

# Supporting guidance for Creation of Grass Strips and Water Margins in Arable Fields

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This capital item creates species-rich, low productivity grassland to benefit biodiversity and water quality. Grass strips are located next to a field boundary or across a slope within a field. Water margins are next to water (a ditch, burn, river, pond or loch). Water margins can be managed as areas of grassland and they can contain trees and shrubs or other habitats such as wetlands.

## Wildlife and water quality benefits

Grass strips within or at the edges of arable fields provide cover and food for birds and small mammals, and flowers for pollinating insects. They can also improve water quality by improving soil structure, preventing soil erosion and intercepting surface water run-off.

Water margins protect water from pollutants such as soil, nutrients, pesticides and animal manures, and provide valuable wildlife habitat and corridors for wildlife to move along.

## What do I need to do?

To create a grass strip or water margin sow the area with a low productivity grass mix to establish a new sward. The seed mix should have at least four flowering species. Establish the sward before 1 June in the first year of your contract.

## Which species should I sow?

Your wildflower mixture should be made up of native Scottish species that naturally grow in your area. At least 15 per cent of the mixture should be herbs and the rest grasses. Most species should be perennials, as in native grassland. Use a mixture that includes two or three legumes, such as red clover, meadow vetchling and bird's-foot trefoil, to provide food for bees and other pollinators. Wildflower seed suppliers sell a variety of mixtures, including some that mimic the composition of typical Scottish grasslands.

## How do I establish the new grassland?

When sowing, be careful to avoid times when the soil is either droughted or waterlogged.

First, prepare the seed bed. Remove the existing vegetation by ploughing or applying herbicide. Leave it bare for a week or two then kill any weed seedlings that arise. Do not add organic or inorganic fertiliser as the seed mix will not benefit from high nutrient inputs.

Next, sow the seed directly onto the soil surface at a rate of 15–30kg/ha. Apply higher rates on more fertile soils, where slower growing wildflowers will have to compete with fast-growing grasses and arable weeds. The lowest rate only suits very thoroughly prepared soils, where the potential competition from other species has been reduced to a minimum.

Finally, roll or tread the seedbed to bring the seed into contact with the soil.

## How should I manage the new grassland?

Competition from annual and biennial weeds is likely to be the main threat to successful establishment of the new grassland. Cut the grassland to about 10 centimetres at least twice in the first summer to prevent the annuals from flowering and to keep the sward open enough for the sown species to establish. It is more important to let the sown species establish than to let them flower in the first year.

In the second or third growing season the sward should have closed up and you should be able to cut or graze it as you would for a long-established grassland. Aim to create a variety of conditions to suit a variety of plants and animals, including:

- a sward mostly between 5 and 20 centimetres in height
- some short open areas where new plants can become established
- some dense tussocks to shelter invertebrates and small mammals
- plenty of flowers visible in summer

In later years and on more fertile soils, unsown grasses such as Yorkshire fog may become dominant and crowd out the smaller species. One way to reduce the growth of problem grasses is to sow yellow rattle after the grassland is established. Yellow rattle is a native plant that is parasitic on grasses and weakens their growth. You can sow yellow rattle seed in autumn when the sward is at its shortest.

## Grazing

Grazing animals are good at creating a varied sward with their trampling, dunging and eating. Your grassland should be grazed at light to moderate levels to keep the sward at a range of heights and to allow some plants to flower. An annual stocking density of 0.35 LU/ha/year is about right. Long periods without grazing allow the grasses to grow tall and dense and to shade out smaller species, so graze down your grassland each year before the end of winter.

## Cutting

Where stock are not available to graze the area, you should cut your grassland to a height between 5 and 10 centimetres after 15 August. Remove the cuttings, as if harvesting for hay. Hay meadows were traditionally grazed after cutting so you will need to cut a second time in the autumn or spring to replace this period of aftermath grazing.