Natural Area: North York Moors	Mountain and Moorland Significance: Considerable

Description: The North York Moors stretch from the Vale of York in the west to the coast in the east. The underlying geology is of Jurassic sandstone and shale with a belt of limestone exposed along the southern edge. These rocks form an upland plateau which is dissected by numerous valleys. Open moorland largely dominated by dry heath extends across the upland plateau, while the valleys support a mosaic of grasslands, woodlands, fast-running rivers and bracken on the steeper slopes.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (I - 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).	M6c	2	I
	M10	1	UK
	M13	1	?
	M15, M15a	2	UK
	M16	2	I
	M20b	2	UK
	M21	2	L
	M22	1	?
	M23	1	I
	M25b	2	I
	M27	1	?
Dry heath	H9	3	UK
	H10	1	UK
	H12	2	UK
	H18	1	L
	H21a	1	I
Grassland and tall herb communities	U4	2	L
	U5	2	L
	U6	1	I
	U20, U20c	3	I
Scrub			

Nationally Rare and Scarce Plant Species:
None recorded

Key Issues	
Habitat	Issue
Blanket mire and wet heath	Burning, moor gripping/drainage?, adjacent forestry.
Dry heath	Access and recreation. Extent and frequency of burning. Bracken control. Pond creation for grouse management. Stock feeding and shepherding. Woodland regeneration.
Grassland and tall herb communities	Agricultural improvement? Afforestation/tree planting. Scrub encroachment and lack of traditional management.
Scrub	

Objective	
Habitat	Objective
Blanket mire and wet heath	Retain and enhance soil hydrology and hydrological features. Maintain and restore species composition and condition of dwarf shrub. Reduce or eliminate burning.
Dry heath	Maintain condition of dry heath communities and encourage mature heather through reduction of burning.
Grassland and tall herb communities	Ensure grassland communities are appropriately managed. Encourage development of a mosaic of dry heath and grasslands types.
Scrub	Encourage natural regeneration of gill woodland/scrub and development of scrub adjacent to moorland and woodland edge (especially as alternative to bracken control with herbicide).

Significance: Important for holding the largest continuous tract of heather moor in England and probably the largest continuous area of H9 in Britain. Also important for good examples of wet heath (M16) and valley mire (M21).

Natural Area: North Pennines	Mountain and Moorland Significance: Outstanding

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 (I -internationally scarce with U.K. representation, UK -well developed in U.K. but represented elsewhere, L - Widely developed in Europe)
Montane	H13	1	I
	H18	2	L
	H22	1	UK
	U10a	2	UK
	U17	1	L
	M7	1	L
	M8	1	L
	M9b	1	L
	U7	1	L
Blanket mire and wet heath (including Bog pool and flush & valley mires)	M2b	2	
	M3	2	L
	M4	2	L
	M6a, M6b, M6c, M6d	3	I
	M10	2	UK
	M11b	1	UK
	M15, M15a, M15b	1	UK
	M16	1	I
	M17	1	I
	M18a, M18b	2	UK
	M19a, M19b, M19c	3	UK
	M20	3	UK
	M23	1	I
	M25, M25b	2	I
	M26b	1	I
	M32	1	L
	M35	1	L
	M37	2	L
	M38	1	L
Dry heath	H8	1	I
	H9	2	UK
	H10c, H10d	1	UK
	H12a, H12b	3	UK
	H8	1	L
	H19	2	L
	H21, H21a	1	I
Grassland and tall herb communities	U1	1	L
	U2	2	
	U4c	3	L
	U5a, U5b, U5c	3	L
	U6, U6a, U6d	2	I
	U16	1	UK
	U19	1	L
	U20, U20a, U20c	2	I
	U21	1	L
	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, Euphrasia rostkoviana, Juncus alpinoarticulatus, Kobresia simpliciuscula, Minuartia stricta, Myosotis alpestris*, M.stolonifera, Phleum alpinum, Poa alpina, Polygala amarella, Potentilla crantzii, P.fruticosa*, Saxifraga hirculus*, S.nivalis, Sedum villosum, Viola rupestris,Woodsia ilvensis*.*
(Carex ericetorum, C.ornithopoda, Crepis mollis, Dryopteris submontana, Equisetum pratense, Epipactis atrorubens, Equisetum variegatum, Gentiana verna, Gymnocarpium robertianum, Hammarbya paludosa, Helianthemum canum, Minuartia verna, Primula farinosa, Sesleria caerulea, Sorbus rupicola, Thlaspi caerulescens.)*

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	Restore dwarf shrub and bryophytes to summit heaths.
Blanket mire and wet heath	Retain and enhance soil hydrology and hydrological features. Maintain and restore species composition and condition of dwarf shrub. Reduce or eliminate burning.
Dry heath	Improve condition of dry heath communities by reducing grazing pressure. Extend dwarf shrub vegetation to limit of unenclosed land. Lengthen burning rotation.
Grassland and tall herb communities	Ensure grassland communities are appropriately managed. Encourage development of a mosaic of dry heath and grasslands types.
Scrub	Encourage natural regeneration of gill woodland/scrub and development of scrub adjacent to moorland and woodland edge. Restore and enhance areas of Juniper scrub.

Significance: The North Pennines Natural Area is second only to the Cumbrian Fells and Dales in terms of its range and extent of internationally rare and uncommon upland communities. As with Cumbria it is particularly important for montane communities and many of the nationally rare and scarce plant species associated with them. It is important for blanket mires (M18, M19) and species-rich flushes (M10), dry heath (especially H12) and particularly important for extensive areas of species-rich calcareous grassland (CG10). It also holds the largest extent of Juniper woodland in England.

Natural Area: Oswestry Uplands	Mountain and Moorland Significance: Negligible

Description: The Oswestry Uplands is one of the smallest Natural Areas and has affinities with areas in Wales. The Natural Area lies on Carboniferous rocks including limestone and millstone grits, along with coal measures and shales. The landscape is intricate and set in a complex of rolling hills and supports fragmented areas of mire and semi-natural grasslands.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (I - 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).	M9 M22 M27	1 1 1	L ? ?
Grassland and tall herb communities	CG2 OV38	1 1	? ?
Scrub			

Nationally Rare and Scarce Plant Species:
(*Gymnocarpium robertianum, Hornungia petraea, Sorbus rupicola.*)

Key Issues	
Habitat	Issue
Small flushes and fens	Inappropriate grazing, lack of management, fragmentation and land reclamation for agriculture.
Grassland and tall herb communities	Inappropriate grazing, lack of management, quarrying, land improved for agriculture.
Scrub	

Objective	
Habitat	Objective
Small flushes and fens	Maintain and enhance through appropriate management. Reduce fragmentation through habitat restoration.
Grassland and tall herb communities	Maintain and enhance through appropriate management.
Scrub	Encourage gill woodland and scrub/woodland regeneration on land of low conseravtion interest.

Significance: This Natural Area does not hold significant areas of internationally and nationally important upland communities.

Natural Area: Shropshire Hills	Mountain and Moorland Significance: Some

Description: The Shropshire Hills Natural Area lies between the Midlands Plain to the east and the Welsh hills to the west. It has a more varied geology than any other area of comparable size in Britain which includes volcanic and sedimentary rocks. The latter have given rise to the characteristic hog-back hills and deeply dissected moorland plateau of Long Mynd. The Shropshire Hills hold extensive tracts of moorland and other upland habitats, often showing transitions between southern lowland and northern upland types, managed within a farming regime.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (I - 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).	M6a, M6b, M6c, M6d	1	I
	M10	1	UK
	M11b	1	UK
	M19	1	UK
	M20a	1	UK
	M23	1	I
	M25	1	I
	M29	1	I
	M32	1	L
	M35	1	L
	M36	1	L
Dry heath	H8	1	I
	H9	1	UK
	H10	1	UK
	H12	3	UK
	H18	2	L
	H21a	1	I
Grassland and tall herb communities	U1b, U1e	1	L
	U4, U4a	3	L
	U5	1	L
	U6	2	I
	U20, U20c	2	I
	CG10	1	UK
Scrub			

Nationally Rare and Scarce Plant Species: none recorded

Key Issues	
Habitat	Issue
Blanket mire and wet heath	Inappropriate grazing, inappropriate/excessive supplementary feeding, habitat fragmentation, land reclaimed for agriculture.
Dry heath	Inappropriate grazing, lack of burning, inappropriate/excessive supplementary feeding, habitat fragmentation, bracken invasion, land reclaimed for agriculture.
Grassland and tall herb communities	Inappropriate grazing, habitat improvement/reclaimed for agricultural purposes.
Scrub	

Objective	
Habitat	Objective
Blanket mire and wet heath	Enhance soil hydrology and hydrological features. Maintain and restore species composition and condition of dwarf shrub and extend dwarf shrub cover. Reduce or eliminate burning.
Dry heath	Improve condition of dry heath communities and extend dwarf shrub cover. Introduce long rotation burning to some areas. Reduce fragmentation through habitat restoration.
Grassland and tall herb communities	Ensure grassland communities are appropriately managed. Encourage development of a mosaic of dry heath and grasslands types.
Scrub	Encourage natural regeneration of gill woodland/scrub and development of scrub adjacent to moorland and woodland edge.

Significance: The most significant feature of the Shropshire Hills is the transitional mix of upland and lowland dry heath communities (H8, H9, H12, H18, H21), managed within the upland sheep regime. U4, U6 and U20 are also frequent.

Natural Area: Southern Pennines	Mountain and Moorland Significance: Considerable

Description: The Southern Pennines Natural Area is that part of the Pennines chain found between the Yorkshire Dales and the Peak District. The Millstone Grit series of coarse pebbly gritstones with finer grained flagstones gives the rock outcrops of this area their typical profile. The landscape is characterised by deeply incised river valleys and flat moorland plateaux which reach their highest point at 517 metres at Lad Law above Colne.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (I - 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**	1	L
	M3	2	L
	M6a, M6c	2	I
	M10	2	UK
	M19b	3	UK
	M20a, M20b	3	UK
	M25, M25b	2	I
Dry heath	H9a, H9b, H9c, H9e	3	UK
	H12a	2	UK
	H18c	?	L
	CG9b	1	I
Grassland and tall herb communities	U2	2	L
	U4b	2	L
	U5d	2	L
	U6	1	I
	U20, U20a, U20c	3	I
Scrub			

Nationally Rare and Scarce Plant Species:
None recorded

Key Issues	
Habitat	Issue
Blanket mire and wet heath	Windfarms, access and recreation, gripping and burning.
Dry heath	Inappropriate grazing, burning, farm abandonment, access and gripping.
Grassland and tall herb communities	Overgrazing, bracken invasion, improvement, access and recreation.
Scrub	

Objective	
Habitat	Objective
Blanket mire and wet heath	Retain and enhance soil hydrology and hydrological features. Restore species composition and condition of dwarf shrub. Reduce or eliminate burning.
Dry heath	Improve condition of dry heath communities including range of species and structural diversity. Extend dwarf shrub vegetation to limit of unenclosed land. Lengthen burning rotation.
Grassland and tall herb communities	Ensure grassland communities are appropriately managed. Encourage development of a mosaic of dry heath and grasslands types.
Scrub	Encourage natural regeneration of gill woodland/scrub and development of scrub adjacent to moorland and woodland edge.

Significance: The Southern Pennines are of particular importance for their northern blanket bogs (nearing the edge of their range in the south) and dry heaths. They hold extensive areas of M19 and M20 along with large areas of the upland heathlands H9 and H12.

Natural Area: South West Peak	Mountain and Moorland Significance: Notable

Description: This Natural Area lies between the Cheshire Plain to the west and the outcropping limestone of the White Peak to the east. The geology is of Carboniferous millstone grit and coal measures. The landscape character is of open moorland separated by small, enclosed rush pastures and improved grasslands. The moorland holds blanket mire and dry heath.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (I - 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).	M2b	1	L
	M3	1	L
	M4	1	L
	M6c, M6d, M6a, M6b	3	I
	M9	1	L
	M10a	1	UK
	M15a, M15b, M15d	1?	UK
	M16	1	I
	M19, M19a, M19b	1	UK
	M20, M20a, M20b	3	UK
	M21b	1	L
	M23a, M23b	1	I
	M25b	2	I
	M26b	1	I
Dry heath	H8	1	I
	H9, H9a, H9b, H9c	3	UK
	H12,	2	UK
	H18	2	L
Grassland and tall herb communities	U2	2	L
	U4, U4a, U4b	3	L
	U5, U5a, U5b, U5c	2	L
	U6a, U6c	2	I
	U20, U20a, U20b, U20c	3	I
Scrub			

Nationally Rare and Scarce Plant Species:
Myosotis stolonifera.
(*Trichomanes speciosum.*)

Key Issues	
Habitat	Issue
Blanket mire and wet heath	Overgrazing, drainage, burning, improvement.
Dry heath	Bracken encroachment, overgrazing, burning.
Grassland and tall herb communities	Improvement, liming.
Scrub	

Objective	
Habitat	Objective
Blanket mire and wet heath	Enhance soil hydrology and hydrological features. Maintain and restore species composition and condition of dwarf shrub. Reduce or eliminate burning.
Dry heath	Reduce fragmentation through habitat creation. Encourage development of mature heather and extend cover of dwarf shrub to limit of unenclosed land.
Grassland and tall herb communities	Introduce appropriate grazing management and reduce invasive species.
Scrub	Encourage natural regeneration of gill woodland/scrub and development of scrub adjacent to moorland and woodland edge.

Significance: Although the extensive blanket bogs are largely of the degraded, species-poor form (M20), the South West Peak is notable for its extensive dry heath (H9, H12 and H18).

Natural Area: Staffordshire Uplands	Mountain and Moorland Significance: Considerable

Description: The Staffordshire uplands occupy the undulating, rising ground between the upper Trent Valley and the Pennines of the South West Peak. The Natural Area is located on the Carboniferous coal measures which are sandwiched between sandstones and millstone grits. The low-lying hills support areas of dry heathland and blanket bog.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (I - 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).	M6c M15 M16 M19 M20 M25	2 2 2 3 2 2	I UK I UK UK I
Dry heath	**H8** **H9a, H9e**	 3	I UK
Grassland and tall herb communities	**U4a, U4b** U5	3 2	L L
Scrub			

Nationally Rare and Scarce Plant Species:
None recorded

Key Issues	
Habitat	Issue
Blanket mire and wet heath	Inappropriate grazing, scrub invasion.
Dry heath	Inappropriate grazing & burning, land reclamation for agriculture, scrub and bracken invasion, habitat fragmentation.
Grassland and tall herb communities	Grazing and stock type, scrub and bracken invasion.
Scrub	

Objective	
Habitat	Objective
Blanket mire and wet heath	Enhance soil hydrology and hydrological features. Maintain and restore species composition and condition of dwarf shrub. Reduce or eliminate burning.
Dry heath	Reduce fragmentation through habitat creation. Encourage development of mature heather and extend cover of dwarf shrub to limit of unenclosed land.
Grassland and tall herb communities	Introduce appropriate grazing management and reduce invasive species.
Scrub	Encourage natural regeneration of gill woodland/scrub and development of scrub adjacent to moorland and woodland edge.

Significance: The Staffordshire uplands are important for the most southerly extensive area of northern blanket bog (M19) along with wet heath (M15, M16) and northern heath (H9).

Natural Area: White Peak	Mountain and Moorland Significance: Negligible

Description: This Natural Area lies at the southern end of the Pennine chain and is mostly within the Peak District National Park. The White Peak is one of the most important exposures of Carboniferous limestone in Britain. The landscape is formed by a plateau which is dissected by numerous valleys or dales. The plateau is dominated by improved pasture with only a vestige of semi-natural heathlands remaining. The dales hold unimproved calcareous grasslands, woodlands and limestone rivers.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (I - internationally scarce with U.K. representation, UK -well developed in U.K. but represented elsewhere, L - Widely developed in Europe)
Dry heath	H8	1	I
	H9, H9c	1	UK
	H12	1	UK
Grassland and tall herb communities	U4b, U4c, U4e	2	L
	U5d	1	L
	CG2	2	?
	CG10a, CG10b	1	UK
	OV37	1	?
	OV38	1	?
	OV39	2	?
Scrub			

Nationally Rare and Scarce Plant Species:
Potentilla crantzii.
(*Carex ornithopoda, Draba muralis, Dryopteris submontana, Epipactis atrorubens, Gymnocarpium robertianum, Hornungia petraea, Minuartia verna, Potentilla neumanniana, Sesleria caerulea, Sorbus rupicola, Thlaspi caerulescens.*)

Key Issues	
Habitat	Issue
Dry heath	Overgrazing, improvement, bracken invasion, habitat fragmentation.
Grassland and tall herb communities	Lack of management, bracken invasion, inappropriate grazing (especially undergrazing), scrub invasion, fertiliser run-off, recreational pressure.
Scrub	

Objective	
Habitat	Objective
Dry heath	Reduce fragmentation through habitat creation. Encourage development of mature heather and extend cover of dwarf shrub to limit of unenclosed land.
Grassland and tall herb communities	Introduce appropriate grazing management and reduce invasive species.
Scrub	Encourage natural regeneration of gill woodland/scrub and development of scrub adjacent to moorland and woodland edge.

Significance: The White Peak has no significant areas of unenclosed internationally or nationally important upland communities.

Natural Area: Yorkshire Dales	Mountain and Moorland Significance: Outstanding

Description: The Yorkshire Dales are located between the Forest of Bowland and the Cumbrian Fells to the west and the Vale of York to the east. The Natural Area comprises a glaciated upland landscape of rounded hills and moors separated by broad valleys cut into the Carboniferous strata of limestone, millstone grit and shale. To the north and east the hills are blanketed by peat, forming dry heath and bog. Further south there are extensive areas of limestone grassland and pavement.

Habitat	NVC present	Extent in Natural Area (1-fragmented, 2-frequent, 3-extensive)	Significance (I - internationally scarce with U.K. representation, UK -well developed in U.K. but represented elsewhere, L - Widely developed in Europe)
Montane	U7	1	L
	H18c	1	L
	H19	1	L
	U17	1	L
Blanket mire and wet heath (including Bog Pool and flush & valley mires)	M3	1	L
	M4	1	L
	M6, M6a, M6c, M6d	3	I
	M9	1	L
	M10, M10b	2	UK
	M17	1	I
	M18b	1	UK
	M19a, M19b, M19c	2	UK
	M20, M20a, M20b	3	UK
	M23	3	I
	M25, M25b	2	I
	M26	1	I
	M27	1	L
	M32	1	L
	M37	1	L
Dry heath	H9, H9c	2	UK
	H12a	2	UK
Grassland and tall herb communities	U2	1	L
	U4a, U4b, U4d U4e	3	L
	U5a, U5b, U5d, U5e	3	L
	U6	2	I
	U19	1	L
	U20, U20c	2	I
	U21	1	L
	OV37	2	?
	OV38	2	?
	OV39	2	?
	OV40	2	?
	CG9a, CG9b, CG9c	2	I
	CG10a	2	UK
	MG10	3	?
Scrub	W19a		L

Nationally Rare and Scarce Plant *Species: Alchemilla glomerulans, A.minima*, A.wichurae, Arenaria norvegica anglica*, Bartsia alpina, Carex capillaris,Circaea alpina, Dryas octopetala, Euphrasia rostkoviana, Juncus alpinoarticulatus, Ledum palustre groenlandicum, Myosotis stolonifera, Poa alpina, Polygala amarella, Potentilla crantzii, Saxifraga hirculus*, Sedum villosum.*
(Actaea spicata, Alchemilla glaucescens, Cardamine impatiens, Carex ornithopoda, Crepis mollis, Draba muralis, Dryopteris submontana, Equisetum pratense, Epipactis atrorubens, Equisetum variegatum, Gymnocarpium robertianum, Hornungia petraea, Minuartia verna, Orobanche alba, Polygonatum odoratum, Primula farinosa, Ribes spicatum, Sesleria caerulea, Sorbus rupicola, Thlaspi caerulescens.)

Key Issues

Habitat	Issue
Montane	Overgrazing, pollution
Blanket mire and wet heath	Overgrazing, drainage, pollution
Dry heath	Overgrazing, burning, drainage, improvement
Grassland and tall herb communities	Removal of rock from pavements, quarrying, overgrazing (including rabbits), improvement.
Scrub	

Objective

Habitat	Objective
Montane	Restore dwarf shrub and bryophyte cover to summit heaths and reduce grazing pressure.
Blanket mire and wet heath	Enhance soil hydrology and hydrological features. Maintain and restore species composition and condition of dwarf shrub. Reduce or eliminate burning and grazing.
Dry heath	Encourage development of mature heather and extend cover of dwarf shrub to limit of unenclosed land.
Grassland, tall herb communities and limestone pavement	Maintain and enhance species-rich grasslands. Ensure no further loss of pavement, enhance through positive management and appropriate grazing management.
Scrub	Encourage natural regeneration of gill woodland/scrub and development of scrub adjacent to moorland and woodland edge.

Significance: The Yorkshire Dales has a wide range of important plant communities. The highest hills support small areas of montane vegetation, including communities that are probably at their most southerly location in England (H19, U7 and U17). There are also extensive areas of northern blanket bog (M19, M20) and dry heath (H9, H12) along with large allotments supporting the internationally important M23. That part of the Natural Area in Craven is important for areas of calcareous grassland (CG9 at the southern limit of its range, and CG10) and its limestone pavements. A large number of nationally scarce plants are associated with these communities.

Appendices

Appendix 1: UPLAND NVC COMMUNITIES IN ENGLAND

MONTANE	H13	
	H18	Also submontane
	H19	
	H22	
	M7	
	M8	
	M31	Also submontane
	M32	Also submontane
	U7	Largely montane
	U10	Largely montane
	U13	Largely montane in England
	U15	Largely montane in England
	U17	
	CG11	
	CG14	
DRY HEATH	H4	
	H8	
	H9	
	H10	
	H12	
	H16	
	H18	Also montane
	H21	
GRASSLAND, FERN AND ROCK COMMUNITIES	U1	
	U2	
	U3	
	U4	
	U5	
	U6	
	U16	
	CG2	
	CG9	
	CG10	
	OV37	
	MG10	
Fern communities	U19	
	U20	
	U21	
Rock communities	OV38	
	OV39	
	OV40	

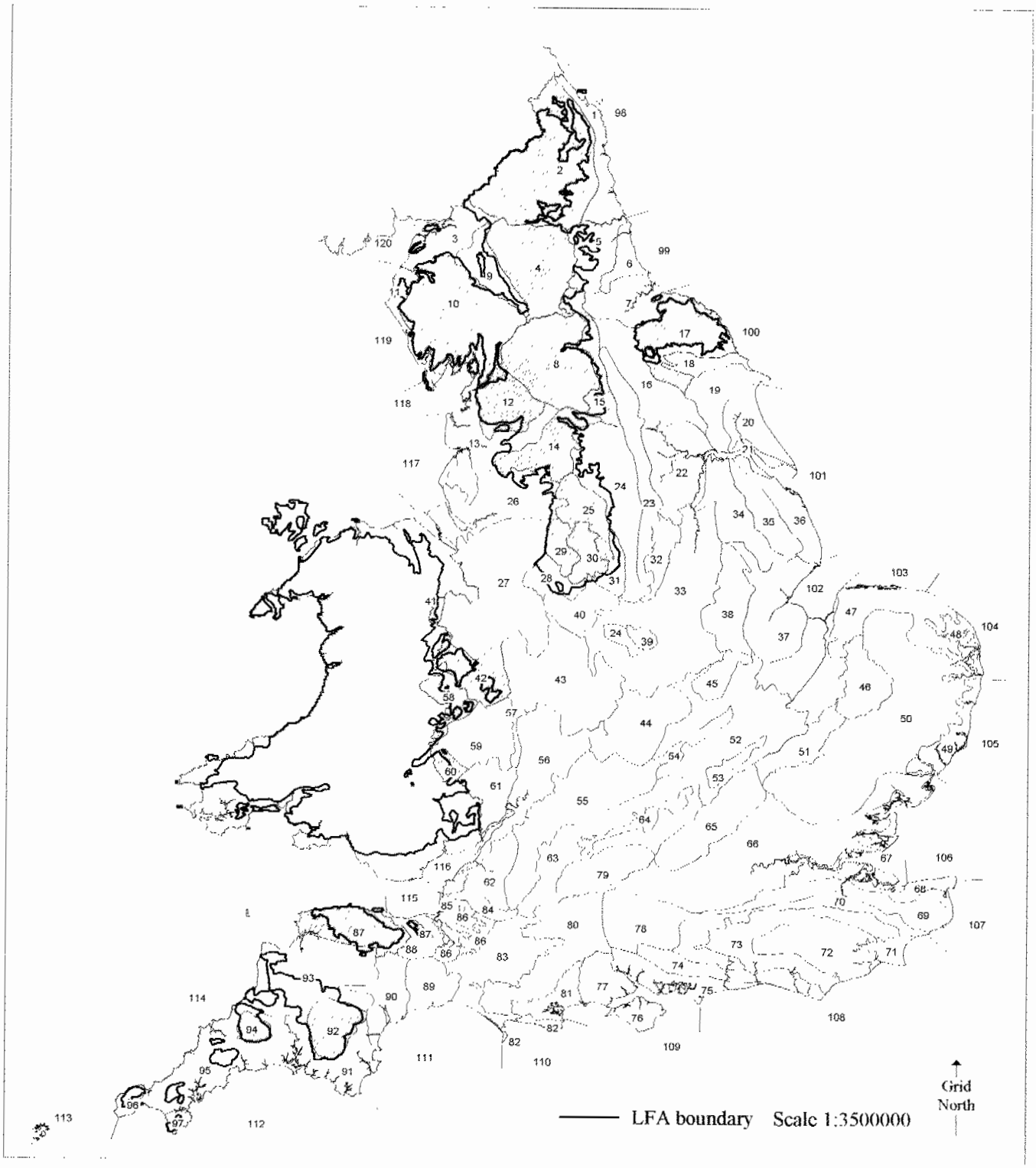
MIRES	Blanket Mires	M17 M18 M19 M20	
	Wet heaths	M15 M16	
	Bog pools	M1 M2 M3	
	Small sedge & bryophyte fens	M4 M5 M6 M9 M10 M11 M13	
	Valley mire	M21	
	Molinia and Juncus fens	M22 M23 M25 M26	
	Tall-herb fen	M27	
	Springs, flushes and soakways	M29 M31 M32 M35 M37 M38	 Also montane Also montane
SCRUB		W19 W20	

APPENDIX 2: NATIONALLY RARE AND SCARCE UPLAND PLANTS IN ENGLAND

		Upland	Red	BAP	Bord	Nth	York	Dart	Ex	Osw	Wht	SW	Dark	Bow	Cu
		species	Data		Upld	Pen.	Dale	moor	moor		Peak	Peak	Peak	Fell	Fell
Actaea spicata	Baneberry						y								y
Ajuga pyramidalis	Pyramidal Bugle	y													y
Alchemilla glaucescens	Lady's Mantle		21				?								
Alchemilla glomerulans	Lady's Mantle	y			y	y	y								
Alchemilla gracilis	Lady's Mantle	y	22		?										
Alchemilla minima	Lady's Mantle	y	22	y			y								
Alchemilla wichurae	Lady's Mantle	y				y	y								y
Allium schoenoprasum	Chives				y										
Alopecurus borealis	Alpine Foxtail	y			y	y									
Arenaria norvegica anglica	Arctic Sandwort	y	14	y			y								
Asplenium septentrionale	Forked Spleenwort					y		y							y
Bartsia alpina	Alpine Bartsia	y	43			y	y								y
Betula nana	Dwarf Birch	y			y	y									
Cardamine impatiens	Narrow-leaved Bitter-cre						y								y
Carex atrata	Black Alpine Sedge	y													y
Carex capillaris	Hair Sedge	y				y	y								?
Carex ericetorum	Rare Spring Sedge					y									y
Carex magellanica	Tall Bog Sedge	y			y	y									y
Carex ornithopoda	Bird's-foot Sedge		74			?	y				y				y
Cerastium alpinum	Alpine Mouse-ear	y													y
Circaea alpina	Alpine Enchanter's Nigh	y				y	y								y
Crepis mollis	Northern Hawk's-beard				y	y	y								y
Diphasiastrum complanat	Issler's Clubmoss	y													
Draba muralis	Wall Whitlowgrass						y				y				
Dryas octapetala	Mountain Avens	y				y	y								y
Dryopteris submontana	Fraser-Jenkins Rigid Bu					y	y				y			y	y
Epipactis atrorubens	Dark-red Helleborine					y	y				y				y
Equisetum pratense	Shade Horsetail					y	y								
Equisetum variegatum	Variegated Horsetail				y	y	y								?
Euphrasia frigida	Eyebright	y			y										y
Euphrasia ostenfeldii	Eyebright	y													y
Euphrasia rivularis	Snowden Eyebright	y	42	y											y
Euphrasia rostkoviana mo	Eyebright	y			y	y	y								y
Euphrasia vigursii	Eyebright	y	42	y				y							
Gentiana verna	Spring Gentian		36	y		y									
Gymnocarpium robertianu	Limestone Fern					y	y			y	y				y
Hammarbya paludosa	Bog Orchid			y	y	y		y							y
Helianthemum canum	Hoary Rock-rose					y									y
Hornungia petraea	Hutchinsea						y			y	y				y
Juncus alpinoarticulatus	Alpine Rush	y				y	y								
Koebresia simpliciuscula	False Sedge	y	73			y									
Lychnis alpina	Alpine Campion	y	10	y											y
Lycopodiella innundata	Marsh Clubmoss			y				y							y
Lycopodium annotinum	Interrupted Clubmoss	y													y
Minuartia stricta	Teesdale Sandwort	y	13	y		y									
Minuartia verna	Spring Sandwort				y	y	y				y				y
Myosotis alpestris	Alpine Forget-me-not	y	38	y		y									
Myosotis stolonifera	Pale Forget-me-not	y			y	y	y					y			y
Orobanche alba	Thyme Broomrape						y								
Phleum alpinum	Alpine Cat's-tail	y				y									y
Poa alpina	Alpine Meadow-grass	y				y	y								y
Poa glauca	Glaucous Meadow-gras	y													y
Polygala amara	Bitter Milkwort	y	8			y	y								y
Polygonatum odoratum	Angular Solomon's-seal						y								y
Potentilla crantzii	Alpine Cinquefoil	y				y	y				y				y
Potentilla fruticosa	Shrubby Cinquefoil	y	21	y		y									y
Primula farinosa	Bird's-eye Primrose					y	y							y	y
Ribes spicatum	Downy Currant					y	y								y
Salix lapponum	Downy Willow	y													y
Saxigraga hirculus	Yellow Bog Saxifrage		25	y		y	y								
Saxifraga nivalis	Alpine Saxifrage	y				y									y
Sedum villosum	Hairy Stonecrop	y			y	y	y								r
Sesleria caerulea	Blue Moor-grass				y	y	y				y				y
Sorbus rupicola	Rock Whitebeam					y	y		y	y	y				y
Spiranthes romanzoffiana	Irish Lady's-tresses	y						y							
Thlaspi caerulescens	Alpine Penny-cress				?	y	y				y				
Trichomanes speciosum	Killarney Fern		1	y									y		y
Viola rupestris	Teesdale Violet	y	7			y									
Woodsia ilvensis	Oblong Ilvensis	y	2	y		y									y

Up=largely upland distribution in England. RDB=Red Data Book species with page number. BA=Listed in Biodiversity Action Plan

Appendix 3: Revised map showing upland Natural Areas within LFA



1. North Northumberland Coastal Plain
2. Border Uplands
3. Solway Basin
4. North Pennines
5. Northumbria Coal Measures
6. Durham Magnesian Limestone Plateau
7. Tees Lowlands
8. Yorkshire Dales
9. Eden Valley
10. Cumbria Fells and Dales
11. West Cumbria Coastal Plain
12. Forest of Bowland
13. Lancashire Plain and Valleys
14. Southern Pennines
15. Pennine Dales Fringe
16. Vale of York and Mowbray
17. North York Moors and Hills
18. Vale of Pickering
19. Yorkshire Wolds
20. Holderness
21. Humber Estuary
22. Humberhead Levels
23. Southern Magnesian Limestone
24. Coal Measures
25. Dark Peak
26. Urban Mersey Basin
27. Mosses and Meres
28. Potteries and Churnet Valley
29. South West Peak
30. White Peak
31. Derbyshire Peak Fringe and Lower Derwent
32. Sherwood
33. Trent Valley and Rises
34. North Lincolnshire Coversands and Clay Vales
35. Lincolnshire Wolds
36. Lincolnshire Coast and Marshes
37. The Fens
38. Lincolnshire and Rutland Limestone
39. Charnwood
40. Needwood and South Derbyshire Claylands
41. Oswestry Uplands
42. Shropshire Hills
43. Midlands Plateau
44. Midland Clay Pastures
45. Rockingham Forest
46. Breckland
47. North Norfolk
48. The Broads
49. Suffolk Coast and Heaths
50. East Anglian Plain
51. East Anglian Chalk
52. West Anglian Plain
53. Bedfordshire Greensand Ridge
54. Yardley-Whittlewood Ridge
55. Cotswolds
56. Severn and Avon Vales
57. Malvern Hills and Teme Valley
58. Clun and North West Herefordshire Hills
59. Central Herefordshire
60. Black Mountains and Golden Valley
61. Dean Plateau and Wye Valley
62. Bristol, Avon Valleys and Ridges
63. Thames and Avon Vales
64. Midvale Ridge
65. Chilterns
66. London Basin
67. Greater Thames Estuary
68. North Kent Plain
69. North Downs
70. Wealden Greensand
71. Romney Marshes
72. High Weald
73. Low Weald and Pevensey
74. South Downs
75. South Coast Plain and Hampshire Lowlands
76. Isle of Wight
77. New Forest
78. Hampshire Downs
79. Berkshire and Marlborough Downs
80. South Wessex Downs
81. Dorset Heaths
82. Isles of Portland and Purbeck
83. Wessex Vales
84. Mendip Hills
85. Somerset Levels and Moors
86. Mid Somerset Hills
87. Exmoor and the Quantocks
88. Vale of Taunton and Quantock Fringes
89. Blackdowns
90. Devon Redlands
91. South Devon
92. Dartmoor
93. The Culm
94. Bodmin Moor
95. Cornish Killas and Granites
96. West Penwith
97. The Lizard
98. Northumberland Coast
99. Tyne to Tees Coast
100. Saltburn to Bridlington
101. Bridlington to Skegness
102. The Wash
103. Old Hunstanton to Sheringham
104. Sheringham to Lowestoft
105. Suffolk Coast
106. North Kent Coast
107. East Kent Coast
108. Folkestone to Selsey Bill
109. Solent and Poole Bay
110. South Dorset Coast
111. Lyme Bay
112. Start Point to Land's End
113. Isles of Scilly
114. Land's End to Minehead
115. Bridgwater Bay
116. Severn Estuary
117. Liverpool Bay
118. Morecambe Bay
119. Cumbrian Coast
120. Solway Firth

Produced by English Nature, Northminster House, Peterborough PE1 1UA.

Revised to August 1996