

**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

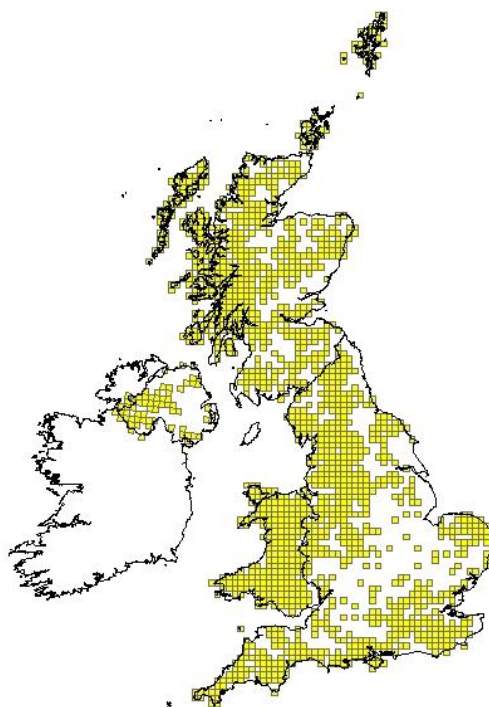
Species:

S1409 - Bog-mosses (*Sphagnum sp.*)

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 | S1409 |
| | 0.2.2 Species scientific name | <i>Sphagnum</i> sp. |
| | 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. | | |



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| 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 | 1989-2012 |
| | 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. |

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| 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 these species was 18km. For further details see the 2013 Article 17 UK Approach document. |



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| 2.1 Biogeographical region & marine regions | ATL |
| 2.2 Published sources | <p>Atherton, I., Bosanquet, S., and Lawley, M. 2010. Mosses and Liverworts of Britain and Ireland- a field guide. British Bryological Society, Plymouth.</p> <p>BERENDSE, F., VAN BREEMEN, N., RYDIN, H., BUTTLER, A., HEIJMANS, M., HOOSBEEK, M.R., LEE, J.A., MITCHELL, E., SAARINEN, T., VASANDER, H. & WALLEN, B. 2001. Raised atmospheric CO2 levels and increased N deposition cause shifts in plant species composition and production in Sphagnum bogs. <i>Global Change Biology</i>, 7: 591-598.</p> <p>BLACKSTOCK, T.H., HOWE, E.A., STEVENS, J.P., BURROWS, C.R. & JONES, P.S. 2008, Habitats of Wales. University of Wales Press.</p> <p>BOSANQUET, S.D.S. 2012. Supporting information for Countryside Council for Wales submission on Sphagnum. British Bryological Society data, and accessed via the NBN Gateway.</p> <p>GARNETT, M.H., INESON, P. & STEVENSON, A.C.. 2000. Effects of burning and grazing on carbon sequestration in a Pennine blanket bog, UK, <i>The Holocene</i>, 10:6, 729-736.</p> <p>HILL, M. O., PRESTON, C. D. & SMITH A. J. E. 1992. Atlas of the</p> |

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| | <p>Bryophytes of Britain and Ireland; Volume 2, Mosses (Except Diplolepideae). Harley Books</p> <p>HUGHES, P.D.M., LOMAS-CLARKE, S.H., SCHULZ, J. & JONES, P. 2007. The declining quality of late-Holocene ombrotrophic communities and the loss of <i>Sphagnum austinii</i> (Sull. ex Aust.) on raised bogs in Wales, <i>The Holocene</i>, 17:5, 613-625.</p> <p>Joint Nature Conservation Committee. 2011. Towards an assessment of the state of UK Peatlands, JNCC report No. 445 http://jncc.defra.gov.uk/page-5861</p> <p>Lockhart, N., Hodgetts, N., and Holyoak, D. 2012. Rare and Threatened Bryophytes of Ireland. National Museums of Northern Ireland.</p> <p>Rothero, G.P. (2012) Surveillance of priority bryophytes in Scotland: <i>Sphagnum</i>. Unpublished report to SNH.</p> <p>SNH SCM reports (various)</p> <p>TUBA, Z., SLACK, N.G. & STARK, L.R. (eds.) 2011. Bryophyte Ecology and Climate Change. Cambridge University Press.</p> <p>UK distribution map data sources</p> <p>BBS data 1989 to 2012 accessed from the NBN Gateway - added by Mike Sutcliffe (NE) 28/09/2012</p> <p>BIS CCW Abergavenny SSSI Scientific Data Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW BBNP Miscellaneous Data (Abergavenny) Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW HQ Phase2 Grassland Survey (BBNP Gwent) Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW HQ Phase2 Grassland Survey (Brecknock) Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW HQ Phase2 Grassland Survey (Camarthen & Dinefwr) Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW HQ Phase2 Grassland Survey (Clwyd) Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Lowland Heathland Survey of Wales: Brecknock and Carmarthenshire, 2000 Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Lowland Heathlands of Wales: Powys, 1999 Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Montgomeryshire General Data Files Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Montgomeryshire Potential SSSI Files Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW NCC/CCW Records Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Newtown SSSI Scientific Data Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW 'NVC Survey of Mynydd Llangatwg and Mynydd Llangynidr'. Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Phase 1 Habitat Survey Radnorshire Target Notes Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Phase1 Habitat Survey Montgomeryshire Target notes Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Powys & BBNP Bryophyte and Vascular Plant Files (Ray Woods' Files) Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Powys & BBNP Lichen Files (Ray Woods' Files)</p> |
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| | <p>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 CCW Radnorshire Grasslands/Mires Files Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Radnorshire Mosses; County Rarities Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Radnorshire Rare Vascular Plant Species Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Swansea (SEWBREC) Emailed to JNCC (no details) Summer 2012</p> <p>NBN Gateway data: Biodiversity Information Service for Powys and Brecon Beacons National Park GA000984 Extracted by LH 13/09/2012 CCW Regional Data : Mid-Wales</p> <p>NBN Gateway data: British Bryological Society GA000144 Extracted by LH 13/09/2012 Bryophyte data for Great Britain from the British Bryological Society held by BRC</p> <p>NBN Gateway data: Cofnod (North Wales Environmental Information Service) GA000747 Extracted by LH 13/09/2012 CCW Regional Data: North Wales</p> <p>NBN Gateway data: Countryside Council for Wales GA000434 Extracted by LH 13/09/2012 Phase 2 Lowland Grassland Survey of Wales</p> <p>NBN Gateway data: Cumbria Biodiversity Data Centre GA000613 Extracted by LH 13/09/2012 Tullie House Museum. Cumbria Wildlife Trust survey records from 1970 - 2007 of Cumbria Wildlife Sites. Various.</p> <p>NBN Gateway data: Dorset Environmental Records Centre GA001111 Extracted by LH 13/09/2012 Dorset Historical Summary Data for Habitats Directive Reporting Group only</p> <p>NBN Gateway data: extracted by LH 11/09/2012 British Bryological Society GA000144 Bryophyte data for Great Britain from the British Bryological Society held by BRC</p> <p>NBN Gateway data: extracted by LH 11/09/2012 Northern Ireland Environment Agency GA000079 EHS Species Datasets</p> <p>NBN Gateway data: extracted by LH 11/09/2012 Northern Ireland Fungus Group EHS00005 Fungi records from Northern Ireland</p> <p>NBN Gateway data: Fife Nature Records Centre GA000387 Extracted by LH 13/09/2012 Records for Fife Nature Records Centre</p> <p>NBN Gateway data: Hampshire Biodiversity Information Centre GA000617 Extracted by LH 13/09/2012 HBIC and partners species records</p> <p>NBN Gateway data: Herefordshire Biological Records Centre GA001084 Extracted by LH 13/09/2012 Herefordshire Biological Records Centre Species Records</p> <p>NBN Gateway data: Kent & Medway Biological Records Centre GA001014 Extracted by LH 13/09/2012 Mosses and Liverworts: Records for Kent.</p> <p>NBN Gateway data: Leicestershire and Rutland Environmental Records Centre GA000150 Extracted by LH 13/09/2012 Leicestershire Bryophyte Data</p> <p>NBN Gateway data: Merseyside BioBank GA000994 Extracted by LH 13/09/2012 North Merseyside Other Taxa (unverified)</p> <p>NBN Gateway data: North & East Yorkshire Ecological Data</p> |
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| | <p>Centre GA000839 Extracted by LH 13/09/2012 North and East Yorkshire Ecological Data Centre - Non-sensitive Records from all taxonomic groups.</p> <p>NBN Gateway data: North East Scotland Biological Records Centre GA000805 Extracted by LH 13/09/2012 NE Scotland moss and liverwort records 1800-2010</p> <p>NBN Gateway data: Pond Conservation GA000459 Extracted by LH 13/09/2012 National Pond Monitoring Network collated pond survey data for Great Britain 1972 to 2007</p> <p>NBN Gateway data: Record, the Biodiversity Information System for Cheshire, Halton, Warrington and the Wirral GA000597 Extracted by LH 13/09/2012 RECORD Bryopsida Data up to 29/05/2009</p> <p>NBN Gateway data: Rotherham Biological Records Centre GA000843 Extracted by LH 13/09/2012 Rotherham Biological Records Centre - Non-sensitive Records from all taxonomic groups</p> <p>NBN Gateway data: Scottish Natural Heritage GA000090 Extracted by LH 13/09/2012 Standing Waters Database - Scotland</p> <p>NBN Gateway data: Scottish Wildlife Trust GA000736 Extracted by LH 13/09/2012 Commissioned surveys and staff surveys and reports for SWT reserves.</p> <p>NBN Gateway data: Sheffield Biological Records Centre GA000878 Extracted by LH 13/09/2012 Sheffield Biological Records Centre- Non-sensitive Records from all taxonomic groups.</p> <p>NBN Gateway data: South East Wales Biodiversity Records Centre GA000823 Extracted by LH 13/09/2012 CCW Regional Data : South East Wales Non-sensitive Species Records</p> <p>NBN Gateway data: Staffordshire Ecological Record GA000548 Extracted by LH 13/09/2012 SER Site-based Surveys</p> <p>NBN Gateway data: Staffordshire Ecological Record GA000549 Extracted by LH 13/09/2012 SER Species-based Surveys</p> <p>NBN Gateway data: Suffolk Biological Records Centre GA000623 Extracted by LH 13/09/2012 Suffolk Biological Records Centre (SBRC) dataset</p> <p>NBN Gateway data: Sussex Biodiversity Record Centre GA001058 Extracted by LH 13/09/2012 UK Habitat Directive data</p> <p>NBN Gateway data: Sussex Biodiversity Record Centre GA001076 Extracted by LH 13/09/2012 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 13/09/2012 Local Wildlife Site Surveys Berkshire</p> <p>NBN Gateway data: The Wildlife Information Centre GA000368 Extracted by LH 13/09/2012 SWT Scottish Borders Local Wildlife Site Survey data 1996-2000 - species information</p> <p>NBN Gateway data: West Wales Biodiversity Information Centre GA000697 Extracted by LH 13/09/2012 CCW Regional Data: all taxa (excluding sensitive species), West Wales</p> <p>NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA000584 Extracted by LH 13/09/2012 Wiltshire & Swindon Site-based Survey Records</p> <p>NBN Gateway data: Wiltshire and Swindon Biological Records</p> |
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Centre GA001098 Extracted by LH 13/09/2012 Wiltshire and Swindon Habitats Directive (Article 17) Species - Reporting Group Use Only
NBN Gateway data: Woodland Condition Survey Group GA000938 Extracted by LH 13/09/2012 Plants recorded during the non-SSSI woodland condition survey 2011
NBN Gateway data: Yorkshire Wildlife Trust GA000837 Extracted by LH 13/09/2012 Yorkshire Wildlife Trust - Non-sensitive records from all taxonomic groups
New Atlas of the British & Irish Flora 2002

UK Distribution Map data sources

BBS data 1989 to 2012 accessed from the NBN Gateway - added by Mike Sutcliffe (NE) 28/09/2012
 BIS CCW Abergavenny SSSI Scientific Data Emailed to JNCC (no details) Summer 2012
 BIS CCW BBNP Miscellaneous Data (Abergavenny) Emailed to JNCC (no details) Summer 2012
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 BIS CCW Montgomeryshire General Data Files Emailed to JNCC (no details) Summer 2012
 BIS CCW Montgomeryshire Potential SSSI Files Emailed to JNCC (no details) Summer 2012
 BIS CCW NCC/CCW Records Emailed to JNCC (no details) Summer 2012
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 BIS CCW Powys & BBNP Lichen Files (Ray Woods' Files) Emailed to JNCC (no details) Summer 2012
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 BIS CCW Radnorshire Mosses; County Rarities Emailed to JNCC (no details) Summer 2012

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| | <p>BIS CCW Radnorshire Rare Vascular Plant Species Emailed to JNCC (no details) Summer 2012</p> <p>BIS CCW Swansea (SEWBREC) Emailed to JNCC (no details) Summer 2012</p> <p>NBN Gateway data: Biodiversity Information Service for Powys and Brecon Beacons National Park GA000984 Extracted by LH 13/09/2012 CCW Regional Data : Mid-Wales</p> <p>NBN Gateway data: British Bryological Society GA000144 Extracted by LH 13/09/2012 Bryophyte data for Great Britain from the British Bryological Society held by BRC</p> <p>NBN Gateway data: Cofnod (North Wales Environmental Information Service) GA000747 Extracted by LH 13/09/2012 CCW Regional Data: North Wales</p> <p>NBN Gateway data: Countryside Council for Wales GA000434 Extracted by LH 13/09/2012 Phase 2 Lowland Grassland Survey of Wales</p> <p>NBN Gateway data: Cumbria Biodiversity Data Centre GA000613 Extracted by LH 13/09/2012 Tullie House Museum. Cumbria Wildlife Trust survey records from 1970 - 2007 of Cumbria Wildlife Sites. Various.</p> <p>NBN Gateway data: Dorset Environmental Records Centre GA001111 Extracted by LH 13/09/2012 Dorset Historical Summary Data for Habitats Directive Reporting Group only</p> <p>NBN Gateway data: extracted by LH 11/09/2012 British Bryological Society GA000144 Bryophyte data for Great Britain from the British Bryological Society held by BRC</p> <p>NBN Gateway data: extracted by LH 11/09/2012 Northern Ireland Environment Agency GA000079 EHS Species Datasets</p> <p>NBN Gateway data: extracted by LH 11/09/2012 Northern Ireland Fungus Group EHS00005 Fungi records from Northern Ireland</p> <p>NBN Gateway data: Fife Nature Records Centre GA000387 Extracted by LH 13/09/2012 Records for Fife Nature Records Centre</p> <p>NBN Gateway data: Hampshire Biodiversity Information Centre GA000617 Extracted by LH 13/09/2012 HBIC and partners species records</p> <p>NBN Gateway data: Herefordshire Biological Records Centre GA001084 Extracted by LH 13/09/2012 Herefordshire Biological Records Centre Species Records</p> <p>NBN Gateway data: Kent & Medway Biological Records Centre GA001014 Extracted by LH 13/09/2012 Mosses and Liverworts: Records for Kent.</p> <p>NBN Gateway data: Leicestershire and Rutland Environmental Records Centre GA000150 Extracted by LH 13/09/2012 Leicestershire Bryophyte Data</p> <p>NBN Gateway data: Merseyside BioBank GA000994 Extracted by LH 13/09/2012 North Merseyside Other Taxa (unverified)</p> <p>NBN Gateway data: North & East Yorkshire Ecological Data Centre GA000839 Extracted by LH 13/09/2012 North and East Yorkshire Ecological Data Centre - Non-sensitive Records from all taxonomic groups.</p> <p>NBN Gateway data: North East Scotland Biological Records Centre GA000805 Extracted by LH 13/09/2012 NE Scotland moss and liverwort records 1800-2010</p> <p>NBN Gateway data: Pond Conservation GA000459 Extracted by LH 13/09/2012 National Pond Monitoring Network collated pond survey data for Great Britain 1972 to 2007</p> <p>NBN Gateway data: Record, the Biodiversity Information System for</p> |
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| | <p>Cheshire, Halton, Warrington and the Wirral GA000597 Extracted by LH 13/09/2012 RECORD Bryopsida Data up to 29/05/2009</p> <p>NBN Gateway data: Rotherham Biological Records Centre GA000843 Extracted by LH 13/09/2012 Rotherham Biological Records Centre - Non-sensitive Records from all taxonomic groups</p> <p>NBN Gateway data: Scottish Natural Heritage GA000090 Extracted by LH 13/09/2012 Standing Waters Database - Scotland</p> <p>NBN Gateway data: Scottish Wildlife Trust GA000736 Extracted by LH 13/09/2012 Commissioned surveys and staff surveys and reports for SWT reserves.</p> <p>NBN Gateway data: Sheffield Biological Records Centre GA000878 Extracted by LH 13/09/2012 Sheffield Biological Records Centre- Non-sensitive Records from all taxonomic groups.</p> <p>NBN Gateway data: South East Wales Biodiversity Records Centre GA000823 Extracted by LH 13/09/2012 CCW Regional Data : South East Wales Non-sensitive Species Records</p> <p>NBN Gateway data: Staffordshire Ecological Record GA000548 Extracted by LH 13/09/2012 SER Site-based Surveys</p> <p>NBN Gateway data: Staffordshire Ecological Record GA000549 Extracted by LH 13/09/2012 SER Species-based Surveys</p> <p>NBN Gateway data: Suffolk Biological Records Centre GA000623 Extracted by LH 13/09/2012 Suffolk Biological Records Centre (SBRC) dataset</p> <p>NBN Gateway data: Sussex Biodiversity Record Centre GA001058 Extracted by LH 13/09/2012 UK Habitat Directive data</p> <p>NBN Gateway data: Sussex Biodiversity Record Centre GA001076 Extracted by LH 13/09/2012 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 13/09/2012 Local Wildlife Site Surveys Berkshire</p> <p>NBN Gateway data: The Wildlife Information Centre GA000368 Extracted by LH 13/09/2012 SWT Scottish Borders Local Wildlife Site Survey data 1996-2000 - species information</p> <p>NBN Gateway data: West Wales Biodiversity Information Centre GA000697 Extracted by LH 13/09/2012 CCW Regional Data: all taxa (excluding sensitive species), West Wales</p> <p>NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA000584 Extracted by LH 13/09/2012 Wiltshire & Swindon Site-based Survey Records</p> <p>NBN Gateway data: Wiltshire and Swindon Biological Records Centre GA001098 Extracted by LH 13/09/2012 Wiltshire and Swindon Habitats Directive (Article 17) Species - Reporting Group Use Only</p> <p>NBN Gateway data: Woodland Condition Survey Group GA000938 Extracted by LH 13/09/2012 Plants recorded during the non-SSSI woodland condition survey 2011</p> <p>NBN Gateway data: Yorkshire Wildlife Trust GA000837 Extracted by LH 13/09/2012 Yorkshire Wildlife Trust - Non-sensitive records from all taxonomic groups</p> <p>New Atlas of the British & Irish Flora 2002</p> |
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2.3 Range

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| 2.3.1 Surface area Range | 224732 | |
| | 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 | 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 | 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 |
| | | |

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| | The FRV has been set as approximately equal to current since this is believed to be large enough to support a viable population and is no smaller than the surface area of range when the Habitats Directive came into force in the UK. 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 |
| | Surface area of range was not reported in 2007 so no comparison is possible. | |
| | b) Improved knowledge/more accurate data? | False |
| | Surface area of range was not reported in 2007 so no comparison is possible. | |
| | c) Use of different method (e.g. "Range tool")? | False |
| | Surface area of range was not reported in 2007 so no comparison is possible. | |

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| 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 |
| | For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. | |
| | b) Minimum | 1897 |
| | For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. | |
| 2.4.3 Additional information on population | c) Maximum | 1961 |
| | For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. | |
| | a) Definition of "locality" | |

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| estimates / conversion Optional | | |
| | b) Method to convert data | |
| | c) Problems encountered to provide population size estimation | It is unhelpful to attempt to report population using a finer resolution unit because this is such widespread species group. |
| | For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. | |
| 2.4.4 Year or period | 1989-2012 | 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 | |
| | For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. | |
| 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 Optional | 1989-2012 | For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. |
| | 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 | stable | For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. |
| | For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. | |

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| | 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 | |
| | | |
| | b) Operator | approximately equal to |
| | The FRV has been set as approximately equal to current since this is believed to be large enough to support a viable population and is no smaller than the surface area of range when the Habitats Directive came into force in the UK. For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. | |
| | c) FRP is unknown (indicated by "true") | False |
| | For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. | |
| | 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 population estimate was not reported in 2007 so no comparison is possible. | |
| | b) Improved knowledge/more accurate data? | False |
| | The population estimate was not reported in 2007 so no comparison is possible. | |

| | | |
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| | c) Use of different method (e.g. "Range tool")? | False |
| The population estimate was not reported in 2007 so no comparison is possible. | | |

| 2.5 Habitat for the species | | |
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| 2.5.1 Area estimation | The specific area of habitat occupied by this species in the UK is unknown. Whilst the total area of the habitat resource for this species is unknown in the UK, all countries consider there to be sufficient habitat available to support a viable population. 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 | 1979-2012 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 knowledge of habitat for the species, and protected sites monitoring of associated Annex 1 habitats. |
| 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 | | |
| 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 | a) Genuine change? | False |
| Is the difference between the value reported at 2.5.1 and the previous reporting round mainly due to | Surface area of habitat is unknown and was reported as unknown in 2007 so no comparison is possible. | |
| | b) Improved knowledge/more accurate data? | False |
| | Surface area of habitat is unknown and 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 is unknown and 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 | |
| B01: forest planting on open ground | M | |
| J02: human induced changes in hydraulic conditions | M | |
| K02: Biocenotic evolution, succession | M | |
| A04: grazing | L | |
| A08: Fertilisation | L | |
| A11: Agriculture activities not referred to above | L | |
| C01: Mining and quarrying | L | |
| C03: Renewable abiotic energy use | L | |
| E01: Urbanised areas, human habitation | L | |
| E02: Industrial or commercial areas | L | |
| F04: Taking / Removal of terrestrial plants, general | L | |
| G05: Other human intrusions and disturbances | L | |
| H01: Pollution to surface waters (limnic & terrestrial, marine & brackish) | L | |

| | | |
|--|---|---|
| H04: Air pollution, air-borne pollutants | L | N |
| J01: fire and fire suppression | 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 | |
| J01: fire and fire suppression | H | |
| J02: human induced changes in hydraulic conditions | H | |
| B01: forest planting on open ground | M | |
| C01: Mining and quarrying | M | |
| D01: Roads, paths and railroads | M | |
| A04: grazing | L | |
| A08: Fertilisation | L | |
| A11: Agriculture activities not referred to above | L | |
| C03: Renewable abiotic energy use | L | |
| E01: Urbanised areas, human habitation | L | |
| E02: Industrial or commercial areas | L | |
| F04: Taking / Removal of terrestrial plants, general | L | |
| G05: Other human intrusions and disturbances | L | |

| | | |
|--|---|--|
| H01: Pollution to surface waters (limnic & terrestrial, marine & brackish) | L | |
| H04: Air pollution, air-borne pollutants | L | |
| K02: Biocenotic evolution, succession | L | |
| M01: Changes in abiotic conditions | L | |
| M02: Changes in biotic conditions | L | |
| | | |

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

2.7.1 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

This group of species is widespread and common, with a wide ecological niche so it will always be difficult to report on trends in population, range and habitat.

For further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information. Supporting documentation is provided by CCW.

2.8.3 Trans-boundary assessment

2.9 Conclusions (*assessment of conservation status at end of reporting period*)

2.9.1 Range

a) Conclusion

Favourable

Range has been assessed as Favourable because the FRV is approximately equal to the current surface area of range and the short term range trend is stable. This species is very widespread and found in the majority of 10km squares in the UK.

b) Qualifier

2.9.2 Population

a) Conclusion

Favourable

Population has been assessed as Favourable because the FRV is

| | | |
|--|---|-------------------|
| | approximately equal to the current population and the short term population trend is stable. | |
| | b) Qualifier | |
| 2.9.3 Habitat for the species | a) Conclusion | Inadequate |
| | Habitat for species has been assessed Inadequate. There is thought to be sufficient habitat to support a viable population, the quality of habitat is moderate, but the short term trend is a slight decline. | |
| | b) Qualifier | declining |
| 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. Main threats and pressures are from changes to the fire regime or hydraulic conditions on the sites; protection of wetland areas is thought to be sufficient to mediate this over the considered timescale. | |
| | b) Qualifier | |
| 2.9.5 Overall assessment of Conservation Status | Inadequate | |
| | The overall assessment is Inadequate because habitat has been assessed as Inadequate. | |
| 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 | a) Unit | |
| Estimation of population size included in the SAC network | | |

| | | |
|--|-------------------|--|
| | b) Minimum | |
| | | |
| | c) Maximum | |
| | | |
| 3.1.2 Method used | | |
| 3.1.3 Trend of population size within the network (short-term trend) 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 |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |