

Natural Area: Bowland Fells

Mountain and Moorland Significance:

**Description:** The Forest of Bowland Natural Area is dominated by Carboniferous Limestone forming an open and rugged upland area. Pendle Hill forms a distinctive landform to the east of the Natural Area, with a steep escarpment capped by millstone grit. The Bowland Fells form an almost circular upland dome of heather moorland and blanket mire, rising to 560 metres at Wards Stone. The landscape is further characterised by gritstone outcrops and steep, wooded valleys.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (1-internationally scarce with U.K. representation, UK-well developed in U.K. but represented elsewhere, L-Widely developed in Europe)
Blanket mire and wet heath (including Bog pool and flush and valley mires).	M2	2	L
	M4	2	L
	M6a, M6b, M6c	3	I
	M15		UK
	M18	2	UK
	M19	3	UK
	M20a, M20b	3	UK
	M23	1	I
	M25a, M25b	2	I
	M32	1	L
Dry heath	H9		UK
	H10	1	UK
	H12		UK
	H18	2	L
	H21a	1	I
Grassland and tall herb communities	U4	3	L
	U5	3	L
	U6	2	I
	U20a, U20c	2	I
Scrub			

**Nationally Rare and Scarce Plant Species:**

*Dryopteris submontana.*  
(*Primula farinosa.*)



Key Issues	
Habitat	Issue
Blanket mire and wet heath	Overgrazing, recreation and access, inappropriate burning, reclamation and improvement, drainage and pollution.
Dry heath	Overgrazing, recreation and access, inappropriate burning, reclamation and improvement.
Grassland and tall herb communities	Agricultural improvement.
Scrub	

Objective	
Habitat	Objective
Blanket mire and wet heath	
Dry heath	
Grassland and tall herb communities	
Scrub	

**Significance:** The upland vegetation of the Bowland Fells is of significance for its extensive areas of northern blanket bog (M19, M20) and associated mires (M6).



Natural Area: Central Marches

Mountain and Moorland Significance:

**Description:** The Central Marches Natural Area consists of the rolling hills of southwest Shropshire and northwest Herefordshire, and is contiguous with similar countryside in Central Wales. Small areas of heather moorland and unenclosed rough pasture exist in the uplands of Clun Forest.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (1-internationally scarce with U.K. representation, UK-well developed in U.K. but represented elsewhere, L - Widely developed in Europe)
Blanket mire and wet heath (including Bog pool and flush and valley mires).	M4		L
	M6		I
	M19	1	UK
	M21	2	L
	M23	1	I
Dry heath	H8	2	I
	H9	3	UK
	H12	2	UK
	H18	1	L
Grassland and tall herb communities	U4	3	L
	U5	1	L
	U6		I
	U20, U20a, U20c	1	I
Scrub			

**Nationally Rare and Scarce Plant Species:**  
(*Dianthus deltoides*, *Sedum forsterianum*).



Key Issues	
Habitat	Issue
Blanket mire and wet heath	
Dry heath	Inappropriate grazing, bracken encroachment, scrub encroachment, recreation? Motor vehicles?
Grassland and tall herb communities	Agricultural improvement, overgrazing, bracken encroachment, afforestation.
Scrub	

Objective	
Habitat	Objective
Montane	
Blanket mire and wet heath	
Dry heath	
Grassland and tall herb communities	
Scrub	

**Significance:**



**Description:** This Natural Area comprises the Lake District mountains, the surrounding fells of the South Lakes, the Howgills and the Orton Fells. The geology is very diverse, and includes volcanic rocks, igneous intrusions, slates and shales, and Carboniferous limestone. The mountains rise into the montane zone and support high level heaths, grasslands and rock and scree. Lower down there are heaths and grasslands along with mires, lakes, tarns and rivers. (Some of the most important areas of limestone pavement in Britain occur here).

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (1-internationally scarce with U.K. representation, UK-well developed in U.K. but represented elsewhere, I-Widely developed in Europe)
Montane	U7, U7c	1	L
	U10a, U10b	1	UK
	U15	2	L
	U16	2	UK
	H13	1	I
	H18a, H18c	2	L
	H19a, H19c	2	L
	CG11a	1	UK
	M31	1	L
	M32	2	L
Blanket mire and wet heath (including Bog pool and flush & valley mires)	M1	1	L
	M2	1	L
	<b>M3</b>		L
	M4	1	L
	M5	1	L
	M6, M6a, M6b, M6c, M6d	3	I
	<b>M9</b>		L
	M10, M10a	3	UK
	M11, M11b	2	UK
	<b>M13</b>		?
	M15, M15a, M15b	2	UK
	M16	1	I
	M17a, M17b, M17c	1	I
	M18a	2	UK
	M19a, M19b	3	UK
	M20, M20a, M20b	2	UK
	M21, M21a	1	L
	M23	3	I
	M25, M25b	2	I
	<b>M26</b>		I
<b>M27</b>		?	
M32	2	L	
M37	1	L	
Dry Heath	H8	2	I
	<b>H9</b>		UK
	H10a, H10b	2	UK
	H12a, H12b, H12c	3	UK
	H13	1	I
	<b>H15</b>		I
	H21a	2	I



Grassland and tall herb communities	U2	1	L
	U4a, U4b, U4d, U4e	3	L
	U5a, U5b, U5d, U5e	3	L
	U6, U6a	3	I
	U13	1	I
	U17a, U17c	1	L
	U19	1	L
	U20, U20a, U20b, U20c	3	I
	U21	3	L
	CG9a, CG9b, CG9c	2	I
	CG10a, CG10b	2	UK
	<b>MG9</b>	1	?
Scrub	W19a	1	L

#### Nationally Rare and Scarce Plant Species:

*Ajuga pyramidalis*, *Alchemilla wichurae*, *Asplenium septentrionale*, *Bartsia alpina*, *Carex atrata*, *C. capillaris*, *C. magellanica*, *Cerastium alpinum*, *Circaea alpina*, *Deschampsia cespitosa*, *Dryas octapetalla*, *Dryopteris submontana*, *Euphrasia frigida*, *E. ostensfeldii*, *E. rivularis*\*, *E. rostkoviana*, *Juncus filiformis*, *Lychnis alpina*\*, *Lycopodium annotinum*, *Myosotis stolonifera*, *Najas flexilis*\*, *Phleum alpinum*, *Poa alpina*, *P. glauca*, *Polygala amarella*, *Potentilla crantzii*, *P. fruticosa*\*, *Salix lapponum*, *Saxifraga nivalis*, *Sedum villosum*, *Subularia aquatica*, *Woodsia ilvensis*\*.

(*Actaea spicata*, *Cardamine impatiens*, *Carex ericetorum*, *C. ornithopoda*, *Crepis mollis*, *Epipactis atrorubens*, *Equisetum variegatum*, *Gymnocarpium robertianum*, *Hammarbya paludosa*\*, *Helianthemum canum*, *Hornungia petraea*, *Isoetes echinospora*, *Lycopodiella inundata*\*, *Minuartia verna*, *Polygonatum odoratum*, *Potentilla neumanniana*, *Primula farinosa*, *Ribes spicatum*, *Sesleria caerulea*, *Sorbus rupicola*, *Trichomanes speciosum*, *Veronica spicata*).

Key Issues	
Habitat	Issue
Montane	Overgrazing, recreation
Blanket mire and wet heath	Peat cutting, drainage, scrub encroachment, drainage, eutrophication.
Dry heath	Overgrazing, afforestation, burning, stockfeeding, recreation, bracken encroachment, wind farms.
Grassland and tall herb communities	Removal of rock from pavements, scrub and bracken encroachment, overgrazing and undergrazing, agricultural intensification.
Scrub	



Objective	
Habitat	Objective
Montane	
Blanket mire and wet heath	
Dry heath	
Grassland and tall herb communities	
Scrub	

**Significance:** The Cumbrian Fells and Dales are very important for a wide range of vegetation types, including many communities that are scarce or absent elsewhere in England. Communities for which this area is particularly important include those of the montane zone (H13, U10, U16, CG11). There is also a good representation of many internationally scarce and nationally important mire and heathland communities (M6, M10, M19, M23, H12) and grassland types (U6, CG9, CG10). Several communities with a wider distribution in Scotland appear to be restricted to this area in England (CG11, H16, M5, M31, U13, U15). As a consequence of this high frequency of restricted plant communities, Cumbria also has a large number of nationally rare and scarce plant species.



Natural Area: Dark Peak

Mountain and Moorland Significance:

**Description:** The Dark Peak is formed by coarse millstone grit and softer shales overlain by peat. The summits of the hills reach 610 metres at Kinder Scout and form relatively level plateaux which are dissected by deep narrow valleys called cloughs. The main vegetation is moorland with blanket mire on the deep peats, dry heath on the lower slopes and acid grassland on more intensively managed land. Springs, flushes, woods and wet rock faces are found in the cloughs.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (1-internationally scarce with U.K. representation, UK-well developed in U.K. but represented elsewhere, L-Widely developed in Europe)
Blanket mire and wet heath (including Bog pool and flush & valley mires)	M2b		L
	M3		L
	M4		L
	M6a, M6b, M6c	3	I
	M10		UK
	M16		I
	M19a, M19b	1	UK
	M20a, M20b	3	UK
	M21b		L
	M25a, M25b	2	L
	M32		L
	M35		L
	M37		L
Dry heath	H8b	1	I
	H9, H9a, H9b, H9c, H9e	3	UK
	H12	2	UK
	H18	2	L
Grassland and tall herb communities	U2	2	L
	U4, U4a, U4b, U4c, U4e	3	L
	U5d	2	L
	U6	1	I
	U20	3	I
Scrub			

Nationally Rare and Scarce Plant Species:

*Ledum palustre groenlandicum*  
(*Trichomanes speciosum*.)



Key Issues	
Habitat	Issue
Blanket mire and wet heath	Gripping, burning, fragmentation, overgrazing, accidental fires, erosion.
Dry heath	Recreation and accidental fires, erosion, local overgrazing, bracken invasion, burning, fragmentation.
Grassland and tall herb communities	Drainage, improvement, inappropriate grazing, bracken & scrub invasion, access and recreation.
Scrub	

Objective	
Habitat	Objective
Blanket mire and wet heath	
Dry heath	
Grassland and tall herb communities	
Scrub	

**Significance:** The Dark Peak is significant for its extensive areas of northern blanket bog (M20 with M6) and upland dry heath (H9, H18).



Natural Area: Dartmoor

Mountain and Moorland Significance:

Description: Dartmoor is the largest area of moorland in southern England and the largest area of unglaciated moorland in Great Britain. The Natural Area is dominated by the massive igneous intrusion of the the Dartmoor Granite. The dome-shaped granite intrusion has produced a distinctive landscape with a radial drainage pattern and granite tors. There are extensive blanket bogs on peats up to seven metres deep on the higher moors, with some active bogs in areas of impeded drainage. Other habitats include wet and dry heaths and valley mires.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (1-internationally scarce with U.K. representation, UK-well developed in U.K. but represented elsewhere, L-Widely developed in Europe)
Blanket mire and wet heath	M1	2	L
	M2	2	L
	M3	2	L
	M4	2	L
	M6a, M6c, M6d	3	I
	M15, M15a, M15b, M15d	2	UK
	M16a, M16b	2	I
	M17a, M17c	2	I
	M21	3	L
	M25a, M25b	3	I
M29	?	I	
Dry heath	H4a, H4b, H4c, H4d	3	I
	H8b	2	I
	H10a	1	UK
	H12a, H12c	2	UK
	H18a, H18c	1	L
Grassland and tall herb communities	U2	2	L
	U3	3	I
	U4a, U4e	2	L
	U5, U5a, U5c	2	L
	U6, U6a, U6c	1	I
	U20, U20a, U20b	2	I
Scrub			

Nationally Rare and Scarce Plant Species:

*Asplenium septentrionale*, *Spiranthes romanzoffiana*.

(*Euphrasia vigursii*, *Hammarbya paludosa*\*, *Lycopodiella inundata*\*, *Sibthorpia europaea*.)



Key Issues	
Habitat	Issue
Blanket mire and wet heath	Inappropriate burning especially in summer. Inappropriate grazing (especially overgrazing). Peat erosion. Water abstraction.
Dry heath	Inappropriate grazing/burning. High reclamation.
Grassland and tall herb communities	Bracken encroachment, overgrazing and drainage.
Scrub	

Objective	
Habitat	Objective
Blanket mire and wet heath	
Dry heath	
Grassland and tall herb communities	
Scrub	

**Significance:** The vegetation of Dartmoor is of particular interest in that it combines western oceanic communities with a more northern, upland component. This includes extensive areas of internationally important blanket mire (M17) and some of the best areas of wet heath (mainly M15) in England. These wet and predominantly western communities occur with dry heath including the upland H12 and the lowland H4. The extensive valley mires (M21) are also of significant interest.



**Natural Area: Exmoor and the Quantocks**
**Mountain and Moorland Significance:**

Description: Exmoor is an elongated core of high land lying above the Culm Measures of Devon and Somerset. The Quantocks are separated from Exmoor to the east by the Vale of Taunton. These upland areas are mostly underlain with slates, shales, sandstones and grits of the Devonian system. Erosion by numerous streams radiating from the upland core has given rise to several deep valleys and has created the characteristic hog's back ridges of this area.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (1-internationally scarce with U.K. representation, UK-well developed in U.K. but represented elsewhere, L-Widely developed in Europe)
Blanket mire and wet heath (including Bog pool and flush & valley mires)	M1	1	L
	M2	1	L
	M3	1	L
	M4	1	L
	M6a, M6b, M6c, M6d	2	I
	M9	1	L
	M10	1	UK
	M15, M15a, M15b, M15c, M15d	2	UK
	M16d	2	UK
	M17, M17c	1	I
	M23	2	I
	M25, M25b	2	I
	M29	?	I
	M32	?	L
M35	?	L	
Dry heath	H4a, H4b, H4c, H4d	3	I
	H8a, H8b	2	I
	H10a	1	UK
	H12a, H12b, H12c	2	UK
	H18, H18a	1	L
	H21a	1	I
Grassland and tall herb communities	U3	3	I
	U4a, U4b, U4e	3	L
	U5d	2	L
	U19	1	L
	U20, U20b	3	L
Scrub			



**Nationally Rare and Scarce Plant Species:**  
*(Sibthorpia europaea, Sorbus rupicola.)*

Key Issues	
Habitat	Issue
Blanket mire and wet heath	Inappropriate grazing (especially overgrazing), inappropriate burning, historical drainage.
Dry heath	Inappropriate grazing (especially undergrazing) and conversion to grass moor, burning, reclamation. Control of invasive species (bracken, rhododendron). Damage due to excessive use of winter feed. Recreational use - horseriding and hunting.
Grassland and tall herb communities	Inappropriate grazing, agricultural reclamation.
Scrub	Inappropriate grazing. Education/change attitude/raise awareness of importance/significance.

Objective	
Habitat	Objective
Blanket mire and wet heath	
Dry heath	
Grassland and tall herb communities	
Scrub	

**Significance:** The most important upland vegetation on Exmoor is the extensive area of internationally important dry heath. Exmoor supports the largest area of this vegetation in southwest England. The heathland is of particular interest in that it consists of both a lowland and southwestern component (H4) alongside more widespread upland communities (H8 and H12).



**Description:** The North Pennines are a distinct upland block bordered by the Eden and Tyne valleys, the Durham lowlands and the Yorkshire Dales. The Natural Area is dominated by Carboniferous rocks including Millstone Grit, shale and limestone which form an open and rugged upland landscape. Intrusions of hard volcanic rock such as the Whin Sill produce distinctive 'vertical steps' in the landscape and have formed the largest waterfall in England at High Force. On much of the high Pennines a layer of peat blankets the bed rock and this supports extensive areas of moorland. Outcrops of limestone support calcareous grasslands and pavements.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (1- internationally scarce with U.K. representation, UK -well developed in U.K. but represented elsewhere, L - Widely developed in Europe)
Montane	H18	2	L
	U10a	2	UK
	M8	1	L
	U7	1	L
Blanket mire and wet heath (including Bog pool and flush & valley mires)	M2b	2	
	M3	2	L
	M4	2	
	M6a, M6b, M6c, M6d	3	
	M10	2	
	M11b	1	
	M15, M15a, M15b	1	
	M16	1	I
	M18a, M18b	2	UK
	M19a, M19b, M19c	3	UK
	M20	3	UK
	M23	1	
	M25, M25b	2	
	M32	1	
M37	2		
Dry heath	H8	1	
	H9	2	
	H10c, H10d	1	UK
	H12a, H12b	3	UK
	H18		
	H19	2	
	H21, H21a	1	
Grassland and tall herb communities	U2	2	
	U4e	3	L
	U5a, U5b, U5c	3	L
	U6, U6a, U6d	2	I
	U20, U20a, U20c	2	I
	U21	1	
	CG9c, CG9d, CG9e	2	I
	CG10a, CG10c	3	UK
Scrub	W19a, W19b	2	L



**Nationally Rare and Scarce Plant Species:**

*Alchemilla glomerulans, A.wichurae, Alopecurus borealis, Asplenium septentrionale, Bartsia alpina, Betula nana, Carex capillaris, C.magellanica, Circaea alpina, Dryas octapetala, Dryopteris submontana, Equisetum pratense, Euphrasia rostkoviana, Juncus alpinoarticulatus, J.filiformis, Kobresia simpliciuscula, Minuartia stricta\*, Myosotis alpestris\*, M.stolonifera, Phleum alpinum, Poa alpina, Polygala amarella, Potentilla crantzii, P.fruticosa\*, Saxifraga hirculus\*, S.nivalis, Sedum villosum, Woodsia ilvensis\*.*

*(Carex ericetorum, C.ornithopoda, Crepis mollis, Epipactis atrorubens, Equisetum variegatum, Gentiana verna, Gymnocarpium robertianum, Hammarbya paludosa\*, Helianthemum canum, Minuartia verna, Primula farinosa, Sesleria caerulea, Sorbus rupicola, Thlaspi caerulescens, Viola rupestris.)*

Key Issues	
Habitat	Issue
Montane	Overgrazing, recreation, acid deposition.
Blanket mire and wet heath	Overgrazing, gripping, burning, recreation, stock-feeding, Sphagnum harvesting, wind farms.
Dry heath	Overgrazing, burning, recreation, stock-feeding, bracken encroachment, woodland regeneration, wind farms.
Grassland and tall herb communities	Overgrazing, recreation, stock-feeding, woodland, regeneration, bracken encroachment.
Scrub	Overgrazing, regeneration

Objective	
Habitat	Objective
Montane	
Blanket mire and wet heath	
Dry heath	
Grassland and tall herb communities	
Scrub	

**Significance:**