

**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

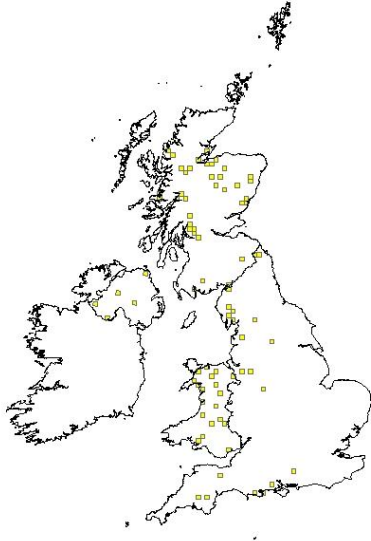
on the implementation of the Directive
from January 2007 to December 2012
Conservation status assessment for

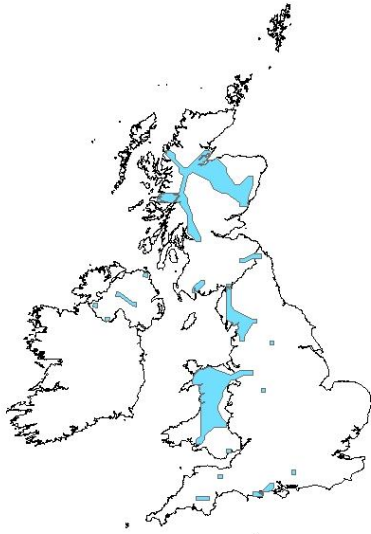
Habitat:

H91D0 - Bog woodland

Reporting format on the 'main results of the surveillance under Article 11' for Annex I Habitats Types

0.2 Habitat code	H91D0
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1.1 Maps	
1.1.1 Distribution map	True
	
	for further details see the 2013 Article 17 UK Approach document
1.1.2 Method used - map	Estimate based on partial data with some extrapolation and/or modelling
	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information
1.1.3 Year or period	1978-2012
	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information
1.1.4 Additional distribution map Optional	False
1.1.5 Range map	True

	
	for further details see the 2013 Article 17 UK Approach document

2.1 Biogeographical region or marine regions	ATL
2.2 Published sources	<p>Information sources as supplied by Natural Resources Wales</p> <p>Blackstock T. H., Howe E. A., Stevens J. P., Burrows C. R. & Jones P. S. 2010. Habitats of Wales. A comprehensive field survey 1979–1997. University of Wales Press, Cardiff.</p> <p>Forestry Commission (2011a). National Forest Inventory Woodland Area Statistics: Wales: http://www.forestry.gov.uk/website/forestry.nsf/byunique/INFD-8EYJWF</p> <p>Forestry Commission (2011b) http://www.forestry.gov.uk/forestry/INFD-8VPJFD</p> <p>Forestry Commission. Impact of Phytophthora diseases on trees: http://www.forestry.gov.uk/fr/INFD-737ESG</p> <p>Guest, D. (2012). Assessing pressures and threats for Article 17 reporting based on information in CCW's Actions Database. CCW Staff Guidance Note.</p> <p>JNCC Bog woodland description: http://jncc.defra.gov.uk/protectedsites/sacselection/habitat.asp?FeatureIntCode=H91D0</p> <p>Latham, J. (2000). Estimates of areas of woodland HSP types and HSD Annex 1 habitats in Wales. Unpublished CCW staff report.</p> <p>Latham, J. (2001). National Vegetation Classification of woodland in Wales: a summary of survey results 1985-2000. CCW Natural Science Report, 01/7/1, CCW, Bangor.</p>

Latham, J., Blackstock, T.H. and Howe, E.A. (2008). Ecological Connectivity in Wales: Planning Action to Help Terrestrial Biodiversity Respond to Habitat Fragmentation and Climate Change. CCW Staff Science Report No. 08/7/1, CCW Bangor.

Watts, K., Griffiths, M., Quine, C., Ray, D. and Humphrey, J.W. (2005). Towards a Woodland Habitat Network for Wales. CCW Science Report 686, CCW Bangor.

Information sources as supplied by Natural England

Jackson, D.L. & McLeod, C.R. (Editors), 2000. ARCHIVED Handbook on the UK status of EC Habitats Directive interest features: provisional data on the UK distribution and extent of Annex I habitats and the UK distribution and population size of Annex II species, Revised 2002. Superseded 2008., JNCC Report 312, 180 pages, ISSN 0963 8091

Rodwell, J.S. (ed) 1991. British Plant Communities volume 1. Woodland and Scrub. Cambridge University Press, Cambridge.

Rodwell, J.S. And Dring, J. 2001. European significance of British woodland types. English Nature Research Report No. 460. (volumes 1-2). English Nature, Peterborough.

UK BAP. Habitat Action Plan for lowland mixed deciduous woodland. Available from JNCC

Information sources as supplied by Northern Ireland Environment Agency

Air Pollution Information System <http://www.apis.ac.uk/>

Bennett, K.D. 1989. A provisional map of forest types of the British Isles 5000 years ago. *Journal of Quaternary Science* 4, 141-144.

Cooper, A. & McCann, T. (2001). The Northern Ireland Countryside Survey 2000. Environment and Heritage Service, Belfast

Cooper, A., McCann, T. and Rogers, D. (2009) Northern Ireland Countryside Survey: Broad Habitat Change 1998-2007. Northern Ireland Environment Agency Research and Development Series No 09/06. NIEA Belfast.

Department of the Environment for Northern Ireland. Northern Ireland Habitat Action Plan – Wet Woodlands - March 05

Department of the Environment for Northern Ireland. (1993) A Planning Strategy for Rural Northern Ireland. Planning Service, Belfast

Department of the Environment (2002). Northern Ireland Biodiversity Strategy. Environment and Heritage Service, Belfast

Department of Regional Development (2001). The Regional Development Strategy 2025. DRD, Belfast

Environment and Heritage Service (2002) Habitats Regulations. A guide for competent authorities. EHS

European Commission (2000). Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. Luxembourg.

Graham, T. (1975). Private Woodland Inventory of Northern Ireland. (1975). Forest Service, Belfast.

Hall, J. 1997. An analysis of National Vegetation Classification survey data. JNCC Report 272, Peterborough.

Jackson, D.L. & McLeod, C.R. (eds.) 2002. Handbook on the UK status of EC

	<p>Habitats Directive interest features: provisional data on the UK distribution and extent of Annex I habitats and the UK distribution and population size of Annex II species. JNCC Report, No. 312. Version 2. www.jncc.gov.uk/page-2447</p> <p>Jones, E.W. 1959. Biological Flora of the British Isles: <i>Quercus</i> L. <i>Journal of Ecology</i> 47, 169-222.</p> <p>Jones, P.S., Stevens, D.P., Blackstock, T.H., Burrows, C.R. & Howe, E.A. 2003. Priority habitats of Wales: A Technical Guide. Cyngor Cefn Gwlad Cymru/Countryside Council for Wales, Bangor</p> <p>Murray, R., McCann, T. and Cooper, A. (1992). A Land Classification and Landscape Ecological Study of Northern Ireland. Department of the Environment NI and Department of Environmental Studies, University of Ulster, Coleraine.</p> <p>Northern Ireland Biodiversity Group (2000). Biodiversity in Northern Ireland: recommendations to Government for a Biodiversity Strategy. HMSO, Belfast</p> <p>McCracken, E. 1971. The Irish Woods Since Tudor Times: Their Distribution and Exploitation. Institute of Irish Studies, Belfast.</p> <p>QUB, 2004. Baseline monitoring of the countryside management scheme in Northern Ireland. Report to DARD.</p> <p>Rackham, O. 1995 Looking for Ancient Woodland in Ireland in <i>Woods, Trees and Forests in Ireland</i>, pp. 1-12. Pilcher, J.R. and Mac an tSaoir, S. S. (eds). Royal Irish Academy, Dublin.</p> <p>Rackham, O. 2003. <i>Ancient Woodland: its History, Vegetation and Uses in England</i> (New Edition). Castlepoint Press, Dalbeattie.</p> <p>Ratcliffe, D. A. 1968. An ecological account of the Atlantic bryophytes in the British Isles. <i>New Phytologist</i> 67, 365-439.</p> <p>Rodwell, J. & Dring, J. 2001. European significance of British woodland types. English Nature Research Report No. 460 (Volumes 1-2). English Nature, Peterborough.</p> <p>Rodwell, J.S. (ed.) 1991. <i>British Plant Communities Volume 1: Woodlands and Scrub</i>. Cambridge University Press, Cambridge.</p> <p>UK Biodiversity Action Plan; Priority Habitat Descriptions. BRIG (ed. Ant Maddock) (2008). <i>Wet Woodlands</i>. JNCC Peterborough.</p> <p>Map Data Sources</p> <p>JNCC International Designations Database. Joint Nature Conservation Committee.</p> <p>NVC Woodland Community Access Database. Joint Nature Conservation Committee.</p> <p>UK distribution map data sources</p> <p>JNCC International Designations Database. Joint Nature Conservation Committee</p> <p>Latham, J. and J. Rothwell: H91D0 Bog Woodland Inventory</p> <p>NVC Woodland Community Access Database. Joint Nature Conservation Committee</p> <p>UK Distribution Map data sources</p> <p>JNCC International Designations Database. Joint Nature Conservation Committee</p> <p>Latham, J. and J. Rothwell: H91D0 Bog Woodland Inventory</p> <p>NVC Woodland Community Access Database. Joint Nature Conservation Committee</p>
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2.3 Range	
2.3.1 Surface area Range	26375.32
	for further details see the 2013 Article 17 UK Approach document
2.3.2 Method used 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
2.3.4 Short-term trend Trend direction	stable
	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	1994-2012
	based on a combination of the trend info given under 2.3.3 and the trend info given in the 2007 Article 17 habitat report (see http://jncc.defra.gov.uk/page-4064) - for further details see the 2013 Article 17 UK Approach document
2.3.7 Long-term trend Trend direction Optional	stable
	based on a combination of the trend info given under 2.3.4 and the trend info given in the 2007 Article 17 habitat report (see http://jncc.defra.gov.uk/page-4064) - for further details see the 2013 Article 17 UK Approach document
2.3.8 Long-term trend Magnitude	a) Minimum

Optional		
	b) Maximum	
2.3.9 Favourable reference range	a) Value in km².	26375.32
	this is an updated value based on the latest version of the UK range mapping tool and the latest 10km square distribution data for the habitat - this data provides a more accurate baseline than used in 2007 to set the Favourable Reference Range value - for further details see the 2013 Article 17 UK Approach document	
	b) Operator	
	c) FRR is unknown (indicated by "True")	False
	d) Method used to set FRR	the approach taken to set the Favourable Reference Range is explained in the 2007 Article 17 habitat report (see http://jncc.defra.gov.uk/page-4064) - further details are given in 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
	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	b) Improved knowledge/more accurate data?	False
	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	c) Use of different method (e.g. "Range tool")	True
	the use of a revised range mapping tool has contributed significantly to the differences in calculated range area - for further details see the 2013 Article 17 UK Approach document	

2.4 Area covered by habitat		
2.4.1 Surface area	Value in km²	12.7
	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.2 Year or period	1980-2012	
	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.3 Method used Area covered by habitat	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	
2.4.4 Short-term trend Period	2001-2012	
	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.5 Short-term trend Trend direction	stable	
	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.6 Short-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
	c) Confidence interval	
2.4.7 Short-term trend Method used	Estimate based on expert opinion with no or minimal sampling	
	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
2.4.8 Long-term trend Period Optional	1994-2012	
	based on a combination of the trend period given under 2.4.4 and the trend info in the 2007 Article 17 habitat report (see http://jncc.defra.gov.uk/page-4064) - for further details see the 2013 Article 17 UK Approach document	
2.4.9 Long-term trend - Trend direction Optional	stable	
	based on a combination of the trend direction given under 2.4.5 and the	

	trend info in the 2007 Article 17 habitat report (see http://jncc.defra.gov.uk/page-4064) - for further details see the 2013 Article 17 UK Approach document	
2.4.10 Long-term trend Magnitude Optional	a) Minimum	
	b) Maximum	
	c) Confidence interval	
2.4.11 Long-term trend Method used Optional	Estimate based on expert opinion with no or minimal sampling	
	based on a combination of the trend method under 2.4.3 and the 'quality of area data' in the 2007 Article 17 habitat report (see http://jncc.defra.gov.uk/page-4064) - for further details see the 2013 Article 17 UK Approach document	
2.4.12 Favourable reference area	a) Value in km²	13.97
	this is an updated value based on the latest, most accurate, area data for the habitat (see 2.4.1) - this data provides a more accurate baseline than used in 2007 to set the Favourable Reference Area value - for further details see the 2013 Article 17 UK Approach document	
	b) Operator	
	c) FRA is unknown (indicated by true")	False
	d) Method used to set FRA value	the approach taken to set the Favourable Reference Area is explained in the 2007 Article 17 habitat report (see http://jncc.defra.gov.uk/page-4064)
2.4.13 Reason for change Is the difference between the reported value in 2.4.1 and the previous reporting round mainly due to:	a) Genuine change?	False
	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	b) Improved knowledge/more accurate data?	True
	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	
	c) Use of different method (e.g. "Range tool")	False
	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information	

2.5 Main pressures		
a) Pressure	b) Ranking H = high importance M = medium importance L = low importance	c) Pollution qualifier
K04: Interspecific floral relations	H	N
B06: grazing in forests/ woodland	M	A
B07: Forestry activities not referred to above	M	
I01: invasive non-native species	M	N
I02: problematic native species	M	N
A04: grazing	L	
B01: forest planting on open ground	L	
B03: forest exploitation without replanting or natural regrowth	L	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	L	
H02: Pollution to groundwater (point sources and diffuse sources)	L	
H04: Air pollution, air-borne pollutants	L	AN
H05: Soil pollution and solid waste (excluding discharges)	L	
J01: fire and fire suppression	L	
J02: human induced changes in hydraulic conditions	L	
K02: Biocenotic evolution, succession	L	

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

2.5.1 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

2.6. Main threats		
a) Threats	b) Ranking H = high importance M = medium importance L = low importance	c) Pollution qualifier
K04: Interspecific floral relations	H	

B02: Forest and Plantation management & use	M	N
B06: grazing in forests/ woodland	M	
B07: Forestry activities not referred to above	M	N
I01: invasive non-native species	M	
I02: problematic native species	M	
A04: grazing	L	
F03: deer grazing/ browsing/ trampling	L	
H01: Pollution to surface waters (limnic & terrestrial, marine & brackish)	L	
H02: Pollution to groundwater (point sources and diffuse sources)	L	
H04: Air pollution, air-borne pollutants	L	AN
H05: Soil pollution and solid waste (excluding discharges)	L	
J01: fire and fire suppression	L	
J02: human induced changes in hydraulic conditions	L	
K01: abiotic (slow) natural processes	L	
K03: Interspecific faunal relations	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

2.6.1 Method used –threats

expert opinion

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

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2.7 Complementary information	
2.7.1 Typical species (as used in the assessment of Structure and function)	a list of the specific species used to assess the condition of the habitat during the reporting period is not available
2.7.2 Typical species – method used	the status of various plant species has been considered when the condition of individual sites supporting the habitat have been assessed - these assessments have utilised Common Standards Monitoring Guidance, information on which is available via http://jncc.defra.gov.uk/page-2199 (refer to guidance on individual habitats for details) - a list of the specific species used during the reporting period is, however, not available
2.7.3 Justification of % thresholds for trends	
2.7.4 Structure and functions - Methods 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
2.7.5 Other relevant information	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information

2.8 Conclusions <i>(assessment of conservation status at end of reporting period)</i>	
2.8.1 Range	a) Conclusion Favourable
	Conclusion reached because: (i) 2.3.4 Range short-term trend direction is stable; (ii) 2.3.1 Range surface area is not less than 2.3.9 Favourable Reference Range; - for further details see the 2013 Article 17 UK Approach document
	b) Qualifier

2.8.2 Area	a) Conclusion	Inadequate
	<p>Conclusion reached because:</p> <p>(i) 2.4.5 Area short-term trend direction is stable;</p> <p>(ii) 2.4.1. Surface area is less than 2.4.12 Favourable Reference Area by not more than 10%;</p> <p>- for further details see the 2013 Article 17 UK Approach document</p>	
	b) Qualifier	stable
<p>Qualifier reached because 2.4.5 Area short-term trend direction is stable - for further details see the 2013 Article 17 UK Approach document</p>		
2.8.3 Specific structures and functions (incl. typical species)	a) Conclusion	Inadequate
	<p>Conclusion reached because available site condition data indicate that between 5-25% of the habitat is in unfavourable condition (based on SAC data = 13% of area unfavourable) - for further details see the 2013 Article 17 UK Approach document</p>	
	b) Qualifier	improving
<p>Qualifier reached because available site condition data indicate that less of the habitat in unfavourable condition is declining than recovering (for SACs = 7ha declining and 112ha recovering) - for further details see the 2013 Article 17 UK Approach document</p>		
2.8.4 Future prospects	a) Conclusion	Inadequate
	<p>Conclusion reached because:</p> <p>(i) 2.3.4 Range short-term trend direction is stable and 2.3.1 Range surface area is expected to be not less than 2.3.9 Favourable Reference Range in c.2025;</p> <p>(ii) 2.4.5 Area short-term trend direction is stable but 2.4.1. Surface area might be less than 2.4.12 Favourable Reference Area by not more than 10% in c.2025;</p> <p>(iii) available site condition data indicate that less than 5% of the UK habitat might be in unfavourable condition in c.2025 (based on SAC data = 1% of area unfavourable) factor - however, various threats (see 2.6) are expected to impact on the future status of the habitat and, as a result, its condition is expected to decline somewhat by c.2025;</p> <p>- for further details see the 2013 Article 17 UK Approach document</p>	
	b) Qualifier	declining
<p>Qualifier reached because:</p> <p>(i) 2.3.4 Range short-term trend direction is stable;</p> <p>(ii) 2.4.5 Area short-term trend direction is stable;</p> <p>(iii) available site condition data indicate that less of the habitat might be in</p>		

	unfavourable condition in c.2025 (based on SAC data from 13% to 1% of area unfavourable) - however, various threats (see 2.6) are expected to impact on the future status of the habitat and, as a result, its condition is expected to decline somewhat by c.2025; - for further details see the 2013 Article 17 UK Approach document
2.8.5 Overall assessment of Conservation Status	Inadequate Based on individual conclusions for Range, Area, Structures and functions, and Future Prospects - for further details see the 2013 Article 17 UK Approach document
2.8.6 Overall trend in Conservation Status	stable Based on trends/qualifiers for Range, Area, Structures and functions, and Future Prospects - for further details see the 2013 Article 17 UK Approach document

3. Natura 2000 coverage & conservation measures - Annex I habitat types

3.1 Area covered by habitat	
3.1.1 Surface area Estimation of habitat type surface area included in the SAC network.	a) Minimum 9.47
	This is based on information submitted to the European Union as part of a Standard Data Form for each candidate SAC. The source information used for these data are available on an individual site basis within a downloadable spreadsheet http://jncc.defra.gov.uk/page-1461 . (Go to the sheet 'Site feature data' and filter on the relevant habitats). Individual site data forms can be accessed here: http://jncc.defra.gov.uk/page-1458 . For the vast majority of sites the habitat extent figures are based on the best available information at the time of the original submission of the site as a candidate SAC to the European Union. In many cases these data have been compiled in the early 2000s, i.e. more than ten years prior to this report.
	b) Maximum 9.47
3.1.2 Method used	Estimate based on expert opinion with no or minimal sampling for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information
3.1.3 Trend of surface area	stable

within the network	Optional	for further details see the 2013 Article 17 UK Approach document and relevant country-level reporting information

3.2 Conservation measures															
Conservation measures taken (i.e. already being implemented) within the reporting period and provided information about their importance, location and evaluation.															
3.2.1 Measure	3.2.2 Type					3.2.3 Ranking H = high importance M = medium importance L = low importance	3.2.4 Location where the measure is PRIMARILY applied			3.2.5 Broad evaluation of the measure					
	a) Legal/statutory	b) Administrative	c) Contractual	d) Recurrent	e) One-off		a) Inside	b) Outside	c) Both inside & outside	a) Maintain	b) Enhance	c) Long term	d) No effect	e) Unknown	f) Not evaluated
1.2: Measures needed, but not implemented	Y	Y		Y	Y	L			Y			Y		Y	
3.0: Other forestry-related measures	Y	Y	Y	Y		L			Y		Y	Y			
3.1: Restoring/improving forest habitats	Y	Y	Y	Y	Y	M			Y		Y	Y		Y	
3.2: Adapt forest management	Y	Y	Y			L		Y			Y	Y		Y	
4.1: Restoring/improving water quality	Y	Y	Y	Y		L			Y		Y	Y			
4.2: Restoring/improving the hydrological regime	Y	Y	Y	Y		H			Y		Y	Y			
6.0: Other spatial measures	Y	Y	Y			L		Y			Y	Y			
6.1: Establish protected areas/sites	Y	Y			Y	L			Y		Y	Y			

6.2: Establishing wilderness areas/ allowing succession	Y					L			Y		Y				Y
6.3: Legal protection of habitats and species	Y	Y		Y		L		Y			Y	Y			
7.1: Regulation/ Management of hunting and taking	Y	Y		Y		L			Y		Y	Y			

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