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:

H6130 - *Calaminarian* grasslands of the *Violetalia calaminariae*

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	**6130 - Calaminarian grasslands of the Violetalia calaminariae**

2. Maps

2.1 Year or period	1992-2018
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	England Natural England CMSi condition data JNCC reporting data for H6130 submittted to EU for the 2013 Article 17 reporting round. RODWELL, J.R., MOSS, D., MORGAN, V. & JEFFERSON, R.G. 2007. The European Context of British Lowland Grasslands. JNCC Report SPALDING, A. 2005. The nature-conservation value of abandoned metalliferous mine sites in Cornwall. British Wildlife, 16: 175-183. Simkin, J. M. (2006) The vegetation and management of Calaminarian grassland in the North Pennines, England. PhD thesis. University of Newcastle. BAKER, A.J.M. & PROCTOR, J. 1990. The influence of cadmium, copper, lead and zinc on the distribution and evolution of metallophytes in the British Isles. Plant Systematics and Evolution, 173: 91-108. BARNATT, J. & PENNY, R. 2004. The Lead Legacy. Peak District National Park Authority SELLARS, B. & BAKER, A.J.M (1988) Review of metallophye vegetation and it's conservation. CSR Report No 797. Peterborough Scotland All known sites in Scotland are either designated SACs or SSSIs. SCM surveys and/or Sitechecks used for all reporting. A sitecheck or SCM visit has been carried out on all sites between 2012 and 2018. It is possible that a few fragments of habitat may occur on mine spoils, as are found in wales but their presence in Scotland is unconfirmed. 2019 areas based on HABMoS measurements with some additional expert interpretation Wales Barton-Allan, L. 2005. Elenydd SAC Calaminarian Grassland: Monitoring report 2005. Internal NRW file note. Countryside Council for Wales. 2012. Interpretation of grassland Annex 1 habitats in Wales for 2013 Article 17 reporting. CCW HQ internal document. Davies, C. 2017. Halkyn Mountain / Mynydd Helygain SAC - Calaminarian grassland monitoring 2017 - Herward Smithy Section. Internal NRW file note. Dyfed Wildlife Trust. 1992-3. Mid-Wales metal mine survey. CCW site reports. Forster-Brown, C. & Chambers, S.P. 2017. Mapping the extent of calaminarian grassland at Mwyngloddfa Cwmystwyth SSSI. NRW Evidence Report No. 203.

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4. Range

4.1 Surface area (in km²)	14884.82
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	

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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)	14884.82
	b) Operator	
	c) Unknown	No
	d) Method	The FRR is approximately equal to the current range area. The FRR value has been updated to take account of improved information on the habitat range. 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	Improved knowledge/more accurate data	
	The change is mainly due to:	Improved knowledge/more accurate data
4.12 Additional information		

5. Area covered by habitat

5.1 Year or period	2002-2018		
5.2 Surface area (in km²)	a) Minimum	b) Maximum	c) Best single value 4.2153
5.3 Type of estimate	Best estimate		
5.4 Surface area Method used	Complete survey or a statistically robust estimate		
5.5 Short-term trend Period	2007-2018		
5.6 Short-term trend Direction	Decreasing (-)		
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	More than (>)	
	c) Unknown	No	
	d) Method	The FRA is not more than 10% above the current area. An FRA operator has been used as it is not clear what the exact area of the FRA is. 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	Improved knowledge/more accurate data		
	The change is mainly due to:	Improved knowledge/more accurate data	
5.15 Additional information	The short term trend direction is considered to be decreasing by 1%/yr or less, because information on losses in Wales and England indicate that the overall reduction in area between 2007-2018 has been limited.		

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6. Structure and functions

6.1 Condition of habitat	a) Area in good condition (km²)	Minimum	1.8127	Maximum	1.8127
	b) Area in not-good condition (km²)	Minimum	1.038	Maximum	1.038
	c) Area where condition is not known (km²)	Minimum	2.2546	Maximum	2.2546
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	2003-2018				
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
Conversion from one type of agricultural land use to another (excluding drainage and burning) (A02)	M
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	H
Intensive grazing or overgrazing by livestock (A09)	M
Extraction of minerals (e.g. rock, metal ores, gravel, sand, shell) (C01)	M
Construction or modification of commercial / industrial infrastructure in existing commercial / industrial areas (F04)	M
Abiotic natural processes (e.g. erosion, silting up, drying out, submersion, salinization) (L01)	M
Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices) (L02)	M

Threat	Ranking
Conversion from one type of agricultural land use to another (excluding drainage and burning) (A02)	M
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	H
Extraction of minerals (e.g. rock, metal ores, gravel, sand, shell) (C01)	M
Construction or modification of commercial / industrial infrastructure in existing commercial / industrial areas (F04)	M

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Abiotic natural processes (e.g. erosion, silting up, drying out, submersion, salinization) (L01)	M
Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices) (L02)	M

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)

8.5 List of main conservation measures

Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land (CA01)
Maintain existing extensive agricultural practices and agricultural landscape features (CA03)
Reinstate appropriate agricultural practices to address abandonment, including mowing, grazing, burning or equivalent measures (CA04)
Adapt mowing, grazing and other equivalent agricultural activities (CA05)
Manage the use of natural fertilisers and chemicals in agricultural (plant and animal) production (CA09)
Management, control or eradication of other invasive alien species (CI03)
Other measures related to natural processes (CL04)

8.6 Additional information

9. Future prospects

9.1 Future prospects of parameters	a) Range	Good
	b) Area	Poor
	c) Structure and functions	Bad
9.2 Additional information		Future trend of Range is Overall stable; Future trend of Area is Negative - decreasing <=1% (one percent or less) per year on average; 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 - Bad (U2)
10.4. Future prospects	Unfavourable - Bad (U2)

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10.5 Overall assessment of Conservation Status	Unfavourable - Bad (U2)
10.6 Overall trend in Conservation Status	Deteriorating (-)
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 Genuine change The change is mainly due to: Genuine change
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 decreasing by 1% per year or less; 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 more than 25% of the habitat is in unfavourable (not good) condition. 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 bad. Overall assessment of Conservation Status is Unfavourable-bad because one or more of the conclusions is Unfavourable-bad. Overall trend in Conservation Status is based on the combination of the short-term trends for Range - stable, Area covered by habitat - decreasing, and Structure and functions - stable. The Overall trend in Conservation Status has changed between 2013 and 2019 because the Structure and functions trend has changed from increasing to stable.

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 1.65
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	Uncertain (u)
11.5 Short-term trend of habitat area in good condition within network Method used	Insufficient or no data available
11.6 Additional information	

12. Complementary information

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12.1 Justification of % thresholds for trends

12.2 Other relevant information

Distribution Map

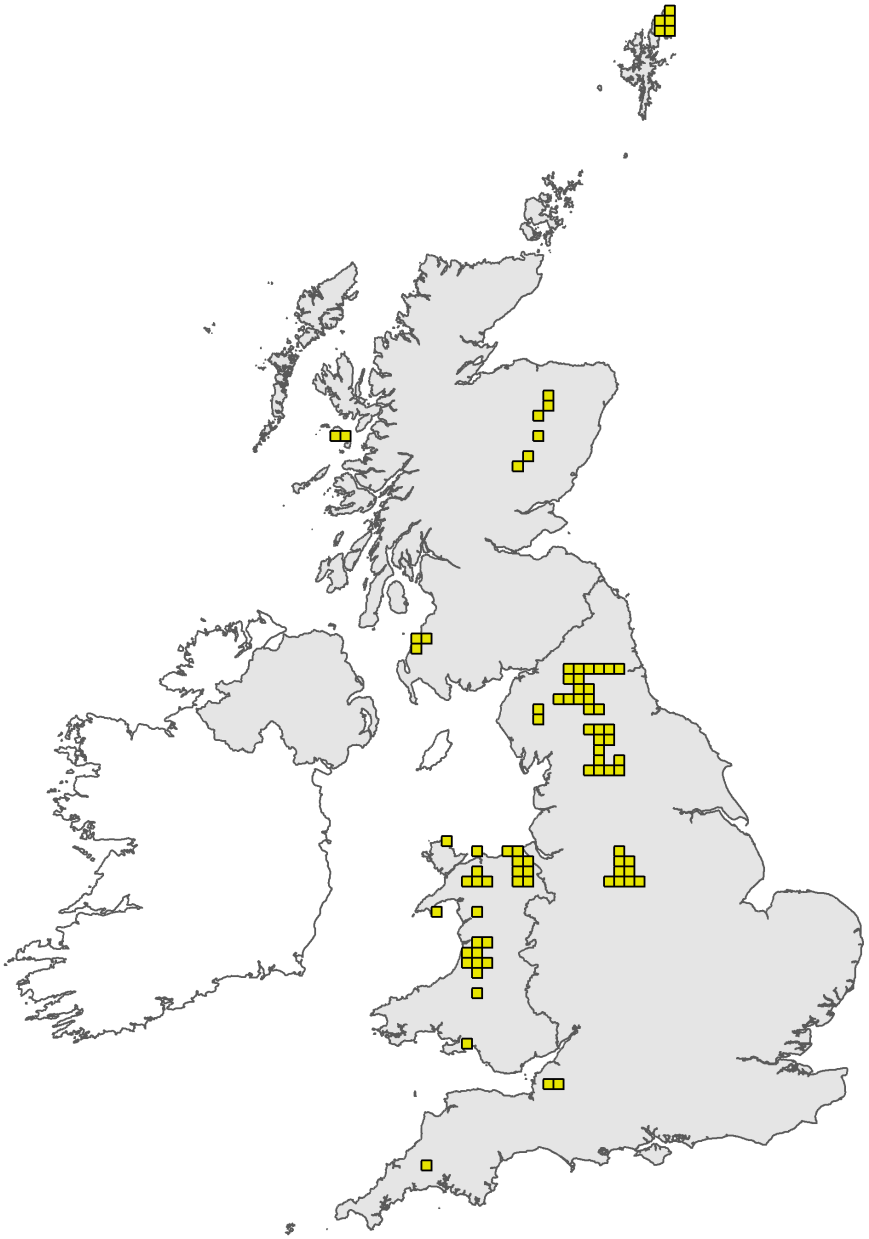

Figure 1: UK distribution map for H6130 - *Calaminarian* grasslands of the *Violetalia calaminariae*. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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

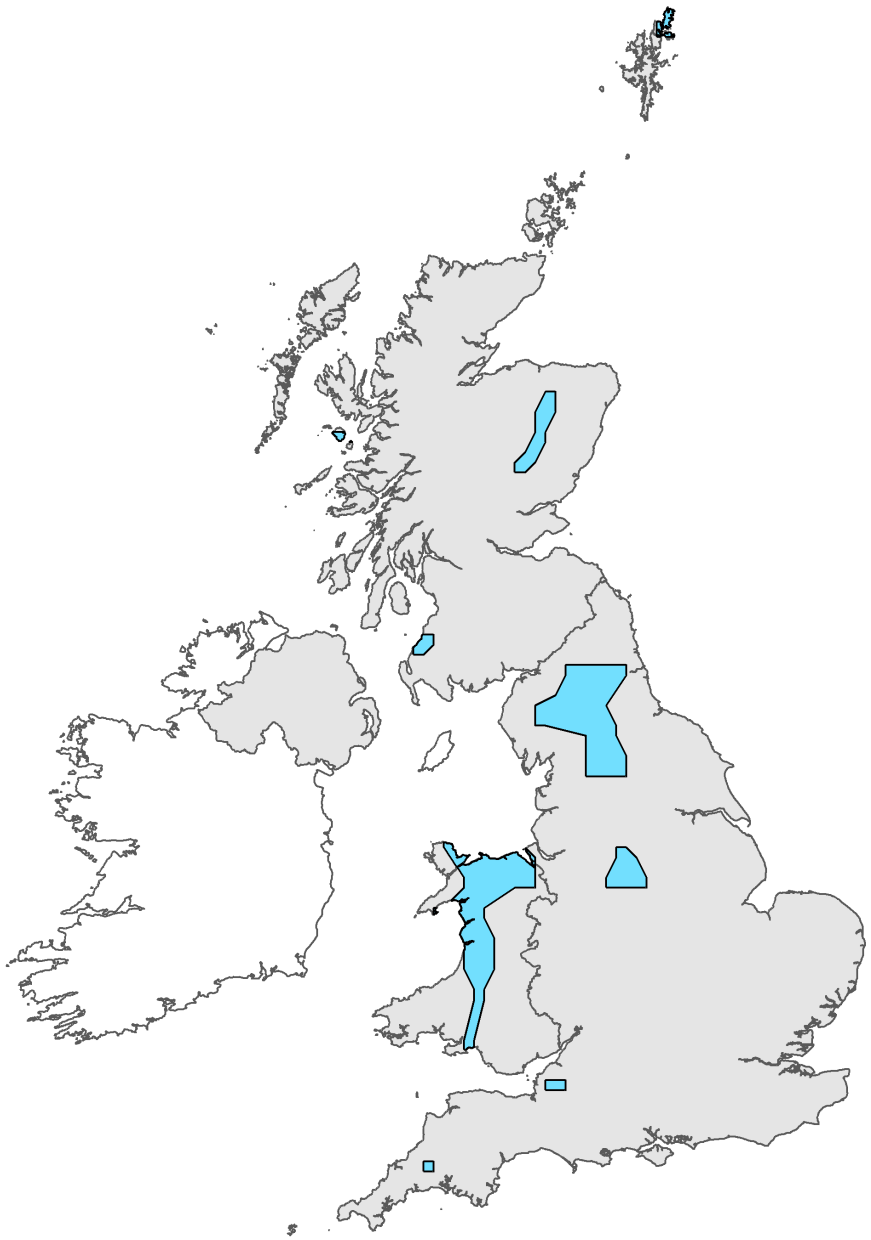

Figure 2: UK range map for H6130 - *Calaminarian* grasslands of the *Violetalia calaminariae*. Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

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.