European Community Directive
on the Conservation of Natural Habitats
and of Wild Fauna and Flora
(92/43/EEC)

Fourth Report by the United Kingdom
under Article 17

on the implementation of the Directive
from January 2013 to December 2018

Conservation status assessment for the habitat:

H91D0 - Bog woodland

UNITED KINGDOM

IMPORTANT NOTE - PLEASE READ

- The information in this document represents the UK Report on the conservation status of this habitat, submitted to the European Commission as part of the 2019 UK Reporting under Article 17 of the EU Habitats Directive.

- It is based on supporting information provided by the geographically-relevant Statutory Nature Conservation Bodies, which is documented separately.

- The 2019 Article 17 UK Approach document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.

- The reporting fields and options used are aligned to those set out in the European Commission guidance.

- Maps showing the distribution and range of the habitat are included (where available).

- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the UK assessments. Further underpinning explanatory notes are available in the related country-level and/or UK offshore-level reports.

- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; and/or (ii) completion of the field was not obligatory.

- The UK-level reporting information for all habitats and species is also available in spreadsheet format.

Visit the JNCC website, https://jncc.gov.uk/article17, for further information on UK Article 17 reporting.

Report on the main results of the surveillance under Article 17 for Annex I habitat types (Annex D)

NATIONAL LEVEL	
1. General information	
1.1 Member State	**UK**
1.2 Habitat code	**91D0 - Bog woodland**
2. Maps	
2.1 Year or period	1985-2018
2.3 Distribution map	Yes
2.3 Distribution map Method used	Based mainly on extrapolation from a limited amount of data
2.4 Additional maps	No

BIOGEOGRAPHICAL LEVEL	
3. Biogeographical and marine regions	
3.1 Biogeographical or marine region where the habitat occurs	**Atlantic (ATL)**
3.2 Sources of information	England Natural England's SSSI series review (unpublished) Scotland References within http://jncc.defra.gov.uk/pdf/Article17Consult_20131010/H91D0_SCOTLAND.pdf JNCC (2004) Common Standards Monitoring Guidance for Woodland Habitats, Version February 2004, http://jncc.defra.gov.uk/page-2238 Wales 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. Forestry Commission (2011). National Forest Inventory Woodland Area Statistics: Wales: http://www.forestry.gov.uk/website/forestry.nsf/byunique/INFD-8EYJWF Guest, D. 2012. Assessing pressures and threats for Article 17 reporting based on information in CCW's Actions Database. CCW Staff Guidance Note. JNCC 2017. Habitat account - Forests. 91D0 Bog woodland: http://jncc.defra.gov.uk/ProtectedSites/SACselection/habitat.asp?FeatureIntCode=H91D0 [Accessed 19/06/18] Latham, J. 2000. Estimates of areas of woodland HSP types and HSD Annex 1 habitats in Wales. Unpublished CCW staff report. 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. Latham, J., Sherry, J. and Rothwell, J. 2013. Ecological connectivity and biodiversity prioritisation in the terrestrial environment of Wales. CCW Staff Science Report No. 13/3/3. Countryside Council for Wales, Bangor. Natural Resources Wales (NRW). 2013. Supporting documentation for the 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. Available from: http://jncc.defra.gov.uk/pdf/Article17Consult_20131010/H91D0_WALES.pdf [Accessed 19 /06/18] Natural Resources Wales (NRW). 2018. SAC and SPA Monitoring Programme Results 2013-2018. Available from:

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http://lle.gov.wales/catalogue/item/SACSPAMonitoringProgrammeResults/?lang=en [Accessed 19/0618)]

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. N.Ireland

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 2007: Broad Habitat Change 1998-2007. Northern Ireland Environment Agency. Northern Ireland Environment Agency Research and Development Series No. 09/06. Belfast. 58 pp.

McCann, T., Rogers, D. and Cooper, A. (2009) Northern Ireland Countryside Survey 2007: Field methods and technical manual. Northern Ireland Environment Agency. Northern Ireland Environment Agency, Research and Development Series No 09/07. Belfast.

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.

Rodwell, J.S. (1991). British Plant Communities. Volume 1, Woodlands. Cambridge: Cambridge University Press

NIEA. Internal Condition Assessment Reports (various sites and years).

Rodwell, J.S., Dring, J.C., Averis, A.B.V., Proctor, M.C.F., Malloch, A.J.C., Schaminee, J.H.J & Dargie, T.C.D. 1998. Review of Coverage of the National Vegetation Classification. Lancaster: Unit of Vegetation Science report to the Joint Nature Conservation Committee.

Data on aerial Nitrogen deposition taken from Air Pollution Information System website - http://www.apis.ac.uk/

NIEA. Internal Survey Reports (various sites and years).

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

Forest Service woodland register - data available online https://www.daera-ni.gov.uk/articles/forest-service-woodland-register

McCracken, E. 1971. The Irish Woods Since Tudor Times: Their Distribution and Exploitation. Insititute of Irish Studies, Belfast.

Rackham, O. 1995 Looking for Ancient Woodland in Ireland in Woods, Trees and Forests in Ireland, pp. 1-12. Pilcher, J.R. and Mac an tSaoir, S. S. (eds). Royal Irish Academy, Dublin.

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

4. Range

4.1 Surface area (in km²)	26375.32	
4.2 Short-term trend Period	2007-2018	
4.3 Short-term trend Direction	Stable (0)	
4.4 Short-term trend Magnitude	a) Minimum	b) Maximum
4.5 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
4.6 Long-term trend Period		
4.7 Long-term trend Direction		
4.8 Long-term trend Magnitude	a) Minimum	b) Maximum
4.9 Long-term trend Method used		
4.10 Favourable reference range	a) Area (km²)	26375.32

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	b) Operator	
	c) Unknown	No
	d) Method	The FRR is approximately equal to the current range area. The approach taken to set the FRR is explained in the 2007 and 2013 UK Article 17 habitat reports (see http://jncc.defra.gov.uk/page-4064 and http://jncc.defra.gov.uk/page-6563).

4.11 Change and reason for change in surface area of range	No change
	The change is mainly due to:

4.12 Additional information	

5. Area covered by habitat

5.1 Year or period	1985-2018		
5.2 Surface area (in km²)	a) Minimum	b) Maximum	c) Best single value 6.57
5.3 Type of estimate	Best estimate		
5.4 Surface area Method used	Based mainly on extrapolation from a limited amount of data		
5.5 Short-term trend Period	2001-2018		
5.6 Short-term trend Direction	Stable (0)		
5.7 Short-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.8 Short-term trend Method used	Based mainly on expert opinion with very limited data		
5.9 Long-term trend Period			
5.10 Long-term trend Direction			
5.11 Long-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.12 Long-term trend Method used			
5.13 Favourable reference area	a) Area (km²) 7.227		
	b) Operator		
	c) Unknown No		
	d) Method The FRA is not more than 10% above the current area. The FRA value has been updated to take account of improved information on the habitat area.The approach taken to set the FRA is explained in the 2007 and 2013 UK Article 17 habitat reports (see http://jncc.defra.gov.uk/page-4064 and http://jncc.defra.gov.uk/page-6563).		
5.14 Change and reason for change in surface area of range	No change		
	The change is mainly due to:		
5.15 Additional information			

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km²)	Minimum 4.116	Maximum 4.116
	b) Area in not-good condition (km²)	Minimum 0.95	Maximum 0.95
	c) Area where condition is not known (km²)	Minimum 1.499	Maximum 1.499

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6.2 Condition of habitat Method used	Based mainly on extrapolation from a limited amount of data
6.3 Short-term trend of habitat area in good condition Period	2007-2018
6.4 Short-term trend of habitat area in good condition Direction	Increasing (+)
6.5 Short-term trend of habitat area in good condition Method used	Based mainly on extrapolation from a limited amount of data
6.6 Typical species	Has the list of typical species changed in comparison to the previous reporting period? No
6.7 Typical species Method used	
6.8 Additional information	

7. Main pressures and threats

7.1 Characterisation of pressures/threats

Pressure	Ranking
Drainage for use as agricultural land (A31)	M
Modification of hydrological conditions, or physical alteration of water bodies and drainage for forestry (including dams) (B27)	M
Problematic native species (I04)	M
Plant and animal diseases, pathogens and pests (I05)	M
Mixed source air pollution, air-borne pollutants (J03)	M
Droughts and decreases in precipitation due to climate change (N02)	M

Threat	Ranking
Modification of hydrological conditions, or physical alteration of water bodies and drainage for forestry (including dams) (B27)	M
Problematic native species (I04)	H
Plant and animal diseases, pathogens and pests (I05)	M
Mixed source air pollution, air-borne pollutants (J03)	M
Droughts and decreases in precipitation due to climate change (N02)	H

7.2 Sources of information

7.3 Additional information

8. Conservation measures

8.1 Status of measures	a) Are measures needed?	Yes
	b) Indicate the status of measures	Measures identified and taken
8.2 Main purpose of the measures taken	Restore the habitat of the species (related to 'Habitat for the species')	
8.3 Location of the measures taken	Both inside and outside Natura 2000	
8.4 Response to the measures	Medium-term results (within the next two reporting periods, 2019-2030)	

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8.5 List of main conservation measures

Manage drainage and irrigation operations and infrastructures in agriculture (CA15)
Restoration of Annex I forest habitats (CB08)
Manage drainage and irrigation operations and infrastructures (CB14)
Management, control or eradication of other invasive alien species (CI03)
Management of problematic native species (CI05)
Reduce impact of mixed source pollution (CJ01)
Implement climate change adaptation measures (CN02)

8.6 Additional information

9. Future prospects

9.1 Future prospects of parameters	a) Range	Good
	b) Area	Poor
	c) Structure and functions	Poor
9.2 Additional information	Future trend of Range is Overall stable; Future trend of Area is Overall stable; and Future trend of Structure and functions is Negative - slight/moderate deterioration	

10. Conclusions

10.1. Range	Favourable (FV)
10.2. Area	Unfavourable - Inadequate (U1)
10.3. Specific structure and functions (incl. typical species)	Unfavourable - Inadequate (U1)
10.4. Future prospects	Unfavourable - Inadequate (U1)
10.5 Overall assessment of Conservation Status	Unfavourable - Inadequate (U1)
10.6 Overall trend in Conservation Status	Improving (+)
10.7 Change and reasons for change in conservation status and conservation status trend	a) Overall assessment of conservation status No change The change is mainly due to: b) Overall trend in conservation status Use of different method The change is mainly due to: Use of different method
10.8 Additional information	Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is stable; and (ii) the current Range surface area is approximately equal to the Favourable Reference Range. Conclusion on Area covered by habitat reached because: (i) the short-term trend direction in Area is stable; and (ii) the current Area is not more than 10% below the Favourable Reference Area. Conclusion on Structure and functions reached because habitat condition data indicates that between c.5-25% of the habitat is in unfavourable (not good) condition.

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Conclusion on Future prospects reached because: (i) the Future prospects for Range are good; (ii) the Future prospects for Area covered by habitat are poor; and (iii) the Future prospects for Structure and functions are poor.

Overall assessment of Conservation Status is Unfavourable-inadequate because one or more of the conclusions is Unfavourable-inadequate and none are Unfavourable-bad.

Overall trend in Conservation Status is based on the combination of the short-term trends for Range - stable, Area covered by habitat - stable, and Structure and functions - increasing. If the negative future trend in Structure and functions is also taken into account, the Overall trend would be stable.

The Overall trend in Conservation Status has changed between 2013 and 2019 because of the removal of the Future prospects trend from the 2019 method used to assess Overall trend.

11. Natura 2000 (pSCIs, SCIs, SACs) coverage for Annex I habitat types

11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network (in km² in biogeographical/ marine region)	a) Minimum b) Maximum c) Best single value	8.231
11.2 Type of estimate	Best estimate	
11.3 Surface area of the habitat type inside the network Method used	Based mainly on extrapolation from a limited amount of data	
11.4 Short-term trend of habitat area in good condition within the network Direction	Stable (0)	
11.5 Short-term trend of habitat area in good condition within network Method used	Complete survey or a statistically robust estimate	
11.6 Additional information		

12. Complementary information

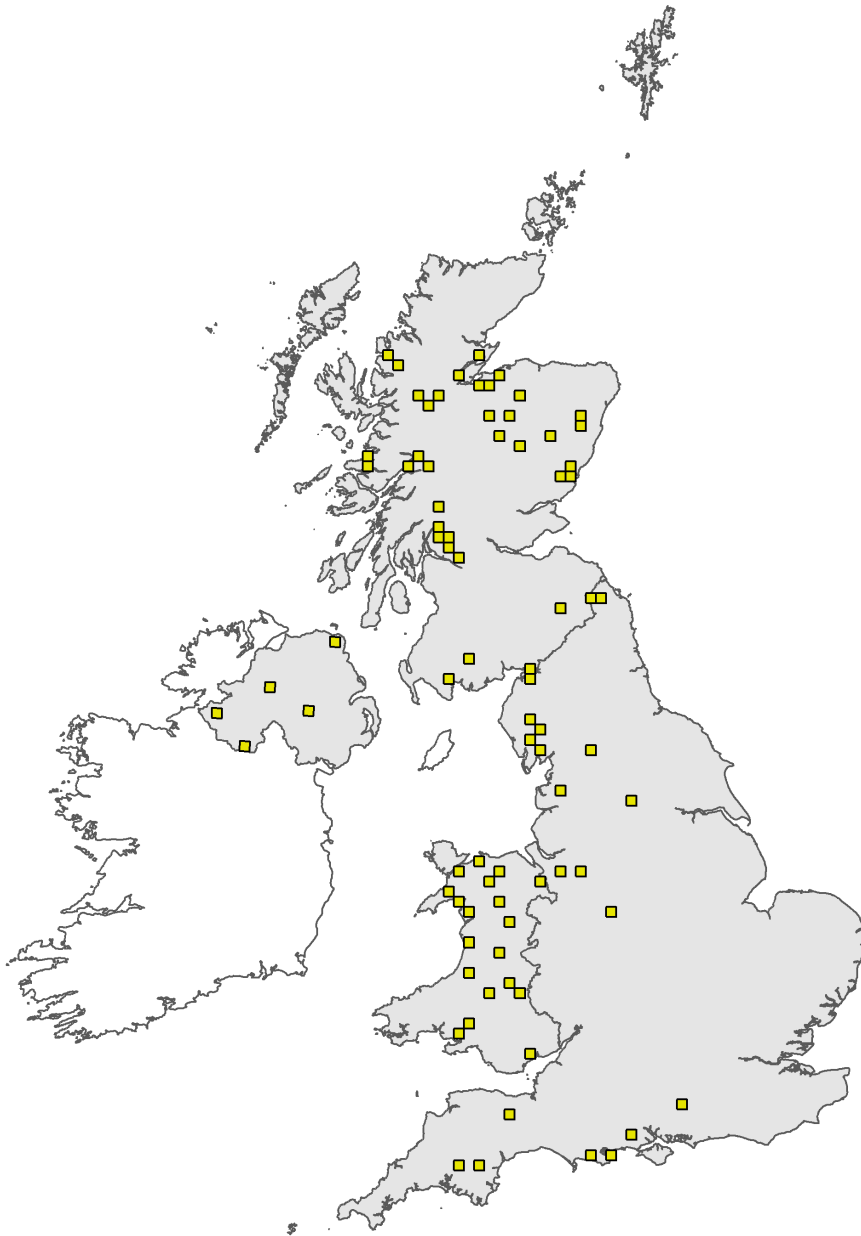|	
12.1 Justification of % thresholds for trends	
12.2 Other relevant information	

Distribution Map

Figure 1: UK distribution map for H91D0 - Bog woodland. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The 10km grid square distribution map is based on available habitat records which are considered to be representative of the distribution within the current reporting period. For further details see the 2019 Article17 UK Approach document.
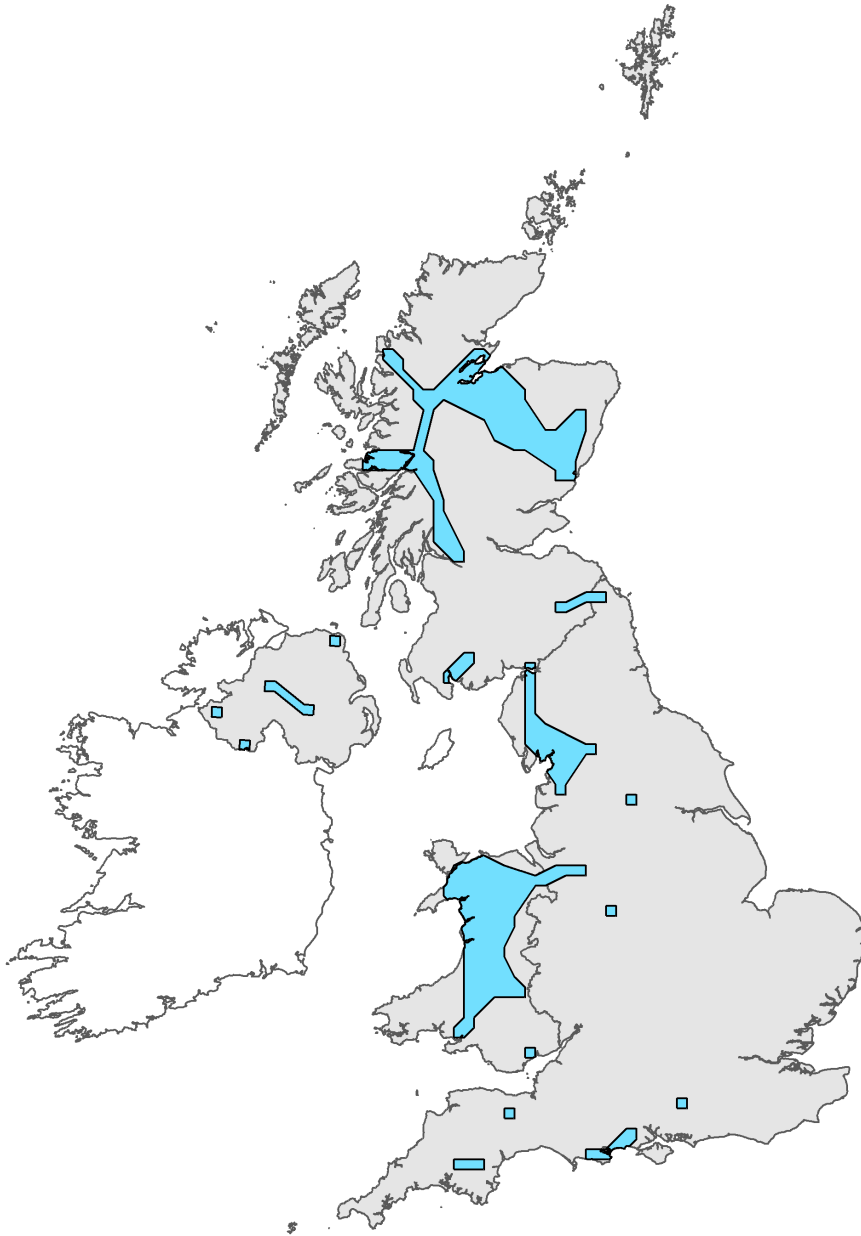
Range Map

Figure 2: UK range map for H91D0 - Bog woodland. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The range map has been produced by applying a bespoke range mapping tool for Article 17 reporting (produced by JNCC) to the 10km grid square distribution map presented in Figure 1. The alpha value for this habitat was 25km. For further details see the 2019 Article 17 UK Approach document.