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 :

H4020: Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix*

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

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H4020 Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix*

Audit trail compiled and edited by JNCC and the UK statutory nature conservation agencies Lowland Heathland 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 and correspondence with National Vegetation Classification (NVC) and other habitat types

Table 1.1.1 provides a summary description of H4020 and its relations with UK classifications.

Table 1.1.1 Summary description of habitat H4020 and its relations with UK vegetation/habitat classifications.

Classification	Correspondence with Annex I type	Comments
NVC	• H3 *Ulex minor – Agrostis curtisii* heath • H4 *Ulex gallii – Agrostis curtisii* heath • M16 *Erica tetralix – Sphagnum compactum* wet heath • M21 *Narthecium ossifragum – Sphagnum papillosum* valley mire	Only those stands where *E. ciliaris* is abundant are included in this Annex I type.
BAP priority habitat type	Lowland heathland.	Priority habitats include other Annex I heathland habitats.
BAP broad habitat	Dwarf shrub heath.	Both CS2000 and LCM2000 reports using BAP broad habitat types. However there are inaccuracies of categorisation within LCM 2000. Broad habitat includes other Annex I type heathland types.
EU Interpretation Manual	PAL.CLASS.: 31.12 Hygrophilous heaths of areas with a temperate oceanic climate, on semi-peaty or dried-out soils, with surface minerals in the case of peaty soils (hydromor), with vegetation of the alliances *Genistion micrantho-anglicae* and *Ulicion minoris*: *Ulici minoris-Ericetum ciliaris, Ulici gallii-Ericetum mackaianae, Ulici minoris-Ericetum tetralicis* (Schwickerath 33 Tuxen 37), *Cirsio filipenduli-Ericetum ciliaris.*	

Heathlands containing cross-leaved heath *Erica tetralix* and the nationally rare Dorset heath *E.ciliaris* are generally found on acid soils with slightly impeded drainage, although in Cornwall they extend onto dry soils. The abundance of *E.ciliaris* differentiates this habitat from other Annex I heath types.

Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix* often contain heather *Calluna vulgaris* and varying proportions of bell heather *Erica cinerea*. Other associated species include purple moor-grass *Molinia caerulea,* bristle bent *Agrostis curtisii* and dwarf gorse *Ulex minor*, with the latter being replaced by western gorse *U.gallii* in south-west England. This habitat type is not recognised as a distinct community in the NVC. It includes forms of the following NVC communities in which *E. ciliaris* is abundant:

H3 *Ulex minor – Agrostis curtisii* heath
H4 *Ulex gallii – Agrostis curtisii* heath
M16 *Erica tetralix – Sphagnum compactum* wet heath
M21 *Narthecium ossifragum – Sphagnum papillosum* valley mire

These heathlands may grade into wetter heath and bog communities, notably valley mires with bog-moss *Sphagnum* spp. and bog asphodel *Narthecium ossifragum*.

2. Range [2.3]

2.1 Current range

Range surface area [2.3.1]: **607 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 H4020 in the UK.

This form of heathland is confined to warm, oceanic locations in the UK. It is a rare habitat, occurring naturally only in Dorset and Cornwall (including a small stand on The Lizard not shown in the maps), except for one site recently discovered on the Somerset/Devon border (Edgington 1999).

Map 2.1.1 Habitat range map [1.1] for H4020	**Map 2.1.2** Habitat distribution map [1.2] for H4020
	
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 10x10km square of the National Grid and shows the known and/or predicted occurrence of this habitat. 10-km square count: 6

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**

This form of heathland has only ever been recorded from Dorset, Cornwall and the Blackdown Hills (Dorset/Somerset border). The latter location was only discovered in 1999 (Edginton 1999) and has significantly increased the previously known range. The distribution of the key species *Erica ciliaris* (Preston *et al.* 2002) shows a 13% decline in the number of occupied 10km squares between 1958 and 1998, although there was no significant trend between 1987 and 2004 (Braithwaite *et al.* 2006).

Overall the evidence suggests that the range since 1994 has been stable; the new site discovered in 1999 simply appears to have been overlooked (Edgington 1999).

2.3 Favourable reference range

Favourable reference range[2.5.1]: **607km^2**

There has been no modelling of the potential range of H4020 at a UK level. Historically H4020 has only ever had a very limited distribution in the UK Although there has been a reduction in the number of 10 km squares where *E. ciliaris* has been recorded as well as the new site discovered in 1999 (as described in 2.2), this does not translate into any significant change in the UK range since 1994. Hence it is considered that the current range is equivalent to the favourable reference range.

2.4 Conclusions on range

Conclusion[2.6.i]: Favourable

The habitat today occupies a very similar range to that recorded historically, with the exception of a new locality discovered in 1999 that has expanded the range. At a UK scale, it is considered to occupy its favourable reference range as defined in Map 2.1.2 and hence the judgement on range is favourable. There has been no significant trend since 1994 in the range for H4020 overall at a UK level.

3. Area [2.4]

3.1 Current area

Range surface area [2.3.1]: 4 km^2
Date calculated [2.3.2.]: May 2007
Quality of data [2.3.3.]: Good

Table 3.1.1. provides information on the area of H4020 in the UK.

The habitat is very restricted in the UK and its sites are generally well known, hence the extent figures are considered quite accurate.

Table 3.1.1 Area of H4020 in the UK.

	Area (ha)	Method [2.4.3]	Quality of data [2.4.4]
England	400	3	Good
Scotland	Not present	-	-
Wales	Not present	-	-
Northern Ireland	Not present	-	-
Total UK extent	400	3	Good

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.
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

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

Although there is much information inferring the trend or this habitat historically (i.e. pre 1994 – see section 3.3), there is no firm information on the trend in area since 1994.

3.3 Favourable reference area

Favourable reference area[2.5.2]: at least 4.44km^2 (at least 440ha)

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 favourable reference area has been identified as greater than the current extent, but not by a factor of more than 10%. Reasons for this are discussed below.

The historic losses and fragmentation of the overall heathland resource in both Dorset and Cornwall have been well recorded (for example, Rose *et al.* 2000 for Dorset; Hocking and Stewart 2000 for Cornwall). However, in Dorset the wet heaths where *Erica ciliaris* occurred – a larger set that will include the resource of H4020 – remained for the most part intact until the 1950s when large areas of wet heath were

drained and planted with conifers. These plantings and small areas of agricultural improvement reduced the total area of heath with *Erica ciliaris* from 426 ha to 310 ha by 1987 (an approximate decline of 28% since the 1950s).

The study by Rose *et al.* (2000), covering a wider range of heathland types in Dorset than H4020 over a 19 year period using similar protocols in 1978, 1986 and 1996, identifies an increase in the number of patches and decrease in individual patch size. The changes in the distribution of the key species *Erica ciliaris* (Preston *et al.* 2002; Preston *et al.* 2006), whilst not translating into a reduction in range at a UK level, can be interpreted as suggesting that the decline in the overall resource over the past 50 years has been replaced by a fragmentation rather than loss of overall area in recent decades. The number of patches (above a minimum size of 4 ha) increased from seven in 1750, to 41 in 1934, to 70 in 1996. Between 1978 and 1996 the total number of fragments increased from 137 to 151 and the mean patch area fell from 57.2 ha to 48.6 ha. This fragmentation and decline in patch size does suggest that the current area and configuration is not viable.

Recent changes in forestry policy have resulted in some of the plantations where *Erica ciliaris* used to occur being felled and left to revert to heathland. Surveys show that some individual plants survive on the edges of tracks and some viable seed persists in the soil; however the soil conditions may not be suitable for seedling establishment and given the known vigour of the sterile hybrid with *Erica tetralix* (*Erica x watsonii*) (see Chapman and Rose 1994) it may prove difficult to re-establish vegetation corresponding to H4020.

Although there is no information on trend in the area of H4020 since 1994, overall these considerations suggest that neither the 1994 area or the current area would be or are viable. For Dorset alone the previous recorded area of 426 ha in the 1950s when combined with the magnitude of the fragmentation (both as decline in patch size and increase in number of patches) suggests that the current area for the UK overall is at least 10% below the favourable reference area.

3.4 Conclusions on area covered by habitat [2.6.ii]

Conclusion[2.6.ii]: Unfavourable – Inadequate

Although losses in the area of this particular heathland type have stabilised in recent decades, losses since the 1950s together with more recent fragmentation of the resource suggests that the current area is at least more than 10% below the favourable reference area. Whilst there has been work to re-establish areas of heath dominated by *Erica ciliaris*, which can be taken as equivalent to H4020, hybridisation between *E.ciliaris* and *E. tetralix* could make this difficult to achieve. Hence, the judgement of 'unfavourable – inadequate but stable'.

4. Specific structures and functions (including typical species)

4.1 Main pressures [2.4.10]

The following list of main pressures is derived from the six year Common Standards Monitoring (CSM) results for the SACs containing H4020:

- Hybridisation with *Erica tetralix* **(970 Interspecific floral relations)**

Erica tetralix forms a fertile hybrid with *Erica ciliaris (E.* x *watsonii*) which introgresses with *E. ciliaris* to form morphologically complex hybrid swarms.

- Development **(400 Urbanised areas, human habitation; 401 Continuous urbanisation; 402 Discontinuous urbanisation)**

There has been considerable past loss of this habitat to housing, roads and associated development. However, most of the resource of H4020 is now directly protected from this form of pressure.

- Under-grazing/ lack of management **(140 Grazing; 141 Abandonment of pastoral systems)**

Under-management on sites containing H4020 has led to dominance by scrub species such as *Ulex europaeus* and *Betula pendula.*

- Forestry **(161 Planting)**

Many of the sites in Dorset where *Erica ciliaris* formally occurred (and by inference which may have conformed to H4020) were planted up with conifers. This pressure is now reducing, with plantations being cleared in some areas to re-establish heathland.

- Hydrology **(920 Drying out)**

Decreasing effective rainfall – both a reduction in precipitation, and increased interception and evapotranspiration by scrub and tree species – has been postulated as leading to some of the vegetation changes observed on Dorset heaths (Rose *et al.* 2000).

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

Based on an assessment of the exceedence 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.

4.2 Current condition

4.2.1 CSM condition assessments

Condition assessments based on CSM (see http://www.jncc.gov.uk/page-2199) provide a means to assess the structure and functioning of H4020 in the UK. The following attributes were examined for all CSM assessments relevant to the habitat:

- Habitat extent.
- Bare ground.
- Vegetation structure: cover of characteristic woody species, and cover of ericaceous species in different growth stages.
- Vegetation composition: frequency of characteristic species (dwarf shrubs, graminoids, forbs), and cover of bryophytes and lichens.
- Indicators of negative trends (percentage of alien or invasive species which may reduce the diversity of the habitat and affect its integrity; presence of artificial drains, soil erosion, trampling; uncontrolled burning; eutrophication).

Special Area of Conservation (SAC) condition assessments

Table 4.2.1 and Map 4.2.1 summarise the CSM condition assessments for UK SACs supporting habitat H4020. 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:

- 81% of the area and 25% of the number of assessments was unfavourable; and
- at least 81% of the total UK habitat area was in unfavourable condition.

Table 4.2.1 CSM condition assessment results for UK SACs supporting H4020. 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		
	No change		
	Unclassified		
	Recovering	356	1
	Total	356	1
	% of all assessments	***81%***	***25%***
	% of total UK resource	***81%***	***unknown***
Favourable	Maintained		
	Recovered		
	Unclassified	85	3
	Total	85	3
	% of all assessments	***19%***	***75%***
	% of total UK resource	***19%***	***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.

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

As almost 100% of the resource of H4020 lies within SACs, SSSI condition assessments have not been used.

Current Condition of H4020 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
	Not applicable	Not applicable
Key Red = unfavourable, 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 contain any SAC features of this habitat type	Key* Green – 80 – 100% of assessed features on 10km square are favourable Yellow - 50 – 80% of assessed features on 10km square are favourable Orange - 20 – 50% of assessed features on 10km square are favourable Red - 0 – 20% of assessed features on 10km square are favourable *This is the same key as was used for JNCC CSM Report 2006	

4.3 Typical species

Typical species[2.5.3]: ***Carex montana, Hammarbya paludosa***

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 H4020.

Table 4.3.1 Trends and faithfulness of selected typical species for H4020

Typical species considered:	Faithfulness to habitat H4020 (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)
Carex montana	**Medium**	Significant increase, >=25% in 25yrs
Hammarbya paludosa	**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 trends for this species are inconclusive on the condition of the wider resource of H4020; however there are no trends for the resource since 1994.

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.

Most of the resource of H4020 lies within SACs and the majority of this resource is currently judged as in unfavourable condition under CSM. However most of this is recovering, and many of the current pressures – with the exception of hydrology (possibly linked to climate change) and air pollution – are being addressed. Hence the judgement of Unfavourable – Bad but improving.

5. Future prospects

5.1 Main factors affecting the habitat

5.1.1 Conservation measures

- Protection within SACs

Almost 100% of the current resource lies within SACs with management measures specifically aimed at maintaining and enhancing the features for which they are designated, particularly to address grazing issues (see 5.1.2).

- UK BAP

The habitat is covered by the lowland heathland action plan under the UK Biodiversity Action plan (see http://www.ukbap.org.uk), as well as under country and local biodiversity action plans and strategies, with targets to maintain, improve, restore and expand the resource.

- Tomorrow's Heathland Heritage initiative

This initiative (see http://www.english-nature.org.uk/thh/) was established to restore and recreate heathland across the UK. There are local projects in both Cornwall and Dorset which are addressing the restoration of a range of heathland types including H4020.

5.1.2 Main future threats

The following list of future threats is derived from further consideration of the main pressures reported in section 4.1, derived from the six year CSM results for the SACs containing H4020:

- Hybridisation with *Erica tetralix* **(970 Interspecific floral relations)**

This issue is likely to pose a continued issue for restoration to mitigate against past losses of H4020.

- Under-grazing/ lack of management **(140 Grazing; 141 Abandonment of pastoral systems)**

This pressure is now being addressed through positive management incentives and agreements, and is declining as a threat for much of the resource.

- Climate change **(750 Other pollution or human impacts/ activities)**

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 CO_2 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 **(702 Air pollution)**

Based on an assessment of the exceedence 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.

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 H4020 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

Table 5.2.1 and Map 5.2.1 summarise the predicted potential future condition of H4020 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:

- 100% of the area and 100% of the number of assessments fall within the future-favourable category; and
- at least 100% of the total UK habitat area falls within the future-favourable category.

Table 5.2.1 Predicted future condition of UK SACs supporting H4020 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		
	Unfavourable no change		
	Unfavourable unclassified		
	Total		
	% of assessments	***00%***	***00%***
	% of total UK extent	***0%***	***Unknown***
Future-favourable	Favourable maintained		
	Favourable recovered		
	Unfavourable recovering	356	1
	Favourable unclassified	85	3
	Total	441	4
	% of assessments	***100%***	***100%***
	% of total extent	***100%***	***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

As 100% of the resource of H4020 lies within SACs, SSSI condition assessments have not been used.

<table>
<tr><td colspan="3">Predicted Future Condition of H4020 based on CSM condition assessments (See Sections 5.2 and 7.2 for further information on these maps)</td></tr>
<tr><td>Map 5.2.1 SAC assessments</td><td>Map 5.2.2 Assessments strongly indicative of the condition on SSSI/ASSIs</td><td>Map 5.2.3 Assessments weakly indicative of the condition on SSSI/ASSIs</td></tr>
<tr><td> 
</td><td>Not applicable</td><td>Not applicable</td></tr>
<tr><td>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</td><td colspan="2">Key*
Green – 80 – 100% of assessed features on 10km square are favourable
Yellow - 50 – 80% of assessed features on 10km square are favourable
Orange - 20 – 50% of assessed features on 10km square are favourable
Red - 0 – 20% of assessed features on 10km square are favourable
*This is the same key as was used for JNCC CSM Report 2006</td></tr>
</table>

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

Conclusion[2.6.iv]: Unknown

Results from Common Standards Monitoring for the majority of the resource that lies in SACs suggest improvement in the foreseeable future if effort is maintained. Other initiatives including local and national BAP initiatives are beginning to address some of the issues of fragmentation and past losses in area of H4020. Hybridisation with *Erica tetralix*, climate change and air pollution may pose future threats to viability of the habitat that will be difficult to address directly for the resource. However it is not possible to judge whether how far these factors will affect range, area or structure and function of H4020 in the foreseeable future. Overall this suggests a judgement of 'Unknown' for future prospects.

6. Overall conclusions and judgements on conservation status

Conclusion [2.6]: Unfavourable –Bad but improving

On the basis of Structure and Function, the overall conclusion for this habitat feature is Unfavourable – Bad.

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	Unfavourable – Inadequate	The current extent is below the favourable reference area, but not by more than 10%.	2
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).	Unknown	Insufficient information to make a judgement.	2
Overall assessment of conservation status	Unfavourable – Bad but improving	One 'Unfavourable-Bad' judgement	2

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

7. Annexed material (including information sources used 2.2)

7.1 References

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EDGINGTON, M.J. 1999. *Erica cilaris* L. (Ericacae) discovered in the Blackdown Hills on the Somerset-Devon border *Watsonia* **22** 426-2428.

HOCKING, S. & STEWART, J. 2000. *English Nature Research Report 353 - The status of Dorset heath (Erica ciliaris) in Cornwall* English Nature, Peterborough.

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ROSE, R.J., WEBB, N.R., CLARKE, R.T. & TRAYNOR, C.H. 2000. Changes on the heathlands in Dorset, England, between 1987 and 1996. *Biol.Conserv*. **93**, 117-125.

ROSE, R.J., BANNISTER, P. & CHAPMAN, S.B. 1996. Biological flora of the British Isles: Erica ciliaris *J. Ecol* **84** 617-628.

Map data sources

JNCC International Designations Database. Joint Nature Conservation Committee.

New atlas of the British and Irish flora. Oxford University Press, Oxford.

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)	4
Number of SACs with CSM assessments (b)	4
% of SACs assessed (b/a)	100
Extent of feature in the UK – hectares (c)	441
Extent of feature on SACs – hectares (d)	441
Extent of features assessed – hectares (e)	441
% of total UK hectarage on SACs (d/c)	100
% of SAC total hectarage that has been assessed (e/d)	100
% of total UK hectarage that has been assessed (e/c)	100

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 4.2.1-3 and 5.2.1-3

Status	Number of squares	Proportion of all squares
Current – Unfavourable (red)	2	22%
Current – Favourable (green)	2	22%
On SAC but not assessed (blue)		%
Not on SAC (transparent)	5	56%
Total Number of 10km squares (any colour)	9	
Future – Unfavourable (red)		%
Future – Favourable (green)	4	44%