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:

H4010 - Northern Atlantic wet heaths with *Erica tetralix*

SCOTLAND

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 (Scotland information only)**
1.2 Habitat code	**4010 - Northern Atlantic wet heaths with Erica tetralix**

2. Maps

2.1 Year or period	1962-2012
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	References within - http://jncc.defra.gov.uk/pdf/Article17Consult_20131010/H4010_SCOTLAND.pdf SNH SCM database, extract A2298772, 2017, processed and summarised in A2494879. Wet heath (upland) feature type (JNCC, (2009), Common Standards Monitoring Guidance for Upland Habitats, Version July 2009 and previous versions) http://jncc.defra.gov.uk/page-2237

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	Improved knowledge/more accurate data The change is mainly due to:	 Improved knowledge/more accurate data
4.12 Additional information	NB Range entries and comments are made on the basis of Distribution maps and assumptions as to how these will affect previous range maps, without having seen new range maps.1) Newly collated vegetation map information (HabMoS) has identified occurrences of this habitat which did not appear in previous Article 17 reporting distribution maps. As noted in previous reporting, it was considered that distribution mapping under-represented actual distribution, and new mapping information helps to correct this. Some of these occurrences are	

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outwith the currently-mapped range and will increase the surface area of the range around the edges. NB only a cursory examination of additional occurrences has been possible, and while those checked are credible, change in range must be regarded as tentative pending verification. 2) For the previously-reported occurrences of the habitat, there is no evidence of any actual change in range in Scotland in the period 2006-2017. Within this period, persistence of the habitat has been confirmed in all the upland designated sites where it is a notified feature that have been checked (SCM database, extract A2298772).

5. Area covered by habitat

5.1 Year or period	2006-006-		
5.2 Surface area (in km²)	a) Minimum 3400	b) Maximum 4000	c) Best single value 3700
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	2006-2016		
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 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	Improved knowledge/more accurate data The change is mainly due to: Improved knowledge/more accurate data		
5.15 Additional information	Conclusions are based on absence of evidence of significant change in extent in Scotland in the period. Within this period, minor losses of extent to bracken have been recorded on two upland designated sites where it is a notified feature (SCM database, extract A2298772). Losses of extent to woodland planting and renewables developments occur outwith designated sites; however this is neither recorded nor quantified in any systematic form. This is a significant omission likely to introduce error into reporting on extent.		

6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km²)	Minimum 63	Maximum 63
	b) Area in not-good condition (km²)	Minimum 613	Maximum 613
	c) Area where condition is not known (km²)	Minimum 2724	Maximum 3324
6.2 Condition of habitat Method used	Based mainly on extrapolation from a limited amount of data		

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6.3 Short-term trend of habitat area in good condition Period	2002-2016
6.4 Short-term trend of habitat area in good condition Direction	Decreasing (-)
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	Site Condition Monitoring provides a means of assessing the structure and function of H4010 in Scotland. Assessment is based on the results of fieldwork carried out between 2002 and 2016. Results are recorded on the SNH SCM database, from which data was extracted to A2298772 on 23/05/2017. Within this period, the proportion of H4010 on SACs considered to be in Favourable condition has remained stable at 9% both in 2012 (based on assessments carried out between 2002 and 2010) and in 2016. Eighteen per cent of H4010 is assessed as recovering, a small increase over 2012, and a further 10% as Unfavourable but recovering due to management, more than double the 2012 figure. 2016 results for SSSI are similar to those for SACs, although based on number of features rather than extent data which is not available. 25247ha was assessed as declining in condition (Unfavourable declining or Favourable declining), with 20139ha recovered or recovering (Favourable recovered, Unfavourable recovering, Unfavourable recovering due to management), compared to 25620ha and 11574ha respectively for 2012. Although this represents some improvement from the previous reporting, the total Favourable extent has not increased, the extent declining still exceeds that recovering, and therefore the trend overall is still judged to be decling.

7. Main pressures and threats

7.1 Characterisation of pressures/threats

Pressure	Ranking
Intensive grazing or overgrazing by livestock (A09)	H
Burning for agriculture (A11)	H
Management of fishing stocks and game (G08)	H
Conversion to forest from other land uses, or afforestation (excluding drainage) (B01)	M
Wind, wave and tidal power, including infrastructure (D01)	M
Hydropower (dams, weirs, run-off-the-river), including infrastructure (D02)	M
Problematic native species (I04)	M
Mixed source air pollution, air-borne pollutants (J03)	M

Threat	Ranking
Intensive grazing or overgrazing by livestock (A09)	H
Burning for agriculture (A11)	H
Management of fishing stocks and game (G08)	H
Conversion to forest from other land uses, or afforestation (excluding drainage) (B01)	H

Wind, wave and tidal power, including infrastructure (D01)	M
Hydropower (dams, weirs, run-off-the-river), including infrastructure (D02)	M
Problematic native species (I04)	M
Mixed source air pollution, air-borne pollutants (J03)	M

7.2 Sources of information

7.3 Additional information

Grazing and trampling - sheep, cattle
Also burning for game management (principally for deer) but no code for this
Deer grazing and trampling
Some instances of planting and planting proposals, likely to increase under woodland expansion strategy
Some instances of turbine and associated infrastructure development leading to habitat loss, but this is unquantified.
Some instances of run-of river schemes and associated infrastructure development leading to habitat loss, but this is unquantified.
Bracken/scrub/tree colonisation. In Lowland wet heath in particular, scrub/tree colonisation often related to abandonment of grazing managemenet.

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: Short-term results (within the current reporting period, 2013-2018)

8.5 List of main conservation measures

Adapt mowing, grazing and other equivalent agricultural activities (CA05)
Prevent conversion of (semi-) natural habitats into forests and of (semi-)natural forests into intensive forest plantation (CB01)
Adapt/manage renewable energy installation, facilities and operation (CC03)
Reduce impact of hydropower operation and infrastructure (CC04)
Management of hunting, recreational fishing and recreational or commercial harvesting or collection of plants (CG02)
Management of problematic native species (CI05)

8.6 Additional information

Conservation measures are generally implemented through designation of protected areas, voluntary and statutory procedures (Deer Act), agri-environment schemes (SRDP). While some results are achievable in the short term, some attributes will recover only over decadal timescales. Although conservation measures have been identified, implementation is patchy.

9. Future prospects

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9.1 Future prospects of parameters	a) Range b) Area c) Structure and functions
9.2 Additional information	Range is considered likely to remain stable. Area is considered likely to remain stable. The very modest improvements shown for Structure and function should continue, but given the extent still considered to be declining, and the patchy nature of both pressures and application of conservation measures, it would be premature to consider future prospects to be better than stable. Despite this evidence of stability, the Future trend for Structure and Function must be classed as Negative, as Nitrogen deposition is a Medium rank threat (for details see the UK Article 17 Approach document). The current assessment found empirical evidence of actual effects of N deposition on the ground in Scotland to be lacking.

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 676.28
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	Decreasing (-)
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	Site Condition Monitoring provides a means of assessing the structure and function of H4010 in Scotland. Assessment is based on the results of fieldwork

carried out between 2002 and 2016. Results are recorded on the SNH SCM database, from which data was extracted to A2298772 on 23/05/2017. Within this period, the proportion of H4010 on SACs considered to be in Favourable condition has remained stable at 9% both in 2012 (based on assessments carried out between 2002 and 2010) and in 2016. Eighteen per cent of H4010 is assessed as recovering, a small increase over 2012, and a further 10% as Unfavourable but recovering due to management, more than double the 2012 figure. 2016 results for SSSI are similar, although these are based on number of features rather than extent data which is not available. 25247ha was assessed as declining in condition (Unfavourable declining or Favourable declining), with 20139ha recovered or recovering (Favourable recovered, Unfavourable recovering, Unfavourable recovering due to management), compared to 25620ha and 11574ha respectively for 2012. Although this represents some improvement from the previous reporting, the total Favourable extent has not increased, the extent declining still exceeds that recovering, and therefore the trend overall is still judged to be decling.

12. Complementary information

12.1 Justification of % thresholds for trends

12.2 Other relevant information

Distribution Map

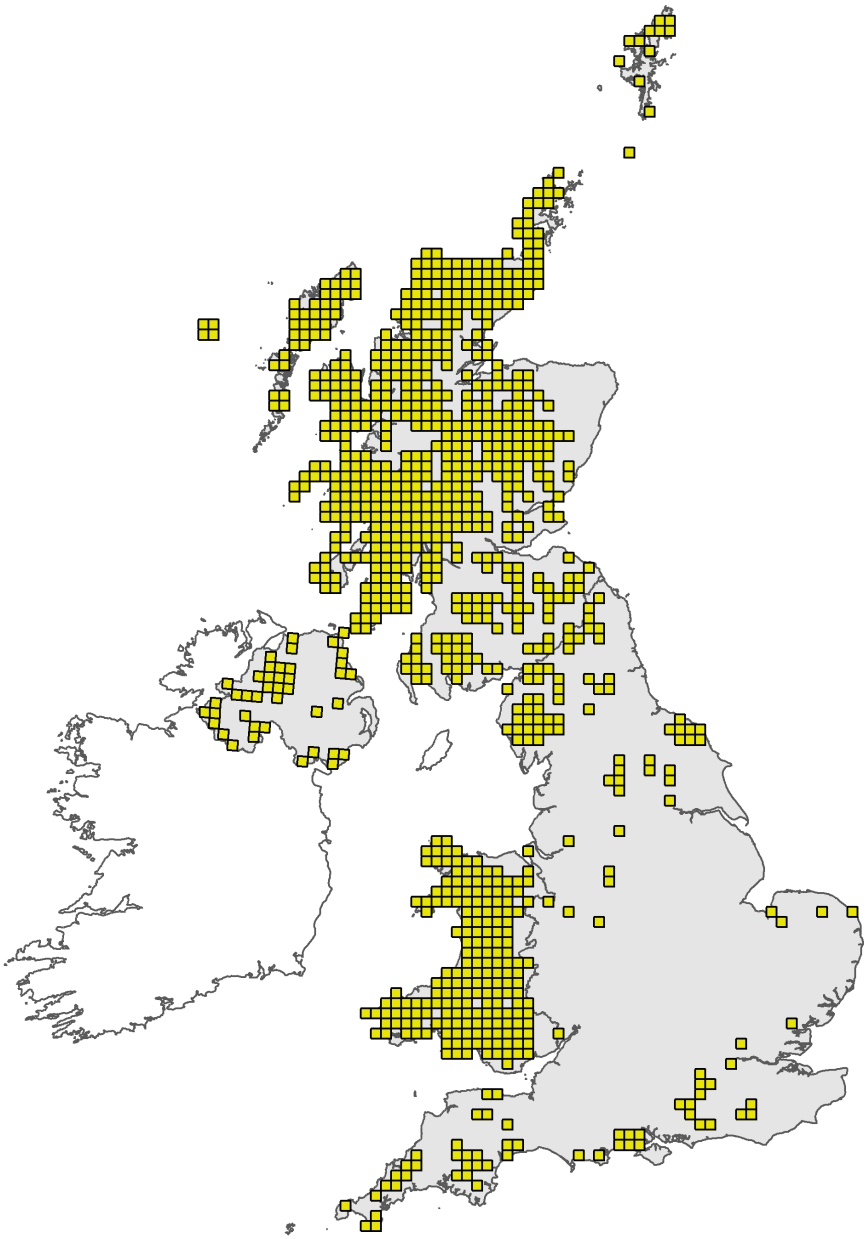

Figure 1: UK distribution map for H4010 - Northern Atlantic wet heaths with *Erica tetralix*. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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

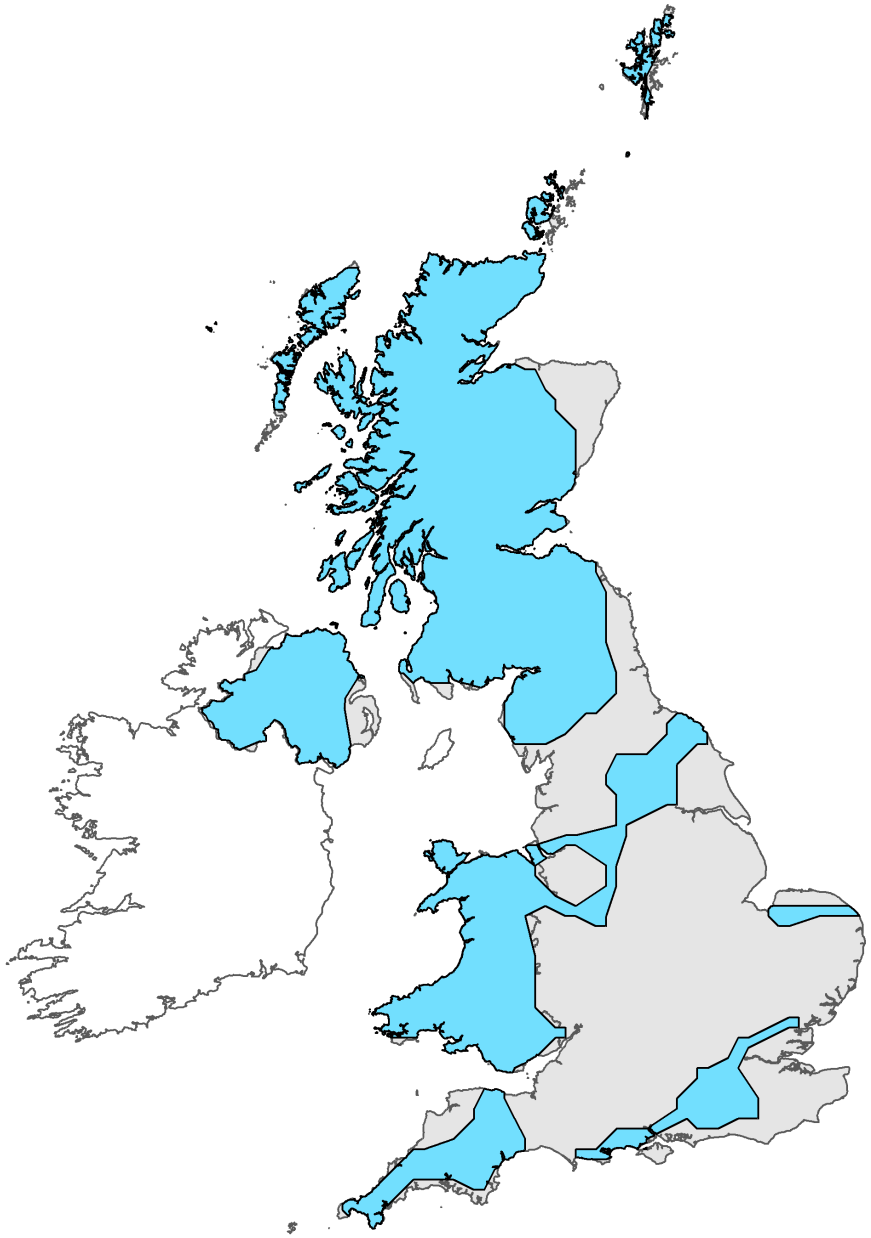

Figure 2: UK range map for H4010 - Northern Atlantic wet heaths with *Erica tetralix*. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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.