

The Green Man, Bottomhouse near Leek

Report on Management of Habitats

Grassland

The areas dedicated to grassland will be managed as a wildflower meadow, to give the holiday lodge site a more natural, relaxed feel and to attract pollinating insects and other wildlife.

Within 0.5m of the gravel drives and paths there will be a mown margin for safety and tidiness.

The remainder will be transformed into an attractive and valuable pollinator-friendly mix of grasses and wildflowers. Wildflower meadows usually flower between May and September, and attract a wide range of pollinators. Seed mixes will be tailored for specific wildlife, such as butterflies and bees. The choice will be for a perennial mix.....the term herbaceous perennial is used to describe long-lived plants without a permanent woody structure (they die back to ground level each autumn), distinguishing them from trees, shrubs and sub-shrubs.

The choice for a perennial meadow at The Green Man is because although it will take longer to establish it will then continue for years to come. The intention will be to contain a wide range of species including ox-eye daisies, red campion, knapweed, ragged robin and field scabious. The exact seed mix will be tailored to the site and soil type following a more detailed soil test at various locations across the site. These will be sourced from specialist wildflower seed merchants selling a wider choice of wildflower and grass mixes suitable for larger areas and for various soil types and locations.

Sowing timing and location

The meadow seed mixes will be sown in early to mid-spring (March/April) or early autumn (September), according to the species selected and the soil tests for heaviness, ph and moisture.

The exact seed mixes will be tailored for each location, such as full sun, semi-shade, damp or dry soil, and procured accordingly from specialist suppliers.

Methodology to sow wildflower seeds

In creating the wildflower meadow from seed, the start will be with bare, weed-free ground. The area will not be fertilised, but a meadow seed mix selected that suits the soil type. Perennial meadows need thorough preparation, and this will be done several months in advance.

Firstly the fertility of the soil will be reduced, so wildflowers don't get overwhelmed by vigorous grasses. This will be done by removing the top layer of soil to reveal the less fertile sub-soil. This will be done by hand in small areas but more generally using a digger and landscape contractor.

Weeding and soil preparation:

Vigorous perennial weeds such as nettles and docks – will be dug out by hand, removing all the roots or other non-chemical weed control. The soil will be harrowed to break up any compaction or lumps, and firmed by light roller

The soil will be left to settle, ideally for four to six weeks, which will give time for any weed seeds to germinate and hoed off, then raked to create a level surface with a fine, crumb-like texture.

Aftercare

Since watering larger meadow areas is not really viable or a good use of water, then the reliance will just be on rainfall. Over the first summer, any obvious weeds that are not in the seed mix will be regularly removed, as this helps to ensure that more delicate wildflowers aren't out-competed by too many vigorous species.

Cutting

The new perennial meadow areas need specifically timed maintenance to create a balanced mix of grasses and wildflower species and cutting them will be done several times a year. The cuts will be timed to encourage certain species to thrive. The new perennial and mixed meadow will be mown regularly in the first year after sowing, to encourage the perennial flowers and grasses to make strong root growth.

The new meadow will be cut to a height of 5cm about six to eight weeks after the seedlings appear, and repeated every two months throughout the first summer. These cuts will be lower, at 4cm.

After the first year and the meadow is established cuts will be carried out at several specific times in the year. There are three main timings, depending on how vigorous the grass is growing and which wildflowers are to be encouraged.

Spring cut – this will be performed on the areas of the meadows where the grass is lush and is crowding out the wildflowers. These areas will be cut to a height of 7.5cm and complete no later than the end of April. Then adhere to ‘No Mow May’. Yellow rattle in August will be sown as an additional way to help manage grass-dominant meadows.

Main summer cut – this is also referred to as a ‘hay cut’ and will be done to remove the bulk of the material, which will be composted. This cut will be done between late June and the end of August. Cutting towards the start of this period will favour spring flowers (cowslips, lady’s smock, selfheal and bugle). August cutting will favour summer flowers (knapweed, devil’s bit scabious and lady’s bedstraw).

The cut material will be left in place for a few days to allow the seeds to drop to the ground, then raked up and removed, to help reduce soil fertility.

Autumn cut – this will be done on the more fertile ground to use up the nutrients (one or two cuts between the end of August and late November to remove surplus growth and to keep grasses at bay, to let the wildflowers thrive).

Following the last cut of the season, all meadows will be kept mown, so the grass is short and neat through the winter. With any cut that produces substantial clippings, they will be removed and composted, to further reduce soil fertility.

General: before cutting long grass, a check will be made to ensure there is no wildlife sheltering there (hedgehogs, toads, grass snakes) by walking through the whole area making lots of noise, giving any animals time to get away.

Weeding the meadow

This will be done to take out any unwanted plants that appear or reducing the numbers if certain species are too prolific and may dominate at the expense of more delicate ones.

Perennial weeds such as docks, thistles and nettles will be pulled out by hand before they set seed. Nettles will also be knocked back by repeated cutting. As a last resort SBK Brushwood Killer would be used for spot treating. It will be used with care so as not to damage wildflowers, and lawn weedkiller completely avoided.

Where grasses are too dominant, annual wildflower yellow rattle (*Rhinanthus minor*) will be sown, which is semi-parasitic on grasses and will weaken their growth. This will be in August after cutting the meadow, and the grass will then be mown until March.

Watering or feeding will be avoided as wildflower areas don’t require any additional. This is because many native flowers colonise poor land, and adding extra nutrients and water will only encourage excessive vigour in the grasses, which will consequently outcompete the more desirable flowering plants.

Tree Planting and Maintenance

Planting and years 1 - 2

Trees to be planted from pots, provide 1.5 m stakes fastened minimum 0.5 m into ground, and tree ties at 0.5 and 1.0 m high. Keep a 1 metre diameter around the tree clear of weeds and grass for the first 2-3 years to reduce competition for moisture and nutrients. Provide tree guards to height of 0.6m.

Suppress weeds with mulch (bark chips). Apply it to a depth of around 10cm

Check tree guards and stakes are upright and pushed firmly into the soil.

Pull up any grass growing inside the guard and carefully replace the guard.

Year 3-10

Remove tree guards

Remove guards as soon as they split and before they start to disintegrate (usually after 5-10 years). Dispose of the plastics responsibly to protect local wildlife. Recycle where facilities exist.

Pruning is not essential but will encourage trees to grow upwards rather than outwards once established and help to create a diverse canopy structure. Prune the native trees in winter when dormant.

There are 73 existing trees and saplings on site at The Green Man (within the red line) so it is proposed to give a 100% uplift by planting 75 No. standards, in the positions shown and create a mixed woodland area.

These will be

14 No Field Maple (*Acer campestre*)

14 No English Oak (*Quercus robur*),

16 No Evergreen Scots Pine (*Pinus Sylvestris*)

17 No Rowan (*Sorbus aucuparia*) and

14 No Blackthorne (*prunus spinosa*). The first two are chosen because they offer great general biodiversity, and the rowan offers berries for birds, and the blackthorne sloe fruit for general feeding.

The existing grassland between the trees will be enhanced as shown through the sowing of wild flowers, and managed as described in the report above.