

# Biodiversity report

## **1 Wild meadow area**

developing a traditional meadow area will provide a wider range of habitats and species.

We already have a diverse range of pollinators that are helping to reverse the decline in pollinators. By increasing the diversity of flower-rich resources we are increasing the abundance of food resources; and extending the availability of flower-rich resources throughout the life cycle of pollinators.

Last year we joined Monmouthshire Meadows Group to discover how best to go about creating wildflower meadow.

As a member we were encouraged to have a survey of our garden. Here below is the preliminary survey of our grasslands and customised advice on managing our land.

Visit to field at 1 Smithy Cottages, Crossways, Newcastle on 18 August 2022

On 18 August 2022 Elsa Wood and Steph Tyler met Kate Owens and Tristan at their home, 1 Smithy Cottage near Newcastle and together we looked at the land that Kate owns.

This comprised a long rectangular field contiguous with their garden area that sloped gently to the south. This had a good thick native species hedge alongside the western boundary and a fence at the southern end. To the east was another adjacent property and garden. The field was dotted with young fir *Abies* trees planted by a previous owner.

The field had mostly been regularly mown but the cut material had been left in situ. The bottom part of the field was where it was hoped to establish a wildflower meadow. Previous owners had put down a membrane to inhibit growth, but this was largely now buried below

the soil and grass was growing on top of it. It was suggested that this should remain in situ rather than go to the expense and effort of removing it.

Grasses were dominant over the field especially Yorkshire Fog and Rye Grass, but a diversity of other species was also present including the fine meadow grasses Common Bent, Sweet Vernal Grass and Red Fescue. Other plants were scarce. These included Yarrow, Hogweed, docks and Creeping Buttercups (see table below for a full list). A few Knapweed plants were seen on the bottom south-west corner; further up the field near the eastern edge under some trees where the grass had not recently been mown, was an interesting patch with Bird's-foot Trefoil and much Common Centaury. These are both indicators of good quality species-rich grassland.

### *Suggested Management...*

Lightly cover with soil the exposed patches of membrane. Mow the area which will become the wildflower meadow but remove all the cut material in August. Then scatter some Yellow Rattle seed in a few areas where the soil is exposed or by molehills. Tread this in and leave. Continue mowing throughout the growing season and again up until the end of March but always remove the cut grass,

In April with luck, the Yellow Rattle will germinate and start reducing the vigour of the grass so that other species can gradually become established. Do not mow until mid-July when the rattle seed should have fallen. Then continue with the mowing and removal regime. Seed from the Centaury, Knapweed and Bird's-foot Trefoil could be scattered over the new meadow area. MMG can supply some additional flower-rich seed to scatter after the cut in mid-July to August 2023.

Keep the bracken that is encroaching from the edge under control by cutting, pulling or bruising as and when necessary.

Areas near the house where some colourful wildflowers are wanted could be sown with annual cornfield plants such as Poppies, Cornflowers and Corn Marigolds. The seed company Habitat Aid (See MMG website) supplies excellent seed of this sort. They do a mix of annuals and perennials so that in the first year you have lots of colour from the cornfield plants and then in the following years the perennials take over. It is suggested though that the bottom part of the field you use MMG seed which is of local provenance so has plants native to the area.

Species seen on the field at The Smithy, Newcastle in August 2022

Species in bold are considered indicators of good quality species-rich grassland.

Latin Name/English Name	Frequency/location
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Grasses Sedges and Rushes

<b>Agrostis capillaris/Common bent</b>	Locally Frequent
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Agrostis stolonifera /Creeping bent Occasional  
Anthoxanthum odoratum /Sweet Vernal grass Occasional  
Arrhenatharum elatius/False Oat Grass Occasional  
Cynosurus cristatus /Crested Dog's-tail Occasional  
Dactylis glomerata/Cocksfoot Occasional  
Festuca rubra/Red Fescue Locally Frequent  
Holcus lanatus/Yorkshire Fog Frequent  
Lolium perenne /Perennial Rye Grass Frequent  
Poa trivialis /Rough meadow Grass Occasional

#### Forbs

Achillea millefolium/Yarrow Occasional  
Bellis perennis/Daisy Rare  
Centaurea nigra /Common Knapweed At Edge  
Centaureum erythraea/Common Centaury Occasional  
Cerastium fontanum/Mouse-ear Occasional  
Chamerion angustifolia/Rose-bay Willowherb Occasional  
Cirsium vulgare /Spear thistle Occasional  
Convolvulus arvensis/Field Bindweed At hedge edge  
Daucus carota/Wild Carrot At edge  
Fragaria vesca/Wild strawberry At hedge edge  
Heracleum sphondylium/Hogweed Occasional  
Hypericum perforatum Perforate St John's-wort At edge  
Jacobaea vulgaris/Ragwort Occasional  
Lotus corniculatus/Bird's-foot Trefoil At edge  
Plantago lanceolata/Ribwort Plantain Rare  
Prunella vulgaris/Self-heal Occasional  
Pteridium aquilinum/Bracken At hedge edge

Ranunculus repens/Creeping Buttercup	Locally Frequent
Rumex acetosa/Common Sorrel	Rare
Rumex crispus /Curled Dock	Occasional
Rumex obtusifolius/Broad –leaved Dock	Occasional
Taraxacum agg/Dandelion	Occasional
Torilis japonica/Upright hedge Parsley	At edge
Trifolium repens/White Clover	Locally Frequent
Urtica dioica/Stinging nettle	Locally Frequent

Steph Tyler and Elsa Wood, on behalf of Monmouthshire Meadows Group

### *Our 5-year plan.*

Creating a wildflower meadow and grassland requires patience and many years of forethought and planning. We have spent the last 8 years slowly preparing the area in which we wish to introduce a species rich grassland and wildflowers area. We have already removed docks, nettles, thistles, brambles and bracken. We have also nurtured the inherited fir trees giving them space and love to flourish. Our neighbours have complained that we have created a “grass desert” but our vision has always been to bring life to this “desert”. By supressing the unwanted elements, we have made way for our vision of a native species rich meadow area. This has taken time and a lot of hard work.

Year 1 2022/3

Autumn

*Establishment...*

Lightly cover with soil the exposed patches of membrane and scatter with Yellow Rattle seed to give best chance of germination. Prepare the grass area to be sown by cutting the grass on a low setting and remove cut material.

#### *Maintenance...*

To Remove all the cut material thus reducing nutrients in the soil before sowing the wildflower/meadow seed and yellow rattle. All the seed has been obtained from the Monmouthshire Meadows Group which we are members of. The seed has been harvested this year by fellow members from exciting meadows. The mix is local and therefore gives the best chance of growing and authenticity of native variety.

#### Spring/summer

#### *Maintenance...*

In April with luck, the Yellow Rattle seed will germinate and start reducing the vigour of the grass so that other species sown can gradually become established. Allow new plants to grow, flower and then set seed. Cut/harvest the area and remove material after mid-July. The material will be removed from the meadow area to prevent enrichment. We will repeat this regime and over time the grassland will become more species rich. Many of the plant species will be perennials and may take 2-3 years of growth before they flower.

## *Management...*

Cutting of hedges and maintenance of boundaries to ensure they not encroaching or shading the meadow areas. Cutting of adjacent grass so that it does not encroach on the wildflower/meadow. Establishing pathways to protect the area from damaged by other activity.

## Year 2-5 2023/27

During the spring allow plants to grow by leaving the area untouched. Cut and remove material after mid-July. If there is growth after the late summer cut, then another cut will be made and again the cut material removed.

Ragwort will not be removed as the area will not be grazed. The benefits of ragwort to insects and butterflies will be encouraged.

Bracken will be controlled and maintained around the edges of our grassland bordered by existing hedging. All hedging is maintained every September/October by ourselves and a man with a tractor/hedge cutter.

Docks and nettles will be left in patches to encourage butterflies and moths caterpillars.

In the extended areas where moles provide us with molehills, we will use these areas to germinate new plants such as cowslips of which we already have an abundance. In the wildflower area we will simply rake the molehills over before cutting the area in the late summer.

Overtime as the area develops, we hope to leave some areas uncut to allow late flying insects to forage on the remaining late flowering species. These areas will be rotated from year to year so that it does not become tussocky.

*Maintenance...as per the 5-year plan.*

*Timeframe...every year for 5 years,*

## **2 Banks**

Wildflowers growing on the banks with strips of pure flower mixes will provide a good source of nectar and pollen for long periods and will be visually attractive. A mix of long grass and wildflowers, such as poppies, borage and ox-eye daisy, will attract pollinating bees and butterflies, and provide shelter to other animals.

*Maintenance...cut down once a year.*

*Timeframe...on going yearly.*

A range of spring flowering bulbs provide food resources early in the year and will be left uncut until they have died down.

## **3 Hedging**

Hedging along boundaries are cut once a year in autumn with a tractor and hedge trimmer. This creates its own mulching. Being cut less frequently and provides better food resources and less mess. Reduced Hedge cutting to once every autumn

to encourage nesting birds, hedgehogs and wildlife. leaving grass longer along the hedge line and leaving the stinging nettles attract the peacock butterfly that uses this plant to lay its eggs on and for the caterpillars to feed on. Stinging nettles also attract moths as they are nighttime nectar providers.

The following measures will help to reverse the decline in pollinators.

*Maintenance...cut once a year in the autumn.*

*Timeframe...on going yearly.*

#### **4 Grass area**

We always use a mulcher on our lawn mower to conserve soil moisture, prevent the growth of unwanted weeds and keep soil temperature even. This also reduces the need for pesticides.

*Maintenance...cut regularly during the growing season on a high setting.*

*Timeframe...on going yearly.*



## **5 Existing trees and shrubs**

Christmas Trees and existing shrubs maintained to encourage wildlife.

*Timeframe...on going yearly.*

## **6 Introduce bird boxes.**

Open-fronted nest boxes to attract blackbirds and robins.

Enclosed nest boxes to attract tits, sparrows, nuthatches and starlings.

Timeframe...by spring 2024.

## **7 Compost bays**

Create compost bays...this reduces the amount of waste sent to landfill and provides a habitat for a range of mini beasts attracting hedgehogs and sloe worms.

We already have a compost bay, but we shall need to create a second to accommodate the differentiate between fresh and rotted piles. The compost will help boost soil fertility and help plants build resistance to disease and improve structure and health increasing its water and nutrient content. Produce micro-organisms and keep the worms happy.

Timeframe...by spring 2024.

## **8 Natural area**

Shaded area... let this area grow wild. When it comes to a biodiverse garden, some messiness is good. We have lots of cowslips that grow in this area in springtime naturally. Shrub Areas left with ivy as a food resource for insects, brambles and fungi.

We have some wild roses and honeysuckle that grow in this area that we are encouraging to grow over an arch which also attract bees and butterflies.

*Maintenance... cut/trim once a year.*

*Timeframe...on going yearly.*

## **9 Log pile**

Create log piles and an insect hotel.

*Timeframe...ongoing but especially an activity when grandchildren visit.*

## **10 New Screen**

Securing of a natural boundary screening near to the shared boundary. Creating an outlook for neighbouring occupants. As suggested by the Planning inspector.

Using locally grown bareroot hedging plants from Border Nurseries, Raglan. Using a mixture of shrubs. Eg...Hawthorn, Hazel, Green beech

Preparation...Dig a planting trench before planting.

*Timeframe... November-April 2023/24*

*Maintenance...prun/cut on rotation to encourage new growth yearly.*