

Guidance Sheet on the Management, Restoration, and Creation of Acid Grassland

°This good practice sheet is intended as a basic guide for landowners and land managers to conserve and enhance the biodiversity value of Acid Grassland and help secure its long-term future. Acid Grassland is listed as a priority habitat in the UK Biodiversity Action Plan and Local Biodiversity Action Plan for Blaenau Gwent as it has suffered serious declines both nationally and locally.

Biodiversity quite simply means 'all living things'. It is the rich variety of wild plants and animals around us together with the habitats that support them.

Local Biodiversity Action Plan Priority Species associated with this Habitat include:

Brown hare	Song thrush
Green woodpecker	Great crested newt
Hen harrier	Adder
Lapwing	Pearl-bordered fritillary
S Skylark	Pink meadow waxcap



Lapwing

Habitat Description

Acid Grassland occurs in both the uplands (over 300m) and lowlands (below 300m), Lowland Acid Grassland is becoming increasingly rare. It occurs on poor, free-draining acidic soils,

overlying acid rocks such as sandstones, or deposits such as sands and gravels. In Blaenau Gwent, it is found mainly on upper valley slopes and areas of Colliery Spoil. The pH usually ranges from 4 to 5.5. Characteristic grasses include sheep's-fescue, common bent, and wavy hair-grass. Typical associated acid plants (see photo below) include heath bedstraw, sheep's sorrel, and tormentil. Dwarf shrubs such as heather and bilberry may also occur but at low densities. The vegetation structure is typically short due to low productivity. Stands on shallow soils are liable to summer drought and are therefore open in structure with frequent patches of bare ground.



Species rich acid grassland.

Factors Affecting Habitat

- Habitat loss and fragmentation from development (particularly, reworking of former mineral/spoil heap sites, and housing/industrial development).
- Agricultural improvement, particularly through drainage, ploughing, reseeding, fertiliser or herbicide treatment, liming, slurry application, conversion to arable, and a shift from haymaking to silage production.
- Lack of grazing leading to an invasion by coarse grasses and scrub.
- Inappropriate grazing regimes by sheep, cattle, and ponies such as, typically excessive grazing levels at the wrong time of year, which causes the habitat to become degraded.
- Abandonment and neglect leading to encroachment by bracken.
- Forestry planting.

Good Practice

Protect, maintain, and enhance any areas of Acid Grassland on your land by:

- Maintain a rich and diverse sward by reducing the frequency of grazing or mowing. Too heavy grazing can result in the loss of sensitive species. Agree a regime involving light grazing (usually between 0.4 and 0.75LSU/ha/pa) and/or light mowing. Generally, with this type of habitat, a short turf is required of less than 5cm in height.
- Try and implement a hay meadow regime where hay is cut in late July. If grazing, follow the cut by aftermath grazing off and on through to the end of February. If mowing, the July cut may require a second cut in September to prevent a build up of thatch. The meadow is then left untouched to July when it is cut again.
- If mowing, always remove the cuttings to prevent nutrient build up and acid grassland becoming dominated by rank vegetation.
- Control bracken by cutting or spraying after the bird-breeding season in late July/early August. Leave bracken on steep slopes or gullies. For best results, roll/flail/cut bracken twice a year in May/June and again in July/August. A noticeable reduction will be achieved in 5 years.
- Remove any invading scrub (particularly birch and gorse) between October to March by either hand pulling or cutting otherwise this will out shade and out compete traditional meadow species. Stumps should be spot treated with a suitable herbicide to prevent regrowth.
- Maintain areas of bare-ground in drier acid grassland to provide places where small, short-lived plants can grow, and seed ripen. Certain types of insect also need loose soil, bare soil, or sand as places for nesting and basking.
- Control the spread of highly invasive weeds such as ragwort, thistles, nettles, and docks and alien species such as himalayan balsam, and japanese knotweed. These can be controlled with minimum harm to wildlife. Ragwort can be hand pulled in May before it sets seed. Thistles, nettles, and docks can be controlled by mowing them to a height of about 15cms before they flower and set seed. Himalyan balsam and japanese knotweed will require spot treatment with a suitable herbicide.

Restore areas of Acid Grassland by:

- Convert improved grassland to semi-improved grassland by taking an annual hay cut and stock at 1.0LSU/ha/pa, or take an annual hay crop in each of the first three years and stock at 0.75LSU/ha/pa. Manage the grassland without using any lime, organic, or inorganic fertilisers.
- Manage semi-improved grasslands without using any cultivations or inorganic fertilisers. Stock at between 0.4 and 0.75LSU/ha/pa.

Create new areas of Acid Grassland by:

- Look for opportunities for habitat creation where cultivated soils are shallow, lime-poor, and infertile. This offers the best opportunity to create species rich Acid Grassland.
- On areas of higher levels of fertility, the topsoil should be removed down to the underlying subsoil.

Natural Regeneration

- This is the preferred option as this will ensure that plants are of genetic stock and therefore well adapted to the soils and local conditions. Natural regeneration can be promoted by fencing off suitable areas, such as arable land or bare ground, to prevent grazing, and allowing seeds within the soil (the seed bank) to germinate, or seeds to spread from nearby areas of species rich Acid Grassland.

Seeding/Planting

- Undertake any soil preparation and sowing work in the Autumn, avoiding any wet or frosty spells.
- Prepare the ground to encourage natural regeneration or for seeding/planting by hand-digging or rotovating for small-scale projects; ploughing, harrowing, or rotavating for large-scale. For seeding, the soil should be cultivated so it is extra fine and free of stones to allow a good seed covering.
- Remove any perennial weeds such as thistle, dock etc. by spot treatment with a suitable herbicide or regular cutting, particularly during the first year, as these will out compete the meadow wildflowers. All cuttings should be removed. Weed control should continue until the grassland becomes established.



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Collecting grassland seeds

- Try and use seed collected from local areas of unimproved Acid Grassland. One way of reducing costs is to harvest the seed rich hay, either as bales or as loose hay in July, and spread it on land without separating out the seed. On small areas, sowing seed can be carried out by hand or applied to larger areas using tractor-mounted machinery such as fertiliser spreaders, and slot seeders that opens up a strip in the turf, into which the seed is planted.
- If seed cannot be harvested from local meadow sources, then seed or native pot grown plants can be purchased from a reputable wildflower supplier. The relative proportions of wildflower mixtures by weight are usually 80% grasses and 20% wildflowers.
- Further advice should be sought on appropriate seed/plant mixtures, seeding/planting techniques, and aftercare and management.

Do not carry out any of the following operations without first seeking further advice:

- Burn any vegetation.
- Plough, cultivate, or re-seed with inappropriate seed mixes, roll or chain-harrow.

- Install any new drainage systems, clear out any ditches, reduce existing water levels, or affect natural drainage and wetland features such as pools and flushes.
- Apply any herbicides or pesticides within 10m of Acid Grassland unless spot treating notifiable weeds and invasive species such as bracken and bramble. Environment Agency approval will be required on herbicide use on or near waterbodies.
- Apply any inorganic or organic fertilisers, such as farmyard manure, slurry, sewage sludge, chicken manure or fishmeal within 10 metres of Acid Grassland.
- Apply any lime, basic slag, calcified seaweed, or other materials to alter soil acidity.
- Store any manure, farm wastes, or any other waste on any area of Acid Grassland.
- Introduce game or change existing practices.
- Carry out supplementary feeding or install new watering troughs.

Stocking Rates

The following conversions have been identified under the Tir Gofal Scheme run by the Countryside Council for Wales (CCW) and will apply when calculating stocking rates:

	Livestock Units (LSU)
1 Dairy Cow	= 1.0LSU
1 Beef Animal (less than 24 months)	= 0.6LSU
1 Suckler Cow	= 1.0LSU
1 Breeding Ewe (with or without lamb)	= 0.15LSU
1 Horse	= 1.0LSU

Further Advice



Blaenau Gwent Biodiversity Partnership
Provides advice on the restoration of priority habitats and species within the County Borough.
Tel. 01495 355702



Blaenau Gwent County Borough Council
Administers the Biodiversity Action Grant Scheme that offers landowners and community groups small grants up to £2k for biodiversity projects.
Tel. 01495 356070



Countryside Council for Wales (CCW)
Administers the Tir Gofal Agri-Environment Scheme where grants are available for a wide range of habitat management work on farms.
Tel. 02920 772400



Environment Agency Wales
Administers herbicide consents near watercourses **Tel. 08708 506506** and runs the Pollution Hotline **Tel. 0800 807060**

Please note, the recommendations contained within this sheet are for guidance purposes only. Due to the complexity of individual grasslands and the interactions occurring within them, it is advisable to seek specialist advice with relevant organisations from the early stages. This sheet can also be downloaded from the Blaenau Gwent Biodiversity Partnership website called 'The Web of Life'. This can be accessed through www.blaenau-gwent.gov.uk.