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:

S1903 - Fen orchid (*Liparis loeselii*)

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**	**S1903**
	0.2.2 Species scientific name	***Liparis loeselii***
	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	**2007-2010**
	The distribution map is based on species records which are considered to be representative of the range within the current reporting period. For further details see the 2013 Article 17 UK Approach document.

1.1.4 Additional distribution map Optional	**False**
1.1.5 Range map	**True**
	The range map was produced by applying the UK range mapping tool to the distribution map presented in 1.1.4. The alpha value for this species was 20km. For further details see the 2013 Article 17 UK Approach document.

2.1 Biogeographical region & marine regions	**ATL**
2.2 Published sources	**Newberry, C. & Westwood, S. (2008) Kenfig SAC Petalwort Petalophyllum ralfsii (1395) & Fen orchid Liparis loeselii (1903) Summary SAC Monitoring report (draft). Countryside Council for Wales, unpublished report.** **Biological Records Centre. Online Atlas of the British & Irish Flora, Liparis loeselii, Fen Orchid. Http://www.brc.ac.uk/plantatlas/index.php?q=node/1415** **SANFORD, M., 1991. The Orchids of Suffolk. Suffolk Naturalists' Society** **Tim Pankhurst. Unpublished survey data. Plant Life.** **WIGGINTON, M.J. 1999. British Red Data Books 1 Vascular Plants. 3rd Edition. Peterborough: Joint Nature Conservation Committee** **Wilkinson, K. (2007). Monitoring Report for Kenfig/Cynffig SAC 2002 - 2006. CCW internal report.** **UK distribution map data sources** **BIS CCW - HQ Terr - Rare Flowering Plants and Fern Data Emailed to JNCC (no details) Summer 2012**

	BSBI: Norfolk Wildlife Trust (1994-2002) 2002 Sent to JNCC 18/7/2012 **BSBI:Vascular Plant Database. Flora of Norfolk 1999A Flora of Norfolk 1999 Sent to JNCC 18/7/2012** UK Distribution Map data sources BIS CCW - HQ Terr - Rare Flowering Plants and Fern Data Emailed to JNCC (no details) Summer 2012 BSBI: Norfolk Wildlife Trust (1994-2002) 2002 Sent to JNCC 18/7/2012 BSBI:Vascular Plant Database. Flora of Norfolk 1999A Flora of Norfolk 1999 Sent to JNCC 18/7/2012

2.3 Range		
2.3.1 Surface area Range	**231.59**	
	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	**decrease >1%/year**	
	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	**decrease**	

Trend direction Optional	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**	**790**
	The FRV for range is the same as reported in 2007.	
	b) Operator for FRR	
	c) FRR is unknown (indicated by "true")	**False**
	d) Method used to set FRR	**The favourable reference value is the same as used in the 2007 Article 17 report. 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 favourable reference value is the same as used in the 2007 Article 17 report. 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?**	**True**
	The decrease in range is thought to be genuine.	
	b) Improved knowledge/more accurate data?	**False**
	The decrease in range is thought to be genuine.	
	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 *(if 2.4.1 filled in)*	**a) Unit**	**number of localities**
	The population unit is the same as reported in 2007.	
	b) Minimum	**6**
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	c) Maximum	**6**
	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"**	**Species' occurrence in an area of continuous habitat, with individuals usually widely seperated from each other**
	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	**Data on localities is a coarse measurement of change, but the best way to combine dune and fen populations. UK counts of Liparis are attempting to combine two populations with very different ecology, dynamics, management, history and, even, taxonomic status.**
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
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	**decrease**	

Trend direction	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. England have gained one site, and Wales have lost 2 sites since 2001.	
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	**decrease**	
	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**	
	b) Maximum	
	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**	**8**

	units	
	The FRV for population is the same as reported in 2007. 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.	
	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 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 trend is thought to be a genuine decline; the apparent increase in population estimate is thought to be due to better data.	
	b) Improved knowledge/more accurate data?	**True**
	The population trend is thought to be a genuine decline; the apparent increase in population estimate is thought to be due to better data.	
	c) Use of different method (e.g. "Range tool")?	**False**
	The population trend is thought to be a genuine decline; the apparent increase in population estimate is thought to be due to better data.	

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. 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	**1994-2012**	
	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	**Protection is in place for the remaining fen habitat, improvements in water quality, and a number of large-scale restoration projects; dune habitats have not received this level of conservation attention.**
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.5 Short-term trend Period	**2001-2012**	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.6 Short-term trend Trend direction	**decrease 1% or less/year**	
	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	**unknown**	
	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 is unknown so no comparison is possible.	
	b) Improved knowledge/more accurate data?	**False**

	Surface area of habitat is unknown so no comparison is possible.	
	c) Use of different method (e.g. "Range tool")?	**False**
	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	
A03:	H	
C01:	H	
J02: human induced changes in hydraulic conditions	H	
K02: Biocenotic evolution, succession	H	
A04: grazing	L	
B07: Forestry activities not referred to above	L	
H04: Air pollution, air-borne pollutants	L	N
I01: invasive non-native species	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	M	
K02: Biocenotic evolution, succession	M	
A03:	L	

A04: grazing	L	
B07: Forestry activities not referred to above	L	
H04: Air pollution, air-borne pollutants	L	N
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	**UK counts of Liparis are attempting to combine two populations with very different ecology, dynamics, management, history and, even, taxonomic status. In view of other populations of Liparis loeselii var ovata in France and Holland it would be more useful to assess the status of Welsh plants in the wider European context - but separately from those in East Anglia.**
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 FRV for range and the short term trend is declining by more than 1% per year.	
	b) Qualifier	**declining**
	The short term trend is declining.	
2.9.2 Population	**a) Conclusion**	**Bad**
	Population has been assessed as Bad because the population is declining by more than one percent per year and the population estimate is less than FRV.	
	b) Qualifier	**declining**

	The short term trend is declining.	
2.9.3 Habitat for the species	**a) Conclusion**	**Inadequate**
	It is unknown whether there is sufficient amount of habitat for the species to be viable. The quality is moderate and but the trend is a slight decline.	
	b) Qualifier	**declining**
2.9.4 Future prospects	**a) Conclusion**	**Bad**
	Future prospects is assessed as Bad on the basis of assessments of the future prospects of the three parameters, range, population and habitat for species: Range future prospects: Bad Population future prospects: Poor Habitat future prospects: Poor Overall future prospects: Bad. Climate change predictions suggest severe declines in suitable climate envelope for the species within the UK are likely. However, all remaining sites are in SACs, and managed for conservation.	
	b) Qualifier	**stable**
	The future trend has been assessed as stable.	
2.9.5 Overall assessment of Conservation Status	**Bad**	
	The overall assessment is Bad because range, population, and future prosects 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 localities**
	b) Minimum	**6**
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	

	c) Maximum	**6**
	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		L	Y				Y	Y			
4.0: Other wetland-related measures	Y	Y	Y			H			Y		Y				
4.4: Restoring coastal areas				Y		L	Y				Y	Y			
6.1: Establish protected areas/sites	Y	Y				H	Y				Y				

6.3: Legal protection of habitats and species	Y	Y				M			Y		Y				

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