



Upland Heathland

During the mid to late 20th century over 35% of the heathland in Cumbria was lost through agricultural improvement, afforestation and overgrazing.

Current status

There are extensive areas of heathland in the upland areas of Cumbria. They characteristically lie between 300m and 750 m, between enclosed, improved agricultural land and montane heath at higher altitudes. The habitat can, however, occur within allotments below the top wall or fence-line. It predominantly overlies base-poor rocks on soils ranging from acid brown earths to podsols. A small amount of heathland overlies limestone on acidic silt that is deposited in hollows in the surface of the limestone. It occurs in the Cumbrian Fells and Dales, North Pennines and Yorkshire Dales Natural Areas.

Upland heathland is recognised as being of international importance, because its distribution is largely confined to the western sea-board of Europe. The UK resource is very significant, comprising an estimated 2 million hectares. The current English extent is estimated at 269,000 ha (Felton and Marsden 1990). This has been subject to considerable losses since 1947, due to afforestation and heavy grazing by sheep. In Cumbria, losses between the 1940s and the 1980s are estimated at 36%.

There is difficulty in estimating the current extent of heathland in Cumbria due to dated survey information, further confused by the problem of drawing a distinction between heathland and grassland with suppressed heather cover. The best estimate comes from The Cumbria Phase I Survey (Kelly and Perry 1990) which identified the total wet and dry heath in Cumbria to be 20,860 ha, with a further total of 10,500 ha of heath/grassland mosaic. These figures will include a relatively small amount of lowland heath.

There is one National Nature Reserve supporting upland heathland in Cumbria. 10 Sites of Special Scientific Interest are notified for their upland heathland. Upland heathland is included within the *northern Atlantic wet heaths with Erica tetralix and dry heaths (all subtypes)* types identified in Annex I of the EC Habitats Directive. However, there are no candidate Special Areas of Conservation for this habitat in Cumbria. A number of sites supporting this habitat are owned or managed by conservation organisations.

Characteristic wildlife

Dry heath, dominated by heather and variable quantities of bilberry and bell heather; characteristically occurs on the steeper hill slopes and as mosaics with acid grasslands. Wet heath, characteristically with cross-leaved heath and/or purple moor-grass, occurs in waterlogged valleys and, in the uplands, often in association with blanket bog. Upland heathland in Cumbria, as throughout the range of this habitat, is strongly influenced by climate, altitude, slope and management practices.

Upland heathland is important for a variety of bird species, such as red grouse, black grouse, hen harrier, merlin and peregrine, as well as curlew, golden plover and twite. Although often rich in shrubs, heather moorland is poor in ground flora but supports rich communities of invertebrates including some uncommon ground beetles and the emperor moth.

Key species

The following rare or threatened species are associated with upland heathlands in Cumbria. Species were selected on the basis that they are UK BAP Priority Species (marked P) or species of County importance in Cumbria. Where species of County importance are also UK BAP Species of Conservation Concern, they are marked C.

skylark	<i>Alauda arvensis</i>	P
black grouse	<i>Tetrao tetrix</i>	P
hen harrier	<i>Circus cyaneus</i>	C
golden plover	<i>Pluvialis apricaria</i>	C
lapwing	<i>Vanellus vanellus</i>	C
natterjack toad	<i>Bufo calamita</i>	P
adder	<i>Vipera berus</i>	C
a wood ant	<i>Formica lugubris</i>	P
mountain ringlet	<i>Erebia epiphron</i>	C
a fly	<i>Cetema transversa</i>	
a fly	<i>Chirosia montana</i>	
a fungus gnat	<i>Macrocera bipunctata</i>	
argent and sable moth	<i>Rheumaptera hastata</i>	P
northern dart moth	<i>Xestia alpicola alpina</i>	P
sword grass moth	<i>Xylena exsoleta</i>	P
an hemipteran	<i>Psammotettix frigidus</i>	
juniper	<i>Juniperus communis</i>	P
chickweed wintergreen	<i>Trientalis europaea</i>	

Best management practice

Upland heathland requires light grazing, at densities of 1.5 ewes/ha or less in summer; to prevent the development of woodland. However, higher grazing densities are detrimental and can lead to loss of dwarf shrub cover. Damage to heather is particularly acute when there is high stocking in September/October and to a lesser extent in April. Damage is concentrated on the heather edge, particularly on the down-slope edge, and can be exacerbated by foddering of stock within or near the heather edge. Grazing needs to be accompanied by good shepherding, which spreads sheep out over the whole moor on a regular basis, to prevent stock concentrating in one area.

Many areas of dry heath are burnt, either for grouse shooting or for grazing. Controlled burning on long rotational cycles is not necessarily harmful to the biodiversity of upland heathland; however too frequent burning can greatly reduce both the floristic and invertebrate diversity of stands. Appropriate burning rotation lengths vary according to factors such as altitude and local climate; however in Cumbria they will rarely be less than 10 to 15 years in length.

Current issues

- Upland heath is a characteristic part of extensive areas of rough pasture used to graze sheep. Its quality, and long-term survival is known to be threatened by high grazing levels, particularly in autumn and winter. Grazing damage can also be exacerbated by lack of shepherding.
- Common land poses a particular problem in Cumbria. The subsidy regime encourages heavy stocking by individual farmers, and reductions in sheep numbers by individual farmers would be penalised by forage being utilised by sheep from neighbouring flocks. Only co-operative action could achieve sustainable grazing regimes in the absence of fenced units. Even with co-operation, appropriate management of a vegetation mosaic may be difficult to achieve if there are restrictions in the ability to fence land. In view of the difficulties involved, those commons which have managed to enter agri-environment schemes deserve much praise.
- Although uncontrolled and too frequent burning of heathland is highly damaging to the habitat,

carefully implemented burning regimes can be beneficial, through rejuvenation of heather plants, especially where associated with carefully-managed grazing. Currently, very little appropriate burning is carried out, due to a lack of manpower and expertise, a situation which also applies to ESA agreement land where sheep numbers have been reduced and sensitive burning would be useful in restoration.

- Game management on upland heath can benefit ground-nesting birds through control of predation by foxes and crows. However, illegal persecution of birds of prey, particularly hen harriers, would clearly damage the nature conservation interest of upland heathland sites.
- Drainage is not a widespread issue on heathland in Cumbria, but it can be damaging in wet heaths, and is more frequent within patches of wet heath contained within allotments rather than on the open fells. Agricultural hill land improvements in such areas have in the past also led to loss of upland heathland.
- Erosion in the uplands, including that within areas dominated by heather, is of widespread concern on steeper slopes. This is likely to be due to a number of factors, including stocking rates, climate change and possible acidification from pollution. Erosion can also be exacerbated by heavy use of footpaths, but the extent of this damage in percentage terms is relatively small, even in the Lake District. However, recreational disturbance of sensitive species is likely to be a more significant issue.
- Loss of heathland vegetation to development such as wind farms is localised and involves very small areas of habitat. However, the management of the heathland within a wind-farm is likely to be more crucial in determining whether it retains conservation interest. Damage by bird-strike has been reported in non-Cumbrian sites, but this may be strongly influenced by site specific characteristics.
- Afforestation has been a significant cause of heathland loss in the past. However, the current occurrence of heathland within plantation blocks can extend the resource, and Forest Design Plans provide the opportunity to maintain heathland in areas excluded from agricultural livestock.

Current action

- In the Lake District ESA a high uptake of the heather fell option has been achieved. This is making a valuable contribution towards maintaining the current extent of upland heathland. However, within Tier 1, the maintenance stocking density for upland heath depends upon the heather already being in relatively good condition. Thus declines in heathland quality within Tier 1 are believed to be occurring if heather is in poor condition. To recover heather quality, a higher uptake of Tier 2 prescriptions is required. Some agreements are in a higher Tier.
- Within Countryside Stewardship there is a scattering of heathland agreements, particularly in the Pennines.
- There is the prospect of significant areas of heather moorland (some of which is upland heath and much of which is blanket bog) coming under agreements in association with the Northern Uplands Moorland Regeneration Project. This partnership is led by the Moorland Association, managed by Agriculture Development and Advisory Service, and funded with the aid of help from MAFF and EC Structural Fund support.
- In addition to these positive schemes, MAFF continues to pursue its cross-compliance policy on semi-natural vegetation within the Less Favoured Area, and has taken action in cases of proven significant overgrazing.
- Atmospheric pollution issues are being studied by a joint Ministry of Agriculture, Fisheries and Food/Department of Environment, Transport and the Regions study, and by the North-West Region Climate Group.

Context in relation to other plans:

UK Habitat Action Plans

The UK Biodiversity Group Tranche 2 Action Plans vol. 6 contains an action plan for upland heathland. The plan sets out the following national objectives and targets:

- maintain the current extent and overall distribution of the upland heathland which is currently in favourable condition.
- achieve favourable condition on all upland heathland SSSIs by 2010, and achieve demonstrable improvements in the condition of

at least 50% of semi-natural upland heath outside SSSI by 2010 (compared with their condition in 2000).

- seek to increase dwarf shrub cover to a minimum of 25%, where it has been reduced or eliminated due to inappropriate management. A target for such restoration of between 50,000 and 100,000 ha by 2010 is proposed.
- initiate management to re-create 5000ha of upland heath by 2005 where heathland has been lost due to agricultural improvement or afforestation, with a particular emphasis on reducing fragmentation of existing heathland.

National Lead Agency

Within England the lead agency for upland heath is English Nature.

Local contacts

Upland Focus Group of the Cumbria Biodiversity Partnership.

Associated plans in the Cumbria BAP

The following Cumbria species/habitat action plans are of relevance to upland heathland:

Phase I

- blanket bog
- upland oak woodland
- natterjack toad
- juniper

Phase II

- lowland heath
- springs and flushes
- montane heath and grassland
- montane rock ledge, outcrop and scree
- sub-montane and lowland natural rock-ledge, outcrop and scree
- black grouse

References

Felton, M. and Marsden, J.H. 1990. Heather regeneration in England and Wales. A feasibility study for the Department of the Environment. Peterborough: Nature Conservancy Council.

Kelly and Perry 1990, Wildlife Habitat in Cumbria. Nature Conservancy Council.

Objectives, targets and proposed actions for Upland Heathland in Cumbria

Broad Objective A	Retain the current distribution and extent of upland heathland in Cumbria			
Operational Objective	Action Required	Suggested organisational involvement	Time-scale	Type
I Ensure that heathland extent is not reduced by severe grazing pressures	1 Compile inventory of heathland sites at risk of loss of current extent of heathland habitat, and supply to MAFF.	EN, CWT, LDNPA	S	SS
	2 Identify priority sites on which grazing pressure is to be investigated.	EN, MAFF	S	SS
	3 Target agri-environment and integrated management schemes at upland heathland to obtain more favourable management.	MAFF, EN, FWAG, ECCP	S	SS
	4 Take action under cross-compliance and overgrazing regulations if significant severe overgrazing is likely to be persistent.	MAFF	M	SS

Broad Objective A	Retain the current distribution and extent of upland heathland in Cumbria			
Operational Objective	Action Required	Suggested organisational involvement	Time-scale	Type
	5 Seek to ensure that no heathland areas are significantly deteriorating through grazing pressure by 2010.	MAFF, EN LDNPA, NT, NWW, Moorland Assoc., CWT, FWAG, ECCP	L	SS
2 Ensure that heathland extent maintains linkages between the greatest geographical concentrations of heathland in Cumbria	1 Give priority attention to key stepping-stone heathland sites such as Birkbeck and Crosby Ravensworth Commons.	EN, MAFF	M	SS
3 Ensure that the planning and legislation system protects upland heathland	1 Ensure that all areas of heathland that meet SSSI criteria are notified by 2005.	EN	M	SS
	2 Ensure no SSSI consent is issued that would permit damage or destruction of upland heathland.	EN	O	SS
	3 Seek to ensure that no heathland is lost to coniferous plantation through plantings grant-aided by Forestry Commission or through inappropriate Forest Design Plans.	FC FE, private forestry companies	S	SS
	4 Seek to ensure that no heathland is lost through agricultural improvement.	MAFF, EN	S	SS
	5. Identify as Wildlife Sites the most important areas for wildlife in the County outside of statutory sites, including areas of upland heathland, by 2006.	CWT	L	SS

Broad Objective B **Achieve favourable conservation management for at least 75% of upland heathland**

Operational Objective	Action Required	Suggested organisational involvement	Time-scale	Type
1 Achieve favourable conservation management on all upland heathland SSSIs by 2010, and achieve demonstrable improvement in the conservation status of at least 50% of upland heath outside SSSIs by 2010	1 Prepare and implement management plans for all upland heathland SSSIs/SACs by 2005.	EN, LDNPA	M	SS
	2 Undertake condition assessment of all existing management agreements.	EN, MAFF	L	RM
	3 Ensure that all heathland on cSAC sites have Site Management Statement (SMS) objectives for upland heath by 2000.	EN	S	SS
	4 Adjust and/or renegotiate agreements (upgrade agreements, add additional off-wintering payments etc.) as opportunities arise, to achieve target.	EN, MAFF	M/L	SS
	5 Acquire ownership, or assist conservation bodies to acquire ownership, of heathland sites, where appropriate.	EN	L	SS
	6 Encourage owners/occupiers to undertake appropriate burning regimes, providing assistance where possible.	EN, MAFF	M	SS
2 Make efforts to obtain ESA agreement over 90% of the resource within the Lake District ESA by 2003	1 Proactively target new ESA agreements.	MAFF, NT	S	SS
	2 Set objectives for new agreements to be achieved in five years.	MAFF	M	SS
	3 Ensure that all heathland on cSAC sites have SMS objectives for upland heath by end 2000.	EN	S	SS
	4 Seek to ensure that all SSSI for which heathland objectives have been set are subject to either an ESA or a WES agreement.	EN, MAFF	M	SS
	5 Provide advice on management and grants to owners and occupiers of Wildlife Sites with upland heathland (within Lake District ESA), by 2008.	CWT, FWAG	L	A/ SS

Broad Objective B **Achieve favourable conservation management for at least 75% of upland heathland**

Operational Objective	Action Required	Suggested organisational involvement	Time-scale	Type
3 Seek to ensure that 90% of resource outside the Lake District ESA is within CSS or a WES agreement	1 Seek to ensure that all SSSIs with heather outside Lake District ESA are subject to either CSS or a WES agreement.	EN, MAFF	M	SS
	2 Ensure that all heathland on cSAC sites have SMS objectives for upland heath by 2000.	EN	S	SS
	3 Proactively target further CSS agreements.	MAFF	S	SS
	4 Provide advice on management and grants to owners and occupiers of Wildlife Sites with upland heathland (outside Lake District ESA), by 2008.	CWT, FWAG	L	A/ SS

Broad Objective C **Create and enhance mosaics and transitions of upland heathland with other habitats**

Operational Objective	Action Required	Suggested organisational involvement	Time-scale	Type
1 Achieve favourable management for all areas of upland heath adjacent to montane heath, blanket mire and upland sessile oak-woodland	1 Target all management schemes to these areas and adjust and/or renegotiate agreements (upgrade agreements, add additional off-wintering payments etc.) as necessary to achieve targets.	EN, MAFF	M	SS
	2 Ensure that all heathland on multi-interest cSAC sites have SMS objectives for upland heath by 2000.	EN	S	SS

Broad Objective D By 2010, seek to restore heathland on 500ha of upland habitat where dwarf shrubs have been reduced or eliminated

Operational Objective	Action Required	Suggested organisational involvement	Time-scale	Type
1 Restore heather cover in areas adjacent to or contiguous with existing heather fell, or where heather could occur in a mosaic with montane heathland, blanket mire, and upland sessile oak woodland	1 Identify suitable target areas in appropriate Natural Areas. Set targets for each NA.	EN, NT, LDNPA	M	RM
	2 Promote CSS, ESA or WES agreements to achieve targets.	EN, MAFF, LDNPA	M	SS

Broad Objective E Foster increased awareness and understanding of the importance of upland heathland and how to manage it

Operational Objective	Action Required	Suggested organisational involvement	Time-scale	Type
1 Provide training, advice and publicity	1 Provide training courses in condition assessment and the setting of management objectives and prescriptions for upland heathland management.	EN, MAFF, LDNPA	M	SS/CP
	2 Establish a network of sites demonstrating good environmental practice.	FWAG, MAFF, LDNPA	M	CP
	3 Produce leaflets in association with training days.	EN	M	CP
2 Contribute to political awareness of the role of common land reform in securing biodiversity objectives for upland heathland	1 Document information on case histories where progress on heathland actions has been hindered by the difficulty, under present legislation, for commoners to take up agri-environment schemes on common land.	EN, NFU, MAFF, LDNPA, NT, CWT	S/M	RM

Broad Objective F	Monitor the quality and extent of upland heathland			
Operational Objective	Action Required	Suggested organisational involvement	Time-scale	Type
I Monitor the quality, extent and management of heathland in Cumbria	I Develop an agreed monitoring strategy within the county by 2002.	EN, MAFF, LDNPA	M	RM

Key to Tables

Suggested organisational involvement: Key Deliverers in bold type; Partners in plain type.
 CWT=Cumbria Wildlife Trust; ECCP=East Cumbria Countryside Project; EN=English Nature; FC=Forestry Commission; FE=Forest Enterprise; FWAG=Farming and Wildlife Advisory Group; LAs =Local Authorities; LDNPA=Lake District National Park Authority; MAFF=Ministry of Agriculture, Fisheries and Food; NT=National Trust; NWW=North West Water Ltd.

Timescale: O=ongoing; S=short term (2000-2001); M=medium (2002-2005); L=long (2006-2010).

Type: Type of action; PL=Policy & Legislation; SS=Site Safeguard & Management; SP=Species Management and Protection (species plans only); A=Advisory; RM=Research & Monitoring; CP=Communications and Publicity.