Grassland Management Policy

CHESTERFIELD
BOROUGH COUNCIL

Introduction

Grasslands have the power to benefit biodiversity, climate and people, by becoming diverse habitats. Whatever the size, appropriate management will enable these diverse and crucial grasslands to thrive for the benefit of our communities and the climate.

This policy provides an important framework for improving biodiversity and carbon sequestration through the identification of clear sustainable practices for the effective management of the council's managed grassland. The policy has been developed with due regard to the Urban Species Recovery Project, the Plan for Nature and Derbyshire's Local Nature Recovery Strategy.

This policy sets out our management practices for a range of grassland areas where this deviates from our standard mowing regime of up to seven cuts per growing season.

Our grassland areas not only have a positive visual impact, but they also absorb carbon dioxide during the growth phase and the more diverse the grasslands are, the greater the storage rates. Grasses that are between 10 and 60 cm tall absorb more carbon than shorter grass.

Through having this policy, the Council is seeking to provide clear information regarding our approach and we sincerely hope that residents and visitors to the Borough find this information helpful in understanding what we do and how why we do it.

The aims of this policy are to:

- Provide a framework by which biodiversity can be enhanced through the protection of priority sites, increased abundance and connectivity of wildflower and grassland habitats within the council's managed land.
- Identify appropriate and sustainable management practices that will support nature and climate issues and address declines in biodiversity and pollinators nationally and locally.
- Seek out methods to maximise carbon sequestration whilst minimising the carbon footprint through appropriate management and resourcing.
- Increase awareness and improve knowledge and understanding of the importance of biodiversity, native wildflower grasslands and pollinators to support understanding the reasons for the policy and practices within it.
- Although the focus of the policy is on the council's management of its own land, the policy is a tool to support and influence the management and creation of additional grassland areas through development management as well as influencing the management of private gardens.

The policy provides an opportunity for the council to demonstrate how it can help to deliver priorities set out in the Chesterfield Climate Change Strategy 2023-2030 and A Greenprint for Chesterfield. In addition to fulfilling its legal duty in exercising its statutory functions under the Natural Environment and Rural Communities (NERC) Act (2006) and the Environment Act (2021).

To achieve these aims, the policy will:

- Be reviewed and where appropriate updated to reflect grassland management regimes including resources available.
- Provide educational information, which, along with the policy can be used to increase public awareness of our grassland management regimes and rationale for change.
- Support the effective management of grassland to provide habitat for over 1,500 species of pollinator insects in the UK and to store and capture carbon, plus other benefits such as flood mitigation, improved water quality and heat cooling to help us adapt to a changing climate.
- Enable monitoring and evaluation of our grasslands to help us to understand the effects of our management. It will inform changes needed to enhance biodiversity, store carbon, and maximise benefits associated with grasslands.
- Address the added pressures of climate change in tandem with a longer growing season, periodic flooding and/or drought conditions resulting in changes to approach and practice in an attempt to mitigate these.
- Prioritise areas for grassland restoration and enhancement, improving grassland management and increasing the connectivity for biodiversity across the borough.

Criteria considered when reviewing a site:

Botanical Diversity

To determine the quality and status of the area based on the diversity of native/ non-native wildflower species and meadow grasses. The sites are also assessed for the presence of indicators of high fertility, that is, presence of invasive native species such as docks, thistles and nettles; and signs of poor management such as the presence of self-set trees and shrubs, encroachment of scrub, and areas of bare earth.

The flowering/blossom season is also measured as an indicator, particularly where non-native species are present to determine the length of season and flowering abundance.

Biodiversity Net Gain (BNG)

New developments often incur biodiversity loss within their design. Therefore we will survey and monitor the condition of sites and habitats that are enhanced or created to off-set biodiversity. All local authorities will be expected to report on site conditions and floristic diversity/habitat value and records will be available in the public domain. Any council-owned sites where off-setting is agreed will form part of that monitoring requirement.

In addition to the above indicators, grazing is also assessed by the amount of bare earth caused by over-grazing of livestock (too many livestock or site grazed for too long and at inappropriate time of year), sward height and number of latrines.

We adhere to different specifications for the creation, improving and maintaining grasslands to improve biodiversity and optimise carbon storage. There are advantages and disadvantages to each method which are more fully explored in the full document.

Annual Flowers

Sites created on roadside verges and suitable park grassland areas to create a highly visual display of native and non-native plants with a flowering season between March and mid-October.

Perennial Meadows (cut and lift)

Applied to previously species-poor grassland by allowing the flora present to grow long or though deliberate seeding to improve biodiversity and carbon storage.

Flowering Lawn

Deliberately created with a rich mix of hardy wildflowers improving biodiversity and can withstand cutting up to 6 times a year.

Naturalised Grass (one cut)

Created on previously species-poor grassland providing invertebrate habitats and eco-corridors. Plus reducing the carbon footprint for maintenance.

Biennial Cut

Generally, species-poor grasses that are cut every 2 years. They are often adjacent to more bio-diverse areas to protect them due to the infrequency of the cut. They require minimal resource but provide a high value biodiversity as they provide shelter and hibernation sites for invertebrate and small mammals.

Sports or specialist grassed areas are not included as part of this policy for grasslands. Where maintenance regimes are aligned with the requirements of a sport's governing bodies performance quality standards. Or in the case of wetlands or grazing land specific maintenance plans apply.

The borough's network of roads act to increase the biodiversity within the borough. They provide vital habitats for pollinators and other wildlife - more pollinators are found on well-managed verges than in the neighbouring countryside. Nearly 45% of our total flora is found on roadside verges.

These attractive wildlife verges quickly attract pollinators and provide safe havens to support more wildlife, they can also provide corridors so that that pollinators can disperse more easily and to better connect to other species-rich areas of meadows, parks and nature reserves.

For more information about our Grassland Management Policy or to view the full policy please email greenspaces@chesterfield.gov.uk

CHESTERFIELD
BOROUGH COUNCIL

Cutting Palettes

Grassland Management Policy

Desirelines are pathways cut into long grass to create access for activities such as walking, running, dog walking and to engage with nature to name a few examples. These will become commuting routes through parks, residential areas and rural areas.

Meadow edge is to retain a visual quality around long grassed areas and wildflower meadows, particularly alongside a road to mitigate any adverse impacts on visibility.

Verges are the responsibility of Derbyshire County Council and have to be cut accordingly to mitigate any adverse impacts on visibility and safety.

Amenity prestige is for highly maintained grassland lawns for widely valued prestigious areas, such as the Church of St Mary and All Saints, Queen's Park and the Town Hall.

Recreation grounds is for areas of grassland often used for informal sports, such as the football pitches at Rother Recreational Ground and Somersall Park.

Public open space are largely amenity areas used by the community for non-sport based recreational activities e.g. Wingerworth Way and Moston Walk.

Managed long meadows Areas of long grass cut annually in areas of little amenity value. We urgently need to start creating meadows across the district as they are crucial for:

- Supporting a huge range of wildlife including wildflowers, fungi, bees, flies, beetles, spiders, moths, butterflies, reptiles, amphibians, small mammals, bats and birds.
- Helping to mitigate flooding by holding on to rainwater.
- Capturing vast amounts of carbon.

Wildflower meadows as with managed long grass, meadows have a huge bio- diversity net gain. Please be aware these can take many years to fully establish. We have sought expert advice to make sure these will be managed successfully.

Grassland Management Policy

Machinery used to create, maintain and restore habitat

Hand Mower
For cutting long grass where large machines cannot go.

Strimmer
For cutting long grass around obstacles and path edges.

Front Mounted Flail Deck
An out-front powerful flail mower. This machine makes quick work in even the toughest terrain.

Flail Mower
Used to deal with heavier grass/scrub which a normal lawn mower could not deal with. Their design reduces the risk of injury from flying debris.

Triple Flail Mower
A versatile machine used for meadow edges, verges and desire lines.

Amenity Prestige Mower
Used to maintain prestiges formal areas.

CHESTERFIELD BOROUGH COUNCIL

Desirelines

Grassland Management policy

Highly maintained
2m Grassland paths

ANNUAL CUTTING TIMELINE & CUT HEIGHT

MAINTENANCE TABLE

TARGET CUT HEIGHT (HEIGHT GRASS TO BE CUT TO)	40mm
CUTTING FREQUENCY	Every three to six weeks throughout the growing season
CUTTING EQUIPMENT	Hand mower, ride-on mower, flail mower and strimmer
ARISINGS COLLECTION	Dropped locally in situ

Management method and design objective

Desirelines will be cut every three to six weeks throughout the growing seasons. Mowing equipment will be dependent on topography and length of the desire lines:

- A ride on mower or flail mower to cut the longer and larger desire lines.
- Hand mower or strimmer to cut shorter/thinner and/or significantly undulating desire lines.

This desireline management approach has been designed to improve the management of existing popular routes for walking/running and active commuting routes through parks, residential and rural areas.

MANAGEMENT STRATEGY DESIGN

Desireline Annotated Example

Mid March to mid October

Cuttings will be chopped up and left on the grass.

The desireline will be cut every three to six weeks to maintain a clear path at all times. The approximate width of the desireline will be 2m.

Cross sectional design of Desirelines

Meadow edge

Grassland Management policy

Highly maintained
1m meadow edges

ANNUAL CUTTING TIMELINE & CUT HEIGHT

MAINTENANCE TABLE

TARGET CUT HEIGHT (HEIGHT GRASS TO BE CUT TO)	40mm
CUTTING FREQUENCY	Every four to six weeks throughout the growing season
CUTTING EQUIPMENT	Hand mower, ride-on mower, flail mower and strimmer
ARISINGS COLLECTION	Dropped locally in situ

Management method and design objective

A minimum 1m wide meadow edge strip will be cut every four to six weeks.

Roadside grass verges and sightline areas will be cut in line with Derbyshire County Councils management approach. Where there is a verge in-between a road and footpath, a 1m safety swathe will be cut along the footpath and roadside edge and if the verge is 3m or less the entire verge will be cut.

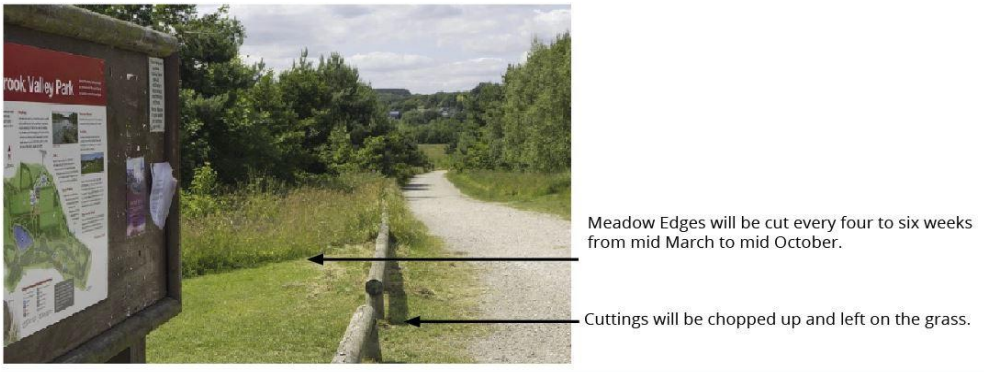
Mowing equipment will be dependent on the topography and the length of the meadow edge.

- A ride on mower or flail mower to cut the longer meadow edges.
- Hand mower or strimmer to cut shorter/thinner and/or significantly undulating meadow edges.

This meadow edge management approach has been designed to present a visual quality around areas of managed long meadows and wildflower meadows; moreover, when this policy is applied alongside a road, it has been designed to mitigate any adverse impacts on visibility.

MANAGEMENT STRATEGY DESIGN

Meadow Edge Example



Cross sectional design of Meadow Edge

Verges

Grassland Management policy

Highly maintained
Road verges

ANNUAL CUTTING TIMELINE & CUT HEIGHT

MAINTENANCE TABLE

TARGET CUT HEIGHT (HEIGHT GRASS TO BE CUT TO)	60mm
CUTTING FREQUENCY	Every five to six weeks throughout the growing season
CUTTING EQUIPMENT	Hand mower, ride-on mower, flail mower and strimmer
ARISINGS COLLECTION	Dropped locally in situ

Management method and design objective

Verges will be cut every five to six weeks or more often/when appropriate.

A 1m minimum width along roadside grass verges, and sightline areas will be cut in line with Chesterfield Borough Council's agency agreement with Derbyshire Couty Council. Where there is a verge in-between a road and footpath, a 1m safety swathe will be cut along the footpath and roadside edge and if the verge is 3m or less the entire verge will be cut.

Mowing equipment will be dependent on the topography and width/length of the verges.

- A ride on mower or flail mower to cut the longer/wider and flat verges
- Hand mower or strimmer to cut shorter/thinner verges and/or significantly undulating verges.

This approach has been designed to improve the management of key verges for visibility purposes.

MANAGEMENT STRATEGY DESIGN

Verge Annotated Example

Cross sectional design of Meadow Edge

Amenity prestige
Grassland Management policy

Highly maintained
Grassland lawns for prestigious areas

ANNUAL CUTTING TIMELINE & CUT HEIGHT

MAINTENANCE TABLE

TARGET CUT HEIGHT (HEIGHT GRASS TO BE CUT TO)	25mm
CUTTING FREQUENCY	Every two to three weeks throughout the growing season
CUTTING EQUIPMENT	Hand mower, ride-on mower and amenity prestige mower
ARISINGS COLLECTION	Collected after each cut

Management

Amenity prestige areas will be cut every two - three weeks to a target height of 25mm or less during the growing seasons. Mowing equipment will be either:

- A ride on mower (used on larger areas)
- Hand mower (used on smaller areas)
- Amenity prestige mower (used on smaller areas)

This amenity prestige management approach has been developed to create highly maintained grassland lawns for widely valued prestigious areas.

MANAGEMENT STRATEGY DESIGN

Amenity Prestige Example

Recreation Grounds

Grassland Management policy

Highly maintained
Grassland lawns for informal sport and recreation

ANNUAL CUTTING TIMELINE & CUT HEIGHT

Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec

MAINTENANCE TABLE

TARGET CUT HEIGHT (HEIGHT GRASS TO BE CUT TO)	50mm
CUTTING FREQUENCY	Every three weeks throughout the growing season
CUTTING EQUIPMENT	Hand mower, ride-on mower, flail mower and strimmer
ARISINGS COLLECTION	Dropped locally in situ

Management method and design objective

Informal sport areas will be cut every three weeks during the growing seasons.

Mowing equipment will be dependent on the topography and size of the area:

- A tractor/ride on mower or flail mower to cut the larger, flatter areas,
- Hand mower or strimmer to cut smaller and/or significantly undulating areas.

This recreation management approach has been developed to create managed grasslands for areas used by the community for sport based recreational activities.

MANAGEMENT STRATEGY DESIGN

Amenity Sport Example

Public open space
Grassland Management policy

Maintained
Grassland areas for valued open spaces

ANNUAL CUTTING TIMELINE & CUT HEIGHT

MAINTENANCE TABLE

TARGET CUT HEIGHT (HEIGHT GRASS TO BE CUT TO)	50mm
CUTTING FREQUENCY	Every four weeks throughout the growing season
CUTTING EQUIPMENT	Hand mower, ride-on mower, flail mower and strimmer
ARISINGS COLLECTION	Dropped locally in situ

Management method and design objective

Throughout the growing season public open space areas will be cut every 4 weeks or when appropriate in the growing season.

Mowing equipment will be dependent on the topography and size of the area:
- A tractor/ride on mower or flail mower to cut the larger, flatter areas,
- Hand mower or strimmer to cut smaller and/or significantly undulating areas.

This public open space management approach has been developed to create managed grasslands for areas used by the community for non-sport based recreational activities. Additionally, desire lines may be cut through to retain and enhance accessibility throughout these areas.

MANAGEMENT STRATEGY DESIGN

Public Open Space Annotated Example

Managed long meadow
Public open space

Long meadow areas used to enhance wildlife
Corridors and biodiversity

Management Rationale

This grassland management policy has been designed to help transition intensively cut grassland areas towards a more sustainably managed and biologically diverse meadow grassland.

These grassland areas are generally used less frequently for recreational purposes and have been selected for their lower amenity value. These areas of longer grass will be less intensely managed to create wildlife corridors an increase their long-term potential for biodiversity.

Key facts

- Grassland allowed to grow long and managed to encourage wildlife corridors.
- Grass to be cut less often than other areas, however it will still be carefully monitored, and weeds controlled.
- Edges will be kept neat and tidy to ensure a maintained appearance.
- Longer term grassland species diversification (not designed as species rich grassland implementation).

Potential ecological benefits of the managed long meadow management policy

This management approach has the potential to improve habitats for various fauna that rely on grasslands to nest, feed, and breed. Below are just a few examples of animals and insects that may benefit.

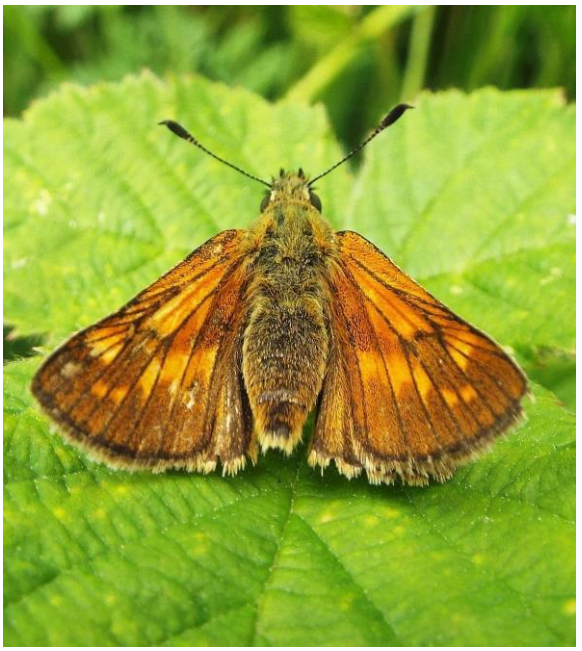
Managed long meadow
Public open space

Long meadow areas used to enhance wildlife
Corridors and biodiversity

Species that may benefit include:

- Various invertebrates, including spiders such as the Phrurolithus festivus and Tapinocyba praecox both locally rare species;
- Bird species may be attracted to invertebrate rich grassland areas, potentially including garden birds and target Biodiversity Action Plan (BAP) species such as Skylark and Yellow Hammer;
- Common Toad: A UK Priority species (BAP) that also feeds in grasslands (particularly tussocky areas) on various invertebrates;
- Small and Large Skipper Butterfly: The food plant for Skipper caterpillars is grass, and they overwinter in grasses that have not been cut throughout the winter;
- Speckled Wood Butterfly: Breeds throughout the summer on grasses like Cock's foot;
- Burnet Moths: A family of moths that favour thin, un-fertile grassland sites.





Locations where the managed long meadow management may be used:

This management policy will be used in both rural and urban settings where the grassland area is less intensively used. Where this borders a path, road, or a residential area fronting a meadow edge with an estimated width of 1m will be cut more regularly to retain accessibility and enhance the managed and maintained appearance of the grassland area.

Grassland Management policy

Frequently Asked Questions

1. What is Grassland management?

It is a way of managing the grass to better suit local biodiversity needs and manage council resources. For example, managed long meadows increase biodiversity and provide more ecosystem services in public open space.

2. Why are you changing the way grass is cut?

- Increase biodiversity
- Climate change aspirations (lower carbon footprint)
- Increase carbon capture and storage

3. How do I find out how the grass will be getting cut in my area?

Please refer to the map at **www.chesterfield.gov.uk/grassland-management-map** and enter your postcode.

4. Can any of the management palettes be cut more frequently?

No, each approach has been designed to improve biodiversity net gain, whilst also creating aesthetic spaces and areas of recreational use. As stipulated by Derbyshire County Council roadside verges are cut 5 times each year

5. Have you received any advice from outside the council on how to implement long grass and wildflower meadows?

Yes, we are very fortunate to have been able to receive local specialist advice. This has come from the Derbyshire Wildlife Trust and DEFRA (The Department of Environment, Fisheries and Rural Affairs). We have worked with the Derbyshire Wildlife Trust, who have surveyed all the grass cutting areas across the borough to enable us to deliver this.

6. Will you be using annual wildflowers mixes?

No, this is going to be a long-term process to achieve the absolute best results. Annual wildflower mixes although they are instantly attractive, need to be re-applied every year, employing a lot of resources. Any wildflower mixes that we will be using, will take many years to fully establish but will then require minimal maintenance. This is a much more sustainable approach. Many commercial wildflower mixes are not wholly native and less sustainable. Native wildflowers are much more suitable for our climate.

7. Can communities get involved to help create wildflower patches?

Yes, this is an excellent way for the community to come together. If this is something you are interested in, please contact **https://www.chesterfield.gov.uk/my-chesterfield/** with your details and the area you are interested in.

8. How can you ensure my area won't get neglected?

Each ward has an area-based team to take care of the area working alongside ward councilors and local residents, giving pride to all those involved. Any issues should be reported via **https://www.chesterfield.gov.uk/my-chesterfield/**

9. What is the purpose of managed long meadows?

Managed long meadows may appear unmanaged, but they are vital to wildlife. Insects such as beetles, caterpillars and grasshoppers all thrive off this, and so then do birds, bats, hedgehogs, and others. Managed long meadows have a huge biodiversity net gain. Where applicable there will be desire lines cut into the grass so the open space can still be accessed and enjoyed.

10. How are you monitoring the biodiversity increase?

We will be participating in the Big Butterfly count which also indicates climate change impacts. We will engage the services of the Derbyshire Wildlife Trust to re-survey spaces over time to assess changes in biodiversity.

11. Once the desirelines have been established, can you consider a longer/ shorter time between cuts, and will the widths vary?

The desirelines are purposely put in to allow a space for people to walk through. Cutting frequency may vary due to weather conditions. We will monitor the cutting frequency to establish if it can be left for longer between cuts to allow for low growing flowers. To implement the desirelines across the entire borough, we will first use 2m widths. We will monitor this and if there is a particular need for a variance, this can be altered at a later date.

12. Can meadow edges be cut less often than every three-six weeks?

- Meadow edges may have to be cut at regular intervals to make sure they are kept short due to road safety, sightlines and pedestrian access.
- Highway sightlines and vision splays in accordance with Derbyshire County Council requirements.

13. Meadow edge and desire lines – if the staff and equipment are already there, would it not be just as easy to cut the rest of the grass. Is this just lazy cutting?

No, the point of having the longer grass is to increase biodiversity. The edges and desirelines are to make it accessible.

14. Will 1m provide a sufficient sight line?

1m is an approximate width. If there are edges that need to be wider for safety reasons, we will create a wider width.

15. Can we be more creative with the verges?

There is no option to vary the cutting methods on verges. They are owned by Derbyshire County Council and are cut the way prescribed to ensure safety.

16. In places of informal sport (e.g. Somersall Park), where there are trees, are we able to leave grass long below the canopy?

Yes, this is something we will do wherever possible.

17. What will you do with the grass after it is collected on amenity prestige cuts?

Currently the cuttings are taken as green waste.

18. Have cemeteries and closed church yards been considered?

Yes, the Chesterfield Borough Council cemeteries and closed church yards have been included and will be monitored. Cemeteries are maintained in line with our prestige management approach, whereas closed churchyards are in accordance with our verge management approach.

19. The proposed equipment and techniques suggest very small grassland enhancements, are larger scale grassland enhancements going to be pursued? Using what equipment and methods?

Yes, we will be looking at larger scale enhancements wherever possible. For example, Loundsley Green Road which has been identified as a biodiversity net gain receptor site.

20. What is 'No Mow May'?

It is a national campaign to encourage no mowing in May to improve the diversity of wildflowers and increase the availability of nectar for early pollinators. Whilst the grassland policy is being implemented, we will not be participating in 'No Mow May'. As many areas are cut at intervals exceeding four weeks, we are consciously increasing the availability of food sources for pollinators, plus increasing the diversity of flora on our managed grasslands.

21. What about hedges and trees?

This is a strategy for grass cutting only. If there is an issue with a hedge or tree, please contact **https://www.chesterfield.gov.uk/my-chesterfield/** One of the benefits from the Grassland Management Policy is the positive affect on a tree's long-term health. Leaving under tree canopies will reduce soil compaction which will encourage root density by maintaining soil structure, with the added benefit of habitat creation for increased biodiversity.

Additionally leaving an ecotone adjacent to hedges, preserves a diverse ecosystem which is beneficial for a wide variety of fauna.

22. What if I don't like the way the grass is being cut near me?

We have been working with specialists to improve the grassland management for every area of grass in the borough and there will be a reason why every patch is going to be managed as set out in this policy. We are aware some people may support the proposed approaches and others may not.

Please use the **interactive map on the website** to let us know if you are not happy about a particular area, giving the reason why. We will then investigate this.

23. Can I cut the grass in front of my house?

Residents can apply to Derbyshire County Council to maintain the verge outside their own property. Application forms for cultivation licenses can be obtained by email highways.hub@derbyshire.gov.uk.

You will require formal permission from Derbyshire County Council to cut grass on public land. You will also require public liability insurance to use power tools on public land.

Summary

This Policy sets out our approach to a variety of public open space areas where it deviates from our standard approach to mowing regimes of up to seven cuts per growing season. The interactive map that supports this policy is intended to help our residents and visitors better understand how the Councils land is managed and why. The policy will be reviewed regularly to ensure it continually reflects resource availability alongside good practice and relevant management techniques.

The document will evolve over time and at the time of writing the intention is that this will form part of a suite of land management resources that the council will utilise as a way of informing on our approach to overall land management across the Borough, whether this be grassland or woodland.

The following appendices will hopefully provide you with ideas and inspiration as to how you can help support a biodiverse Borough adopting at a suitable scale the techniques we use.

Appendix 1

CHESTERFIELD BOROUGH COUNCIL

Creating a pollinator patch or wildflower meadow

Introduction

One out of every three mouthfuls of our food depend on pollination taking place according to multiple studies, including by the UN Food and Agricultural Organization. It is almost impossible to over-emphasise the importance of the service pollinators perform for us.

Many plants rely on insects to pollinate their flowers and so complete their reproductive cycle. Most plants cannot set seed without being pollinated, that is receiving pollen, usually from another flower.

Without bees, hoverflies and other insects visiting flowers, there would be no strawberries, apples, avocados, chocolate, cherries, olives, blueberries, carrots, grapes, pumpkins, pears, cotton, plums, peanuts and the list goes on. And very few flowers in our gardens and countryside!

It is estimated that 84% of EU crops (valued at £12.6 billion) and 80% of wildflowers rely on insect pollination.

Yet pollinators have traditionally been ignored as we have always taken it for granted that they would be there to carry out their free services to mankind. Now it is becoming apparent that if current trends continue, we may not have enough wild pollinators for all the crops our growing population requires. That is a truly frightening prospect. Wild pollinators include bumblebees and other bees (250 species), butterflies and moths (2200 species), flies (6700) and various other insects such as beetles, wasps and thrips.

Pollinators in trouble

- Half of our 27 bumblebee species are in decline
- Three of these bumblebee species have already gone extinct
- Seven bumblebee species have declined by more than 50% in the last 25 years two-thirds of our moths and 71% of our butterflies are in long term decline.
- Across Europe 38% of bee and hoverfly species are in decline.

Pollinators face a perfect storm of problems:

- Unpredictable/extreme weather resulting from our changing climate
- Intensive farming, which has fragmented and isolated flower-rich habitats and affected the quality of much that still remains
- Pesticide use – intended for the 'troublesome' insects but killing the beneficial ones too
- Loss of flowery habitat to urban growth and the associated sanitising of the nearby countryside
- Inappropriate tree planting on flowery habitats
- Loss of and damage to brownfield sites.

Imagine living in a green desert with barely any food, water or shelter. Much of the modern British countryside is now like that for many wild pollinators. A landscape that appears green and lush but lacks biodiversity and ecological health.

What can you do to help?

Creating either a wildflower meadow or a pollinator patch can provide an oasis in this desert and increase the chances of pollinators surviving. So, what is the difference?

A wildflower meadow (left) is an area of permanent grassland where native wildflowers grow. A pollinator patch (right) is a bed of annual flowers which may contain native cornfield annuals or non-native flowers or a mixture of both. Using a mixture of both can ensure a longer flowering period.

It is important to make and understand the distinction because cornfield annuals thrive well on fertile soil, whereas wildflower meadows grow better on unproductive soil, where vigorous grasses do not out-compete the flowers.

Before you get to work on your wildflower meadow consider the availability of light and your soil type. All meadow plants prefer an open, sunny place, so avoid sites under trees as these will be too dark and too dry. Small native trees and shrubs (such as hawthorn, blackthorn and gorse) or fruit trees scattered through the meadow are beneficial for other wildlife but can make maintenance more difficult.

Your soil type will determine which flowers will grow. Drier sites with poorer soils are easier to manage. Damp soils will be fine but avoid extremely wet sites. Testing your soil to determine whether it is acid, neutral or alkaline is essential in order to identify which types of flowers are most likely to succeed.

Creating a pollinator patch

Seed is sown in the Spring. You will need about five grams of seed per square metre of meadow. As the sowing is so thin it is best to mix the seed with dry silver sand (the type used for block paving).

Do not use builders' sand as it is not fine enough and is usually too damp. Pale-coloured sand helps you see areas that you've already sown and whether you have missed anywhere.

Just scatter the seed as you walk across the ground. To try and get an even coverage, split your seeds into batches and sow one batch walking in one direction and another batch walking at 90 degrees.

There is no need to rake the seed in or cover it with soil, but gently walk across it so that the seeds are in contact with the soil. You may need to net it from birds.

Keep it well watered until it has established.

Collecting and storing seeds from your patch

In the late summer or early autumn, once all the flowers have died and set seed, you can collect the seed for sowing next year. It is important to harvest your seeds at the right time, but this is not complicated or difficult.

Remember, a flower will naturally drop its seeds when it is ready, so the best way to tell if the seeds are ready to be harvested is to feel the flower head carefully with your hand. If the seeds easily fall away, this means they are ready. With a flower like a poppy where the seeds are stored inside the head, you will be able to hear the seeds rattling loosely inside when they're ready.

You can sometimes pick or strip individual seeds from the flower head with your hand, but the easiest way to harvest your seeds is often to just cut off the whole flower head, very carefully, with scissors or secateurs.

Next, spread the flower heads out on newspaper and leave in a cool, dry, airy place to allow the seeds to fully dry. You will know the flower heads are dry enough when they feel dry and crumbly to the touch.

Do not put your seeds in an airing cupboard to dry as this will be far too warm and will damage the seeds.

When the seeds and flower heads are all dried out, you can release the seeds by gently crushing the flower heads. Gently shaking the crushed material in a jar or other container should cause the seeds to fall to the bottom, allowing you to remove any small pieces of dried-up plant or flower from the top. Do not worry about getting the seeds completely clean! This would be a fiddly process and is not necessary as the seeds will grow just as well with other pieces of organic matter mixed in.

If possible, store your seeds in a cotton bag and keep them in a cool, dry place, such as a fridge, but be very careful the seeds do not get mistaken for food as some may be poisonous!

If you do not have a cotton bag, you can use a normal paper envelope. Never store your seeds in plastic because this can cause condensation to form which will make the seeds damp and mouldy.

Your patch can then be prepared and left bare over-winter.

Creating a wildflower meadow

A wildflower meadow is an area of permanent grassland where native wildflowers grow.

There are three ways to create a wildflower meadow.

Option 1 is to start from scratch, preparing the land in a similar way as you would for a pollinator patch and then sowing a suitable meadow seed mix. The only difference in preparing the site is that you might want to consider removing some of the top soil in order to reduce the fertility of the soil, making it more suitable for wildflowers. Depending on the size of your proposed meadow, this might best be done by machinery.

Option 2 is to convert an existing piece of lawn or grassland. Areas that are naturally low in fertility are ideal, but if yours is not, there are several things you can do to bring the nutrient levels down and prevent vigorous grasses from taking over. These include:

- not using fertilisers or weed killers, mowing the area regularly and keeping the grass very short
- removing all clippings to prevent nutrients being returned to the soil.

You may need to keep this up for two years until it is ready to be planted with wildflowers. Seeding existing grassland is rarely successful. The wildflowers you use should largely depend on your soil conditions and will establish best if planted in the autumn as small plug plants.

One flower deserves a special mention. Yellow Rattle is a lovely meadow flower with a slightly sinister character. Its roots tap into those of grasses, stealing their nutrients and suppressing their growth. This keeps them in check and allows many other meadow flowers to thrive with the reduced grass growth. It does such a good job it's sometimes called "the meadow maker".

Option 3 is to prepare your site in the same way as for a pollinator patch and then lay rolls of specialist wildflower meadow turf. This is very expensive, although success is almost guaranteed unless you fail to water in a dry period.

Caring for your wildflower meadow

Once you have a meadow with some grass and flowers, the absolute key to maintaining it is through mowing.

The basic yearly pattern is to leave the meadow alone until the first grass cut in late summer, any time from the end of July until mid-September. This gives wildflowers the chance to set and shed their seed. The exact timing depends on the year and the weather, but a later cut will help species like knapweed and orchids to spread, while earlier cuts can help control competitive species.

Try cutting different areas at different times and see how your wildflowers respond. Cut the grass down hard to a few inches in height but, if you can, it's also good to leave some strips or edges uncut as refuges for insects.

When you cut your meadow, you may wish to leave the cuttings for about a week in order that any remaining flower seeds will dry out, drop to the soil and grow next year.

However, it is critical to remove all the cuttings in order to keep the soil fertility down. You may also wish to cut the meadow again later in the year in order to keep the grass down.

This annual cycle of management mimics the traditional pattern of hay-cutting followed by grazing to which many meadow flowers are adapted.

Your meadow will evolve year by year, with some species coming through strongly to start with and then others taking over. You should see bees and butterflies start to use your meadow in its first year and maybe, even grasshoppers.

Choosing your seed mix

An on-line search will show a wide range of sources offering an even wider range of seed mixes. In order to choose the most appropriate one(s) for your purpose, you need to be clear what your purpose is.

Do you wish to create a pollinator patch and if so:

- will this be in full sun or partial shade?
- do you want to include non-native species?
- what type of soil do you have?

Once you have decided you can select an appropriate annual seed mix.

If you wish to create a wildflower meadow you will need to go through the same process. However, meadow mixes contain both annual and perennial flower seeds together with a range of wild grasses, such as bents, fescues and crested dogstail.

Due to this, meadow mixes never produce as colourful display as a patch of annuals but once established, and if properly maintained, will provide forage and habitat for a much greater range of insects and small mammals.

Introductory mix (Year 1 & 2)
Wildflower Management policy

Wildflower mix designed
To establish in partly nutrient rich soils

SEEDING AND CUTTING TIMELINE & HEIGHT - YEAR 1

Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
						CUT (*Short As Possible*) & SEEDING of Introductory Mix					

MAINTENANCE TABLE - YEAR 1

TARGET CUT HEIGHT (HEIGHT GRASS TO BE CUT TO)	Between Late July and October cut the grassland area back as short as machinery allows.
GROUND PREPARTION	Shortly after (ideally the same day as cutting) thoroughly wire rake to create frequent patches of bare soil, covering at least 50% of the grassland area. The patches should be at least 100mm in diameter for seeding and dead grasses/loose vegetation should be removed.
SEEDING STRATEGY	Sow this wildflower mix in the late summer (ideally late July, not to be seeded after October). This may improve the chances of perennial wildflower meadow establishing. Upon sowing, the seeds are to be gently raked in and then very lightly trampled on by foot to give good soil/seed contact. These areas should then not be disturbed. The wildflower area should be monitored regularly. Weeds should be hand pulled, as necessary. Use the supplier specified seeding rate. Emorsgate Seeds (2020) suggest a rate 0.1g to 1g per m^2 for Yellow Rattle (*Rhinanthus minor*).
WILDFLOWER SPECIES MIX TO OVERSEED	Use an annual mix including hemiparasitic wildflower(s). Consider a species such as Yellow Rattle (Rhinanthus minor) or similar. Wildflower mixes should use native species and be of local provenance where this is possible. Wildflower seeds will need to be appropriate to the site location and ground conditions e.g. dependant on soil type, nutrient level, aspect, or pollinator friendly.  Yellow Rattle (Rhinanthus minor) ***WHERE POSSIBLE COMPLETE THESE STAGES WITHIN THE SAME DAY***
CUTTING EQUIPMENT	Flail Mower & Strimmer.
ARISING COLLECTION	Arisings are to be removed straight after each cut.

SEEDING AND CUTTING TIMELINE & HEIGHT - YEAR 2

Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
						75mm					

MAINTENANCE TABLE - YEAR 2

TARGET CUT HEIGHT (HEIGHT GRASS TO BE CUT TO)	During late summer (Late July to Mid September) cut the sward to a target height of 75mm.
SWARD MANAGEMENT	1. The arisings are to be left in-situ for 2 days minimum and up to a maximum of 4 days to encourage seed dispersal from the annual species. 2. During the collection of arisings, they should be bashed and tossed ("threshed") to encourage final seed dispersal. Arisings must not be left any longer or they will start to decompose, lowering the viability of the future wildflower meadow. 3. Wildflower areas should continue to be monitored regularly and all notifiable and agricultural weeds should be hand pulled, as necessary.
CUTTING EQUIPMENT	Flail Mower & Strimmer
ARISING COLLECTION	Arisings are to be removed.

Wildflower mix (All years)

Management Policy objective

Wildflower mix designed to establish in partly Nutrient rich soils

Management Rationale

This wildflower management approach has been designed to help transition intensively cut grassland areas towards more species rich, wildflower meadows.

These grassland areas will be more actively managed than areas of long meadow but still have a similar appearance. By reducing the fertility of the soil over time, the grass will open up and allow a greater diversity of species within the grassland. This in turn will support an increase in biodiversity.

Key facts

- Grass allowed to grow longer to form wildlife corridors;
- Actively managed to increase the number of grass and wildflower species, which will support a more diverse fauna;
- Edges and weeds controlled;
- There may be times when these areas appear more bare than other grassland types (during establishment or in winter).

Potential ecological benefits of the managed long meadow management policy

This management policy has the potential to improve habitats for various pollinators/invertebrate species that rely on wildflowers for nectar and breeding habitats.

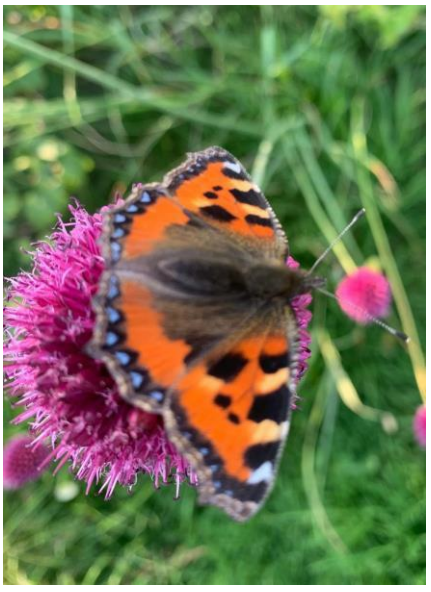
Wildflower mix (All years)

Management Policy objective

Wildflower mix designed to establish in partly Nutrient rich soils

Species that may benefit include:

- Dingy Skipper Butterfly - A S41 species (NERC Act 2006 “of principal importance for the purpose of conserving biodiversity”) that feeds on the wildflower Birdsfoot Trefoil;
- Silvery Moth & Humming Bird Hawk Moth - A day flying moth that nectars on wildflowers;
- Orange Tip Butterfly - A species of butterfly that breed on the Cuckoo flower wildflower; Peacock Butterfly, Small Tortoiseshell Butterfly and the Comma Butterfly - These species are known to favour wildflowers for nectar; and
- Various invertebrate, pollinator and bird species



Locations where the managed long meadow management may be used:

This management policy will be used in both rural and urban settings where the grassland area has less amenity value but is suitable for more species rich grassland. Areas where this strategy borders a path, road, or residential fronting a meadow edge with an estimated width of 1m will be cut more regularly to retain accessibility and enhance the managed and maintained appearance.

CHESTERFIELD
BOROUGH COUNCIL