

**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

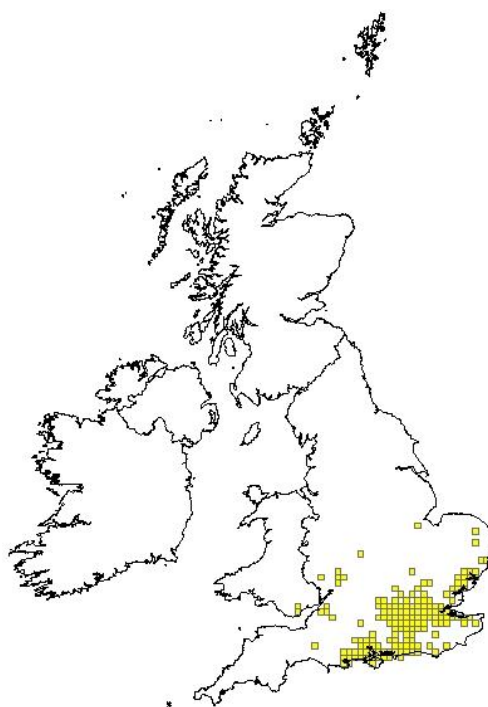
Species:

S1083 - Stag beetle (*Lucanus cervus*)

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

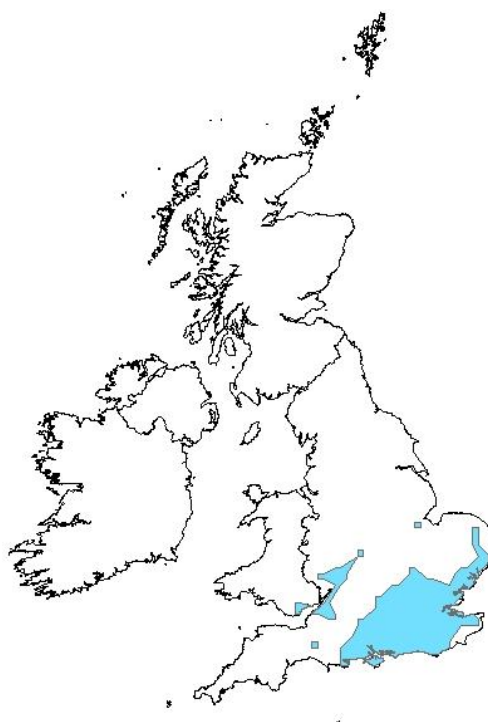
<i>Field name</i>	<i>Brief explanations</i>	
0.2 Species	0.2.1 Species code	S1083
	0.2.2 Species scientific name	<i>Lucanus cervus</i>
	0.2.3 Alternative species scientific name Optional	
	0.2.4 Common name Optional	

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	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	2006-2011
	The distribution map is based on species records which are considered to be representative of the range within the current reporting period. For further details see the 2013 Article 17 UK Approach document.

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



2.1 Biogeographical region & marine regions	ATL
2.2 Published sources	<p>HARVEY DJ and GANGE AC (2011) The stag beetle: a collaborative conservation study across Europe, Insect Conservation and Diversity (2011) 4, 2-3.</p> <p>Hawes, C, (2009) Radio-telemetric monitoring of stag beetles <i>Lucanus cervus</i> at two sites in the United Kingdom: limited dispersal and its implications for conservation, in 2nd meeting of the European Stag Beetle Group December 5th 2009, Leiden, http://www.repository.naturalis.nl/document/157904.</p> <p>http://www.rspb.org.uk/naturecount/results2011.aspx</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>London Wildlife Trust (2011) Staggering Gains: Report of the 2011 survey of stag beetle in Greater London.</p>

<http://www.wildlondon.org.uk/stag-beetle-survey-2011-12>

Smith, M. 2003. National stag beetle survey 2002. People's Trust for Endangered Species.

Smith, M.N. 2011. Great Stag Hunt III: National stag beetle survey 2006 - 2007, PTES. [Http://www.ptes.org/?page=392](http://www.ptes.org/?page=392)

Rink M, and Sinsch U, (2007) Radio-telemetric monitoring of dispersing stag beetles: implications for conservation, Journal of Zoology, Volume 272, Issue 3, pages 235-243, July 2007. UK distribution map data sources

M. Smith (pers. comm.), Independent Consultant

NBN Gateway data: Bristol Regional Environmental Records Centre GA001100Extracted by LH 19/09/2012 BRERC JNCC May 2012

NBN Gateway data: Dorset Environmental Records Centre GA001010Extracted by LH 19/09/2012 Dorset Important Species 2012 for Natural England use only

NBN Gateway data: Hertfordshire Biological Records Centre GA001009Extracted by LH 19/09/2012 Hertfordshire Miscellaneous records

NBN Gateway data: Kent & Medway Biological Records Centre GA000618Extracted by LH 19/09/2012 Coleoptera: Records for Kent for the period 1978 to 2007

NBN Gateway data: National Trust GA001105Extracted by LH 19/09/2012 Extract of National Trust species database covering Article 17 species

NBN Gateway data: People's Trust for Endangered Species GA000634Extracted by LH 19/09/2012 National Stag Beetle survey 2007 - Great Stag Hunt 3

NBN Gateway data: Royal Horticultural Society GA000550Extracted by LH 19/09/2012 RHS monitoring of native and naturalised plants and animals at its gardens and surrounding areas

NBN Gateway data: Royal Horticultural Society GA000927Extracted by LH 19/09/2012 Records from the RHS insect reference collection

NBN Gateway data: Suffolk Biological Records Centre GA000623Extracted by LH 19/09/2012 Suffolk Biological Records Centre (SBRC) dataset

NBN Gateway data: Surrey Biodiversity Information Centre GA000735Extracted by LH 19/09/2012 Surrey Wildlife Trust Nature Reserves - Tranche 1 Species Records

NBN Gateway data: Sussex Biodiversity Record Centre GA001076Extracted by LH 19/09/2012 SxBRC Full dataset for Environment Agency and Natural England use only.

NBN Gateway data: Thames Valley Environmental Records Centre GA000531Extracted by LH 19/09/2012 Local Wildlife Site Surveys Berkshire

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>NBN Gateway data: Worcestershire Biological Records Centre GA000712 Extracted by LH 19/09/2012 WBRC Species data for Worcestershire collated by date.</p> <p>UK Distribution Map data sources</p> <p>M. Smith (pers. comm.), Independent Consultant</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: 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: Hertfordshire Biological Records Centre GA001009 Extracted by LH 19/09/2012 Hertfordshire Miscellaneous records</p> <p>NBN Gateway data: Kent & Medway Biological Records Centre GA000618 Extracted by LH 19/09/2012 Coleoptera: Records for Kent for the period 1978 to 2007</p> <p>NBN Gateway data: National Trust GA001105 Extracted by LH 19/09/2012 Extract of National Trust species database covering Article 17 species</p> <p>NBN Gateway data: People's Trust for Endangered Species GA000634 Extracted by LH 19/09/2012 National Stag Beetle survey 2007 - Great Stag Hunt 3</p> <p>NBN Gateway data: Royal Horticultural Society GA000550 Extracted by LH 19/09/2012 RHS monitoring of native and naturalised plants and animals at its gardens and surrounding areas</p> <p>NBN Gateway data: Royal Horticultural Society GA000927 Extracted by LH 19/09/2012 Records from the RHS insect reference collection</p> <p>NBN Gateway data: Suffolk Biological Records Centre GA000623 Extracted by LH 19/09/2012 Suffolk Biological Records Centre (SBRC) dataset</p> <p>NBN Gateway data: Surrey Biodiversity Information Centre GA000735 Extracted by LH 19/09/2012 Surrey Wildlife Trust Nature Reserves - Tranche 1 Species Records</p> <p>NBN Gateway data: Sussex Biodiversity Record Centre GA001076 Extracted by LH 19/09/2012 SxBRC Full dataset for Environment Agency and Natural England use only.</p> <p>NBN Gateway data: Thames Valley Environmental Records Centre GA000531 Extracted by LH 19/09/2012 Local Wildlife Site Surveys Berkshire</p> <p>NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA001098 Extracted 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 GA000712 Extracted by LH 19/09/2012 WBRC Species data for Worcestershire collated by date.</p>
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2.3 Range

2.3.1 Surface area

26941

Range	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	1991-2012	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.3.7 Long-term trend Trend direction Optional	stable	
	The long term trend direction was derived by comparing the range map in 1.1.5 with the range map produced in the 2007 report, by considering the range trend in the 2007 report, and by considering any further information provided by the UK country conservation agencies. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.3.8 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
2.3.9 Favourable reference range	a) Value in km²	
	b) Operator for FRR	approximately equal to

	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 reduction of range when using current distribution records is most likely due to lack of recording particularly in northern and western areas after the intensive survey of the PTES Great Stag hunt had passed.	
	b) Improved knowledge/ more accurate data?	True
	The apparent reduction of range when using current distribution records is most likely due to lack of recording particularly in northern and western areas after the intensive survey of the PTES Great Stag hunt had passed.	
	c) Use of different method (e.g. "Range tool")?	False
The apparent reduction of range when using current distribution records is most likely due to lack of recording particularly in northern and western areas after the intensive survey of the PTES Great Stag hunt had passed.		

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	158
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	c) Maximum	295
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	a) Definition of "locality"	

Optional	b) Method to convert data	
	c) Problems encountered to provide population size estimation	With a larval life-cycle of 3 to 7 years any site loses will be hard to detect until all the larvae have bred through, and no adults does not necessarily equate with species loss. Records for the stag beetle are from a citizen science recoding scheme which did not standardise recording effort. A very large number of records were submitted through the PTES Great Stag Hunt in 1998. Fewer have since been recorded, but this is likely to reflect less recording rather than a genuine decline in population or range.
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	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	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	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 –	1988-2012	

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 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	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	
2.4.14 Favourable reference population	a) Number of individuals/agreed exceptions/other units	228
	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 estimate from 2007 is within the range of the population estimate reported now.	
	b) Improved knowledge/more accurate data?	False
	The population estimate from 2007 is within the range of the population estimate reported now.	
	c) Use of different method (e.g. "Range tool")?	False
	The population estimate from 2007 is within the range of the population estimate reported now.	

2.5 Habitat for the species		
2.5.1 Area estimation	The specific area of habitat occupied by this species in the UK is unknown.	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	There is thought to be a sufficient amount of habitat in the UK to support a viable population of the species.	
2.5.2 Year or period	n/a For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.3 Method used Habitat for the species	Absent data For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
2.5.4 Quality of the habitat	a) Habitat quality	Moderate
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	b) Assessment method	Expert opinion suggests quality is moderate, although there is no systematic way of assessing the resource.
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 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	
E01: Urbanised areas, human habitation	H	
B02: Forest and Plantation management & use	M	

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.
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2.7 Threats		
a) Threat	b) Ranking	c) Pollution qualifier
	H = high importance (max 5 entries) M = medium importance L = low importance	
B02: Forest and Plantation management & use	H	
E01: Urbanised areas, human habitation	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	<p>The apparent reduction of range when using current distribution records is most likely due to lack of recording particularly in northern and western areas after the intensive survey of the PTES Great Stag hunt had passed. Although PTES have continued to run the great stag hunt and are doing so again in 2012, the key thrust of the work remains close to the end of the last reporting period, with no 2007-2012 analysis yet performed. For this species it is hard to distinguish genuine change from a change in recording effort, but it is thought that the species has remained relatively stable in the short term.</p> <p>For further information please see relevant country-level 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	Favourable
	Range has been assessed as Favourable because surface area of range is approximately equal to current and the short term trend is thought to	

	be stable.
	b) Qualifier
2.9.2 Population	a) Conclusion Favourable
	Population has been assessed as Favourable because the FRV for population is within the estimated range for the population estimate, population was assessed as Favourable in 2007, and the short term trend is stable.
	b) Qualifier
2.9.3 Habitat for the species	a) Conclusion Favourable
	Habitat is assessed as Favourable because there is thought to be sufficient habitat to allow the species to be viable and the habitat quality is thought to be moderate, despite the trend being unknown.
	b) Qualifier
2.9.4 Future prospects	a) Conclusion Favourable
	Future prospects is assessed as Favourable on the basis of assessments of the future prospects of the three parameters, range, population and habitat for species: Range future prospects: Good Population future prospects: Good Habitat future prospects: Good Overall future prospects: Favourable. Conservation measures are thought to be sufficient to reduce impacts of the main pressures and threats for this species.
	b) Qualifier
2.9.5 Overall assessment of Conservation Status	Favourable
	The overall assessment is Favourable because all parameter assessments are Favourable.
2.9.6 Overall trend in Conservation Status	

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

3.1 Population		
3.1.1 Population size Estimation of population size included in the SAC network	a) Unit number of map 10x10 km grid cells	
	b) Minimum 10	
	For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
	c) Maximum 10	
	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 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.	
3.1.3 Trend of population size within the network (short-term trend)	stable For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information.	
Optional		

3.2 Conservation measures															
Conservation measures taken (i.e. already being implemented) within the reporting period and provided information about their importance, location and evaluation.															
3.2.1 Measure	3.2.2 Type					3.2.3 Ranking H = high importance M = medium importance L = low importance	3.2.4 Location where the measure is PRIMARILY applied			3.2.5 Broad evaluation of the measure					
	a) Legal/statutory	b) Administrative	c) Contractual	d) Recurrent	e) One-off		a) Inside	b) Outside	c) Both inside & outside	a) Maintain	b) Enhance	c) Long term	d) No effect	e) Unknown	f) Not evaluated
1.3: No measure known/impossible to carry out specific measures					Y	L		Y							Y

3.1: Restoring/improving forest habitats				Y		M			Y		Y				
6.1: Establish protected areas/sites	Y	Y				M		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.