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

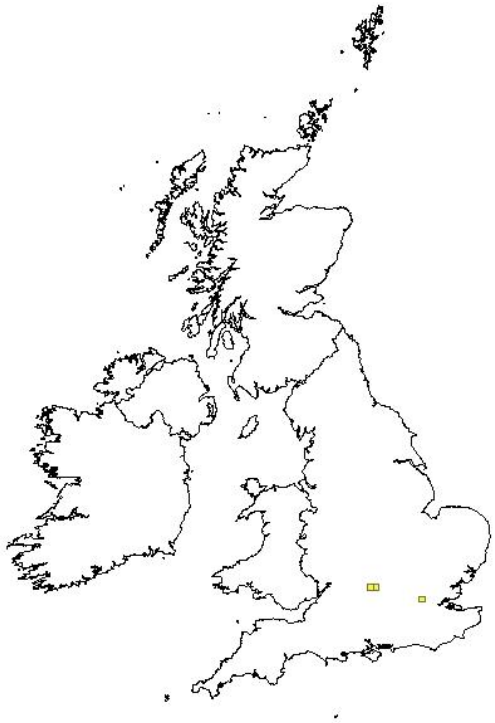
Species:

S1614 - Creeping marshwort (*Apium repens*)

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

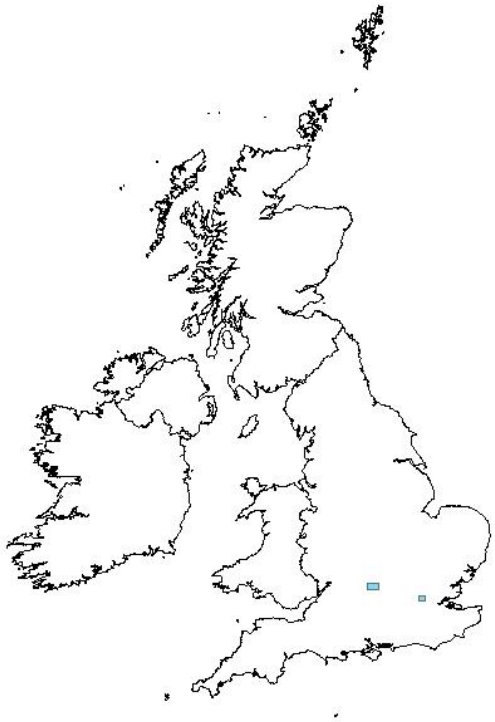
Field name	*Brief explanations*	
0.2 Species	**0.2.1 Species code**	**S1614**
	0.2.2 Species scientific name	***Apium repens***
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	

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	**2003-2009**
	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 20km. For further details see the 2013 Article 17 UK Approach document.



2.1 Biogeographical region & marine regions	**ATL**
2.2 Published sources	**Apium repens Conservation Report, 2010. Unpublished report about monitoring at Walthamstow Marshes, Brian Wurzell, February 22nd 2011** **Ashmolean Natural History Society of Oxfordshire, Rare Plants Group. Creeping marshwort, Apium repens, Binsey Green SLINC Oxon. Unpublished report, C. R. Lambrick, 18th Sept 2012** **Ashmolean Natural History Society of Oxfordshire, Rare Plants Group. Apium repens, Creeping marshwort, North Hinksey 2012. Unpublished report. C. R. Lambrick, 18th Sept 2012** **Ashmolean Natural History Society of Oxfordshire, Rare Plants Group: Annual monitoring reports (2007-2012).** **Biological Records Centre. Online Atlas of the British Flora. Http://www.brc.ac.uk/plantatlas/index.php?q=plant/apium-repens**

	Lambrick C. (2007). The plants we monitor - Apium repens, Creeping Marshwort. Ashmolean Natural History Society of Oxfordshire Rare Plants Group 2007 Newsletter http://www.anhso.org.uk/ **Lambrick C. (2008). The plants we monitor - Apium repens, Creeping Marshwort. Ashmolean Natural History Society of Oxfordshire Rare Plants Group 2008 Newsletter http://www.anhso.org.uk/** **Lambrick C. (2009). The plants we monitor - Apium repens, Creeping Marshwort. Ashmolean Natural History Society of Oxfordshire Rare Plants Group 2009 Newsletter http://www.anhso.org.uk/** **Rosenthal, G. & Lederbogen D. (2008). Response of the clonal plant Apium repens (Jacq.) Lag. To extensive grazing. Flora 203, 141-151** **UK distribution map data sources** **BSBI MAPMATE database (includes import from several data centres)** **BSBI: Ashmolean Natural History Society (1999-2004) 2004 Sent to JNCC 18/7/2012** UK Distribution Map data sources BSBI MAPMATE database (includes import from several data centres) BSBI: Ashmolean Natural History Society (1999-2004) 2004 Sent to JNCC 18/7/2012

2.3 Range	
2.3.1 Surface area Range	**300**
	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	**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
2.3.3 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	**stable**
	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	**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	**increase**	
	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**	**300**
	The long term trend direction was derived by comparing the range map in 1.1.5 with the range map produced in the 2007 report, by considering the range trend in the 2007 report, and by considering any further information provided by the UK country conservation agencies. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	b) Maximum	**400**
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.3.9 Favourable reference range	**a) Value in km²**	**400**
	The FRV for range has been increased from 300 to 400 because this greater area is now believed to be required to support a viable population. 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 FRV for range has been increased from 300 to 400 because this greater area is now believed to be required to support a viable population. This value 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 for range has been increased from 300 to 400 because this greater area is now believed to be required to support a viable population. This value 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 apparent increase in range is not genuine. The 2007 range was the same as is reported now, but was previously reported as two hectads rather than three hectads in error.	
	b) Improved knowledge/more accurate data?	**True**
	The apparent increase in range is not genuine. The 2007 range was the same as is reported now, but was previously reported as two hectads rather than three hectads in error.	
	c) Use of different method (e.g. "Range tool")?	**False**
	The apparent increase in range is not genuine. The 2007 range was the same as is reported now, but was previously reported as two hectads rather than three hectads in error.	

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 *(if 2.4.1 filled in)*	**a) Unit**	**number of localities**
	The population unit is the same as reported in 2007.	
	b) Minimum	**3**
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	c) Maximum	**4**
	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"**	**Locality is defined as a single management unit separated from other localities by unsuitable habitat. There are sub-populations within the localities occupying suitable pockets of habitat but linked by management continuity (e.g. with similar stock grazing and subject to the same water management regime).**
	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	**Counting individuals is difficult because of the growth habit with horizontal stems connecting many growth nodes. More significantly, perhaps, the plant annually fluctuates in numbers too greatly (depending heavily on water levels as well as on grazing pressure and other factors) to make such data useful. It is mobile and able to move about the flood plain responding to suitable conditions as they appear.**
2.4.4 Year or period	**2007-2012**	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.5 Method used Population size	**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	
2.4.6 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	**stable**	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.8 Short-term trend Magnitude Optional	**a) Minimum**	
	b) Maximum	
	c) Confidence interval	
2.4.9 Short-term trend Method used	**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	
2.4.10 Long-term trend – Period Optional	**1989-2012**	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	

2.4.11 Long-term trend Trend direction Optional	**increase**	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.12 Long-term trend Magnitude Optional	**a) Minimum**	**300**
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	b) Maximum	**400**
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	c) Confidence interval	
2.4.13 Long term trend Method used Optional	**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	
2.4.14 Favourable reference population	**a) Number of individuals/agreed exceptions/other units**	**6**
	The FRV for population is the same as reported in 2007. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	b) Operator	
	c) FRP is unknown (indicated by "true")	**False**
	d) Method used to set FRP	**The favourable reference value is the same as used in the 2007 Article 17 report. The value is considered to be large enough for the population to be viable and no lower than the population estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document and relevant country-level reporting information.**
	The favourable reference value is the same as used in the 2007 Article 17 report. The value is considered to be large enough for the population to be viable and no lower than the population estimate from when the Habitats Directive came into force in the UK. For further details please see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.4.15 Reason for change	**a) Genuine**	**False**

Is the difference between the value reported at 2.4.1 or 2.4.2 and the previous reporting round mainly due to:	**change?**	
	Not applicable because the population reported in 2007 is within the range of the current population estimate.	
	b) Improved knowledge/more accurate data?	**False**
	Not applicable because the population reported in 2007 is within the range of the current population estimate.	
	c) Use of different method (e.g. "Range tool")?	**False**
	Not applicable because the population reported in 2007 is within the range of the current population estimate.	

2.5 Habitat for the species		
2.5.1 Area estimation	**0.0006**	
	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	**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	**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.	
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	**Assessment of each site, considering vegetation structure and conservation management.**
	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	**stable**	
	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	**1989-2012**	
	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 Optional	**increase**	
	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	
A04: grazing	H	
J02: human induced changes in hydraulic conditions	H	
I01: invasive non-native species	M	

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	
A04: grazing	H	
J02: human induced changes in hydraulic conditions	H	
E01: Urbanised areas, human habitation	M	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	M	
I01: invasive non-native species	M	

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.7.1 Method used – Threats	**expert opinion**
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.

2.8 Complementary information	
2.8.1 Justification of % thresholds for trends	
2.8.2 Other relevant information	
2.8.3 Trans-boundary assessment	

2.9 Conclusions *(assessment of conservation status at end of reporting period)*		
2.9.1 Range	**a) Conclusion**	**Bad**
	Range has been assessed as Bad because the surface area of range is more than 10% below the FRR.	
	b) Qualifier	**stable**
	The short term range trend is stable because the number of sites has not changed.	
2.9.2 Population	**a) Conclusion**	**Bad**
	Population has been assessed as Bad because the population is more	

	than 25% below the FRV for population. The short term trend is stable.	
	b) Qualifier	**stable**
	Population trend is stable based on the short term population trend.	
2.9.3 Habitat for the species	**a) Conclusion**	**Unknown**
	Habitat has been assessed as unknown because it is unknown whether there is sufficient habitat for the species to be viable, although habitat quality is moderate and the habitat trend is stable.	
	b) Qualifier	
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: Poor Population future prospects: Poor Habitat future prospects: Unknown Overall future prospects: Inadequate. Intensive conservation effort has maintained and increased the number of localities and plants.	
	b) Qualifier	**improving**
	Intensive conservation management has maintained the plant at its two main sites, and successfully established it in a new locality. Future opportunities to establish the plant at additional sites are being explored.	
2.9.5 Overall assessment of Conservation Status	**Bad**	
	The overall conclusion has been assessed as Bad because range and population have been assessed as bad.	
2.9.6 Overall trend in Conservation Status	**stable**	
	On balance, the overall trend is stable.	

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 localities**

	b) Minimum	**1**
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) Maximum	**1**
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
3.1.2 Method used	**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.	
3.1.3 Trend of population size within the network (short-term trend) Optional	**stable**	
	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**
2.1: Maintaining grasslands and other open habitats		Y	Y			H			Y		Y				
6.1: Establish protected areas/sites	Y					H	Y				Y				
6.3: Legal protection of habitats and species	Y					M			Y		Y				

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