

BLANKET BOG HABITAT ACTION PLAN

1. Introduction

Blanket bog is confined to cool, wet oceanic regions and a major part of the total European resource of this habitat is found in the UK. Active raised bogs, degraded raised bogs still capable of natural regeneration, blanket bogs, and transition mires and quaking bogs are included on Annex 1 of the EU Habitats Directive. Those that are active (i.e. still growing and accumulating peat) are Priority habitats. This habitat is therefore considered the most important habitat in the National Park and constitutes approximately 5% of the area. The minimum peat depth of blanket bog is considered to be 0.5m. No extensive peat depth survey has been carried out in Northumberland and it is possible that deep peat, especially if drained, may be confused with areas of upland dry heath and wet heath.

This HAP includes actions for both blanket and raised mires and is important for the conservation of several species most notably **large heath butterfly**, **bog orchid** and **black grouse** for which Species Action Plans have been, or are being, prepared. In addition many other specialist plants (such as great sundew) and invertebrates will benefit from habitat improvements to raised and blanket bogs. This habitat occurs in a mosaic with **heathland** and holds water in the uplands helping to regulate the release of water and prevent siltation in **rivers and burns**.

2. Current Status

2.1 National

Of the 1.5m ha of blanket bog in the UK, about 215,000 ha of blanket bog is in England. Much of England's blanket bog is covered by SSSI, SAC and/or SPA designation, some are also Ramsar sites. The habitat has been lost and degraded over a wider part of England; losses are due to drainage, peat extraction, afforestation, burning and overgrazing. These factors continue to play a part in the diminution of the resource nationally.

2.2 Local

The habitat covers about 5% of the park as defined by Phase 1 habitat survey; this includes high altitude bog as well as low level raised bog. Some NVC work has been carried out on SSSIs and over 2500ha is designated, over 1100 ha is cSAC (Border Mires, Kielder-Butterburn and part Roman Wall Loughs). Phase 1 Habitat Survey lists 5194 ha of Mire (E code) which includes all blanket bog habitats such as valley mire, raised bog, and also flushes. The majority of this is true blanket bog equating to approximately 2.5% of the England resource. The extent of this resource is unlikely to have changed very much since 1992 but the quality of the resource will be improving in some locations. Map 1 shows the extent of the resource from Phase 1 data. Map 2 shows the lower altitude (<500m) blanket bog. A good indicator of the health of lower altitude blanket bog is the presence of the large heath butterfly - over 100 sites are recorded for this species in the NNP.

3. Factors Causing Loss or Decline

- 3.1 Drainage has been undertaken over many decades. Such drains are normally sheep grips and they may have been subject to regular maintenance. MAFF grants were available for drainage work but few consultations to drain mires were received between 1980, when MAFF notifications started, and 1988 when such grants were withdrawn.
- 3.2 Some losses have occurred due to afforestation especially on drier bogs, some of the wettest were left unplanted but are subject to the influence of peripheral drains, transpiration from trees and conifer regeneration on the bog; all of which can lower the

water table. Most of the bogs in Kielder Forest are not subject to sheep grazing but all others are grazed.

- 3.3 Increases in grazing pressure may have led to a deterioration of the bogs but this is likely in most cases to be slight due to the lack of grazing offered by the bogs themselves. Some localised damage may have occurred from cattle being foddered on the drier margins.
- 3.4 Burning can also damage blanket bog under farming and grouse moor management. Regular burning tends to result in a hardened peat crust, diminished plant species (particularly bryophytes) and an impoverished invertebrate fauna.
- 3.5 There is some localised but severe damage from recreational pressure from the Pennine Way, especially on Cheviot summit.
- 3.6 Military training damage to bogs from cratering is not well understood and may well diversify the habitat. The best examples on the OTA are generally outside the main active Impact Areas.
- 3.7 Vehicles including ATVs can damage fragile habitats such as these.

4. Current Action

- 4.1 There has been a big effort to conserve blanket bog in recent years through initiatives such as the Forest Enterprise's Border Mires Committee, English Nature's WES scheme, the Otterburn Training Area ILMP and Countryside Stewardship as well as NNPA schemes e.g. at Hangingshields Rigg Moss and Greenlee Lough. Most recently the EU LIFE funded project on the Border Mires (involving a number of partners) has undertaken a large amount of habitat improvement. Conservation work has been targeted on restoring the watertable on bogs that have been subject to drainage in the past. Dams, normally ply or plastic, have been inserted into the drains to raise the water table to allow *Sphagnum* growth to re-commence and the bog to become active. In some areas many hectares of planted conifers are being removed on the margins of mires, as well as self-sown trees on the bog centre.
- 4.2 Grazing pressure has been restricted by CSS and some other agreements have made localised grazing controls or exclusions.
- 4.3 Burning exclusion zones are often established on SSSIs and CSS.
- 4.4 Footpath restoration work and re-vegetation is underway on the Pennine Way where it crosses deep peat, further work is planned for Cheviot summit having laid a stone slab path across the eroded area.
- 4.5 Research in restoration techniques and monitoring of progress has been established at several sites. This involves measuring fluctuations in the water table linked with botanical monitoring, as well as establishing long term botanical transect / quadrat data. Further work is needed to establish condition assessments.
- 4.6 This habitat has been chosen by the NWT as a focal habitat.

5. Broad Objectives and Targets

- 5.1 Promote the restoration and conservation of blanket bog through the establishment of appropriate management, ensuring that at least 3000 ha of blanket bog is in conservation management and is in an actively growing state by 2011.
- 5.2 Restore the natural vegetation cover on the Cheviot summit and eroded sections on Pennine Way.
- 5.3 Increase populations of key indicator species, such as large heath butterfly, *Sphagnum* species and *Drosera longifolia*.
- 5.4 Increase awareness of blanket bog and raised mires and the importance of the Northumberland resource in national and international terms.

6. Proposed Action

6.1 Policy and Legislation

Action	Target	Partners	Achieving Objective
6.1.1 Ensure that there is a mechanism to identify and protect bogs within forest areas.	2002	FE, FC	1,4

6.2 Site Safeguard and Management

Action	Target	Partners	Achieving Objective
6.2.1 Review the extent of blanket bog currently in conservation management.	2002	DEFRA, EN, NWT, FE, MOD	1
6.2.2 All SSSIs containing mires to have management plans in place.	2003	EN, MOD, FE, NWT	1,3
6.2.3 All SSSIs in favourable or improving condition	2007	EN, MOD, DEFRA, FE, NWT	
6.2.4 Complete restoration programme for eroded part of Cheviot summit	2005	EN, landowners	2
6.2.5 Ensure that mires are surrounded by a 30-50 metre no planting margin on Forest Design Plans.	Trees cleared by 2007	FE	1
6.2.6 Enter land with blanket bog into conservation management – CSS, ILMP, WES etc. until at least 3000 ha is protected.	At least 2 new sites per year.	DEFRA, MOD, EN, FE, EA	1
6.2.7 Ensure that all burning plans include no burn areas on active blanket bog.	In current plans by 2004	MOD, Estates, DEFRA	1,3

6.3 Species Management and Protection

Action	Target	Partners	Achieving Objective
6.3.1 Target mires supporting <i>Drosera longifolia</i> for conservation management.	Review sites by 2003, in favourable m/ment by 2007	DEFRA, MOD, EN, FE,	3
6.3.2 Target mires with rare <i>Sphagnum</i> species for conservation management.	Relevant mires in favourable m/ment by 2007	DEFRA, MOD, EN, FE	3

6.4 Advisory

Action	Target	Partners	Achieving Objective
6.4.1 Advise landowners and managers about best practice for blanket bog management, protection and funding. Target SNCIs	SNCI owners approached by 2005	DEFRA, EN, MOD, FE, EA, NWT	4,1

6.5 Future Research and Monitoring

Action	Target	Partners	Achieving Objective
6.5.1 Monitor blanket bog where conservation measures have been established e.g. CSS	25% of CSS schemes	DEFRA, FE, MOD	1
6.5.2 Monitor extent of <i>Drosera longifolia</i> colonies.	Baseline 2002, repeat 2007	FE, EN, NWT, MOD	3
6.5.3 Survey plant species on Cheviot summit	2003	EN	2
6.5.4 Undertake survey on a selection of sites for mosses and lichens	2002	FE, EN, NWT	3

6.6 Communication and publicity

Action	Target	Partners	Achieving Objective
6.6.1 Hold a dedicated year celebrating the biodiversity of bogs targeting events and activities.	2006	Local media schools, NWT, FE, EN,	4
6.6.2 Provide sustainable access on to suitable sites with interpretation to allow members of the public to appreciate this habitat type. Use international bog day for focus some years.	3 sites by 2006	FE, NWT, EN, DEFRA	4
6.6.3 Pass on information and experience gained from the Border Mires LIFE project via seminar, video and articles.	2002	FE, NWT, RAF, N Uni	4

7. References

H. T Eales 1995-1999 (5 reports). A review of the status of the large heath butterfly (*Coenonympha tullia*)