

Upland																																																														
Biosphere High Focus Habitat	Indicator species of habitat in good condition - Dominant Plant type + other possible species	Biosphere High Focus species and other important species	Possible signs of poor habitat condition	Possible causes of poor habitat condition	Possible management to improve habitat condition	Possible public benefits	Typical Grazing density ¹ LU/ha	General guide for grazing	Possible SRDP option																																																					
Dry heath	Heather, bell heather, blaeberry	Black grouse, Golden eagle, Golden plover, Curlew	<ul style="list-style-type: none"> • Low plant diversity • Dominance by one plant eg soft rush, Molinia, deer grass • Absence or scarcity of heath species • Bare ground or very short vegetation height. • Burnt bog vegetation. • Conifer regeneration 	<ul style="list-style-type: none"> • Over grazing • Over grazing in winter by sheep. • Burning wet heath • No control of Invasive non-natives (INNS) 	<ul style="list-style-type: none"> • Reduce sheep numbers on hill • Reduce grazing density in winter or remove sheep • Improve grass availability through bracken control • Control INNS • Introduce extensive cattle summer grazing 	Carbon storage	0.02-0.22	Low or no sheep grazing in winter Summer cattle grazing	<ul style="list-style-type: none"> • Moorland options incl. • Away wintering • Stock reduction 																																																					
Wet Heath	Heather, cross-leaved heath, bog asphodel, bog myrtle, crowberry, deer grass, Molinia ² , sedges, lichens and mosses					Clean water				Water regulation	Blanket/ Raised bog	Formed from peat accumulation. Sphagnum mosses, cotton grass, Molinia, sundews, bog asphodel, Azure Hawker dragonfly	Black grouse, Curlew Golden eagle	<ul style="list-style-type: none"> • Exposed peat (haggs, gullies etc) • Ditches • Dominance of heather (Calluna) • Peaty water • Bare ground or very short vegetation height. • Conifer regeneration 	<ul style="list-style-type: none"> • Over grazing • Burning • Artificial drainage • No control of INNS 	<ul style="list-style-type: none"> • Restore exposed peat to prevent further loss (important for carbon storage, water quality) • Managing grazing (including deer) • Ditch blocking • Control INNS 	Soil formation & retention	0.037-0.075	Low or no sheep grazing in winter, manage cattle to ensure no trampling/ poaching	<ul style="list-style-type: none"> • Ditch blocking • Stock control • Stock/deer fence 	Montane habitats	Only found above treeline, dominated by mosses, club mosses and lichens or dwarf scrub, including willow and juniper	Golden eagle, Juniper (prostrate), Downy willow	<ul style="list-style-type: none"> • Erosion • Absence/scarcity of montane species • Bare ground or very short vegetation height. 	<ul style="list-style-type: none"> • Over grazing • Trampling by livestock • Trampling and erosion caused by people 	<ul style="list-style-type: none"> • Reducing grazing pressure • Managing access 	Recreation	0	Limited grazing throughout year	<ul style="list-style-type: none"> • Moorland options 	Acid grassland	Diverse grassland (upland or lowland) usually as a mosaic with other habitats. Fescues, bents, sedges, wood rushes, tormentil, heath bedstraw, harebell, devils bit scabious	Black grouse, Curlew, Golden eagle, Golden plover	<ul style="list-style-type: none"> • Low plant diversity • Bare ground or very short vegetation height. • Conifer regeneration 	<ul style="list-style-type: none"> • Over or under grazing • Enrichment through Fertilising, manuring • Ploughing • No control of INNS 	<ul style="list-style-type: none"> • Implement suitable grazing regime • Don't apply artificial fertilisers, lime etc. • Don't spread manure/slurry 	Food	0.25	Variable – depends on vegetation.	<ul style="list-style-type: none"> • Moorland options • If inbye; species rich grassland 	Native oak/wet woodland	Oak, willow, alder, birch, rowan, hazel, ash etc.	Red Squirrel (also uses conifers) Willow tit	<ul style="list-style-type: none"> • Lack of regeneration • Low diversity • Stunted trees 	<ul style="list-style-type: none"> • Inappropriate grazing 	<ul style="list-style-type: none"> • Remove stock or implement suitable grazing. • Manage scrub • Retain dead wood 	Fuel	0.03-0.15	Low summer grazing if applicable	<ul style="list-style-type: none"> • SRDP Forestry Grant Scheme 	Woodland fringe	Found between woodland and open hill/moorland. It is sparsely wooded and scrubby with pockets of open ground.	Black grouse. (hen harrier, nightjar, tree pipit, whinchat, pine marten and adder)	<ul style="list-style-type: none"> • Low plant diversity • Low structural diversity • Conifer regeneration 	<ul style="list-style-type: none"> • Over or under grazing (including by deer) • No control of INNS 	<ul style="list-style-type: none"> • Implement suitable grazing regime • Control INNS 	Habitat	Low, variable	Limit impact of deer and livestock	Oligotrophic lochs	Nutrient poor, usually in upland areas and important for their clear, clean waters that support Brown Trout, Arctic Char and Atlantic Salmon	Brown trout
Blanket/ Raised bog	Formed from peat accumulation. Sphagnum mosses, cotton grass, Molinia, sundews, bog asphodel, Azure Hawker dragonfly	Black grouse, Curlew Golden eagle	<ul style="list-style-type: none"> • Exposed peat (haggs, gullies etc) • Ditches • Dominance of heather (Calluna) • Peaty water • Bare ground or very short vegetation height. • Conifer regeneration 	<ul style="list-style-type: none"> • Over grazing • Burning • Artificial drainage • No control of INNS 	<ul style="list-style-type: none"> • Restore exposed peat to prevent further loss (important for carbon storage, water quality) • Managing grazing (including deer) • Ditch blocking • Control INNS 	Soil formation & retention	0.037-0.075	Low or no sheep grazing in winter, manage cattle to ensure no trampling/ poaching	<ul style="list-style-type: none"> • Ditch blocking • Stock control • Stock/deer fence 																																																					
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¹ TN586: Conservation Grazing Of Semi-Natural Habitats, The Scottish Agricultural College 2007. West Mains Road, Edinburgh EH9 3JG. ISSN 0142 7695 • ISBN 1 85482 870 3 • March 2007

http://www.sruc.ac.uk/downloads/file/1128/tn586_conservation_grazing_of_semi-natural_habitats

² Also known as purple moor grass or blow grass

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Species rich grassland	Grasses (fescues, crested dogtail), herbs (sorrel, meadow buttercup, pignut, harebell, mosses, knapweed, hay rattle, heath & ladies bedstraw)	• Pollinating bees, butterflies, moths and other invertebrates.	• Low diversity • Sward height too short or bare ground.	• Overgrazing esp. in summer • Fertilisation/muck spreading	• 10+ plants in 1m ² • No rye grass! No recent fertilisation, ploughing	Clean water	0.30-0.40	Low/none in summer	• Species rich grassland, • Habitat Mosaic
Purple Moor grass rush pasture	Molinia and/or sharp flowered rush with a diverse range of wetland plants – tormentil, whorled caraway, bog myrtle, angelica, marsh bedstraw, meadow sweet, water forget me not, ragged robin, marsh marigold	• Curlew	• Low plant diversity • Uniform sward height • Bare ground.	• Overgrazing esp. in summer • Under/no grazing • Fertilisation/muck spreading • Poor soft rush control	• Reduction in summer grazing • Increase late summer grazing	Water regulation	0.5-1.0	Light summer grazing, can be increased in spring and autumn	• Wetland • Species rich grassland
Freshwater habitats	A significant part of the Biosphere ecosystem, with rivers and burns radiating out from the Core	• Water vole • Brown trout	• Discoloured water • Algal deposits on bed • Bare banks	• Peat/soil erosion • Enrichment (dunging/fertiliser or slurry input) • Overgrazing of bank	• Attend to source of erosion • Identify and attend to source of input • Reduce grazing &/or fence off for controlled grazing	Recreation Ecotourism Food Habitat	NA	Graze or cut during late summer to reduce rank growth. Avoid overgrazing margins	• Arable/grassland water margin • Alternative watering • Fencing
Additional Habitats									
Wetland ³ (fen meadow, fen)	Rush species with other species including flag iris, ragged robin, meadow sweet, valerian, marsh cinquefoil marsh bedstraw, marsh marigold	• Curlew	• Low diversity • Soft rush dominance	• Over/under grazing • Fertilisation/muck spreading • Artificial drainage	• Cut patches of soft rush to open up the sward • Appropriate grazing	Carbon storage Clean water Water regulation	Up to 0.40	Low summer grazing or exclusion, higher autumn grazing to remove rank vegetation	• Wetland
Hedgerows	2m wide, bushy to the ground, with a mix of native species incl. berry producers. Important wildlife corridors across farms	• Red squirrel • Tree sparrow • Small mammals	• 'Lollipop' shape, bare at base • Sparse plants, short and narrow	• Grazing by stock, trimming at wrong time of year or too low and narrow	• Allow to grow to 2m wide and 2m tall • Cut in late winter after berries eaten • Cut every second or third year in rotation to allow berry production	Flood mitigation Habitat	-	Well managed hedges provide good shelter	• Restoration of hedgerows • Creation of hedgerows (check target area)

³ SRDP listed wetland types:

- **Fen meadows** are dominated by purple moor-grass and / or rushes. They often occur in mosaics with grassland, or merge into other wetland habitats such as bogs or fen.
- **Fens** are wetlands that receives water and nutrients from surface and / or groundwater, as well as from rainfall. These habitats are dominated by sedges, rushes, reeds, or meadowsweet. These habitats are important for their vegetation interests, as well as the habitat they provide for birds and insects.
- **Saltmarshes** are coastal wetlands found in the intertidal zone between land and open salt water or brackish water that is regularly flooded by the tides, with specialised plant community.