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:

H7110 - Active raised bogs

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	**7110 - Active raised bogs**

2. Maps

2.1 Year or period	2018-
2.3 Distribution map	Yes
2.3 Distribution map Method used	Complete survey or a statistically robust estimate
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 (2015) Hydrological Functioning IPENS SIPs Diack (2016) Review of SSSI series for Raised Bogs. Unpublished Natural England report Lindsay & Immirzi (1996) Lowland Raised Bog Inventory

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 d) Method	 No
4.11 Change and reason for change in surface area of range	No change The change is mainly due to:	
4.12 Additional information	Current range is not favourable as several areas where bogs once occurred are now bereft of any bog vegetation, let alone active bog, and other areas are still largely dominated by degraded bog. However, losses occurred prior to assessment period, so range considered stable.	

5. Area covered by habitat

5.1 Year or period	2018-018-

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5.2 Surface area (in km²)	a) Minimum 37.27	b) Maximum 47.27	c) Best single value 42.27
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	2007-2018		
5.6 Short-term trend Direction	Increasing (+)		
5.7 Short-term trend Magnitude	a) Minimum	b) Maximum	c) Confidence interval
5.8 Short-term trend Method used	Based mainly on extrapolation from a limited amount of 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	Original area of habitat derived from National Peat Resource Inventory (NPRI) and BogBase and agreed by JNCC/RSPB in 2007, as described in 2013 report (3727 ha). Subsequent increases following restoration have not been comprehensively measured however data for individual sites from site officers showing positive change following restoration - largely on N2K sites - gives an indication of scale of increase in active bog, i.e. c.1000ha now newly active.		

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km²)	Minimum 1.8	Maximum 2.4
	b) Area in not-good condition (km²)	Minimum 35.4	Maximum 44.9
	c) Area where condition is not known (km²)	Minimum 0	Maximum 0
6.2 Condition of habitat Method used	Complete survey or a statistically robust estimate		
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	Condition information based on CMSi data from site CSM assessments. 'Good' condition may overstate true area as very few if any bogs truly in good condition with structural and functional integrity. Area figures from CSM based on		

assessments of vegetation on parts of the site rather than hydrological integrity of entire raised bog.

7. Main pressures and threats

7.1 Characterisation of pressures/threats

Pressure	Ranking
Drainage for use as agricultural land (A31)	H
Modification of hydrological conditions, or physical alteration of water bodies and drainage for forestry (including dams) (B27)	H
Agricultural activities generating air pollution (A27)	H
Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices) (L02)	H
Agricultural activities generating diffuse pollution to surface or ground waters (A26)	H
Conversion to forest from other land uses, or afforestation (excluding drainage) (B01)	H
Mixed source air pollution, air-borne pollutants (J03)	H

Threat	Ranking
Drainage for use as agricultural land (A31)	H
Modification of hydrological conditions, or physical alteration of water bodies and drainage for forestry (including dams) (B27)	H
Agricultural activities generating air pollution (A27)	H
Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices) (L02)	H
Agricultural activities generating diffuse pollution to surface or ground waters (A26)	H
Conversion to forest from other land uses, or afforestation (excluding drainage) (B01)	M
Mixed source air pollution, air-borne pollutants (J03)	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, but none yet 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)
8.5 List of main conservation measures		

Reduce diffuse pollution to surface or ground waters from agricultural activities (CA11)
Prevent conversion of (semi-) natural habitats into forests and of (semi-)natural forests into intensive forest plantation (CB01)
Adapt/change forest management and exploitation practices (CB05)
Manage drainage and irrigation operations and infrastructures in agriculture (CA15)
Restore habitats impacted by multi-purpose hydrological changes (CJ03)
Reduce impact of mixed source pollution (CJ01)

8.6 Additional information

9. Future prospects

9.1 Future prospects of parameters

a) Range

b) Area

c) Structure and functions

9.2 Additional information

Range likely to remain as now, unless new initiatives to restore bog in parts of range where currently bog no longer present, e.g. Somerset Levels. Most/all restoration efforts currently on extant bog sites. Structure & function should continue to benefit from works done under various LIFE programmes, although unless this is followed up with maintenance and restoration of peripheral areas of peat body true integrity will not be achieved. Prospects for non-SAC sites less good, as major restoration still required. Future prospects though overall given as negative based on N dep prospects, which are likely to retard or prevent full restoration of integrity despite restoration of hydrological conditions.

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

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

11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network (in km² in biogeographical/ marine region)	a) Minimum	30.82
	b) Maximum	34
	c) Best single value	32.41
11.2 Type of estimate		Best estimate
11.3 Surface area of the habitat type inside the network Method used		Complete survey or a statistically robust estimate
11.4 Short-term trend of habitat area in good condition within the network Direction		Increasing (+)
11.5 Short-term trend of habitat area in good condition within network Method used		Based mainly on extrapolation from a limited amount of data
11.6 Additional information		Minimim figure based on agreed areas JNCC &RSPB (2007). Additional areas based on information from NE site responsible officers & NNR managers on development of active bog on restored degraded bog.

12. Complementary information

12.1 Justification of % thresholds for trends	
12.2 Other relevant information	

Distribution Map

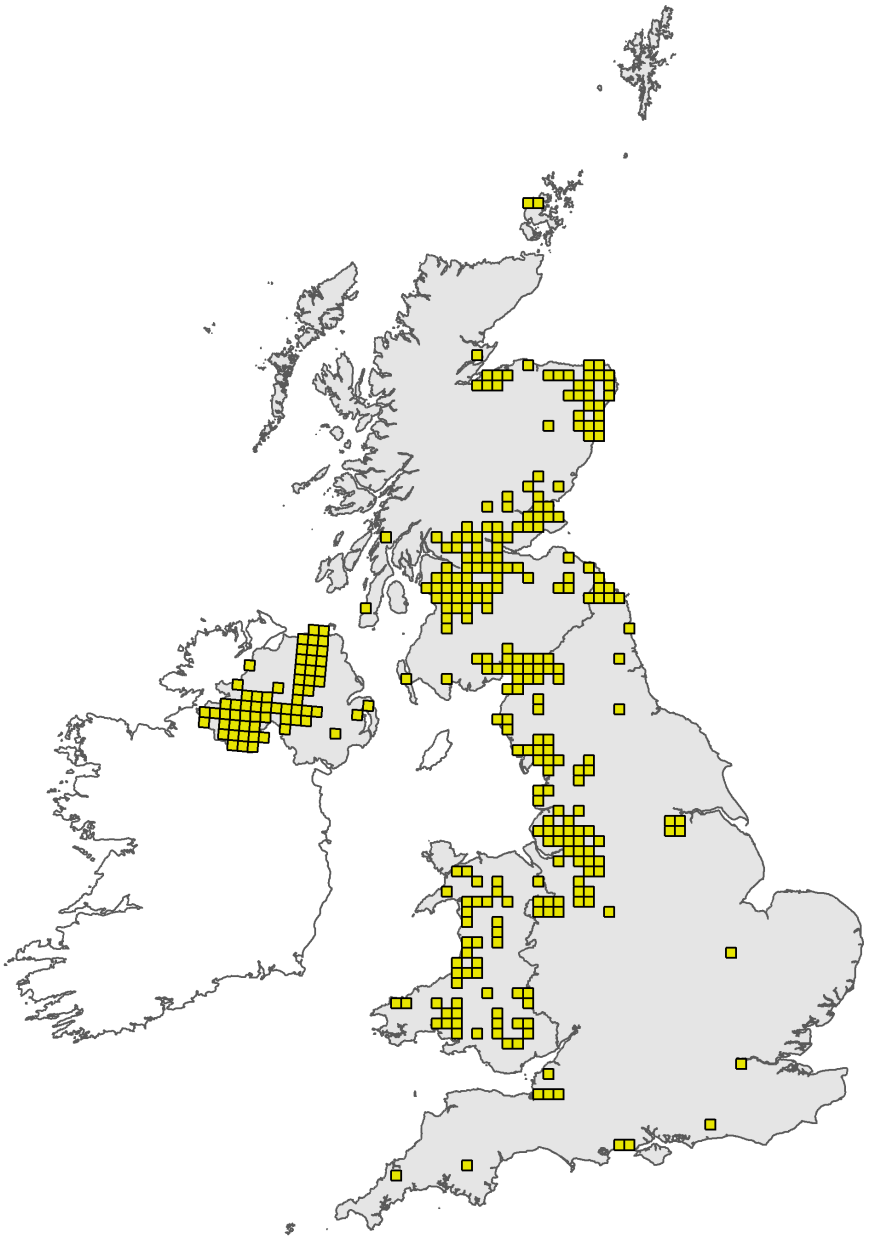

Figure 1: UK distribution map for H7110 - Active raised bogs. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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

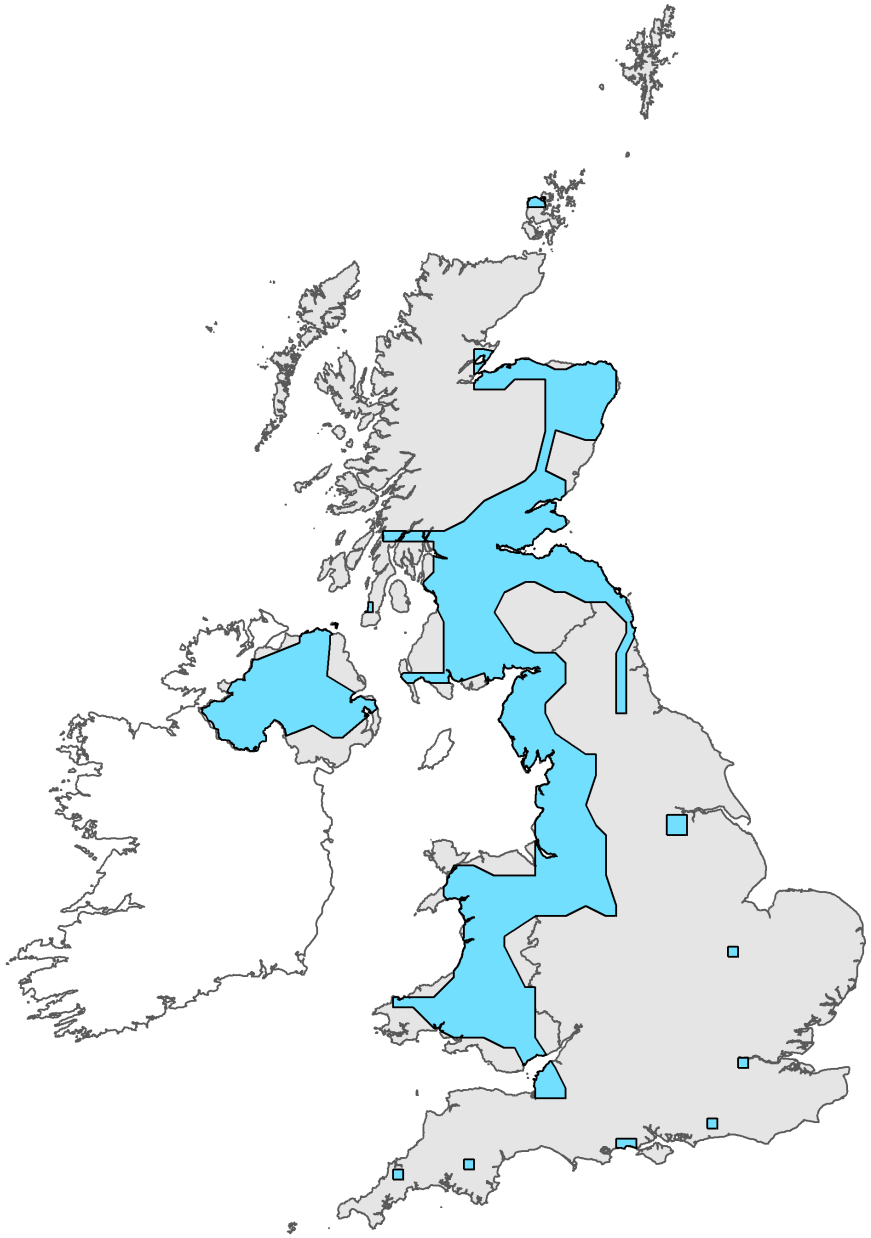

Figure 2: UK range map for H7110 - Active raised bogs. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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.