



TREND IN THE PEAK DISTRICT:

Extent overall stable. Condition has been compromised by long-term historical impacts resulting in continuing local erosion.

ESTIMATED EXTENT IN THE PEAK DISTRICT:

15890 ha Blanket Bog (including up to 650 ha bare ground) and 700ha Wet Heath.

NATIONAL BAP HABITATS:

Blanket Bog (priority habitat).

ASSOCIATED NATIONAL BAP PRIORITY SPECIES:

Water vole, skylark, reed bunting, black grouse (extinct) and marsh clubmoss (extinct).

ASSOCIATED PEAK DISTRICT AUDITS:

Blanket Bog and Wet Heath.

INTRODUCTION

Blanket bog is a special habitat that has developed where cool, wet climatic conditions have favoured water-logging of the ground and accumulation of plant remains as deep peat. Strictly speaking the term blanket bog applies only to that part of the blanket mire which is rain-fed. However the definition here encompasses some wet heath, raised bogs, bog pools and basin bogs as well as various flush and fen vegetation types occurring within the expanses of blanket bog.

The blanket bogs or mires of the Peak District are part of a U.K. resource which is globally restricted and hence of international importance for nature conservation. It is one of the most extensive semi-natural habitats in the U.K. which supports around 10 – 15 % of the global resource. A large part of the blanket bog and associated moorland vegetation communities are found on the higher ground in the northern part of the Dark Peak Natural Area and parts of the South West Peak Natural Area. The balance between grazing and grouse moor management, as the two major land uses, has been an important influence on blanket bogs in the Peak District. Amongst the examples of good sites are Howden Moor, the Eastern Moors Estate (raised bog), Warslow Moors Estate, Alport Castles (basin bog) and Saddleworth Moor South.

There is no comprehensive national data set on trends in the extent of blanket bog across the U.K.. However serious declines, perhaps 27 % between the 1940s and 1980s, have occurred in Scotland principally due to afforestation. This has not been such an issue in the Peak District. Instead it is the quality of the habitat that has suffered significantly (mainly historically) with a decline in species diversity as a result of air pollution, overgrazing, inappropriate or accidental burning, peat extraction and past drainage. Wildfires and air pollution in particular have contributed to the poor condition. Haretail cottongrass is often overwhelmingly dominant but the bog building *Sphagnum* mosses are scarce. At their worst these impacts have led to substantial areas of eroding moor especially in the Dark Peak Natural Area where up to 33 km² may be degraded or bare of vegetation. It is worth noting however that in part some erosion may be a natural process reflecting the great age (9000 years) of the Peak District peats.

Although in the Peak District the characteristic plants of the bogs like cloudberry are few, there are a number of rare species such as Labrador tea and bog rosemary. The flushes on the margins of the bog are botanically richer including bog asphodel, sundew and a variety of sedges. Invertebrate interest is less well understood but includes a large population of craneflies, at least locally, which are an important food source for moorland birds. Together with the lower and intimately linked heather moorland the vast blanket bogs of the Peak District support a breeding bird community of international importance. About 2 % of the British population of golden plover breed here mainly on the bog, whilst merlin and short-eared owl hunt over the moor. Other characteristic birds include the red grouse, curlew, snipe and dunlin, with the latter breeding around the bog pools.

The moorland streams associated with the fringes of the blanket bogs can be important for water voles. Mountain hares, the only English population, also frequent blanket bog vegetation.

The blanket bogs are part of a moorland landscape that has been formed primarily by extensive stock (especially sheep) grazing and grouse moor management. In addition to their nature conservation interest they have a variety of socio-economic values. They are, for example, important for water supply, being a natural slow-release water storage body. The blanket peats are also of great archaeological interest, including mesolithic remains such as flint tools at the base of the peat; important pollen and fossil evidence of the past vegetation within the peat; and surface remains such as peat cuttings. Blanket bogs are a distinctive part of the landscape in the Peak District and an important part of the recreational resource, providing wide open spaces for upland walking.

ADVERSE IMPACTS

	Historic	Current
Land Management		
Inappropriate grazing management locally, eg. overgrazing and a decline in hefting as a result of off-wintering.	✓	✓
Locally inappropriate burning regimes.	✓	✓
Drainage leading to drying out of blanket bog.	✓	✓
Afforestation.	✓	
Peat cutting (possibly beneficial on a small scale).	✓✓	✓

Pollution

Atmospheric pollution depleting the lower plant flora (sulphur dioxide levels have decreased but nitrous oxides increased).

✓✓

✓

Climate change.

✓

✓✓

Use of Ivermectin and its associated effects on invertebrates.

✓

Others

Fragmentation of sites leading to risk of species extinctions and a negative effect on moorland restoration feasibility.

✓

✓

Wildfire resulting accidentally or from arson, exhausts and aircraft.

✓✓

✓✓

'Natural' erosion.

✓

✓

Developments e.g. road, rail, services, installation of masts.

✓

✓

Recreational disturbance leading to localised vegetation damage and possible disturbance to breeding birds.

✓

✓✓

Predation of ground-nesting birds and their eggs.

✓

✓✓

An impact ✓ *Significant impact* ✓✓

CURRENT ACTION

Designated Sites

- All of the blanket bog in the Peak District is protected within four SSSIs - Dark Peak, Eastern Peak District Moors, Leek Moors and Goyt Valley.
- The four SSSIs also form the South Pennine Moors SPA, designated in recognition of its populations of upland breeding birds - golden plover, merlin and short-eared owl.
- All the areas of blanket bog and transition mire within the four SSSIs are included within the South Pennine Moors candidate SAC.

New Initiatives

- EN has embarked on a comprehensive monitoring programme. This is tied into agreeing management with owners and occupiers and partner organisations aimed at maintaining and where possible restoring the sites to favourable condition.
- Over recent years there have been various initiatives by land managers to restore heather moorland on degraded acid grassland. These are beginning to show the way to landscape scale restoration of heathland and may be used in the future to inform blanket bog restoration.
- A partnership of conservation and land-owning organisations has submitted a bid to the Heritage Lottery Fund (HLF) for a major 'Moors for the Future Project'. If successful, this project will lead to: the restoration of 3 km² of the worst eroded areas of moorland, including blanket bog, and 19 km² of badly eroded paths; the enhancement of people's awareness and enjoyment of the moors through appropriate interpretation and a 'moor care' initiative; and the establishment of a moorland centre to draw together experience of moorland management and make it widely available.
- In response to the Countryside and Rights of Way Act a Local Access Forum has been established for the Peak District. This will seek to encourage opportunities for responsible enjoyment of the countryside (including open country) whilst reducing conflict.

Sites Owned and Managed by Conservation Organisations

- The PDNPA owns areas of blanket bog including White Path Moss on the North Lees Estate, Lucas Moss on the Eastern Moors Estate and several areas on the Warslow Moors Estate.
- The NT owns significant areas of blanket bog including substantial areas in the Upper Derwent, on the Kinder Plateau and the Marsden moors.

Sites Within Conservation Agreements

- By 1994, 78 % of cotton grass moor and 69 % of eroding moor in the North Peak Environmentally Sensitive Area (ESA) was under agreement.
- By 1996, 88 % of moorland including blanket bog in the South West Peak ESA was within an agreement.

Research

- Since the early 1980s there has been extensive work carried out on the Peak District moorlands aimed at understanding the reasons for degraded moorland and finding ways of repairing the damage. This has largely occurred under the umbrella of the Peak District Moorland Management Project, a partnership of key bodies with an interest in the subject. The Project's Phase III report, 'Restoring Moorland', was published in 1997.

ACTION PLAN OBJECTIVES AND TARGETS

National Targets

The National Plan recognises four broad types of condition of blanket bog- favourable; degraded but readily restored; degraded but less readily restored; and degraded and probably beyond restoration. Nationally it is provisionally estimated that around 25 % may be too degraded to merit restoration due, for example to severe erosion.

There are four provisional national targets:

- Maintain the extent and overall distribution of blanket mire currently in favourable condition.
- Improve the condition of those areas degraded but readily restored so that the total area in, or approaching, favourable condition by 2005 is 340000 ha (i.e. around 30 % of the total blanket bog resource).
- Introduce management regimes to improve to, and subsequently maintain in, favourable condition a further 280000 ha of degraded blanket mire by 2010.
- Introduce management regimes to improve the condition of a further 225000 ha of degraded blanket mire by 2015 resulting in a total of 845000 ha (i.e. around 75 % of the total extent of restorable blanket bog) in, or approaching, favourable condition.

A Vision for the Peak District

The following objectives and targets for blanket bog aim to retain and enhance this very important habitat, for which the Peak District supports approximately 1 % of the U.K. total. They recognise that the quality of blanket bog in the Peak District is often poor as a result of historical over-grazing, accidental burns and high levels of atmospheric pollution. This has resulted in low species diversity and often extensive areas of bare peat, some of which may be beyond restoration. Such degraded areas may however be important for birds such as the golden plover. The targets below are in line with the Peak District's pro-rata contribution towards the national targets for blanket bog, but will require careful judgements about what degree of favourable condition can feasibly be achieved in the Peak District given the historic legacy of degradation. Though very much influenced and shaped by man, blanket bogs retain their primeval and 'wild' nature. The fragile ecology of blanket bogs, their condition and potential for enhancement is complex. It is hoped that this plan will initiate action which will find solutions and answers to the conservation problems of this unique habitat.

OBJECTIVES AND TARGETS

Objective 1

Maintain current extent and overall distribution of blanket bog, and maintain favourable condition where areas are already in such condition.

Target

Maintain the current extent of the resource. Define favourable condition, locate any examples and ensure all are in a management regime by 2003 that will maintain favourable status.

Objective 2

Restore areas of degraded blanket bog which can be readily restored.

Target

For 3600 ha (23 % of the total area of blanket bog) introduce/maintain management regimes by 2005 to improve condition to ensure it is in or approaching favourable condition.

Objective 3

Improve the condition of remaining degraded blanket bog in a manner that is compatible with maintenance or enhancement of internationally important bird populations.

Target

Maintain/introduce management regimes to improve, and if possible subsequently maintain in favourable condition, 3000 ha of degraded blanket bog (19 % of the total area of blanket bog) by 2010 and a further 2500 ha (15 %) by 2015.

Overall objectives should ensure 75 % of the resource is in improving and if possible favourable condition by 2015.

Main Factors Likely to Affect the Achievement of Targets

Land Management

Implementation of the Rural Development Regulations and reform of the Common Agricultural Policy.
The effectiveness of agri-environment scheme prescriptions.

Resources and Financial Incentives

Future viability and pressures on grouse moor management and farming.
The prohibitively large costs of re-wetting on a large scale.
The cost effectiveness of restoration methods.
The adequacy of financial incentives within agri-environment and conservation schemes.
The availability of resources for agri-environment schemes.
The success of the 'Moors for the Future' HLF bid.

Planning and Regulations

Planning policy.

Conflicts with Other Priorities

The conflict between grouse moor management and the optimisation of wider wildlife and vegetation benefits.
Reconciling the requirements of the vegetation with those of the birds.

Practical Difficulties and Gaps in Knowledge

Accessibility to carry out management or restoration work - some areas are remote and difficult to access with materials etc.
The potential for degraded blanket bog to be restored and the availability/cost-effectiveness of restoration methods. Some areas may have irreversibly declined whilst the future widespread re-establishment of *Sphagnum* mosses is very uncertain.
Timescales – restoration may only be possible in the long term using time as a healer.

Pollution and Climate Change

Future air quality and its effects on moorland vegetation.
Climate change - with effects on peat formation, run-off erosion, water regimes and fire risk.

Others

The impact of access, including the Countryside and Rights of Way Act 2000, which gives right of access on foot across open country, which would include blanket bog.
The effectiveness of predator control.

ACTIONS

Key to the achievement of the proposed targets are the actions relating to:

- research and development of guidelines with regard to blanket bog conservation and restoration (Action BB8 and 10 – 15);
- considering review of agri-environment schemes or other sources of financial aid to ensure they provide adequate financial incentive and appropriate management prescriptions for blanket bog safeguard and restoration (BB27);
- the review and implementation of management on all sites aimed at initiating progress towards the achievement of favourable condition (BB28);
- monitoring the success of different restorative techniques to allow key amendments to be made (BB18 and 19), and
- a collaborative approach to the solution of both access and conservation problems (BB17).

ACTIONS	TIMESCALE	LEAD AGENCY & Partners	
DATA COLLATION AND SURVEY			
Data Collation			
BB1	Collate existing information on the blanket bog resource. (Objectives 1, 2 and 3)	2002	EN/PDNPA/MAFF WTs/MBAPG/LRCs Voluntary Sector/LAs
BB2	Map the extent of the resource on GIS including ecological variation, condition and the locations of bare ground and areas of blanket bog that can readily be restored to favourable condition. (Objectives 1, 2 and 3)	2002	EN/PDNPA/MAFF MBAPG
BB3	Compile a register of blanket bog sites including classification into types, level of importance (including 'Wildlife Site' status), condition, constituent habitats, important species and conservation status, and initiate a programme for regular updating. Integrate with the proposed national inventory. (Objectives 1, 2 and 3)	2002 – 2004	EN/PDNPA/MAFF MBAPG
BB4	Collate existing information on species groups especially invertebrates and bryophytes. (Objectives 1, 2 and 3)	2002	PDNPA/Voluntary Sector/WTs/EN

EVALUATING THE IMPORTANCE AND CONDITION OF SITES

Evaluating Importance and Identifying Key Sites			
BB5	Agree a methodology for the evaluation of blanket bog and identification of 'Wildlife Sites'. (All Objectives)	2002	EN/PDNPA/MBAPG
Defining Favourable Condition			
BB6	Agree definition of favourable condition for blanket bog including the complete range of sites in the Peak District and the requirements of key bird species such as golden plover. (Objectives 1, 2 and 3)	2001	EN/PDNPA/MBAPG
BB7	Clarify objectives for sites where it is not possible to achieve favourable condition owing to historical factors and current factors outside management control. (Objective 3)	2002	EN/PDNPA/RSPB
BB8	Agree guidelines for the range of appropriate management needed to achieve favourable condition. Ensure that experience of recent trials		

is considered and include:

*When to restore and when to leave alone

*Appropriate techniques for re-vegetation and restoration of blanket bog (e.g. use of herbicides, lime, seed mixes) (Objectives 1, 2 and 3)

2001 - 2003

EN/PDNPA/PPMOTA
MBAPG

RESOURCES

BB9	Consider opportunities for seeking resources, such as an EU Life bid for a blanket bog restoration project, in conjunction with the Heather Moorland Action Plan. (Objectives 2 and 3)	2003	PDNPA/EN/NT/MBAPG
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RESEARCH

BB10	Encourage research into vegetation (including restoring characteristic blanket bog species cover), hydrology (especially restoring the water table), vertebrate and invertebrate populations, and the peat archive. (Objectives 1, 2 and 3)	2001 onwards	EN/PDNPA/NT/RSPB Voluntary Sector/EA WCs/MBAPG/WTs Universities
BB11	Evaluate to what extent erosion of blanket bog is a natural process of intrinsic value which should be allowed to continue. (Objective 3)	2002	EN/PDNPA/MBAPG
BB12	Explore validity and potential application of concept of wilderness and other novel approaches to management. (Objectives 1, 2 and 3)	2002	EN/PDNPA/MBAPG
BB13	Evaluate the usefulness of grip blocking for grouse and other wildlife/ vegetation and prioritise sites for action. (Objective 3)	2002	EN/PDNPA/PPMOTA
BB14	Assess current loadings of atmospheric pollutants (e.g. sulphur dioxide and nitrous oxides) on blanket mire. Investigate ways of promoting reductions if levels are damaging. (Objectives 1, 2 and 3)	2001 - 2002	EA/EN/LAs
BB15	Assess current information and develop guidelines for the conservation and enhancement of the habitats of rare plants e.g. Labrador tea, bearberry and bog rosemary. (Objectives 1, 2 and 3)	2001 onwards	MBAPG Voluntary Sector
BB16	Ensure that the results of research into the effects of Ivermectin on invertebrate communities associated with animal dung are implemented at a local level. (Objectives 1, 2 and 3)	2001 onwards	WEG

PUBLIC ACCESS

BB17	Agree and implement approaches to management of access on moorland that enables public enjoyment but prevents/ removes significant damage to wildlife, especially from wildfires e.g. through: *Access Management *Actions proposed in the 'Moors for the Future' HLF bid *Implementation of access provisions in the Countryside and Rights of Way Act *Implementation of Habitats Regulations 1994 (All Objectives)	2001 onwards	PDNPA/PDLAF(joint leads)/DETR/EN MBAPG
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MONITORING

BB18	Implement EN's standard monitoring regime for blanket bog in SSSIs to assess condition of all sites. Ensure the
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	results of the process are collated and used to update the inventory. (All Objectives)	2003	EN/PDNPA/NT/MAFF
BB19	Ensure that all restoration sites are adequately monitored and the information is used to inform future blanket bog restoration and re-creation. (Objectives 2 and 3)	2001 onwards	EN/PDNPA/NT/MAFF

AWARENESS RAISING

BB20	Share information on the wildlife importance and management needs of key conservation and restoration sites with the landowners/managers, including feedback from surveys. (Objectives 1, 2 and 3)	2001 onwards	PDNPA/NT/EN/WTs MAFF/FWAG/LAs/RSPB
BB21	Promote local guidance on appropriate techniques for grip blocking and restoration of wet moor and pools across a whole drainage system. (Objectives 2 and 3)	2004	EN/PDNPA/PPMOTA HT
BB22	Promote widespread adoption of burning regimes that ensure improvement in vegetation condition (including any revision to national muirburn legislation). (Objectives 1, 2 and 3)	2001 onwards	PPMOTA/MGA/PDNPA EN/MAFF/HT
BB23	Consider and implement if appropriate a demonstration site(s) for best practice management advice to contribute to a national series. (Objectives 1, 2 and 3)	2002	PDNPA/NT/PPMOTA EN/MAFF/HT
BB24	Set up training days for land owners, managers and advisors in the conservation, restoration and vegetation condition assessment of blanket bog. (Objectives 1, 2 and 3)	2001 onwards	EN/MBAPG (joint leads)/NT/PDNPA MAFF/PPMOTA/HT

CONSERVATION ACTION AND INCENTIVES

Designations

BB25	Implement obligations under European (Natura 2000) legislation with respect to the South Pennine Moors SPA and cSAC. (Objectives 1, 2 and 3)	2001 (SPA) 2004 (SAC)	EN/DETR
BB26	Review the desirability and opportunities for establishment of a NNR or LNR on a moorland holding and establish if appropriate. (All Objectives)	2002	EN/LAs (joint leads) PDNPA/NT/WTs PPMOTA

Grant Schemes

BB27	Consider recommending a review of all agri-environment and conservation schemes to ensure that: *Management prescriptions are adequate to maintain and/or improve blanket bog condition *Payments and management prescriptions consider the possibilities for encouraging improved utilisation of moorland vegetation by sheep, for example by shepherding and hefting (Objectives 1, 2 and 3)	2001 onwards	MAFF/EN/PDNPA WEG/MBAPG
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Negotiation and Review of Agreements

BB28	Review management of all sites. Where necessary agree revised management regimes with owners/managers through appropriate mechanisms, such as ESAs, to ensure maintenance or restoration of favourable condition. (Objectives 1, 2 and 3)	2001 - 2003	EN/PDNPA/MAFF PPMOTA
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Direct Action

BB29	On land owned by public or conservation bodies, ensure that:		
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	*Management maintains and where possible enhances the value of blanket bog		
	*Options for the restoration of blanket bogs are considered		
	*Opportunities for involvement of local communities in site management are taken (Objectives 1, 2 and 3)	2001 onwards	PDNPA/WTs/NT/EN LAs/FC
BB30	Seek development of improved firefighting services, including helicopter availability. (Objectives 1, 2 and 3)	2001 onwards	MBAPG /LAs/PDNPA
Land Acquisition			
BB31	Consider negotiating purchase/lease of priority sites where this would be the most effective way of achieving conservation objectives and when a negotiated conservation solution has not succeeded. (Objectives 1, 2 and 3)	2001 onwards	PDNPA/EN/RSPB WTs/NT

REGULATION

Planning

BB32	Ensure all Planning Applications and General Development Orders are adequately assessed in relation to their impact on blanket bog; that loss or damage is avoided; and that opportunities for the enhancement of the blanket bog habitat is considered in relevant planning decisions. (Objectives 1, 2 and 3)	2001 onwards	PDNPA/LAs/EN/WTs
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Pollution Control and Waste Management

BB33	Ensure point source emissions are controlled as necessary through the Review of Consents procedure under the Habitat Regulations 1994 for the SPA and cSAC. (All objectives)	2001 - 2004	EA /LAs/EN
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RESOURCES

It is envisaged that a significant proportion of work as a result of the actions proposed will be carried out by the relevant organisations using current resources. These include:

- continuing investment by landowners and managers in managing their land sympathetically for wildlife;
- EN's programme of reviewing SSSI management;
- EN's grant and management agreement schemes;
- MAFF's Environmentally Sensitive Area Schemes;
- continuing management of blanket bog owned by conservation organisations and public bodies (LAs, PDNPA, EN, NT, WTs) and WCs.

Additional substantial resources will prove necessary for:

- the proposed programme of blanket bog restoration (2003 onwards).

and may also be significant in carrying out actions relating to:

- awareness raising (2001 onwards);
- the management of appropriate access (2001 onwards).

A partnership of conservation and land-owning organisations has submitted a bid to HLF for a major 'Moors for the Future' project which, if successful, will lead to the restoration of 3 km² of badly eroded moorland including areas of upland heathland and blanket bog. It will also lead to initiatives relating to access, interpretation and the sharing of management experience.