawed Crayfish <i>Austropotamobius pallipes</i> Records for Essex from 1971-2010</p> <p>NBN Gateway data: Bristol Regional Environmental Records Centre GA001100Extracted by LH 19/09/2012 BRERC JNCC May 2012</p> <p>NBN Gateway data: Countryside Council for Wales CCWJMP03Extracted by LH 19/09/2012 UK Biodiversity Action Plan Invertebrate Data for Wales</p> <p>NBN Gateway data: Derbyshire Biological Records Centre GA000622Extracted by LH 19/09/2012 Derbyshire & Peak District Protected Species Database (Summary of available records 1970-2008)</p> <p>NBN Gateway data: Dorset Environmental Records Centre GA001010Extracted by LH 19/09/2012 Dorset Important Species 2012 for Natural England use only</p> <p>NBN Gateway data: Environment Agency GA001129Extracted by LH 19/09/2012 Environment Agency Rare and Protected Species records v1</p> <p>NBN Gateway data: extracted by LH 11/09/2012 Biological Records Centre GA000154 Crayfish (Crustacea; Astacura) data for Britain and Ireland to 2003</p> <p>NBN Gateway data: extracted by LH 11/09/2012 Northern Ireland Environment Agency GA000079 EHS Species Datasets</p> <p>NBN Gateway data: Herefordshire Biological Records Centre GA001084Extracted by LH 19/09/2012 Herefordshire Biological Records Centre Species Records</p> <p>NBN Gateway data: Norfolk Biodiversity Information Service GA000908Extracted by LH 19/09/2012 Norfolk Environment Agency Priority Species Records</p> <p>NBN Gateway data: Nottinghamshire Biological and Geological Records Centre GA000540Extracted by LH 19/09/2012 NBGRC Crayfish Dataset</p> <p>NBN Gateway data: Shropshire Ecological Data Network GA000693Extracted by LH 19/09/2012 Shropshire Ecological Data Network Database</p> <p>NBN Gateway data: Suffolk Biological Records Centre GA000623Extracted by LH 19/09/2012 Suffolk Biological Records Centre (SBRC) dataset</p> <p>NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA001098Extracted by LH 19/09/2012 Wiltshire and Swindon Habitats Directive (Article 17) Species - Reporting Group Use Only</p> <p>NBN Gateway data: Worcestershire Biological Records Centre GA000712Extracted by LH 19/09/2012 WBRC Species data for Worcestershire collated by date.</p> <p>NBN Gateway data: Yorkshire Wildlife Trust GA000837Extracted by LH 19/09/2012 Yorkshire Wildlife Trust - Non-sensitive records from all taxonomic groups</p> <p>NIEA emailed to JNCC (LH by Kyle Hunter 17/09/2014 Records held on CCW's invertebrate database - added by Mike Howe (CCW) 02/10/2012 SW Pilot Project BAP Species Inventory 2002</p>
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2.3 Range

2.3.1 Surface area Range	78018	
	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.	
2.3.2 Method used Surface area of Range	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	
2.3.3 Short-term trend Period	2001-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.3.4 Short term trend Trend direction	decrease	
	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.	
2.3.5 Short-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
2.3.6 Long-term trend Period Optional	1990-2012	
	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	decrease	
	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	
	b) Operator for FRR	much more than

	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	c) FRR is unknown (indicated by "true")	False
	d) Method used to set FRR	
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 apparent increase in range is due to better recording rather than a genuine increase. There has actually been a decline.	
	b) Improved knowledge/more accurate data?	True
	The apparent increase in range is due to better recording rather than a genuine increase. There has actually been a decline.	
	c) Use of different method (e.g. "Range tool")?	False
Use of a revised UK range mapping tool had little effect on the calculation for surface area of range.		

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 10x10 km grid cells
	The population unit is the same as reported in 2007.	
	b) Minimum	192
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	c) Maximum	223
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	There is insufficient information to give a precise population estimate.
2.4.4 Year or period	2001-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.5 Method used Population size	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	
2.4.6 Short-term trend Period	2001-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.7 Short-term trend Trend direction	decrease >1%/year	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.8 Short-term trend Magnitude	a) Minimum	
Optional		
	b) Maximum	
	c) Confidence interval	
2.4.9 Short-term trend Method used	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	
2.4.10 Long-term trend – Period	1989-2012	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.11 Long-term trend Trend direction	decrease 1% or less/year	
Optional	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.12 Long-term trend Magnitude	a) Minimum	

Optional		
	b) Maximum	
	c) Confidence interval	
2.4.13 Long term trend Method used	Estimate based on partial data with some extrapolation and/or modelling	
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	much more than
	c) FRP is unknown (indicated by "true")	False
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 apparent increase in population is due to better data and not thought to be a genuine increase. There has actually been a decline.	
	b) Improved knowledge/more accurate data?	True
	The apparent increase in population is due to better data and not thought to be a genuine increase. There has actually been a decline.	
	c) Use of different method (e.g. "Range tool")?	False
	The apparent increase in population is due to better data and not thought to be a genuine increase. There has actually been a decline.	

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	2007-2012
	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 General quality assessment (GQA) as undertaken by the Environment Agency.
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information
2.5.5 Short-term trend Period	2000-2012
	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	Optional
2.5.8 Long-term trend Trend direction	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
	The surface area of habitat is unknown so no comparison is possible.
	b) Improved knowledge/more accurate data? False
	The surface area of habitat is unknown so no comparison is possible.

	c) Use of different method (e.g. "Range tool")?	False
	The surface area of habitat is unknown 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	
A07: use of biocides, hormones and chemicals	H	O
I01: invasive non-native species	H	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	M	X
A02: modification of cultivation practices	L	X
A10: Restructuring agricultural land holding	L	X
A11: Agriculture activities not referred to above	L	
D01: Roads, paths and railroads	L	
E03: Discharges	L	X
F01: Marine and Freshwater Aquaculture	L	
F02: Fishing and harvesting aquatic resources	L	X
F06: Hunting, fishing or collecting activities not referred to above	L	
H02: Pollution to groundwater (point sources and diffuse sources)	L	X
J02: human induced changes in hydraulic conditions	L	
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

2.6.1 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	
K03: Interspecific faunal relations	H	
A01: Cultivation	L	NPX
A07: use of biocides, hormones and chemicals	L	OX
A10: Restructuring agricultural land holding	L	X
E03: Discharges	L	X
F01: Marine and Freshwater Aquaculture	L	
F02: Fishing and harvesting aquatic resources	L	X
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	L	X
H02: Pollution to groundwater (point sources and diffuse sources)	L	X
J02: human induced changes in hydraulic conditions	L	X
M01: Changes in abiotic conditions	L	
XO: Threats and pressures from outside the Member State	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	<p>The spread of signal crayfish into waterways and water bodies occupied by white-clawed crayfish is the main pressure affecting the white clawed cray fish, and normally indicates the extinction of the latter as a consequence of competition and crayfish plague. Whilst signals remain within a catchment - and there is still no way of effectively eradicating signals - there is little point in restocking contiguous waterways. One option may be the establishment of Ark sites -discrete, isolated water bodies free of signals and crayfish plague</p> <p>For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.</p>
2.8.3 Trans-boundary assessment	

2.9 Conclusions (<i>assessment of conservation status at end of reporting period</i>)		
2.9.1 Range	a) Conclusion	Bad
	Range has been assessed as Bad because surface area of range is thought to be more than 10% below the FRV, and the short term range trend is declining.	
	b) Qualifier	declining
	The short term range trend is declining.	
2.9.2 Population	a) Conclusion	Bad
	Population has been assessed as Bad because the population estimate is thought to be more than 25% below the FRV, and the short term range trend is declining by more than 1% per year.	
	b) Qualifier	declining
2.9.3 Habitat for the species	a) Conclusion	Favourable
	Habitat for species has been assessed as Favourable because there is sufficient habitat, it is of moderate quality and the habitat short term trend is increase.	
	The main problem for the species is not habitat extent and physical habitat characteristics, but spread of the non-native signal crayfish and crayfish plague.	
	b) Qualifier	
2.9.4 Future prospects	a) Conclusion	Bad
	Future prospects is assessed as Bad on the basis of assessments of the	

	<p>future prospects of the three parameters, range, population and habitat for species:</p> <p>Range future prospects: Bad</p> <p>Population future prospects: Bad</p> <p>Habitat future prospects: Good</p> <p>Overall future prospects: U2</p> <p>If current declines due to the signal crayfish continue, it is possible that this species will become restricted to isolated water bodies within the conservation Ark series, and be entirely lost in rivers, streams and canals.</p>		
	<table border="1"> <tr> <td>b) Qualifier</td> <td>declining</td> </tr> </table>	b) Qualifier	declining
b) Qualifier	declining		
	The decline in range and population is likely to continue in the future.		
2.9.5 Overall assessment of Conservation Status	Bad		
	The overall assessment is Bad because range, population and future prospects have been assessed as Bad.		
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	number of map 10x10 km grid cells
	b) Minimum	41
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) Maximum	54
	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)	decrease	
Optional	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
2.0: Other agriculture-related measures	Y			Y		L			Y		Y	Y		Y	
3.2: Adapt forest management	Y	Y		Y		L			Y					Y	
4.1: Restoring/improving water quality	Y	Y		Y		H			Y		Y	Y		Y	
4.3: Managing water abstraction	Y					L			Y		Y			Y	
6.1: Establish protected areas/sites	Y	Y		Y	Y	H			Y		Y	Y		Y	Y
6.3: Legal protection of habitats and species	Y				Y	L	Y				Y	Y			
7.0: Other species management measures				Y		L			Y				Y		

7.1: Regulation/ Management of hunting and taking					Y	M			Y		Y				
7.2: Regulation/ Management of fishery in limnic systems	Y	Y		Y		L			Y		Y	Y		Y	
7.4: Specific single species or species group management measures	Y		Y	Y	Y	H			Y		Y	Y	Y		Y

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