

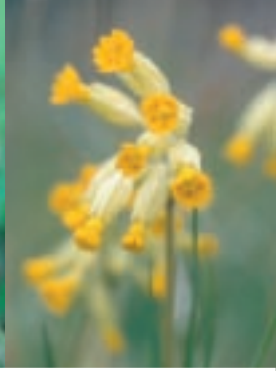


Cotswold Limestone Grassland

Conservation and management



Working together to conserve and enhance
the natural beauty of the Cotswolds
www.cotswoldsaonb.com



What is Unimproved Limestone Grassland?

Unimproved limestone grassland is wildflower rich grassland that has not been affected by modern farming methods.

The grassland has not been 'improved' with fertilizer or herbicides or reseeded to produce more grass for agriculture.

It is found on shallow, free draining and alkaline soils.

Unimproved limestone grassland is an important wildlife habitat because it sustains a wide range of plants and invertebrates such as butterflies and rare snails. The Cotswolds Area of Outstanding Natural Beauty (AONB) contains a nationally significant proportion (over 50%) of the UK's total Jurassic unimproved limestone grassland. For this reason, conserving and managing the limestone grassland is a high priority.



How have these limestone grasslands developed?

Wildflower grassland was created by human activity and has developed since the early farmers cleared the forest to make grazing land for their livestock. Management by grazing and mowing has developed and maintained the grassland, some areas of which have been continuously managed for centuries.

Why is Cotswolds limestone grassland important?

In the 1930's, 40% of the Cotswolds was covered in wildflower rich limestone grassland. Today, fewer than 3,000 hectares remain - only 1.5% of the total area. Although much reduced, this is still a vitally important wildlife and landscape feature.

The limestone grassland found in the Cotswolds is an important home for a range of plants and invertebrates. Grassland sites typically contain over 100 species of wildflowers and grasses and 25 species of butterflies.

Cotswold grassland is home to a large number of rare and declining plants, including many species of orchid and other flowers including Pasque Flower and Cotswold Penny Cress.

The plants and flowers provide a glorious spectrum of colours from Spring through to early Autumn.

Cotswold grassland also supports nationally rare butterflies, such as the Chalkhill Blue and the Duke of Burgundy. It sustains a multitude of insects, which in turn provide food for bats, birds and mammals.

How is the limestone grassland under threat?

The greatest threat to the survival of the remaining wildflower grassland is a lack of grazing or other suitable management.

- Without grazing, coarse grasses, scrub and eventually woodland develops, reducing wildlife diversity.
- Over the past 50 years, wildflower limestone grassland was considered to be the least productive area of the farm. As a result, it was treated with herbicides and artificial fertilizers. Although this practice is becoming less frequent, it may still occur because of a lack of awareness of this important habitat.
- Tree planting for forestry and in some cases to provide cover for pheasants is also a threat.



- Grassland may be damaged when farmers diversify into other activities, such as motor sports.
- Grazing by horses can damage a site.

Grassland sites can sometimes be prone to considerable pressure for recreation from people walking, riding and cycling.

Greater public access requires a more careful approach to site management and interpretation.

How can limestone grassland be managed?

In order to keep what remains of our wildflower rich limestone grassland, it is important to manage it carefully. This will involve farmers, local people and interest groups working together.

Caring for the grassland properly will ensure that we:

- Conserve and enhance its wildlife interest
- Maintain an important feature of the Cotswolds AONB
- Use grassland as part of a viable farm system
- Protect the open character of the land.

The main method used to manage grassland is controlling the annual growth of vegetation through grazing and mowing and in some cases burning.

Grazing

Grazing is by far the best way to manage the growth of vegetation on limestone grassland. It allows more sensitive and less competitive plants to compete with more vigorous species.

- Sheep are suitable for the steeper grassland sites. In some cases it is necessary for traditional breeds of cattle to graze and restore the grassland first as Cattle are good at tackling taller grasses and other plants and are ideal for controlling coarser grasses.





- Hardy native ponies will tackle coarse grasses and help to control scrub. They are particularly effective at grazing neglected grassland.
- Domestic horses and ponies are generally not suitable as they graze selectively. They also leave dung patches and deep hoof slots, which encourage docks, thistles and ragwort.

The type of breed of animal chosen for grazing is an important consideration; the more traditional breeds can be better suited to grazing unimproved grassland.

Mowing

Mowing is particularly appropriate for maintaining and restoring grassland where grazing is not possible.

- Mowing is difficult and dangerous on steep and uneven ground.
- Mowing can damage invertebrates' habitat and features such as ant hills.
- After mowing, it is important to remove all cut material by raking it or putting it into bails. This will prevent nutrient enrichment from taking place.

Some Cotswolds grasslands have traditionally been managed as meadows. On these sites

mowing and bailing should continue, as should any traditional grazing after the hay cut.

Burning

Controlled burning has been used in the past to manage some Cotswold grassland sites.

- It is not recommended on sites with public access.
- Burning can damage populations of butterflies and other invertebrates, such as Roman Snails.

Burning must be carried out by experienced land managers.

Specific limestone grassland management issues

Scrub

Scrub encroachment is a natural benefit and has some benefits for wildlife. However it is important to control scrub on grasslands sites if they are to retain their diversity for wildlife.

- Recognising the need for some scrub, 20% of an area of grassland sites should remain as well managed scrub.
- Some bird species rely on scrub for nesting, feeding and roosting.



- Managed scrub is particularly important for invertebrates providing food, shelter and territory.
- Reptiles use scrub for foraging, nesting, resting, hibernation and to aid thermo-regulation.
- Large mammals use scrub for cover, feeding and nesting.

Scrub of high conservation interest contains many native shrub species and is often found where grassland and ancient woodland occur together.

Juniper

Juniper is a native plant of limestone grassland. It is easily lost to scrub encroachment, over-grazing by rabbits and theft and nationally is in decline. A handful of sites in the Cotswolds AONB contain Juniper and its conservation is a high priority.

Archaeology

Many areas of Cotswold limestone grassland have remained undisturbed for centuries and are therefore rich in archaeological features.

Managing the grassland significantly contributes to the management of the archaeology. Protecting and managing our Scheduled Ancient Monuments and other

historical and archaeological sites is a high priority.

Overstocking of animals can cause problems of erosion and poaching on earthwork features within grassland sites.

- Sheep are most suited to these sites, with some cattle to balance the grazing regime. Grassland sites can usually support fewer cattle than sheep due to their increased weight and most sites can only support a very limited number of horses.
- Varying and restricting the intensity of grazing can avoid damage and erosion to sites.
- Controlled grazing using moveable electric fencing can provide a detailed, tailored solution.
- The location of gates and permanent fencing on archaeological sites needs to be planned carefully to avoid damaging any archaeology.

What is being done to protect grassland sites?

Some grassland sites are given special protection as Sites of Special Scientific Interest (SSSI), or National Nature Reserve (NNR) - within the Cotswolds AONB there are 40



grassland SSSIs and 2 NNRs. Only a few sites can be designated, however many that are not are just as rich in wildlife and are as important in their own right.

Changes in agriculture, food production and in the perception and attitudes towards food will bring benefits for limestone grasslands.

- Farmers are being encouraged to move away from intensive food production and are being given incentives to manage grasslands whilst producing quality produce, protecting the environment and maintaining high standards of animal welfare.
- Well managed flower rich grassland, as part of a whole farm plan, can restore wildlife to a farm where it may previously have been in decline.
- Traditional breeds of cattle and sheep that graze on unimproved grassland produce meat that is of high quality and flavour.
- When people buy food that is produced locally they help farmers' efforts to manage grasslands.

Quality produce from the Cotswolds can be found in local butchers shops, pubs, restaurants and farmers' markets.

Getting involved

As well as benefiting wildlife, people can gain great enjoyment from helping to manage limestone grasslands. There are a number of local groups that help manage sites, details of these organisations are available at www.cotswoldsaoib.com





**Area of Outstanding
Natural Beauty**

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118CotsAONB/7.04/4k

Designed by TOUCHMEDIA 01242 519914



Supported by the
Heritage Lottery Fund

This booklet is part of a series that aims to raise awareness of the features that make the Cotswolds landscape so special. It also sets out how we can help to conserve and enhance this outstanding heritage.