

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

**Second Report by the United Kingdom under
Article 17**

**on the implementation of the Directive
from January 2001 to December 2006**

Conservation status assessment for :

**H8110: Siliceous scree of the montane to snow
levels (*Androsacetalia alpinae* and *Galeopsietalia
ladani*)**

Please note that this is a section of the report. For the complete report visit <http://www.jncc.gov.uk/article17>

Please cite as: Joint Nature Conservation Committee. 2007. *Second Report by the UK under Article 17 on the implementation of the Habitats Directive from January 2001 to December 2006*. Peterborough: JNCC. Available from: www.jncc.gov.uk/article17

H8110 Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*)

Audit trail compiled and edited by JNCC and the UK statutory nature conservation agencies Upland Lead Co-ordination Network.

This paper and accompanying appendices contain background and data used to complete the standard EC reporting form (Annex D), following the methodology outlined in the document entitled “Assessment, monitoring and reporting under Article 17 of the Habitats Directive, Explanatory Notes and Guidelines, Final Draft 5, October 2006.” The superscript numbers below cross-reference to the headings in the corresponding Annex D reporting form. This supporting information should be read in conjunction with the UK approach for habitats (see ‘Assessing Conservation Status: UK Approach’).

1. National-biogeographic level information

1.1. General description and correspondance with National Vegetation Classification (NVC) and other habitat types

Table 1.1.1 provides a summary description of H8110 and its relations with UK classifications. Scree habitats consist of rock fragments covering the frost-shattered summits of mountains or accumulating on slopes below cliffs. Siliceous screes are made up of siliceous rocks such as quartzite, granite and sandstone. They may occur at any altitude, but screes in the lowlands are excluded from the Annex I definition. The scree may be colonised by a range of pioneer species. It also provides shelter for many species sensitive to frost, such as parsley fern *Cryptogramma crispa*, species requiring a humid microclimate such as Wilson’s filmy-fern *Hymenophyllum wilsonii*, and species sensitive to grazing such as stone bramble *Rubus saxatilis*.

Screes in the UK provide a habitat for plant communities with affinities to the *Thlaspietea rotundifolii*, as described from continental Europe. Both H8110 and 8120 Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*) are important for their rich fern flora and act as refugia for a number of rare species.

Floristically the habitat type is principally characterised in the UK by two NVC types in which parsley fern *Cryptogramma crispa* and other ferns are prominent:

U18 *Cryptogramma crispa* – *Athyrium distentifolium* snow-bed community

U21 *Cryptogramma crispa* – *Deschampsia flexuosa* community

The U18 *Cryptogramma* – *Athyrium* snow-bed community occurs principally in the Scottish Highlands above 800 m, where prolonged snow-cover provides suitable conditions for alpine lady-fern *Athyrium distentifolium*, the rare Newman’s lady-fern *Athyrium flexile*, and other montane vascular plants, bryophytes and lichens. U21 *Cryptogramma* – *Deschampsia* community extends to lower altitudes in mild oceanic climates in western Scotland, north-west England and north Wales, and has a less well-developed montane flora.

Other forms of siliceous scree are dominated by bryophytes and lichens and are not described in the NVC. In the west and, more locally at high altitude in the eastern Scottish Highlands, such screes provide an important habitat for Atlantic bryophytes, such as *Anastrophyllum donnianum*, *Bazzania pearsonii*, *Herbertus aduncus*, *Scapania nimbosea* and *Scapania ornithopodioides*, many of which have a restricted world distribution.

Siliceous scree of the montane to snow levels can occur in close association with the Annex I type H8220 Siliceous rocky slopes with chasmophytic vegetation, while stabilised block screens may support a range of vegetation types including other Annex I types.

Table 1.1.1 Summary description of habitat H8110 and its relations with UK vegetation/habitat classifications

Classification	Correspondence with Annex I type	Comments
EU Interpretation Manual	PAL.CLASS.: 61.1 This habitat consists of: a) communities of siliceous scree of the superior montane level to the snow level, growing on more or less moving "cryoclastic systems" with variable granulometry and belonging to the <i>Androsacetalia alpinae</i> order. b) vegetation of the montane level of the west and centre of Europe growing on screes sometimes of artificial origin (extraction of materials). It consists of alpine communities often rich in bryophytes, lichens and sometimes in ferns (<i>Cryptogramma crispa</i>), belonging to the <i>Galeopsietalia</i> order.	Based on CORINE classifications.
NVC	U18 <i>Cryptogramma crispa</i> - <i>Athyrium distentifolium</i> snow-bed (partial) U21 <i>Cryptogramma crispa</i> - <i>Deschampsia flexuosa</i> community (partial)	This Annex I type comprises screes of siliceous rocks, generally found at high altitude. It grades to other Annex I types where the scree is stable. As well as <i>Cryptogramma crispa</i> types, it includes screes dominated by bryophytes or lichens which are not covered by the NVC.
BAP priority habitat type	Proposed new BAP priority habitat - inland rock outcrops and scree habitats.	A broader category which will entirely include H8110.
CSM reporting categories, for: feature types; ASSI/SSSI feature types	Limestone pavement, inland cliffs and screes. (See Williams 2006 www.jncc.gov.uk/page-3520)	A broader category which covers the following Annex I feature types: <ul style="list-style-type: none"> • H6130 Calaminarian grasslands of the <i>Violetalia calaminariae</i> • H8120 Calcareous and calcshist screes of the montane to alpine levels (<i>Thlaspietea rotundifolii</i>) • H8210 Calcareous rocky slopes with chasmophytic vegetation • H8310 Caves not open to the public • H6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels • H8240 Limestone pavements • H8220 Siliceous rocky slopes with chasmophytic vegetation • H8110 Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>)
JNCC CSM Guidance feature types	Siliceous scree (JNCC 2005b www.jncc.gov.uk/page-2237)	Close correspondence to H8110.

2. Range ^{2.3}

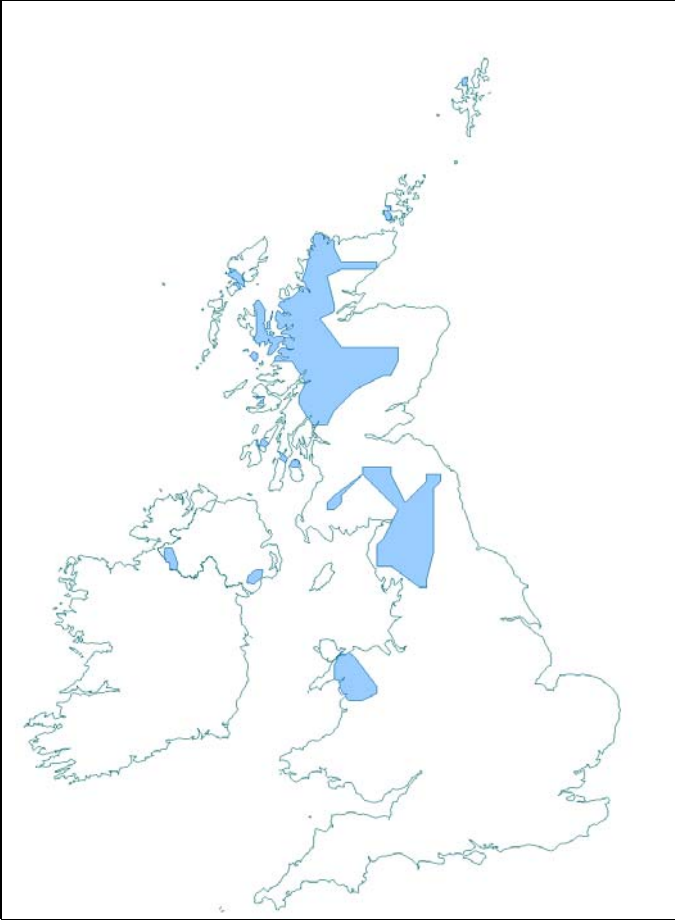
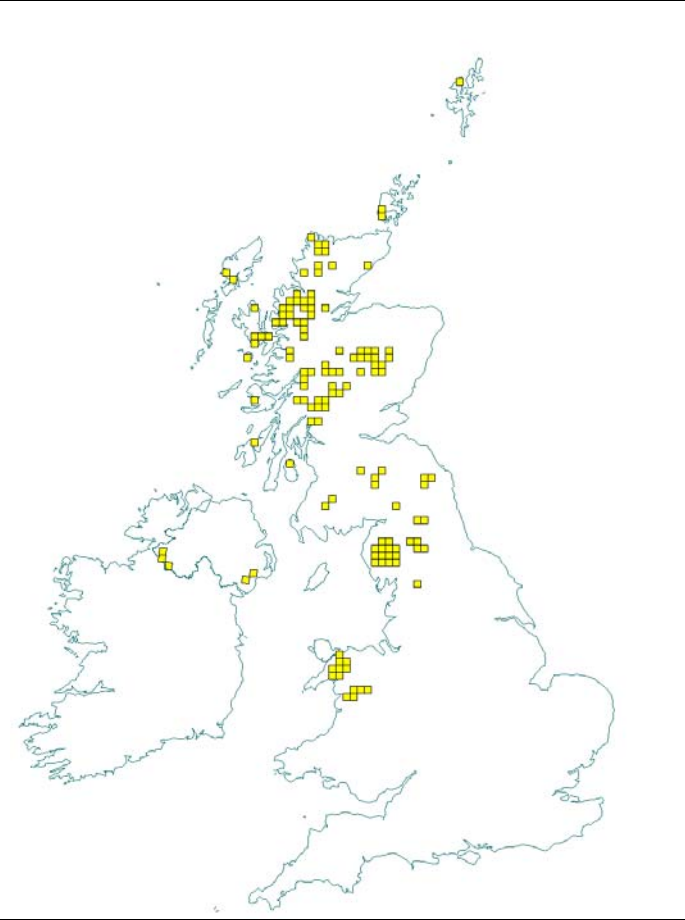
2.1 Current range

Range surface area ^{2.3.1}: 34,783 km²

Date calculated ^{2.3.2}: May 2007

Quality of data ^{2.3.3}: Moderate

The surface area estimate was calculated within alpha hull software, using extent of occurrence as a proxy measure for range (see Map 2.1.1). The value of alpha was set at 25 km; the alpha was clipped to include inland areas only.

Map 2.1.1 Habitat range map ^{1.1} for H8110	Map 2.1.2 Habitat distribution map ^{1.2} for H8110
	
<p>Range envelope shown in blue/grey shade in above map is a minimum convex polygon constructed using JNCC Alpha Shapes tool (see Technical Note I for details of methodology).</p>	<p>Each yellow square represents a 10x10-km square of the National Grid and shows the known and/or predicted occurrence of this habitat. 10 km square count: 131</p>

Maps 2.1.1 and 2.1.2 show the range and distribution of H8110 in the UK. Siliceous scree of the montane to snow levels is widely distributed in the UK, but generally limited by altitude. The *Cryptogramma* – *Athyrium* snow-bed community occurs throughout the Scottish Highlands, between Foinaven in the north and Ben Lui in the south. It is most common on the high Moine and Dalradian schist hills and on the hills that lie along the watershed of western Scotland. There are outliers in the Cairngorms and on Lochnagar.

The *Cryptogramma* – *Deschampsia* community is most common in the warmer parts of the oceanic west of the country, notably north Wales and the Lake District. It is especially associated with the hard volcanic rocks in these regions. *Cryptogramma crispum* is largely confined to the *Cryptogramma* – *Athyrium* community in the Scottish Highlands in the shelter of snow-beds, except in the extreme west (Jackson and McLeod 2000).

2.2 Trend in range since c.1994

Trend in range^{2.3.4}:	Stable
Trend magnitude^{2.3.5}:	Not applicable
Trend period^{2.3.6}:	1994-2006
Reasons for reported trend^{2.3.7}:	Not applicable

There is little quantitative information available on trends in range in the UK for H8110, and particularly since 1994. However, expert judgement suggests that the range since 1994 is likely to be stable as natural erosion and rockfall is unlikely to create scree in new areas outside the current range and the processes which have created the habitat historically are still operating in suitable locations within the surface area of the range shown in Map 2.1.1.

However, heavy grazing may help to slow colonisation of scree by vegetation and soils and even create instability, loss of vegetation cover, erosion and fresh development of scree. Atmospheric pollution has, in the past led to the loss of certain plant species from certain areas of the UK, notably the south Pennines.

Since there is no evidence of significant scree removal in the uplands, and a possibility of fresh scree creation by rockfall, soil erosion and heavy grazing, the habitat may be assumed to be increasing or stable. The effect on range may be small since the processes will mostly act in areas of existing scree and are unlikely to create new areas of scree outside the current range.

2.3 Favourable reference range

Favourable reference range^{2.5.1}: 34,783 km²

Section 3.2.1.3 of 'Assessing Conservation Status: UK Approach' sets out how favourable reference range estimates for habitats have been determined in the UK. Based on this approach, the current surface area, 34,783 km², has been set as the favourable reference area. Reasons for this are discussed below.

There is little quantitative information on the historic range of H8110, only in relation to the contraction in the range of key plant species associated with the habitat, notably *Cryptogramma crispera* which has been lost in the south Pennines (see Section 4.3).

The current and potential distribution of H8110 as shown on Map 2.1.2 is naturally limited by the occurrence of particular geomorphological processes (principally rockfalls) in the uplands of the UK. Gully formation can also lead to scree development by washout of rock. In the UK, there is no potential for increase in the natural range of the habitat as present day rockfalls are most likely to fall into existing areas of scree.

Natural processes since the end of the Ice Age may be expected to have greatly reduced the area of scree by vegetation and soils developing to cover the rock. Currently such processes may be relatively slow, localised and small scale, though large rockfalls, creating large areas of fresh scree do occasionally occur e.g. on Trotternish Ridge. These requirements also mean that the resource has a naturally fragmented distribution within its range.

Consequently the known distribution of H8110 shown in Map 2.1.2 is likely to be occupying most of its potential natural range and is viable. Expert judgement is that favourable reference range and distribution is likely to match closely the current range and distribution.

2.4 Conclusions on range

Conclusion^{2.6.i}: Favourable

There is no empirical information on any changes in range for H8110 since 1994, nor any previous historical data on extent or changes. Although H8110 is a dynamic habitat, natural change affecting the

range operates on geological timescales and human activities are unlikely to have reduced the range of the habitat at a UK scale. Expert opinion suggests that the current range is similar to that in 1994 at a UK scale. The current range for H8110 is considered to be close to the potential range for the habitat and to its favourable reference range, and so the judgement on range for H6430 is Favourable.

3. Area^{2.4}

3.1 Current area

Total UK extent^{2.4.1}: 663.5 km²
Date of estimation^{2.4.2}: May 2007
Method^{2.4.3}: 1 = only or mostly based on expert opinion
Quality of data^{2.4.4}: Moderate

Table 3.1.1 provides information on the area of H8110 in the UK.

There is no comprehensive data available for the extent of this habitat type in the UK, which has a naturally limited extent due to the particular geomorphological conditions required. The range of values provided are estimates based on expert opinion.

Table 3.1.1 Area of H8110 in the UK

	Area (ha)	Method ^{2.4.3}	Quality of data ^{2.4.4}
England	3,250	1	Moderate
Scotland	60,000	1	Moderate
Wales	3000	1	Moderate
Northern Ireland	100 +/- 20	1	Moderate
Total UK extent^{2.4.1}	50,000-80,000 median value 66,350	1	Moderate

Method used to estimate the habitat surface area: 1 = only or mostly based on expert opinion; 2 = based on remote sensing data; 3 = ground based survey. Only the most relevant class is given if more than one applies.

Key to reliability of measure/estimate: 1 = Precise measure of total extent/population size; 2 = Measure based on inventory data; 3 = Estimate calculated from different data sources and/or incomplete inventory data; 4 = Estimate based on expert opinion.

Quality of habitat surface area data: 'Good' e.g. based on extensive surveys; 'Moderate' e.g. based on partial data with some extrapolation; 'Poor' e.g. based on very incomplete data or on expert judgement.

Data source: : Uplands Lead Co-ordination Network, JNCC; David Horsfield, SNH.

3.2 Trend in area since c.1994

Trend in area^{2.4.5}: Stable
Trend magnitude^{2.4.6}: Not applicable
Trend period^{2.4.7}: 1994-2006
Reasons for reported trend^{2.4.8}: Not applicable

There is no readily available quantitative evidence or information on any trend in area for H8110 since 1994. While there is some suggestion that there may be localised increases in area due to heavy grazing removing vegetation from stabilised slopes and promoting scree formation, expert opinion is that the extent of the habitat has remained stable at a UK level since 1994.

3.3 Favourable reference area

Favourable reference area^{2.5.2}: 664 km²

Section 3.2.2.3 of 'Assessing Conservation Status: UK Approach' sets out how favourable reference area estimates have been determined in the UK. Based on this approach, the current extent, which is approximately 664 km², has been set as the favourable reference area. Reasons for this are discussed below.

The potential area of H8110 is naturally limited by the occurrence of specific geomorphological conditions. Natural processes such as rockfall can create new scree; heavy grazing and trampling may help to maintain areas of scree or facilitate the development of new scree. Natural removal of the Annex I habitat through colonisation by vegetation and soils balances against these processes, but it is not known whether loss and gain of extent of the habitat is in balance. The prevailing high numbers of animals in the UK uplands more generally may have extended the extent of scree by facilitating vegetation and soil erosion. The particular environmental conditions required for H8110 also mean that the habitat is naturally fragmented.

There is no readily available information on the historic area of H8110 before 1994.

Expert judgement is that the current area and distribution of H8110 is likely to be viable and that this is likely to equate to its favourable reference area.

3.4 Conclusions on area covered by habitat

Conclusion^{2.6.ii}: Favourable

The extent and distribution of H8110 is dictated principally by a balance between specific geomorphological conditions creating the habitat; grazing which can both maintain and create new habitat; and the creation of soils and colonisation by vegetation that can lead to its loss. The habitat extent is only locally affected by human activities. There is no known trend in area since 1994 and the current area, patch size and distribution is both considered viable and likely to equate to favourable reference area at a UK level.

4. Specific structures and functions ^(including typical species)

4.1 Main pressures ^{2.4.10}

The following list of main pressures for H8110 has been derived from the six year Common Standards Monitoring (CSM) results for SACs designated for their representation of H8110:

- **Grazing (140 Grazing)**

Overgrazing, especially by sheep and red deer, may cause instability in screes resulting in a slowing down of recolonisation by plant growth. More widely, grazing may remove grazing sensitive species and favour unpalatable species such as ferns.

- **Recreational activities (624 Mountaineering, rock climbing, speliology)**

Recreational disturbance such as scree running can result in the localised acceleration of erosion of scree.

- **Air pollution (702 Air pollution)**

Based on an assessment of the exceedance of relevant critical loads (see Technical Note III), air pollution is considered to be a potentially significant pressure to the structure and function of this habitat. The loss of *Cryptogamma crispa*, a key species for H8110 in the UK, from scree in the south Pennines has been attributed to atmospheric pollution.

4.2 Current condition

4.2.1 CSM condition assessments

Condition assessments based on CSM (see www.jncc.gov.uk/page-2199) provide a means to assess the structure and functioning of H8110 in the UK. The following attributes were examined for all CSM assessments relevant to the habitat:

- Feature (habitat) extent.

- Vegetation composition: frequency of taxa which are indicators of favourable condition; cover of taxa which are indicators of favourable condition, and others which are indicators of unfavourable condition.
- Vegetation structure: growth stages, burning, grazing, and disturbance.
- Physical structure: ground disturbance.

Special Area of Conservation (SAC) condition assessments

SACs include about 20% (13,947 ha) (see Technical Note II) of the extent of H8110 in the UK in a well-dispersed network across its range.

Table 4.2.1 and Map 4.2.1 summarise the CSM condition assessments for UK SACs supporting habitat H8110. These data were collated in January 2007. The maps give an impression of the overall spread of where unfavourable and favourable sites exist (summary statistics for the map are given in Section 7.2). The combined assessments show that of the SACs assessed:

- 44% of the area and 30% of the number of assessments was unfavourable; and
- at least 8% of the total UK habitat area was in unfavourable condition.

Table 4.2.1 CSM condition assessment results for UK SACs supporting H8110. See notes below table for details. Information on the coverage of these results is given in Section 7.2

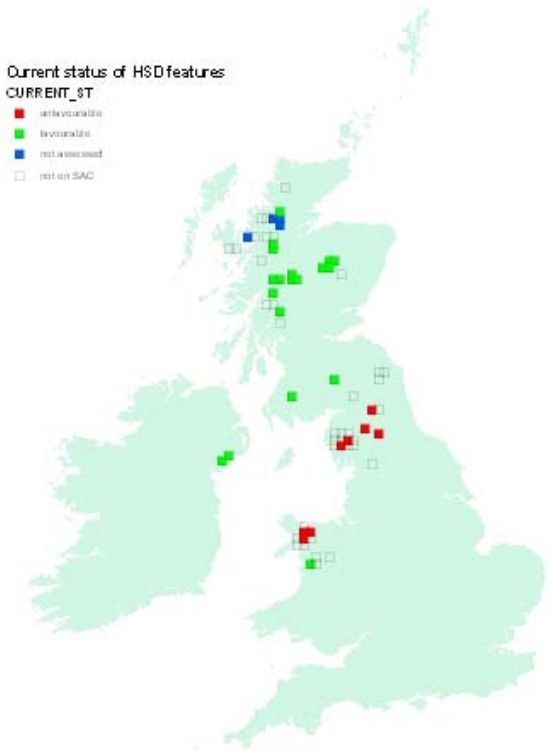
Condition	Condition sub-categories	Area (ha)	Number of site features
Unfavourable	Declining	144	1
	No change	1,872	3
	Unclassified	1,189	1
	Recovering	1,969	2
	Total	5,174	7
	<i>% of all assessments</i>	44%	30%
<i>% of total UK resource</i>	8%	unknown	
Favourable	Maintained	6,715	16
	Recovered		
	Unclassified		
	Total	6,715	16
	<i>% of all assessments</i>	56%	70%
	<i>% of total UK resource</i>	10%	unknown

Notes

1. Data on features that have been partly-destroyed have been excluded from this table because they are not relevant to the consideration of present condition.
2. The data included are from CSM assessments carried out between April 1998 and December 2006. NB: these include additional and some up-date data from those used in the six year report produced by JNCC. (Williams, J.M., ed. 2006. *Common Standards Monitoring for Designated Sites: First Six Year Report*. Peterborough, JNCC).
3. Only assessments made for qualifying interest features on SAC have been included in this analysis.
4. Area figures for CSM assessments have been calculated using the data presented on the standard Natura 2000 data forms submitted to the EU.

Site of Special Scientific Interest (SSSI)/Area of Special Scientific Interest (ASSI) condition assessments

Not used

Current Condition of H8110 based on CSM condition assessments (See Sections 4.2 and 7.2 for further information)		
Map 4.2.1 SAC assessments	Map 4.2.2 Assessments strongly indicative of the condition on SSSI/ASSIs	Map 4.2.3 Assessments weakly indicative of the condition on SSSI/ASSIs
 <p>Current status of HSD features CURRENT_ST</p> <ul style="list-style-type: none"> ■ unfavourable ■ favourable ■ not assessed □ not on SAC 	Not used	Not used
<p>Key</p> <p><u>Red</u> = unfavourable, i.e. the square contains at least one SAC where this habitat feature is present and has been judged to be unfavourable</p> <p><u>Green</u> = favourable, i.e. the square contains at least one SAC where this habitat feature is present and has been assessed as favourable but there are no unfavourable SAC features</p> <p><u>Blue</u> = SAC not assessed, i.e. the square contains at least one SAC supporting this habitat feature but no assessment has been reported</p> <p><u>Transparent</u> = SAC feature not present, i.e. the square does not contain any SAC features of this habitat type</p>	<p>Key*</p> <p><u>Green</u> – 80 – 100% of assessed features on 10-km square are favourable</p> <p><u>Yellow</u> - 50 – 80% of assessed features on 10-km square are favourable</p> <p><u>Orange</u> - 20 – 50% of assessed features on 10-km square are favourable</p> <p><u>Red</u> - 0 – 20% of assessed features on 10-km square are favourable</p> <p>*This is the same key as was used for JNCC CSM Report 2006</p>	

4.3 Typical species

Typical species^{2.5.3}: *Cryptogramma crispa*

Typical species assessment^{2.5.4}: **Change in 10 km square occupancy across UK over last 25 years**

The trends of the following typical species are considered to indicative or informative on the structure and function of the UK resource of H8110.

Table 4.3.1 Trends and faithfulness of selected typical species for H8110

Typical species considered:	Faithfulness to habitat H8110 (based on analysis of NVC synoptic tables)	Trend over last 25 years from BSBI atlas - based on change in 10 km square occupancy across UK (see http://www.jncc.gov.uk/page-3254)
<i>Cryptogramma crispa</i>	Medium	No data

None of the other species listed as characteristic of this habitat in the EU Interpretation Manual are particularly faithful to this habitat so available trend data at the UK-level is not particularly meaningful and has not been utilised here. However, there are no data available on trends for *Cryptogramma crispa* and limitations to deducing a trend for a habitat from a single species in any case.

4.4 Conclusions on specific structures and functions (including typical species)

Conclusion^{2.6.iii}: **Unfavourable - Inadequate but improving**

The EC Guidance states that where the specific structures and functions of a habitat are intermediate between “good with no significant pressures” and “bad with more than 25% of the area of the habitat area unfavourable as regards its specific structures and functions”, the conclusion should be Unfavourable – Inadequate. In the UK, this was generally taken to mean that 5-25% of the habitat area was in unfavourable condition.

CSM data for 2000-2006 for SACs suggest 30% of the number of assessed SACs supporting H8110, and 44% of the assessed SAC area (equivalent to 8% of the UK total area for H8110) were unfavourable. Around 17% of the assessed SAC area is recovering and only 1% is declining, suggesting a general improvement in the condition of H8110 in these sites.

Extrapolating these trends to the wider resource of H8110 suggest that much more than 25% of the overall resource is likely to be in unfavourable condition. However, all the unfavourable assessments are for England which holds only 4% of the UK resource, and expert opinion suggests extrapolating this trend to the whole of the UK may be misleading and that the total in unfavourable condition may be rather less than 25% of the UK resource. Consequently a judgement of Unfavourable - Inadequate but improving’ is more justified.

5. Future prospects

5.1 Main factors affecting the habitat

5.1.1 Conservation measures

- Protection within SACs

Around 20% of the known resource of H8110 lies within SACs with management measures specifically aimed at maintaining and enhancing the features for which they are designated, and to address some of the pressures listed within Section 4.1 and the future threats listed in Section 5.1.2.

An unknown but significant proportion of the resource of H8110 also lies within the SSSI/ASSI series where similar management measures are in place.

- Agri-environment measures

A suite of agri-environment measures are now in place in both the uplands and lowlands which are addressing more appropriate management, particularly grazing levels, for much of the resource of H8110, particularly within the statutory site series.

- UK Biodiversity Action Plan (BAP)

H8110 has been put forward as part of a new priority habitat type - inland rock outcrop and scree habitats. However it is not currently covered by any priority habitat action plan under the UK BAP.

5.1.2 Main future threats^{2.4.11}

The most obvious major future threats to H8110 are listed below, several of which are referred to in Section 4.1. The measures identified in section 5.1.1 are addressing some of these factors, with a greater proportion being addressed within the statutory site series:

- Grazing (**140 Grazing**)

In some areas scree may start to become more vegetated in future years if grazing levels fall under agri-environment schemes and/or Common Agricultural Policy (CAP) changes. This should not be of initial concern (as increases in valuable habitat from currently degraded scree may occur) but it will be important to monitor the affect of increased vegetation cover, and it may require the identification of those key areas of scree that should be kept open.

- Recreational activities (**624 Mountaineering, rock climbing, speliology**)

- Air pollution (**702 Air pollution**)

Based on an assessment of the exceedance of relevant critical loads (see Technical Note III), air pollution is considered to be a potentially significant threat to the future condition of this habitat.

- Climate change

Based on the literature review (Technical Note IV) climate change is considered a major threat to the future condition of this habitat especially in the long term. However, there is a high degree of uncertainty in defining future climate threats on habitats and species due to uncertainty in: future greenhouse gas emissions; the consequential changes in climatic features (for instance temperature, precipitation CO₂ concentrations); the responses of habitats and species to these changes (for instance location, phenology, community structure) and the role of other socio-economic drivers of environmental change. The scale of change in habitats and species as a result of climate change will vary across ecosystems. Small changes in the climate are more likely to have a substantial impact on habitats and species which exist within a narrow range of environmental conditions. The future impacts of climate change on UK biodiversity will be exacerbated when coupled with other drivers of environmental change.

5.2 Future condition (as regards range, area covered and specific structures and functions)

5.2.1 CSM condition assessments

The CSM condition assessments reported in Sections 4.2.1-2 provide a basis to predict the potential future condition of H8110 in the UK. This involved treating all assessments currently identified as either favourable or unfavourable recovering as future-favourable: remaining categories were treated as future-unfavourable – see Table 5.2.1. There are a number of caveats to this approach, which are set out beneath this table.

SAC condition assessments

Table 5.2.1 and Map 5.2.1 summarise the predicted potential future condition of H8110 on UK SACs. This is based on the approach described above. The maps give an impression of the overall spread of

where future-unfavourable and future-favourable sites are predicted to occur (summary statistics for the map are given in Section 7.2). The combined assessments show that of the SACs assessed:

- 73% of the area and 78% of the number of assessments fall within the future-favourable category; and
- at least 13% of the total UK habitat area falls within the future-favourable category.

Table 5.2.1 Predicted future condition of UK SACs supporting H8110 based on current CSM condition assessments. See notes below table for details. Information on the coverage of these results is given in Section 7.2

Future condition	Present condition	Area (ha)	Number of site features
Future-unfavourable	Unfavourable declining	144	1
	Unfavourable no change	1,872	3
	Unfavourable unclassified	1,189	1
	Total	3,205	5
	<i>% of assessments</i>	<i>27%</i>	<i>22%</i>
	<i>% of total UK extent</i>	<i>5%</i>	<i>Unknown</i>
Future-favourable	Favourable maintained	6,715	16
	Favourable recovered		
	Unfavourable recovering	1,969	2
	Favourable unclassified		
	Total	8,684	18
	<i>% of assessments</i>	<i>73%</i>	<i>78%</i>
	<i>% of total extent</i>	<i>13%</i>	<i>Unknown</i>

Note that the scenario presented above is based on the same information as used to construct the Table in section 4.1. It is based on the following premises:

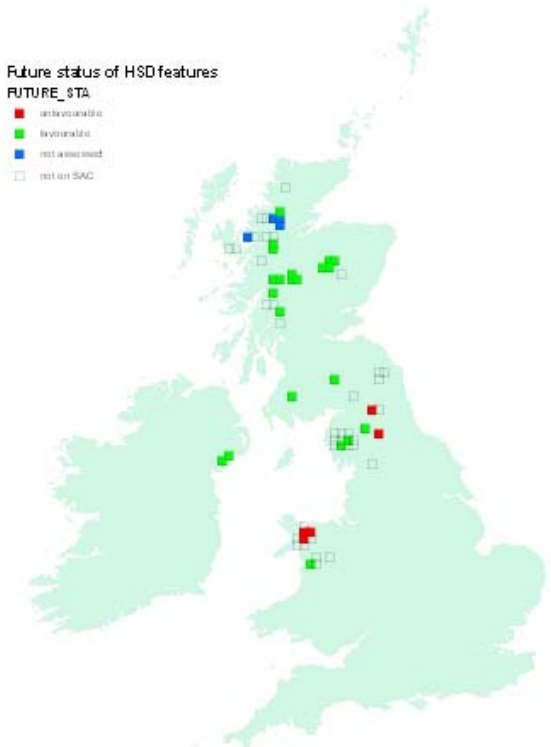
- the unfavourable-recovering condition assessments will at some point in the future become favourable;
- all unfavourable-unclassified sites will remain unfavourable, which is probably overly pessimistic;
- sympathetic management will be sustained on sites already classified as favourable and these will not be seriously damaged by any unforeseen events.

IMPORTANT NOTE: We do not have information on the timescale of the predicted recovery, which may be influenced by many past, natural and human related factors. A sustained, sympathetic management regime is more likely to result in 'favourable' condition being attained.

5.2.2. SSSI/ASSI condition assessments

Not used

Predicted Future Condition of H8110 based on CSM condition assessments (See Sections 5.2 and 7.2 for further information on these maps)

Map 5.2.1 SAC assessments	Map 5.2.2 Assessments strongly indicative of the condition on SSSI/ASSIs	Map 5.2.3 Assessments weakly indicative of the condition on SSSI/ASSIs
	<p>Not used</p>	<p>Not used</p>

<p>Key</p> <p>Red = <u>future-unfavourable</u>, i.e. the square contains one or more SACs where this habitat feature is present and has been predicted to be future-unfavourable</p> <p>Green = <u>future-favourable</u>, i.e. the square contains at least one SAC where this habitat feature is present and has been predicted to be future-favourable</p> <p>Blue = <u>SAC not assessed</u>, i.e. the square contains at least one SAC supporting this habitat feature but no assessment has been reported</p> <p>Transparent = <u>SAC feature not present</u>, i.e. the square does not contain any SAC features of this habitat type</p>	<p>Key*</p> <p>Green – 80 – 100% of assessed features on 10-km square are favourable</p> <p>Yellow - 50 – 80% of assessed features on 10-km square are favourable</p> <p>Orange - 20 – 50% of assessed features on 10-km square are favourable</p> <p>Red - 0 – 20% of assessed features on 10-km square are favourable</p> <p>*This is the same key as was used for JNCC CSM Report 2006</p>
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5.3 Conclusions on future prospects (as regards range, area covered and specific structures and functions)

Conclusion^{2.6.iv}: Unfavourable – Inadequate but improving

The EC Guidance states that where habitat prospects are intermediate between “good with no significant impacts from threats expected and long-term viability assured” and “bad with severe impacts from threats expected and long-term viability not assured”, the judgement should be Unfavourable – Inadequate. In the UK, this was generally taken to mean that range and/or area are stable or decreasing, and between 75-95% of the habitat area is likely to be in favourable condition in 12-15 years.

The principal future pressure (grazing) on H8110 is being addressed directly for the proportion of the resource of H8110 that lies within the statutory site series; and (particularly through agri-environment measures) for the larger proportion of the resource of H8110 lying outside the statutory site series. However uncertainty over the effective extent of changes to grazing may reduce the confidence associated with this judgement.

Within the SAC series, 73 % of the area of SAC and 78% of the sites for the feature are assessed by CSM as “future – unfavourable”, which can be extrapolated to suggest that at least 73% of the total UK resource of H8110 is likely to achieve favourable condition in the foreseeable future. However as only 20% of the UK resource of H8110 lies within SACs, and most of the small part of the SAC resource assessed to date lies in England, this may reduce the confidence associated with this judgement.

As there is no evidence to suggest a future decline in the area or range of H8110 in the UK by more than 1% p.a., the evidence from conservation measures currently in place and predicted to operate over the next 15-20 years leads to a judgement of Unfavourable – Inadequate but improving for the future prospects for H8110.

6. Overall conclusions and judgements on conservation status

Conclusion^{2.6}: Unfavourable – Inadequate but improving

On the basis of the Structure and Function and Future Prospects assessments, the overall conclusion for this habitat feature is Unfavourable – Inadequate.

Table 6.1 Summary of overall conclusions and judgements

Parameter	Judgement	Grounds for Judgement	Confidence in judgement*
Range	Favourable	Current range is stable and not less than the favourable reference range.	2
Area covered by habitat type within range	Favourable	Current range is stable and not less than the favourable reference area.	2
Specific structures and functions (including typical species)	Unfavourable – Inadequate but improving	Structures and functions considered to be intermediate between “good with no significant pressures” and “more than 25% of the habitat area unfavourable as regards its specific structures and functions”. Significantly more of the resource in unfavourable condition is improving than declining.	3
Future prospects (as regards range, area covered and specific structures and functions).	Unfavourable – Inadequate but improving	Habitat prospects considered to be intermediate between “good with no significant impacts from threats expected and long-term viability assured” and “bad with severe impacts from threats expected and long-term viability not assured. Measures are in place and planned to address threats to future range, extent and structure and function for the overall UK resource.	3
Overall assessment of conservation status	Unfavourable – Inadequate but improving	Two parameters judged as Unfavourable – Inadequate, but both improving; two parameters judged as Favourable.	2

Key to confidence in judgement: 1 = High; 2 = Medium; 3 = Low

7. Annexed material (including information sources used 2.2)

7.1 References

JACKSON, D.L. & MCLEOD, C.R. (eds.) 2002. Handbook on the UK status of EC Habitats Directive interest features: provisional data on the UK distribution and extent of Annex I habitats and the UK distribution and population size of Annex II species. *JNCC Report* No. 312. Version 2. www.jncc.gov.uk/page-2447

JOINT NATURE CONSERVATION COMMITTEE. 2005a. *Common Standards Monitoring (CSM)*. Joint Nature Conservation Committee, Peterborough. www.jncc.gov.uk/page-2217

JOINT NATURE CONSERVATION COMMITTEE. 2005b. *Common Standards Monitoring Guidance for Upland Habitats* Version May 2005, Peterborough. www.jncc.gov.uk/page-2237

Map data sources

Dave Horsfield (*pers. comm.*) 2007. Scottish Natural Heritage.

JNCC International Designations Database. Joint Nature Conservation Committee.

Richard Weyl (*pers. comm.*) 1995. Environmental Heritage Service.

7.2 Further information on CSM data as presented in Sections 4.2 and 5.2

Table 7.2.1 Summary of the coverage of the data shown in Tables 4.2.1 and 5.2.1

Data	Value
Number of SACs supporting feature (a)	29
Number of SACs with CSM assessments (b)	23
% of SACs assessed (b/a)	79
Extent of feature in the UK – hectares (c)	66,350
Extent of feature on SACs – hectares (d)	13,947
Extent of features assessed – hectares (e)	11,889
% of total UK hectarage on SACs (d/c)	21
% of SAC total hectarage that has been assessed (e/d)	85
% of total UK hectarage that has been assessed (e/c)	18

Table 7.2.2 Summary of grid square map data shown in Maps 4.2.1-3 and 5.2.1-3

Status	Number of squares	Proportion of all squares
Current – Unfavourable (red)	8	12%
Current – Favourable (green)	19	28%
On SAC but not assessed (blue)	4	6%
Not on SAC (transparent)	36	54%
Total Number of 10-km squares (any colour)	67	
Future – Unfavourable (red)	5	7%
Future – Favourable (green)	22	33%