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 :

H7240: Alpine pioneer formations of the *Caricion bicoloris-atrofuscae*

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

H7240 Alpine pioneer formations of the *caricion bicoloris-atrofuscae*

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 information and data used to complete the standard EC reporting form (Annex D), following the methodology outlined in the commission document "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 & correspondance with NVC and other habitat types

Table 1.1.1 provides a summary description of H7240 and its relations with UK classifications.

Alpine pioneer formations of the *Caricion bicoloris-atrofuscae* is a type of flush mire that occurs only at high altitude. The characteristic plant communities colonise open substrates that are constantly flushed by surface seepage of cold, base-rich water. They are amongst the few remaining natural plant communities in the UK and are maintained by harsh climatic and soil conditions.

The vegetation consists of mixtures of small sedges, rushes, small herbs and bryophytes, and includes many arctic-alpine species. High-altitude stands only, of four NVC types, enriched by arctic-alpine elements, fall within the definition of this habitat type:

M10 *Carex dioica – Pinguicula vulgaris* mire
M11 *Carex demissa – Saxifraga aizoides* mire
M12 *Carex saxatilis* mire
M34 *Carex demissa – Koenigia islandica* flush

There is variation in this habitat because of differences in altitude, geographic location, length of snow-lie, nature of the substrate, and the amount of water flushing the communities. The habitat is characterised by the presence of a number of rare species. These include scorched alpine-sedge *Carex atrofusca*, bristle sedge *C. microglochin*, alpine rush *Juncus alpinoarticulatus*, chestnut rush *J. castaneus*, two-flowered rush *J. biglumis*, three-flowered rush *J. triglumis*, false sedge *Kobresia simpliciuscula* and Scottish asphodel *Tofieldia pusilla*. Other uncommon species may occur, such as hair sedge *Carex capillaris*, sheathed sedge *C. vaginata* and variegated horsetail *Equisetum variegatum*. There is a range of calcicolous mosses, some of which are rare.

A number of commoner species are also characteristic of the habitat. These include yellow sedge *Carex viridula*, carnation grass *C. panicea*, flea sedge *C. pulicaris*, russet sedge *C. saxatilis*, jointed rush *Juncus articulatus*, common butterwort *Pinguicula vulgaris*, yellow saxifrage *Saxifraga aizoides*, alpine bistort *Persicaria vivipara*, alpine meadow-rue *Thalictrum alpinum* and the moss *Blindia acuta*.

This habitat usually forms mosaics and shows complex transitions to other upland Annex I habitat types.

Table 1.1.1 Summary description of habitat H7240 and its relations with UK vegetation/habitat classifications.

Classification	Correspondence with Annex I type	Comments
EU Interpretation Manual	Alpine, peri-Alpine and northern British communities colonising neutral to slightly acid gravelly, sandy, stony, sometimes somewhat argilous or peaty substrates soaked by cold water, in moraines and on edges of springs, rivulets, glacial torrents of the alpine or subalpine levels, or on alluvial sands of pure, cold, slow-flowing rivers and calm backwaters. Permanent or continued soil frost over a long period is essential for the existence of this habitat type. Low vegetation composed principally of species of *Carex* and *Juncus* ([Caricion bicoloris-atrofuscae]).	
NVC	M10 *Carex dioica – Pinguicula vulgaris* mire M11 *Carex demissa – Saxifraga aizoides* mire M12 *Carex saxatilis* mire M34 *Carex demissa – Koenigia islandica* flush	Stands of M10 are only referable to this Annex I type if they occur at high altitude and contain arctic-alpine species. (Appendix II Jackson & McLeod 2000)
BAP priority habitat type	Upland flushes and fens	Proposed new UK BAP priority habitat type. H7240 fully included in proposal.
JNCC CSM reporting categories, for SAC feature and ASSI/SSSI feature types	Fens and marshes – uplands (See Willliams 2006 www.jncc.gov.uk/page-3520)	A broader category which covers the following Annex I feature types: H6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) H7230 Alkaline fens H7240 Alpine pioneer formations of the *Caricion bicoloris-atrofuscae* H7210 Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* H7220 Petrifying springs with tufa formation (*Cratoneurion*) H7150 Depressions on peat substrates of the *Rhynchosporion* H7140 Transition mires and quaking bogs
JNCC CSM Guidance feature types	Alpine flush (JNCC 2005b www.jncc.gov.uk/page-2237)	Close correspondence to H7240 Alpine pioneer formations of the *Caricion bicoloris-atrofuscae*

2. Range [2.3]

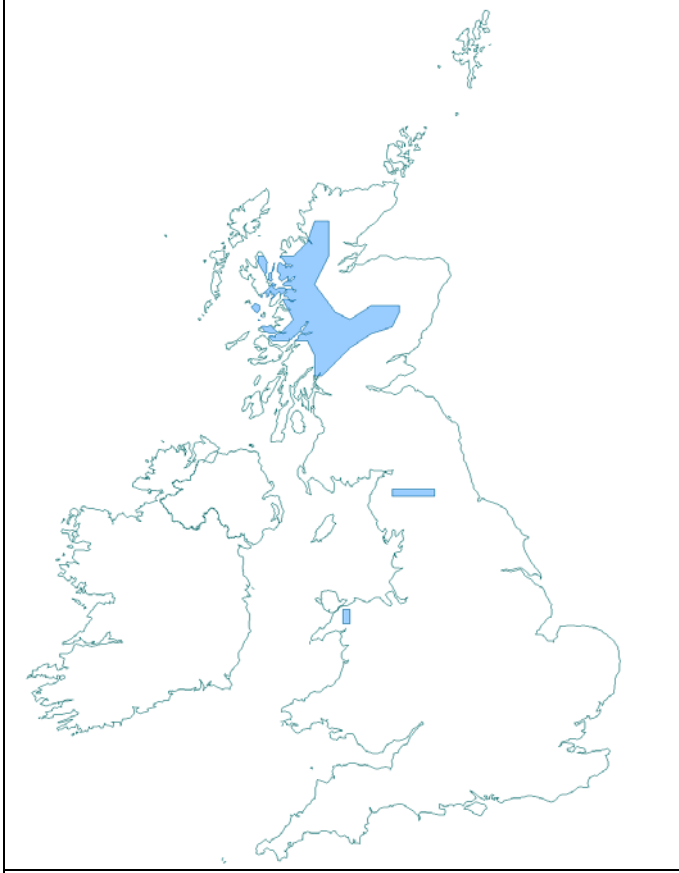
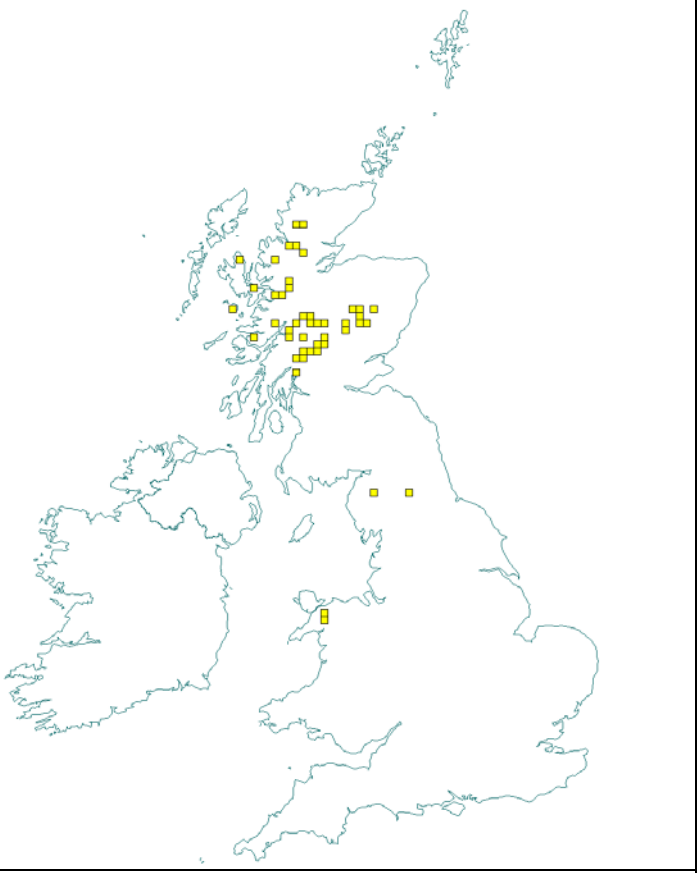
2.1 Current range

Range surface area [2.3.1]: **15,245 km²**
Date calculated [2.3.2.]: **May 2007**
Quality of data [2.3.3.]: **Good**

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.

Maps 2.1.1 and 2.1.2 show the range and distribution of H7240 in the UK. This habitat occurs in the Atlantic, Alpine and Boreal Biogeographical Regions. In the UK this priority habitat is rare and is largely restricted to the Scottish Highlands, where it is relatively widespread. There are southern outliers in northern England and north Wales. The habitat is rarely extensive but is important as a habitat for some of the rarest plant species in the UK, which characterise this habitat type. (Jackson & McLeod 2000)

An indication of the range is given by the distribution of the most relevant NVC communities. Maps 2.1.1 and 2.1.2 shows records for NVC communities M12 and M34 as indicative of areas of snowmelt, together with Special Areas of Conservation supporting this Annex I type. Records of M10 have not been included as most forms of this community are referable to Annex I type **7230 Alkaline fens**. Similarly only one of the sub-communities of M11 conforms to the habitat and so records of M11 have been omitted from this map to give a more accurate representation of the distribution of H7240.

Map 2.1.1 Habitat range map [1.1] for H7240	**Map 2.1.2** Habitat distribution map [1.2] for H7240
	
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)	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: 45

2.2 Trend in range since c.1994

Trend in range[2.3.4]: **Unknown**
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 no readily available evidence or information on the trend in range for H7240 since 1994.

2.3 Favourable reference range

Favourable reference range[2.5.1]: 15,245 km^2

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, 15, 245 km^2, has been set as the favourable reference area. Reasons for this are discussed below.

There is no information readily available on the historic range of H7240. The potential range depends on the definition of the habitat. This habitat is not well-defined floristically, being a type of base-rich fen characterised by a number of arctic-alpine species. In the UK, with only a modest development of the characteristic arctic-alpine species, the habitat is at the edge of its range in Europe. The distribution of the habitat is limited by severe and special environmental factors notably by cool summits or corries and late-lying snow giving rise to cold long-lasting flushes through base-rich substrates. Such conditions are restricted chiefly to high ground with base-rich schists at high altitude in the Highlands and a few other areas with special conditions and flora such as Skye and England and Wales.

The habitat is likely to occur on the higher hills in the Highlands outside of the designated sites series. This is most likely within the currently known range in the Breadalbanes and central Highlands on base-rich schist.

Overall expert opinion suggests that the current distribution of H7210 as shown in Map 2.1.2 appears to occupy most of the potential range, and that the favourable reference range and distribution are likely to match closely the current range and distribution.

2.4 Conclusions on range

Conclusion[2.6.i]: Favourable

There is no information on any changes in the range of H7240 since 1994, nor any previous historical data on extent or changes. However H7240 is considered to be close to its favourable reference range and as viable as it can be under the marginal conditions for the development of the habitat in the UK. Consequently the judgement on range for H7240 is 'Favourable'.

3. Area [2.4]

3.1 Current area

Total UK extent [2.4.1]: 3.4 km^2
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]: Poor

Table 3.1.1 provides information on the area of H7240 in the UK. There are no comprehensive data available for the extent of this habitat type in the UK, and the figures provided in Table 3.1.1 are estimates based on expert opinion. Currently about 40 ha are known from Scotland which is thought to hold the majority of the resource; allowing for the findings of more detailed survey, expert judgement suggests that this figure is unlikely to exceed 100 ha hence the range of 40-100 ha.

The exact figure in England and Wales are not known but are likely to be very small

The total area of H7240 currently recorded on UK SACs is 340ha; this is considered to be an overestimate as not all stands of the core NVC communities may have the rare species characteristic of the habitat. This figure has been used for subsequent calculations in this assessment but does require further verification.

Table 3.1.1 Area of H7240 in the UK

	Area (ha)	Method [2.4.3]	Quality of data [2.4.4]
England	present	1	Poor
Scotland	40-100	1	Poor
Wales	Present	1	Poor
Northern Ireland	Absent	1	Not applicable
Total UK extent [2.4.1]	340	1	Poor

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
Data source: Uplands Lead Co-ordination Network, JNCC. NI Alastair Church, EHS – (pers com 2007).

3.2 Trend in area since c.1994

Trend in area[2.4.5]: **Unknown**
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 evidence or information on recent trends in the UK area of H7240.

3.3 Favourable reference area

Favourable reference area[2.5.2]: **Unknown**
The potential area for H7240 is unlikely to significantly exceed the current area as the habitat is largely limited by the harsh and special conditions required for its development. The habitat naturally occurs in the UK in small patch sizes, and this renders the resource of H7240 particularly vulnerable to climate change and changes in snowfall. Most of the UK resource of H7240, as special montane habitat, is already included within the SAC and SSSI series. However as the total current area for the UK is not known it is not possible to identify a favourable reference area for H7240.

Although unlikely to have ever been extensive the lack of information on the current area of H7240 in the UK and and its small patch sizes mean that it is likely to be currently at less than its favourable reference area. However without further information it is not possible to conclude whether the current area is more or less than 10% below any favourable reference area.

3.4 Conclusions on area covered by habitat

Conclusion[2.6.ii]: **Unknown**
Although both the current area and favourable reference area are unknown, expert judgement suggests that there is no evidence that human activities have restricted the area of the habitat, which is primarily governed by harsh and special environmental conditions. However, due to the highly fragmented nature of the habitat, the small populations of the rare species supported by H7240 may be considered to be at risk. Therefore, there are doubts as to whether the habitat is viable in its current state and the current extent may be less than the “favourable reference area”.

4. Specific Structures and Functions **(including typical species)**

4.1 Main pressures [2.4.10]

The following list of main pressures for H7240 has been derived from the 6-year Common Standards Monitoring results for SACs designated for their representation of H7240:

- Grazing **(140 Grazing)**

Over-grazing has been recorded as a reason for adverse condition of H7240 in the SAC series, principally of the more accessible stands. This leads to loss of vegetation structure and the failure of more palatable or vulnerable species to reproduce and maintain themselves. It can also lead to the loss of plant species and associated fauna. However some grazing may be necessary for their survival to keep competition from more vigorous species in check.

- Fragmentation and connectivity **(950 Biocenotic evolution)**

This is a highly fragmented habitat occurring on isolated hills in small stands probably mainly less than 0.1 ha in size and only on a few favoured sites do stands occur in any numbers. Many of the rare arctic-alpine species that characterise these stands survive at the limits of viability. Given such fragmentation the characteristic species of this habitat are susceptible to chance events.

- Burning **(180 Burning)**

Burning of adjoining associated habitats has led to damage to isolated patches of H7240 on some parts of the SAC series.

- Water management **(990 Other natural processes)**

The habitat is dependent on snowmelt flushing the habitat in early spring. Changes to the length of snow lie and the amount of water can lead to adverse changes to this naturally variable habitat.

- Air pollution

Based on an assessment of the exceedence of relevant critical loads (see Technical Note III), air pollution is not considered to be a potentially significant pressure to the structure and function of this habitat.

4.2 Current condition

4.2.1 Common Standards Monitoring condition assessments

Condition assessments based on Common Standards Monitoring (see www.jncc.gov.uk/page-2199) provide a means to assess the structure and functioning of H7240 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.

Table 4.2.1 Common Standards Monitoring condition assessment results for UK SACs supporting H7240. 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	00	1
	No change	184	5
	Unclassified		
	Recovering	16	1
	Total	200	7
	% of all assessments	***69%***	***50%***
	% of total UK resource	***59%***	***unknown***
Favourable	Maintained	89	7
	Recovered		
	Unclassified		
	Total	89	7
	% of all assessments	***31%***	***50%***
	% of total UK resource	***26%***	***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 form 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.

SAC condition assessments

Please note The total area of H7240 in the UK on SACs exceeds expert estimates of the total UK resource of the habitat (see section 3.1); however it has been used as a surrogate for the total UK extent in the absence of any other reliable UK extent figure for this habitat. The relative proportions of the figures in Table 4.2.1 and associated maps are considered likely to be representative of the broad trend for the whole UK resource of H7240.

Table 4.2.1 and Map 4.2.1 summarise the Common Standards Monitoring condition assessments for UK SACs supporting habitat H7240. 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:

- 69% of the area and 50% of the number of assessments was Unfavourable;
- 59% of the total UK habitat area was in Unfavourable condition.

SSSI/ASSI condition assessments

Table 4.2.2 and Maps 4.2.2 and 4.2.3 summarise the Common Standards Monitoring condition assessments that were judged to be either strongly or weakly indicative of the condition of the Annex I habitat on SSSI/ASSIs (see Technical Note II for details of methodology behind this). 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 maps are given in Section 7.2.). The combined condition assessments show that of the SSSI/ASSI assessments considered:

- 100% of strongly indicative assessments and 38% of weakly indicative assessments were Unfavourable.

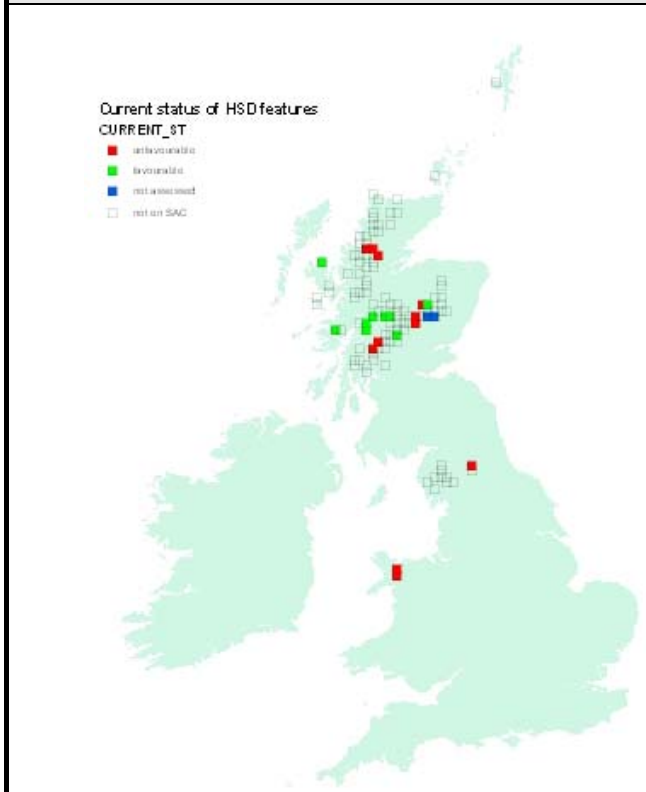
Table 4.2.2 Common Standards Monitoring condition assessment results for UK SSSI/ASSIs that were judged to be either strongly or weakly indicative of the condition of H7240 on SSSI/ASSIs. See notes below table and Technical Note II for further details.

Condition	Condition sub-categories	Number of assessments	
		Strongly indicative assessments (Category 1)	Weakly indicative assessments (Category 2)
Unfavourable	Declining		1
	No change	1	2
	Unclassified		
	Recovering		2
	Total	1	5
	% of all assessments	***100%***	***38%***
Favourable	Maintained		
	Recovered		
	Unclassified		8
	Total		8
	% of all assessments	***00%***	***62%***

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.

Current Condition of H7240 based on Common Standard Monitoring 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
		
Key Red =Uunfavourable, i.e. the square contains at least one SAC where this habitat feature is present and has been judged to be Unfavourable Green =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 Blue = SAC not assessed, i.e. the square contains at least one SAC supporting this habitat feature but no assessment has been reported Transparent = SAC feature not present, i.e. the square does not	Key* Green – 80 – 100% of assessed features on 10-km square are Favourable Yellow - 50 – 80% of assessed features on 10-km square are Favourable Orange - 20 – 50% of assessed features on 10-km square are Favourable Red - 0 – 20% of assessed features on 10-km square are Favourable *This is the same key as was used for JNCC CSM Report 2006	

contain any SAC features of this habitat type	

4.3 Typical species

Typical species[2.5.3]: ***Juncus castaneus, Carex saxatilis, Juncus alpinoarticulatus, Tofieldia pusilla, Minuartia stricta***

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 H7240.

Table 4.3.1 Trends and faithfulness of selected typical species for H7240

Typical species considered [2.5.3]:	**Faithfulness to habitat H7240 (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)**
Juncus castaneus	Very high	Significant decline, but <25% in 25yrs
Carex saxatilis	Very high	Significant decline, but <25% in 25yrs
Juncus alpinoarticulatus	High	No significant change
Tofieldia pusilla	Medium	Significant decline, but <25% in 25yrs
Minuartia stricta	Medium	No significant change

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. Overall the trend for this species suggests an improvement in the condition of the wider resource of H7240; however there are no trends for the species since 1994 and limitations to deducing a trend for a habitat from a single species.

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

Conclusion[2.6.iii]: Unfavourable - Bad but improving

The EC Guidance states that where "more than 25% of the area of the habitat is Unfavourable as regards its specific structures and functions", the conclusion should be Unfavourable – Bad. In the UK this was generally taken to mean that more than 25% of the habitat area in Unfavourable condition.

Grazing is the main pressure on this habitat. Whilst it may help to maintain the viability of the smaller species in the sward by cutting back on the growth of more vigorous competitors, heavy grazing can reduce or eliminate flowering and seeding, possibly reducing the long-term viability of characteristic species, especially the arctic-alpines.

Common Standards Monitoring data for 2000-2006 for SACs suggest 59% of the area of SACs supporting H7240 (and between 38 and 100% of features from respectively weakly and strongly indicative CSM assessments for SSSI/ASSIs) are Unfavourable. Around 5% of the assessed SAC area is recovering and none is declining (sample sizes are too small to be meaningful for SSSI/ ASSIs for his purpose), suggesting a very slight general improvement in the condition of H7240 in these sites.

Expert opinion suggests that the overall majority of the UK resource of H7240 lies within SACs. Given this high representation and in the absence of date from sites outside the statutory site series, the figures from CSM data for SACs have been extrapolated as being representative of the UK resource overall and

this suggests that much more than 25% of the UK area for H6430 is in Unfavourable condition. With very slightly more of the assessed SAC resource in the 'Favourable' category improving as declining, this suggests a judgement of Unfavourable – Bad but improving for the structure and function parameter for H7240.

5. Future Prospects

5.1 Main threats

5.1.1 Conservation measures

- Protection within SACs

The majority of the known resource of H7240 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. These include for example the removal of grazing and large grazing enclosures.

- 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 H7240, particularly within the statutory site series.

- UK BAP

H7240 has been put forward as part of a new priority habitat type - upland flushes and fens - but is not currently covered by any priority habitat action plan under the UK Biodiversity Action plan.

5.1.2 Main future threats[2.4.11]

The most obvious major future threats to H6430 are listed below, several of which are referred to in Section 4.1. Many of these should decline given the current and propose actions listed under section 5.1.1:

- Grazing **(140 Grazing)**
- Fragmentation and connectivity **(950 Biocenotic evolution)**
- Burning **(180 Burning)**
- Water management **(990 Other natural processes)**

- Climate change **(990 Other natural processes)**

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.

- Air pollution

Based on an assessment of the exceedence of relevant critical loads (see Technical Note III), air pollution is not considered to be a potentially significant threat to the future condition of this habitat.

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

5.2.1 Common Standards Monitoring condition assessments

The Common Standards Monitoring condition assessments reported in Sections 4.2.1-2 provide a basis to predict the potential future condition of H7240 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 5.2.1.1. There are a number of caveats to this approach, which are set out beneath this table.

SAC condition assessments

Please note The total area of H7240 in the UK on SACs exceeds expert estimates of the total UK resource of the habitat (see section 3.1); however it has been used as a surrogate for the total UK extent in the absence of any other reliable UK extent figure for this habitat. The relative proportions of the figures in Table 4.2.1 and associated maps are considered likely to be representative of the broad trend for the whole UK resource of H7240.

Table 5.2.1 and Map 5.2.1 summarise the predicted potential future condition of H7240 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:

- 36% of the area and 57% of the number of assessments fall within the future-Favourable category;
- 31% of the total UK habitat area falls within the future-Favourable category.

Table 5.2.1 Predicted future condition of UK SACs supporting H7240 based on current Common Standards Monitoring 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	00	1
	Unfavourable no change	184	5
	Unfavourable unclassified		
	Total	184	6
	% of assessments	***64%***	***43%***
	% of total UK extent	***54%***	***Unknown***
Future-Favourable	Favourable maintained	89	7
	Favourable recovered		
	Unfavourable recovering	16	1
	Favourable unclassified		
	Total	104	8
	% of assessments	***36%***	***57%***
	% of total extent	***31%***	***Unknown***

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:
(i) the Unfavourable-recovering condition assessments will at some point in the future become Favourable.
(ii) all Unfavourable-unclassified sites will remain Unfavourable, which is probably overly pessimistic;
(iii) 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.

SSSI/ASSI condition assessments

Table 5.2.2 and Maps 5.2.2 and 5.2.3 summarise the predicted potential future condition of H7240 on UK SSSI/ASSIs. This is based on the approach described above and utilises condition assessments that were judged to be either strongly or weakly indicative of the condition of the Annex I habitat on SSSI/ASSIs (see Technical Note II for details of methodology behind this). The maps give an impression of the overall spread of where Unfavourable and Favourable sites exist (summary statistics for the maps are given in Section 7.2.). The combined condition assessments show that of the SSSI/ASSI assessments considered:

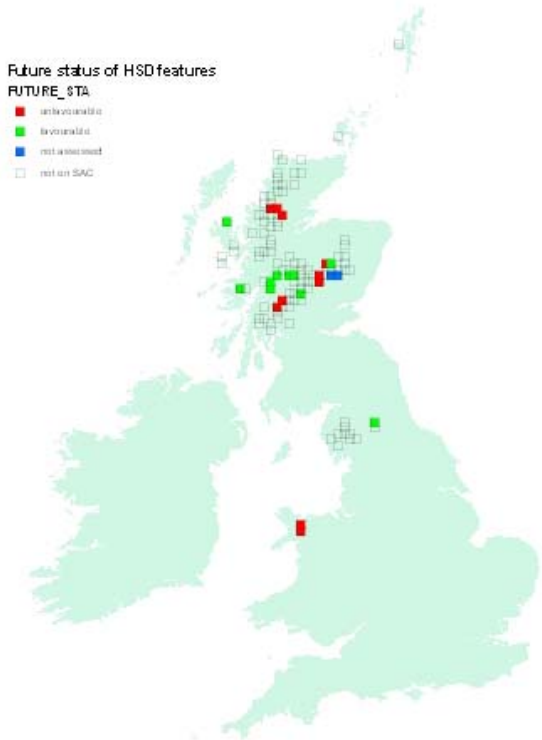
- 0% of strongly indicative assessments and 77% weakly indicative assessments fall within the future-Favourable category.

Table 5.2.2 Predicted future condition of H7240 on SSSI/ASSIs based on Common Standards Monitoring assessments that were judged to be either strongly or weakly indicative of the condition. See notes below table and Technical Note II for further details.

Future condition	Present condition	Number of assessments	
		Strongly indicative assessments (Category 1)	Weakly indicative assessments (Category 2)
Future-Unfavourable	Unfavourable declining		1
	Unfavourable no change	1	2
	Unfavourable unclassified		
	Total	***1***	***3***
	% of assessments	***100%***	***23%***
Future-Favourable	Favourable maintained		
	Favourable recovered		
	Unfavourable recovering		2
	Favourable unclassified		8
	Total		10
	% of assessments	***00%***	***77%***

Note that the scenario presented above is based on the same information as used to construct the Table 4.2.2. It is based on the following premises:
(i) the Unfavourable-recovering condition assessments will at some point in the future become Favourable.
(ii) all Unfavourable-unclassified sites will remain Unfavourable, which is probably overly pessimistic;
(iii) 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.

Predicted Future Condition of H7240 based on Common Standard Monitoring condition assessments (See Sections 5.2 and 7.2 for further information)

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
		
Key Red = future-Unfavourable, i.e. the square contains one or more SACs where this habitat feature is present and has been predicted to be future-Unfavourable Green = future-Favourable, i.e. the square contains at least one SAC where this habitat feature is present and has been predicted to be future-Favourable Blue = SAC not assessed, i.e. the square contains at least one SAC supporting this habitat feature but no assessment has been reported Transparent = SAC feature not present, i.e. the square does not contain any SAC features of this habitat type	Key* Green – 80 – 100% of assessed features on 10-km square are Favourable Yellow - 50 – 80% of assessed features on 10-km square are Favourable Orange - 20 – 50% of assessed features on 10-km square are Favourable Red - 0 – 20% of assessed features on 10-km square are Favourable *This is the same key as was used for JNCC CSM Report 2006	

5.3 Conclusions on future prospects (as regards range, area covered and specific structres and functions)

Conclusion[2.6.iv]: Unfavourable - Bad but improving

The EC Guidance states that where "habitat prospects are bad, with severe impacts from threats expected and long-term viability not assured", the judgement should be Unfavourable – Bad. In the UK, this was generally taken to mean that habitat range and/or area are in decline, and/or less than 75% of the habitat area is likely to be in Favourable condition in 12-15 years.

Range and area appear to have been little affected directly by human activities but there is some concern that future climate change – in particular changes to snowfall patterns - might lead to a decline in the area or range of H7240 in the UK in the longer term. The results of Common Standards Monitoring indicate that the current condition of the habitat is likely to remain poor. Common Standards Monitoring predicts that 64% of the area of the habitat on SACs is likely to remain Unfavourable for the next 12-15 years.

However management agreements may be able to lead to sufficient control of grazing that should assist in bringing many stands of H7240 into Favourable condition. Where grazing occurs below existing inaccessible stands, quite often many of the species are in the grazed sward, but are dwarfed and do not flower.

Overall this suggests a judgment of Unfavourable-Bad but improving for future prospects for H7240.

6. Overall Conclusions and Judgements on Conservation Status

Conclusion[2.6]: Unfavourable - Bad but improving

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

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	Unknown	Insufficient information to make a judgment.	Not applicable
Specific structures and functions (including typical species)	Unfavourable – Bad but improving	More than 25% of the habitat area is considered to be Unfavourable as regards its specific structures and functions. Significantly more of the resource in Unfavourable condition is improving than declining.	2
Future prospects (as regards range, area covered and specific structures and functions)	Unfavourable – Bad but improving	Habitat prospects over next 12-15 years considered to be bad, with severe impact 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 - Bad but improving	One parameter judged as 'Unfavourable – Bad'; trends overall are improving.	3

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, CR (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

Map data sources

JNCC International Designations Database. Joint Nature Conservation Committee

SNH Uplands Database, (18-12-98) 10KMVEG.XLS. Scottish Natural Heritage

7.2 Further information on Common Standards Monitoring 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)	15
Number of SACs with CSM assessments (b)	14
% of SACs assessed (b/a)	93
Extent of feature in the UK – hectares (c)	340
Extent of feature on SACs – hectares (d)	340
Extent of features assessed – hectares (e)	288
% of total UK hectarage on SACs (d/c)	100
% of SAC total hectarage that has been assessed (e/d)	85
% of total UK hectarage that has been assessed (e/c)	-

Note: UK extent is assumed to be the same as extent on SACs as no figures are available for UK extent. However there are known errors in the attribution of stands of this habitat on UK SACs (see section 2.1)

Notes

1. Extent of features on SACs (d) includes only those features that have been submitted on the official Natura 2000 data form as qualifying features. This figure is based on the habitat extent figures presented on standard Natura 2000 data forms.
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 form 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)

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

Status	Number of squares	Proportion of all squares
Current – Unfavourable (red)	11	10%
Current – Favourable (green)	9	8%
On SAC but not assessed (blue)	2	2%
Not on SAC (transparent)	92	81%
Total Number of 10-km squares (any colour)	114	
Future – Unfavourable (red)	10	9%
Future – Favourable (green)	10	9%