

Local Wildlife Sites – South East Wales Project

The following information outlines the best practice guidelines for managing the habitat type listed below in a manner that is sympathetic to wildlife. It is part of a series relating to various habitat types and management issues that have been produced by your local Wildlife Trusts.

No.4 Calcareous Grassland

What is Calcareous Grassland?

Calcareous Grassland occurs only on lime rich soil, which is relatively free draining and has low fertility. In South Wales carboniferous limestone runs along the edge of the coalfield but this is often overlain by non-calcareous soils, making calcareous grassland a rare and localised habitat. It is species rich, although diversity can vary, generally as a result of how much “improvement” (fertilisers, ploughing, seeding) has been undertaken. As this toolkit relates to the management of Local Wildlife Sites it will focus on the more species rich end of the spectrum.



Bee Orchid



Greater Knapweed



Marjoram

What wildlife does it support?

Calcareous grassland can be the most species rich of the UK’s grassland types with a very high floral diversity, particularly where grazing is not too heavy. Typical flowers include Marjoram, Salad Burnet, Fairy Flax and Greater Knapweed as well as orchid species, such as the attractive Bee Orchid. If the grassland is not over-grazed it will be frequented by numerous insects such as burnet moths, grasshoppers, Marbled White butterflies and Small Blue butterflies during the spring and summer. These in turn support communities of mammals and birds.



Burnet Moth



Marbled White



Small Blue

Why preserve/enhance it?

Species rich Calcareous grassland, which you can justifiably feel proud to have on your land, is a superb resource for wildlife as well as being of great visual appeal. Sadly, habitats such as this have become an increasingly rare habitat with a shocking 80%+ of such habitat lost in the UK between 1945 and 1984, with losses still ongoing. Furthermore, within South Wales the habitat is already rare and localised due to the geology. It is therefore of great importance that this decline is halted and we would very much like to assist you in achieving this goal by both highlighting the threats to this habitat and providing management recommendations.

Threats

The following can all lead to the loss/degradation of this habitat:

- Development i.e. building of roads, housing etc.
- Agricultural improvement - drainage, ploughing, reseeded, fertiliser or herbicide treatment, slurry application, conversion to arable.
- Inappropriate levels of grazing, typically too intensive not giving wildflowers a chance.
- Change of livestock to inappropriate types for conditions/season.
- Lack of grazing - Invasion by coarse grasses and scrub.
- Inappropriate grazing regimes – Grazing/too heavy grazing in spring/summer not allowing flowers to flourish.
- Abandonment and neglect - Encroachment by bracken.
- Tree planting.

Management Recommendations

The following is recommended to ensure the valuable grassland habitat is managed sympathetically for wildlife and is thus preserved and enhanced:

Preservation/Enhancement of Calcareous Grassland

Calcareous grassland is typically managed through grazing, although in some cases hay cuts may be taken. If your grassland is already species rich there may be no need to alter the current regime. If alterations are required then the best-practice guidelines for grazing throughout the year are as follows (exact timings will vary from site to site and sometimes year to year):

- **January-February** – Light grazing to remove old growth. Remove grazing if the field is particularly wet and thus subject to high levels of poaching, although creation of some areas of bare ground will benefit seed germination.
- **March** - Light grazing* to maintain small areas of bare ground for germination and keep vigorous grasses in check.
- **April-mid July** - Very light or no grazing. There are many important flowering plants in calcareous grassland, so exclude grazing to allow seed to set. If grazing, levels should be adjusted to enable a variety of sward heights to develop from short to slightly tussocky and for some flowering and seed setting to take place. If you have more than one field then rotational grazing can be utilised to give flowers the chance to flower and seed.
- **Mid July-end December** – The main grazing period, with light grazing* over a long period to help create varied sward height and trample seeds into the soil. Overgrazing should be avoided to prevent too much bare ground which is easily colonized by weedy species such as docks and nettles. However under-grazing may lead to dominance by coarse grasses and scrub. Lighter, later and or/less frequent grazing will benefit insects, whilst heavier grazing in autumn/winter can benefit wildflower diversity more.

*Every site is different but as a guide light grazing of between 0.4 and 0.75 Live stock units (LSU)**/ha/per annum) is ideal.

**Live Stock 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

No fertilisers should be used, which will increase soil fertility and encourage vigorous coarse grasses and weedy species that would out compete the wildflowers.

There may be further issues that are reducing/threatening the ecological value of your grassland such as:

- **Bracken** - For best results, roll/flail/cut bracken twice a year in May/June and again in July/August. Leave bracken on steep slopes or gullies. Consideration however, needs to be given to potential for breeding birds that may limit/preclude work in May/June. If this is the case then control bracken by cutting or spraying after the bird-breeding season in late July/early August. A noticeable reduction will be achieved in 5 years. **Refer to separate Toolkit – No. 12 Bracken Control for more detail.**

- **Invading Scrub** - Remove any invading scrub between October to March (avoiding the bird-breeding season also) 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. **Refer to separate Toolkit – No. 11 Scrub Control for more detail.**

- **Invasive weeds** - Control the spread of highly invasive weeds such as ragwort, thistles, Nettles and docks, as well as alien species such as Himalayan Balsam, and Japanese Knotweed. These can be controlled with minimum harm to wildlife.
 - ❖ **Ragwort** can be hand pulled (wear suitable gloves) 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.
 - ❖ **Himalayan Balsam** can also be controlled by hand-pulling before it sets seed.
 - ❖ **Japanese Knotweed** will require spot treatment with a suitable herbicide.

Refer to separate Toolkits – No. 13 & 14 Invasive Weed Control for more detail.

- **Hedgerows** – Hedgerows are an important feature of the countryside and border many fields providing stock-proofing as well as valuable ecological habitat and connectivity. Hedgerows can however shade the grassland, particularly if hedges lie on the southern edge of species rich grassland. Furthermore, certain species such as Blackthorn can sucker and spread out of the hedgerow into the grassland. Hedgerows therefore need to be managed by cutting/laying to preserve the quality of the species rich grassland. This cutting will also prevent them from becoming leggy and therefore maintain their stock-proofing and shelter properties. **Refer to separate Toolkit – No. 8 Hedgerows for more detail.**

Restoration of Calcareous Grassland

There may also be areas of grassland within your land that are not currently of particularly high ecological value but measures can be taken to restore these if desired.

This can be achieved by converting species poor “semi-improved” grassland (species poor, probably formerly quite intensively farmed with applications of chemicals) to more species rich “semi-improved” grassland by ceasing applications of fertilisers and possibly reducing stocking levels for grazing to reduce nutrient enrichment from droppings.

Creation of Calcareous Grassland

Additionally there may be some areas within your land that do not have any discernible wildlife value but measures can be taken to create habitat of higher ecological value if desired. The detail of this work is beyond the scope of this document but your Local Wildlife Trust would be delighted to advise you further.

Should you require any further advice regarding the management of your Local Wildlife Site please do not hesitate to contact your local Wildlife Trust:

Gwent Wildlife Trust

Tel: 01600 740600

e-mail: info@gwentwildlife.org

Wildlife Trust of South & West Wales

Tel: 01656 724100

e-mail: info@welshwildlife.org

Other toolkits available are:

No.1 Neutral Grassland (Hay Meadows)

No.2 Neutral Grassland (Grazed)

No.3 Acid Grassland

No.5 Marshy Grassland

No.6 Marsh Grassland (with Marsh Fritillary)

No.7 Heath

No.8 Hedgerows

No.9 Salt Marsh & Coastal Grazing Marsh

No.10 Ponds & Lakes

No.11 Scrub control

No.12 Bracken control

No.13 Invasive weed control (natives – thistle, dock etc.)

No.14 Invasive weed control (aliens – Japanese Knotweed, Himalayan Balsam etc.)

Further useful documents include:

- ❖ Advice on managing grasslands for invertebrates: www.buglife.org.uk/sites/default/files/Grassland_web.pdf
- ❖ Advice on managing grasslands that are in environmental schemes: www.eblex.org.uk/wp/wp-content/uploads/2013/04/managementguidelinesforgasslandinenvironmentalschemes_210710-final-report.pdf
- ❖ Further advice on grazing: www.grazinganimalsproject.org.uk/
- ❖ Meadow & Pasture in Wales information www.ccw.gov.uk/pdf/Meadows-website.pdf
- ❖ General information on Hay Meadows www.floralocale.org/page24057
- ❖ Lowland Grassland Management (Chapter 5 Grazing): www.publications.naturalengland.org.uk/publication/35034

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