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

Supporting documentation for the
conservation status assessment for the habitat:

H91D0 - Bog woodland

ENGLAND

IMPORTANT NOTE - PLEASE READ

- The information in this document is a country-level contribution to 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.
- The 2019 Article 17 UK Approach document provides details on how this supporting information was used to produce the UK Report.
- The UK Report on the conservation status of this habitat is provided in a separate document.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Explanatory notes (where provided) by the country are included at the end. These provide an audit trail of relevant supporting information.
- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; (ii) completion of the field was not obligatory; and/or (iii) the field was only relevant at UK-level (sections 10 Future prospects and 11 Conclusions).
- For technical reasons, the country-level future trends for Range, Area covered by habitat and Structure and functions are only available in a separate spreadsheet that contains all the country-level supporting information.
- The country-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 (England information only)**
1.2 Habitat code	**91D0 - Bog woodland**

2. Maps

2.1 Year or period	2013-
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3.2 Sources of information	Natural England's SSSI series review (unpublished)

4. Range

4.1 Surface area (in km²)		
4.2 Short-term trend Period		
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		
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) b) Operator c) Unknown No d) Method	
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	2012-2018		
5.2 Surface area (in km²)	a) Minimum	b) Maximum	c) Best single value 1
5.3 Type of estimate	Best estimate		
5.4 Surface area Method used	Based mainly on expert opinion with very limited data		
5.5 Short-term trend Period	2007-2018		
5.6 Short-term trend Direction	Stable (0)		

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

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) b) Operator c) Unknown No d) Method		
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 0.13	Maximum 0.13
	b) Area in not-good condition (km²)	Minimum 0.87	Maximum 0.87
	c) Area where condition is not known (km²)	Minimum 0	Maximum 0
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	Stable (0)		
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
Mixed source air pollution, air-borne pollutants (J03)	H
Agricultural activities generating diffuse pollution to surface or ground waters (A26)	M
Modification of hydrological flow (K04)	M
Replanting with or introducing non-native or non-typical species (including new species and GMOs) (B03)	M

Removal of small landscape features for agricultural land parcel consolidation (hedges, stone walls, rushes, open ditches, springs, solitary trees, etc.) (A05)	M
Drainage for use as agricultural land (A31)	H
Mixed source pollution to surface and ground waters (limnic and terrestrial) (J01)	H
Modification of hydrological flow or physical alteration of water bodies for agriculture (excluding development and operation of dams) (A33)	H
Removal of dead and dying trees, including debris (B07)	M
Abiotic natural processes (e.g. erosion, silting up, drying out, submersion, salinization) (L01)	M

Threat	Ranking
Mixed source air pollution, air-borne pollutants (J03)	H
Agricultural activities generating diffuse pollution to surface or ground waters (A26)	M
Modification of hydrological flow (K04)	H
Replanting with or introducing non-native or non-typical species (including new species and GMOs) (B03)	M
Removal of small landscape features for agricultural land parcel consolidation (hedges, stone walls, rushes, open ditches, springs, solitary trees, etc.) (A05)	M
Droughts and decreases in precipitation due to climate change (N02)	M
Drainage for use as agricultural land (A31)	M
Mixed source pollution to surface and ground waters (limnic and terrestrial) (J01)	H
Modification of hydrological flow or physical alteration of water bodies for agriculture (excluding development and operation of dams) (A33)	H
Removal of dead and dying trees, including debris (B07)	M
Abiotic natural processes (e.g. erosion, silting up, drying out, submersion, salinization) (L01)	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		Maintain the current range, population and/or 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)
8.5 List of main conservation measures		

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

Restore small landscape features on agricultural land (CA02)
Reduce diffuse pollution to surface or ground waters from agricultural activities (CA11)
Manage drainage and irrigation operations and infrastructures in agriculture (CA15)
Adapt/manage reforestation and forest regeneration (CB04)
Adapt/change forest management and exploitation practices (CB05)
Reduce impact of mixed source pollution (CJ01)
Management of habitats (others than agriculture and forest) to slow, stop or reverse natural processes (CL01)
Minimise/prevent impacts of geological and natural catastrophes (CL02)
Restore habitats impacted by multi-purpose hydrological changes (CJ03)

8.6 Additional information	All SAC sites have IPENS and Site Nitrogen Action Plans (SNAPs)

9. Future prospects

9.1 Future prospects of parameters	a) Range b) Area c) Structure and functions
9.2 Additional information	

10. Conclusions

10.1. Range	
10.2. Area	
10.3. Specific structure and functions (incl. typical species)	
10.4. Future prospects	
10.5 Overall assessment of Conservation Status	
10.6 Overall trend in Conservation Status	
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 No change The change is mainly due to:
10.8 Additional information	

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 4
11.2 Type of estimate	Best estimate

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

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

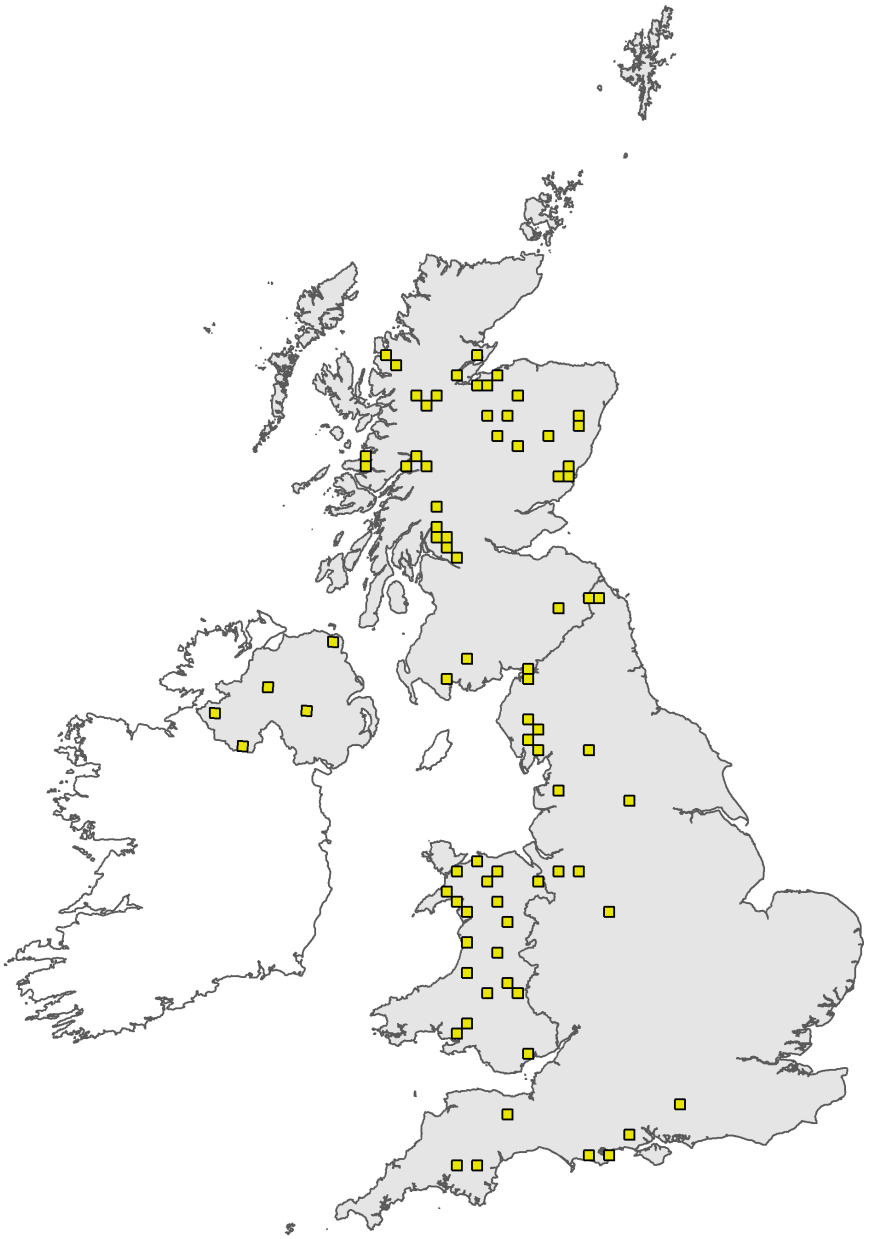

Figure 1: UK distribution map for H91D0 - Bog woodland. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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

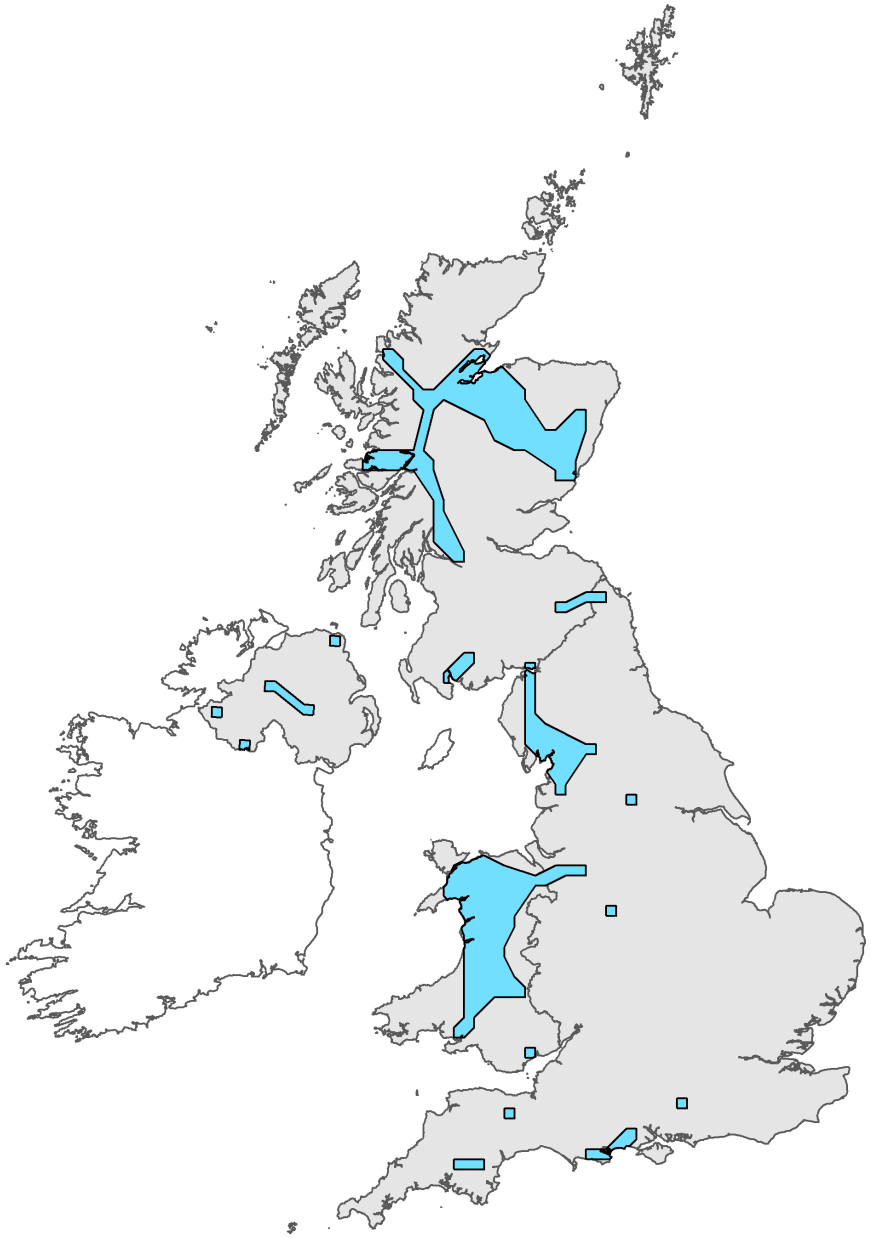

Figure 2: UK range map for H91D0 - Bog woodland. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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.

Explanatory Notes

Habitat code: 91D0 Region code: ATL

Field label	Note
4.3 Short term trend; Direction	No evidence to suggest a change in trend direction since 2013 reporting round
5.1 Year or period	Previous report period to present
5.2 Surface area	No evidence for change since 2013 report
6.1 Condition of habitat	Figures taken from CSM data supplied from NE's CSMi dataset. Figures not felt to broadly represent the condition of the resource as a whole. Woodland is under-represented in the SSSI series (NE's SSSI series review 2016), and is generally undermanaged. Management effort focussed on maintaining or improving habitat condition inside protected sites is not reflected in effort outside the protected site series. The CSMi figures therefore probably overestimate the condition of the resource as a whole.The CSMi figures therefore probably overestimate the condition of the resource as a whole. The figures presented are based on the CSMi data % in good v not good (13% v 87%); These figures have been used to scale the values from CSMi down so that columns BL&BM and BN&BO add up to the total habitat area under 5.2c (the values work out to be 0.13 & 0.87); as a consequence zero is the figure entered in columns BP
7.1 Characterisation of pressures/ threats	Threats: J03, K04, A33, J01, L01 and A26 are expected to continue being a threat to this habitat and N02 decreasing precipitation is likely to exacerbate these threats.
7.1 Characterisation of pressures/ threats	Pressures: A05 this habitat is very rare and fragmentation is a significant problem; A26/J01 air and water pollution has a significant impact on this habitat (SIPs); K04, A31 and A33: drainage of the habitat and surrounding land via agriculture or development, and resultant changes to hydrology, significantly negatively impacts the habitat and L01 because of risk of drying out; J03 the critical load threshold is exceeded throughout the range of this habitat; B03 planting of inappropriate species and forestry; B07 the national forestry inventory survey has highlighted dead wood as a problem throughout all woodland habitats.
8.1 Status of measures	Conservation measures have been identified through the HLF funded IPENS porject which has identified the main activities required to achieve favourable conservation status. Remedies for the conservation measures, although identified, have not always been
11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network	Figure provided by G. Hinton (Natural England) from CSM analysis.