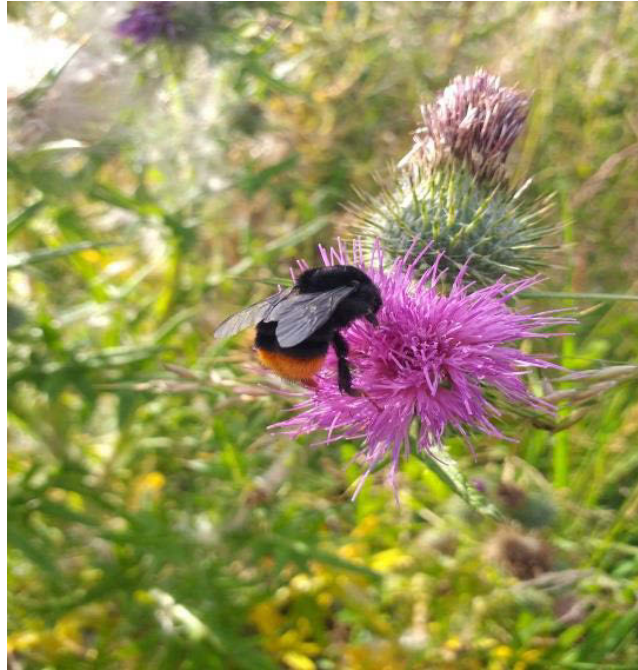


# Kanturk Town Pollinator Plan



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**An Roinn Tithíochta,  
Rialtas Áitiúil agus Oidhreachta**  
Department of Housing,  
Local Government and Heritage



**Cork  
County Council**  
Comhairle Contae Chorcaí

Prepared by Tony Nagle on behalf of Cork County Council

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November 2020

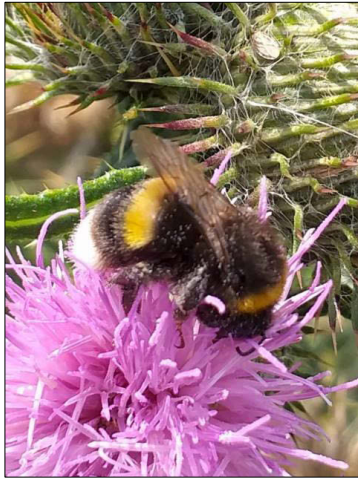
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## Introduction

### What Are Pollinating Insects?

Pollinating insects (bees, butterflies, moths, hoverflies and other insects) play a vital role in the natural process of pollination. Pollination is essential for many of our food crops, trees, fruit trees, flowers and wildflowers. Insect pollinators fly from plant to plant in search of pollen and nectar and by doing so they transfer pollen from one plant to another thereby facilitating the fertilisation and reproduction of these plants. Pollination by bees is essential for the production of one third of the food crops we eat and the majority of our wildflowers benefit from being pollinated by insects.



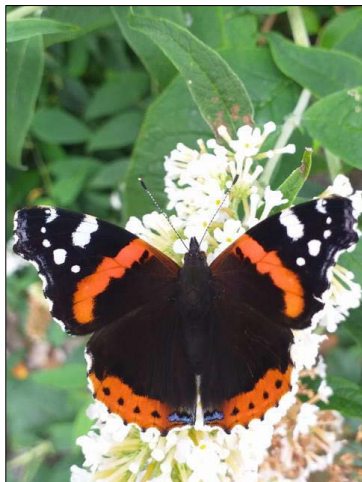
White-tailed Bumblebee



Solitary Bee  
(*Halictus rubicundus*)



Honeybee



Red Admiral Butterfly



Emperor Moth



Hoverfly (*Sphaerophoria* spp)

Pollinators are among the most familiar and colourful of Ireland's insects. In Ireland there are 20 species of bumblebee, 77 species of solitary bee and a single species of managed bee (the Honey Bee), 36 species of butterfly, more than 1400 species of moth and 180 species of hoverfly. They all play a

role in pollinating our trees, wildflowers and crops but bees are the most important group and it is estimated that they account for a large proportion of pollination in Ireland.

Pollinators require suitable breeding conditions to build nests in the case of bees; butterflies and moths depend on larval food plants and hoverflies need suitable nesting habitat varying from dead wood to ponds and puddles. It is essential for the success of any pollinator plan to provide adequate nesting/breeding conditions for a range of pollinators as well as providing a broad and seasonal range of pollinator-friendly plants for foraging. Some pollinator plans have focused almost exclusively on the provision of foraging plants while neglecting to retain or provide adequate breeding habitats or larval food plants. Failure to address the breeding requirements of pollinators will reduce the effectiveness of a pollinator plan. Particular attention should be given to the retention of 'wild' habitats such as woodland, hedgerows, 'rough ground', ponds, puddles and man-made features such as stone walls. In the absence of such habitats, artificial nesting conditions can be provided in the form of 'bee scapes', 'bee hotels', dead wood, wet areas and by planting important food plants such as Birdsfoot Trefoil, Nettle and a range of native trees ranging from Hawthorn to Oak.

### Why Are Pollinators in Trouble?

Unfortunately, many of Ireland's pollinating insects have undergone serious declines in recent decades and the rate of decline is accelerating. Bumblebees are declining at a rate of 3.7% annually compared to the global average figure of 1%. One third of our 97 native bee species are threatened with extinction within the next 10 years. Butterflies are declining at an average of 2.6% per year and this is considerably higher than the global average figure of 1.8%. The reasons behind these worrying declines are varied but they include agricultural intensification, afforestation and urbanisation, all of which result in habitat loss. The widespread use of insecticides and herbicides has had a serious impact on pollinators and wildlife in general.

### The Purpose of This Plan

Studies in Britain have shown that the six commonest bumblebees in Britain (Buff-tailed, Red-tailed, Garden, Early, Common Carder and White-tailed Bumblebees) now often have higher population densities in urban areas than in the surrounding countryside and the situation is likely to be similar in the more intensively farmed areas of Ireland. Therefore, managing public spaces in urban areas can have a very positive impact for pollinators. This plan has been prepared as part of Cork County Councils effort to provide suitable habitat for pollinators in the public spaces it manages. It includes proposals for the management of public spaces in the town of Kanturk with a view to increasing food and shelter opportunities for pollinator insects. The plan identifies areas which are already of high value for pollinators where minimal intervention is required. It also includes recommendations for more wildlife friendly management of areas which are traditionally more intensively managed. This includes roadside verges, parklands and amenity areas. The principles of the proposed approach follow those set out in the All-Ireland Pollinator Plan Sectoral [Guidelines for Councils](#) and include, in brief:

#### 1. Identify and protect any existing suitable pollinator foraging habitat



*Small Copper butterfly on Bramble*

In some ways, protecting existing pollinator resources is perhaps the easiest and most important measure that can be undertaken in each town. Existing habitat can include areas of rough grassland or infrequently-mown grassland, hedgerows, riverbanks, small wild

areas with bramble, nettle or ivy, stone walls, allotments and flowerbeds that have already been planted with pollinator-friendly flowers.

## **2. Adjust mowing practices on grassland areas**

Altering the frequency of mowing can facilitate the transformation of grassland areas into habitats that are more suitable for pollinating insects. Frequent mowing on a weekly or fortnightly basis inhibits the growth of wildflowers and deprives pollinating insects of a potentially widespread food resource. Reducing the frequency of mowing regimes can greatly improve the abundance of wildflowers. On Council land many grassy areas receive up to 22 cuts per year from mid-February onwards and the cut grass is often mulched back in to the lawn. This may look tidy to us but it creates a sterile grassy desert for pollinators. A cost equivalent action would be to change some areas to a pollinator friendly mowing regime where the grass-cuttings are removed (vital to reduce nutrient levels for many wildflower species) and composted. Depending on the site, mowing can be

- reduced to three or four week cuts, producing what is known as a flowering lawn;
- reduced to six-week cuts, creating a temporary 6-week meadow;
- reduced to a single cut at the end of each season, (ideally mid to late September) thereby creating a wildflower meadow.

A pollinator-friendly mowing regime could adapt the following timetable:

- First cut and lift after the 15th April (Dandelions are a vital early food source for pollinators in spring)
- Second cut at the end of May
- Third cut in mid/late July (maximises the growth of Clovers and other wildflowers)
- Fourth cut at the end August
- Fifth cut after mid-October

Reducing the frequency of mowing will result in a financial saving.

If necessary, additional wildflower species (e.g. Yellow Rattle) that will enhance the biodiversity value of the site can be added by seeding or plug planting over time. It is possible to create a wildflower meadow by completely reseeding the site with wildflower seeds but this is a time-consuming and expensive undertaking that often involves the use of herbicides to clear the site of grasses and other vegetation. It is vitally important to remove grass cuttings for composting as decaying grass fertilises the soil and perpetuates the cycle of grass dominance at the expense of wildflowers.

## **3. Planting pollinator friendly flower beds and trees**

Flowerbeds can be very effective pollinator foraging habitats provided the right plants are in place. Many existing urban flower beds contain flowers that are appealing to human eyes but are of no value to pollinating insects. Traditional annual bedding plants such as Geraniums, Begonias, Busy Lizzy, Petunias, Polyanthus or Salvia splendens have virtually no pollen or nectar and are of little value to pollinators. The substitution of non-pollinator friendly flowers

with varieties that are attractive to pollinators (and the public!) can greatly increase foraging habitat for pollinators in urban and suburban areas.



When choosing a selection of pollinator-friendly plants it is very important to recognise that not all pollinator plants suit every pollinator. Differences in anatomical structure mean that some flowers that are suitable for larger species may not be suitable for smaller species. Bumblebees for instance, are divided into long-tongued and short-tongued species and their preferences vary accordingly. It is also very important to choose a mixture of plants that will provide nectar and pollen throughout the spring and summer months to cater for species that are active early in the year as well as species that are active later in the year. A suggested list of plants is provided in Appendix 1 and this chart outlines the typical growing season and the types of pollinators likely to be attracted. A more extensive list of suitable plants is available in the [All-Ireland Pollinator plan in Councils – Actions to Help Pollinators](#) guidance prepared by the National Biodiversity Data Centre.

Planting pollinator-friendly trees (especially some of our native species) provides additional foraging habitat for pollinators in urban landscapes. Scrub or transitional woodland is an important habitat for many bee species. Early flowering trees such as Goat Willow are used by virtually all spring-flying bees. Trees provide hollow twigs and dead wood for various aerial nesters. Trees also create windbreaks providing shelter and allowing some parts of a site to attain higher temperatures than the surrounds. It is very important to prioritise the management and restoration of native plants over ornamental varieties wherever possible. Many ornamental tree species are of little or no value as foraging habitat for pollinators.



Native trees are also used as larval food plants by many of our moths and some of our butterflies and their autumn fruits provide a valuable food resource for a variety of bird and mammal species. The Alder Buckthorn (pictured left) has a very restricted range in Ireland (and is rarely included in planting schemes) but it is one of only two larval food plants for the Brimstone Butterfly. Its flowers are also used by many pollinating insects including bees and hoverflies and it is unusual in that it continues to flower long after the first berries have formed.

#### 4. Provide pollinator nesting habitat

The provision of suitable pollinator nesting habitats is vital to the success of any pollinator plan. Pollinating insects need a variety of different nesting habitats. Some species of bumblebee nest on or just below the surface whereas others build their nests underground accessed by tunnels that can vary in length from a few centimetres to more than a metre. Most bumblebee species will use the old burrows of small mammals (mice and voles). Solitary bees build their nests in places such as south-facing earthen banks, old walls and dead wood.

A **'Bee scrape'** (pictured below) is one of the best ways to provide nesting habitats for a variety of solitary or mining bees of which there are 62 species in Ireland. Exposing small areas of soil (1 metre x 1 metre) on well-drained south-facing locations can provide suitable nesting habitat for many species of solitary or mining bee. Ideally, locations varying from vertical scrapes in banks to flat areas on well-drained soils should be chosen to create nesting habitats for different solitary bee species. Bee scrapes need to be maintained throughout the breeding season (March-September) by ensuring that the scrapes are kept clear from encroaching vegetation during the summer months. Care should be taken to avoid disturbance (e.g. trampling) to the scrapes once they have been created.



Artificial nest sites (commonly known as **'bee hotels'**) can be provided for some of the 15 species of cavity-nesting solitary bees in or close to suitable foraging areas by placing sawn logs (pictured left) on east or southeast-facing locations ideally within 100 metres of foraging sites. The logs can be placed individually or in small housing structures. Holes varying in diameter from 4-10 mm should be drilled into the sawn side of the log at a depth of 15 cm to attract different species of bees. Drill the holes at a slight upward angle to prevent water-logging. If a housing structure is

being used, lengths of bamboo or reeds can be placed in the gaps between the logs as these provide additional nesting habitats for other cavity-nesting species. Bee hotels should ideally be placed at a height of 1 to 1.5 metres above the ground.

Butterflies and moths tend to lay their eggs on various native grasses, herbs and trees that are subsequently used as food plants by the emerging caterpillars.



The Common Nettle (pictured left) is used by 5 of Ireland's butterfly species: Red Admiral, Painted Lady, Small Tortoiseshell, Peacock and Comma. Other important larval food plants include Birdsfoot Trefoil, native Violet species and a range of wild grass species including Cock's-foot and Couch Grass.

Preserving corner areas containing a mixture of these species will provide vital egg-laying habitat for a variety of butterfly and moth species. Many of these plant species will also thrive in 'wildflower' meadows (see Appendix 2).

180 species of hoverfly have been recorded in Ireland and different species require a variety of different nesting habitats. Adult hoverflies feed largely on nectar and pollen but the larvae of hoverflies (depending on the species) feed on aphids, ant larvae, living plant tissue and decaying plant tissue so their nesting requirements are varied but include leaves of trees, wet mud, ponds and puddles.

## 5. Reduce the use of pesticides

Pesticides are known to be extremely harmful to pollinating insects. Herbicides eliminate wildflowers and nesting vegetation whereas insecticides are fatally harmful to pollinators.



Fungicides are harmful to some species of hoverfly. Pesticides should only be used when absolutely necessary and great care should be applied in their use.

### How the Plan Was Prepared

A meeting was held in September 2020 with Council staff and a number of suggested sites in and around Kanturk were visited. Proposed management of these areas and possible constraints were discussed. The sites were revisited and surveyed for existing flora and potential pollinator nesting areas in September and October and a draft proposal describing the sites, proposed measures and details regarding implementation was prepared. The plan was finalised following consultations with staff of Cork County Council including the Council Ecologist and also involved liaison with Kanturk Tidy Towns Group.

### What the Plan Contains

The plan includes recommendations for management of public spaces including public parks, roadside verges, roundabouts, riverside banks and housing estates managed by Cork County Council. Not all publicly-owned land is included in the current plan but it is hoped that the number of such areas will be expanded over the coming years.

The plan does not include proposals for management of privately owned land or residential estates that are not managed by Cork County Council, however, it is hoped that the management of open areas on privately owned land will be influenced by the measures adopted in this plan. The plan has been prepared by taking account of the needs of the people of the town as well as the local pollinators and public lands that are currently used for sports, general amenity purposes and recreation will not be adversely affected by any of the measures in the plan.

Certain alterations to grass-mowing regimes will occur in some areas but public access will not be impacted by any of these measures and indeed it is hoped that the public will explore and enjoy the results of these measures as they become apparent over time.

Safety concerns are fully acknowledged and respected in the plan and none of the recommended measures will result in any obstruction to traffic or walkways at any location within the town.

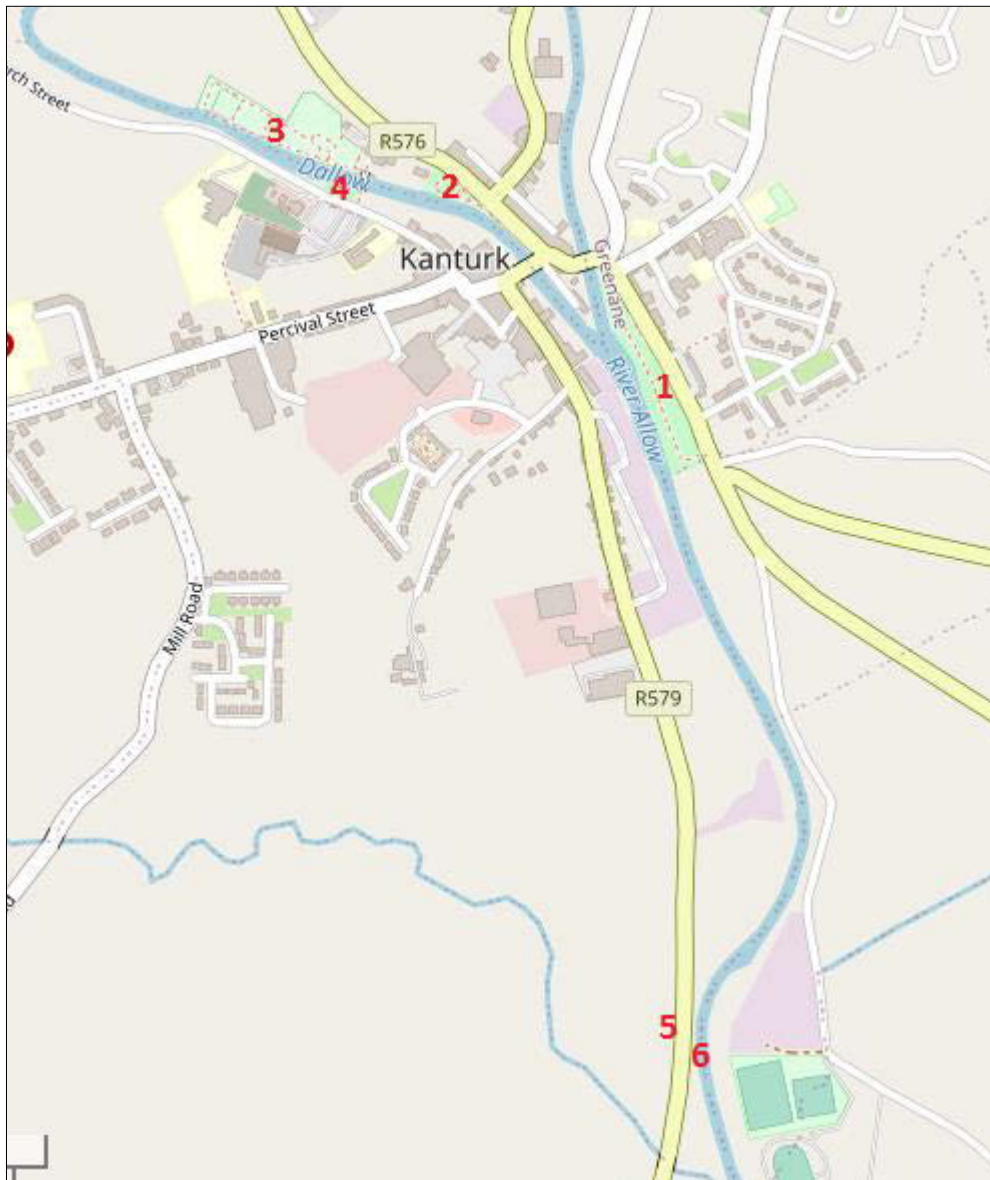
### How the Plan Will Be Implemented

The plan will be implemented by Cork County Council staff and members of Kanturk Tidy Towns Group.

## Management Recommendations

A number of areas within Kanturk Town which are within the management control of Cork County Council have been proposed to be incorporated into this plan. These sites were identified through field survey and consultation with local staff of Cork County Council. The areas are described and management recommendations for each of these sites are set out below. The sites are shown on Figure 1 below. Ideally, additional sites can be added each year based on the same suggested guidelines. These sites lie within or adjacent to the Blackwater River SAC. Re-seeding or new planting should only be carried out in consultation with an ecologist. Regard needs to be had to the proximity of the site to water when treating Japanese Knotweed and other invasive species.

**Figure 1.** Pollinator Plan sites in Kanturk.



## 1. Greenane Park

### Site Description

This large public amenity area is bounded on the west by the River Allow before its confluence with the River Dalua and on the east by Greenane Street. It is a popular park and is used by many people each day for physical exercise and relaxation. The park contains a number of interesting pollinator habitats including a strip of flood meadow along the east bank of the River Dalua, a small area of Ash-Alder-Hawthorn woodland on the southern boundary, Parkland trees (including several oaks), a sloping meadow on the west side, a stone wall close to Greenane Street and a large lawn area in the centre. Native flora is widespread and diverse. The sloping meadow contains an interesting mix of wild grasses and a range of herbs frequented by pollinators including Birds-foot Trefoil, Black Medick, Red Clover, Nettle, Ribwort Plantain, Common Knapweed, Yarrow and Oxeye Daisy. A small pollinator-friendly herb area has been planted in the southeast corner containing Poppy, Lemoine, Common Mallow, Oxeye Daisy, Chicory, Cornflower and Wild Carrot. Nasturtium and Ragweed, Wild Carrot and Bramble occur in the southwest corner. The flood meadow adjacent to the river contains a good selection of native pollinator-friendly plants including Red Clover, St John's-wort, Nipplewort, Yarrow and Wild Angelica Hogweed and Wild Carrot. Dandelion, Yarrow, Oxeye Daisy and Hogweed grow in the northwest of the site but at least three established patches of Japanese Knotweed are also growing in this part of the site.



### Management Recommendation

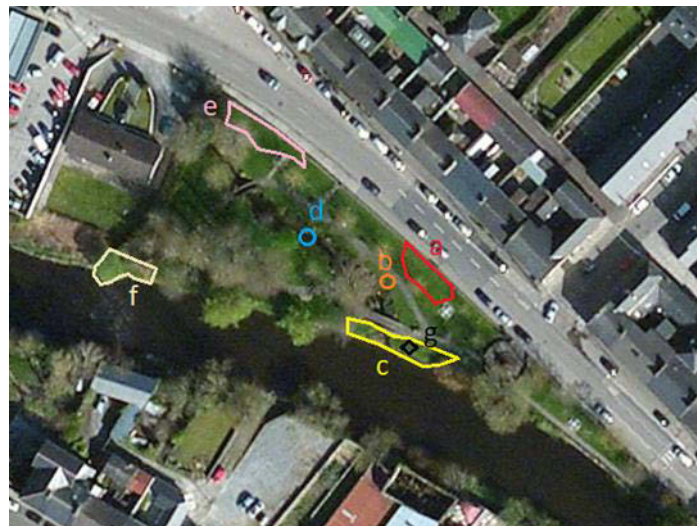
- (a) One cut and lift in early to mid-September, especially on the East Meadow. The introduction of Yellow Rattle would assist the colonisation of additional pollinator-friendly plants.
- (b) The flood meadow strip could be strimmed in early to mid-September each year.
- (c) A similar single cut and lift in September would enhance the grass verge on the park side of the stone wall bordering Greenane Street.
- (d) The selection of plants used in the pollinator-friendly area in the southeast corner is a good mix but non-native planting should be confined to this area.

- (e) Two or three bee-scrapes of exposed soil (1m x 1m) could be created on the eastern meadow bank to provide nesting habitat for solitary bees.
- (f) A bee-hotel could be introduced to the pollinator-friendly herb area.
- (g) The Japanese Knotweed infestation in the northwest needs to be treated and eradicated to prevent further spread in this area and downstream.

## 2. O'Brien Street Park

### Site Description

This small park is bounded on the south by the River Dalua and O'Brien Street on the north. The grass is maintained as a regularly cut lawn and much of the park (especially the north side) is heavily shaded by mature Beech, Yew, Oak and Lime trees. The riverside vegetation is sparse in comparison to Greenane Park.



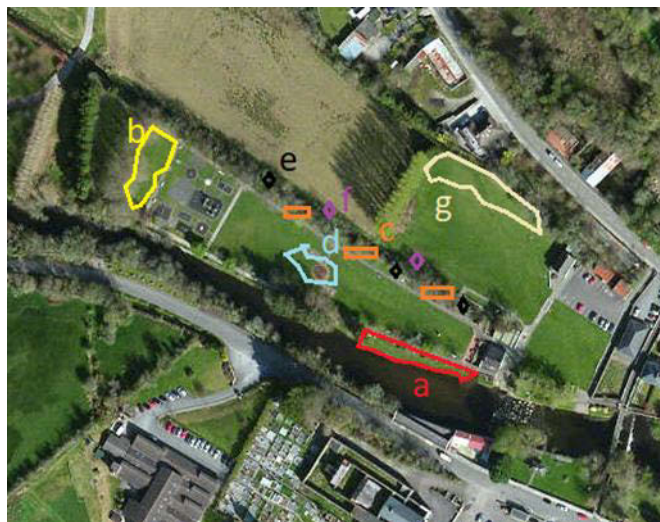
### Management Recommendation

- (a) A strip of 6-week meadow alongside the O'Brien Street boundary would enhance the site for pollinators.
- (b) A pollinator-friendly flower bed (see Appendix 1) could be created in the centre of the park as this area is not subject to the same level of shade as elsewhere.
- (c) The riverside boundary would benefit from reduced strimming to allow an increase of native vegetation.
- (d) A second pollinator-friendly flowerbed could be created close to the picnic table area near the path junction and west of the impounded stream that runs through this section.
- (e) A small flowering lawn could be created in the wide lawn area between the north bank of the stream and the road boundary.
- (f) A small area of meadow could be created in the northwest corner adjacent to the river.
- (g) A 1m x 1m bee scrape could be created on the river bank immediately south of the path junction.

### 3. Kanturk Town Park

#### Site Description

This is the largest park in Kanturk and it consists of three grassland sections, two of which are used for sport activities and the third one is a recreational park that includes a children's playground. The grass is regularly mown in all three sections. The field to the south of the car-park is regularly mown and is of minimal use to pollinators. The recreational section is bounded by the River Dalua on the south and trees on the west and north. A building forms the narrow east boundary. A number of trees grow along or close to the riverbank including Alder, Sycamore and Maple. In the southeast corner there is a substantial area of grassland adjacent to the river but this area is subject to regular strimming/mowing and so too is the grassland strip on the river side of the fence along the riverbank. The area to the west of the playground is also regularly mown. The northern boundary of this section is formed by a tree-lined bank and there are several seating areas. The north-eastern section is largely subjected to regular mowing but a significant wet area close to the northern boundary has been left uncut and several pollinator-friendly herbs including Red Clover, Knapweed, Ragwort, Yarrow and Willowherbs occur here. There are three flowerbeds in the centre of the recreational section and two of these are dominated by cultivated roses. Garden Cosmos (a pollinator-friendly plant) has been planted in the circular flower bed in the centre.



#### Management Recommendations

(a) The grassland area adjacent to the river and the grass strip on the river side of the fence in the recreational section could become wildflower meadow areas if a single cut and lift management regime was implemented.

(b) A six-week meadow approach to grass management in the area west of the playground would be beneficial.

(c) A range of seasonal pollinator-friendly flowers (see Appendix 1) could be planted along the northern bank of the recreational section.

(d) Grass areas between the flowerbeds could be transformed into flowering lawns by reducing mowing to three or four week cycles.

(e) Two or three 1m x 1m bee scrapes could work well on the south-facing bank of the north boundary of the recreational section.

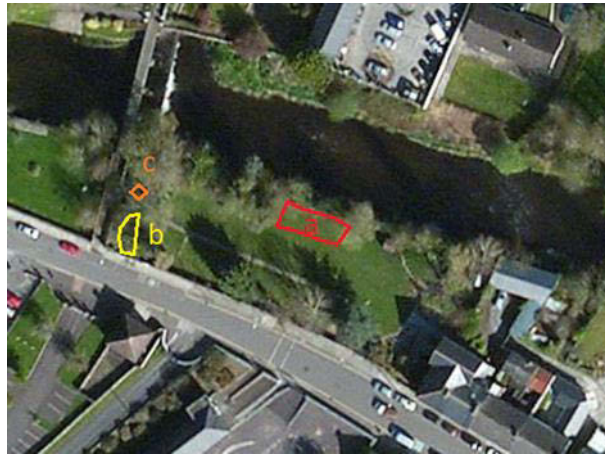
(f) Two or three small bee hotels could also be considered along this section.

(g) The wet grassland area in the north-eastern section has the potential to become a useful pollinator habitat if a single cut and lift management regime is introduced. Yellow Rattle could also be seeded here to accelerate the transformation to wildflower meadow.

#### 4. Canon's Wood Park

##### Site Description

This small park is bounded on the north by the River Dalua and Church Street on the south. Large and mature trees grow on each of the four perimeters and consequently the park is subjected to considerable shading. Most of the park area is currently maintained as a regularly cut lawn. There is a biodiversity garden known locally as a "Pollinator Hangout" on the west end. A good variety of native/long-established pollinator-friendly herbs have been planted here including Musk Mallow, White Campion, Bittersweet and Wood Sage as well as suitable garden plants such as Garden Catmint and Snapdragon. A large 'Insect Plaza' (Bee Hotel) has been placed in shade on the opposite side of the park facing north and a good distance from the main foraging area on the west side of the park.



##### Management Recommendations

- (a) A six-week meadow strip (2 metres in width) could be introduced on the north side of the park adjacent to the river.
- (b) The 'Pollinator Hangout' area is a good idea and should be maintained.
- (c) The 'Insect Plaza' should be moved to the west side of the park and placed in a warm south facing location. Most of the cavity bricks should be replaced with logs that have been drilled with holes 15 cm in depth and 4-12 mm in diameter. Holes of different diameters will attract different species of solitary bees.

## 5. Banteer Road (West Side)

### Site Description

This site is located on the southern outskirts of the town on the Banteer Road around the plough man sculpture on the west side of the road. The area is currently maintained as a regularly mown lawn with a small number of flower pots and is of minimal use to pollinators. The site is bordered on the west by a hedgerow containing Ash, Hawthorn and Willow.



### Management Recommendations

(a) This site could be improved for pollinators by introducing a three or four-week flowering lawn approach on both sides of the sculpture. A one metre strip adjacent to the footpath could be cut more regularly to maintain a managed appearance.

(b) A selection of pollinator-friendly flowers could be planted in the flower pots and perhaps one or two flowerbeds of a variety of pollinator-friendly flowers could be created on this site (see Appendix 1).

## 6. Banteer Road (East Side)

### Site Description

This site is located on the opposite side of the road to Site 5. The site is currently maintained as a picnic area that is regularly mown. The site is bordered on the east by medium sized trees including Sycamore.



### Management Recommendations

(a) Mowing could be reduced to 3-4 week cycles and this would enable plants such as White Clover to flower and provide a valuable food resource for pollinators.



Site Pictures



1(a) Greenane Park: East meadow.



1(b) Greenane Park: Flood meadow.



1(c) Greenane Park: Grass verge next to wall.



1(d) Greenane Park: Existing pollinator corner.



1(e) Greenane Park: area suitable for mining bees.



3(a) Town Park: Grass area suitable for wildflower meadow strip.



3(e) Town Park recreational area suitable for mining bee habitat creation.



3(g) Town Park: wet grassland area in the northeast of the site.



4(b) Canon's Wood Park "Pollinator Hangout".



4(c) Canon's Wood Park "Insect Plaza" (needs to be moved to a sunny area.



5(a) Banteer Road (west side): suitable site for a flowering lawn.



6(a) Banteer Road (east side): suitable site for a flowering lawn.

Table 1 Summary of sites and proposed measures.

Site No.	Site Name	Site Description	Area m <sup>2</sup>	Target	Management Recommendations
1 (a)	Greenane Park	East meadow.		Wildflower meadow	Basic: A single cut and lift each September.  Optional: Plug-planting/seeding of Yellow Rattle.
1 (b)	Greenane Park	Flood meadow strip adjacent to the River Dalua.		Wildflower meadow strip	Basic: A single trim and lift each September.
1 (c)	Greenane Park	Grass verge next to the stone wall parallel to Greenane Street.		Wildflower meadow	Basic: A single cut and lift each September.
1 (d)	Greenane Park	Pollinator-friendly flower area in the southeast.		Continue with planting regime and see Appendix 1 for additional suggestions.	Confine non-native flower planting to this area.
1 (e)	Greenane Park	East meadow		Provide solitary/mining bee habitat.	Create three (or more) 1m x 1m bee-scrapes on the bank of the meadow and keep the scrapes free of vegetation.
1 (f)	Greenane Park	Pollinator-friendly flower area in the southeast.		Provide cavity-nesting bee habitat.	Place three or four sawn logs with drilled holes 4-10mm in diameter and 15cm in depth. Alternatively, a housed structure using sawn logs and 20cm bamboo canes could be used.
1 (g)	Greenane Park	Northwest corner		Eradicate Japanese Knotweed.	Avoid cutting. Requires repeated herbicide application. May require specialist involvement.
2 (a)	O'Brien Street Park	Lawn area close to O'Brien St boundary.		Create a six-week meadow.	Reduce mowing to a six-week cut and lift cycle.
2 (b)	O'Brien Street Park	Unshaded area in the centre of the park.		Create a pollinator-friendly flowerbed.	Plant a selection of pollinator-flowers that will provide pollen and nectar from March to September. (See Appendix 1).
2 (c)	O'Brien Street Park	Riverside boundary.		Create a meadow habitat in grass	Reduce mowing/trimming to a single cut and lift in mid to late September.

Site No.	Site Name	Site Description	Area m <sup>2</sup>	Target	Management Recommendations
				areas close to riverbank.	
2 (d)	O'Brien Street Park.	Picnic table area close to path junction and west of stream.		Create a pollinator-friendly flowerbed.	Plant a selection of pollinator-flowers that will provide pollen and nectar from March to September. (See Appendix 1).
2 (e)	O'Brien Street Park	Lawn between north bank of stream and road boundary.		Flowering lawn.	A flowering lawn could be created in this area by reducing the mowing cycle to a three or four week mowing cycle.
2 (f)	O'Brien Street Park	Northwest corner next to river.		Wildflower meadow.	Reduce mowing to a single cut and lift in mid to late September.
2 (g)	O'Brien Street Park	Riverbank due south of path junction.		Solitary/mining bee nesting habitat.	A single 1m x 1m bee scrape could be created on the steep riverbank. It would need to be maintained clear of vegetation.
3 (a)	Kanturk Town Park	Grass areas adjacent to the river and on the river side of the fence.		Wildflower meadow strip.	Reduce mowing/strimming to a single cut and lift in mid to late September.
3 (b)	Kanturk Town Park	Grass area west of the children's playground.		Six-week meadow.	Reduce mowing to a six-week cut and lift cycle.
3 (c)	Kanturk Town Park	North bank of recreational section.		Create three or four pollinator-friendly flowerbeds.	Plant a selection of pollinator-flowers that will provide pollen and nectar from March to September. (See Appendix 1).
3 (d)	Kanturk Town Park	Grass areas between the flowerbeds in the centre of the recreational section.		Flowering lawn.	A flowering lawn could be created in this area by reducing the mowing cycle to a three or four week mowing cycle.
3 (e)	Kanturk Town Park	North bank of recreational section.		Mining bee nesting habitat.	Two or three 1m x 1m bee scrapes could be created on the bank between the suggested flowerbeds. They would need to be kept clear of vegetation and free from disturbance.

Site No.	Site Name	Site Description	Area m <sup>2</sup>	Target	Management Recommendations
3 (f)	Kanturk Town Park	North bank of recreational section.		Cavity bee nesting habitat.	Place three or four sawn logs with drilled holes 4-10mm in diameter and 15cm in depth. Alternatively, a housed structure using sawn logs and 20cm bamboo canes could be used.
3 (g)	Kanturk Town Park	Wet grassland area in northeast section.		Wildflower meadow.	Basic: A single cut and lift each September.  Optional: Plug-planting/seeding of Yellow Rattle.
4 (a)	Canon's Wood Park	North side of the park adjacent to the river.		Six-week meadow.	Reduce mowing to a six-week cut and lift cycle.
4 (b)	Canon's Wood Park	Pollinator-friendly area ('Pollinator Hangout')		Continue with planting regime and see Appendix 1 for additional suggestions.	Confine non-native flower planting to this area.
4 (c)	Canon's Wood Park	'Insect Plaza' on east side of site.		Cavity bee nesting habitat.	Move the plaza to a sunny position in the west of the site and replace the bricks with sawn logs and bamboo canes.
5 (a)	Banteer Road (west)	Regularly mown lawn.		Flowering lawn.	A flowering lawn could be created in this area by reducing the mowing cycle to a three or four week mowing cycle.
5 (b)	Banteer Road (west)	Flower pots.		Pollinator-friendly flowers.	Plant a selection of pollinator-flowers that will provide pollen and nectar from March to September. (See Appendix 1).
6 (a)	Banteer Road (east)	Regularly mown lawn.		Flowering lawn.	A flowering lawn could be created in this area by reducing the mowing cycle to a three or four week mowing cycle.

## Other Recommendations

### Raising Awareness

It is important to inform the public about the rationale behind the pollinator plan. The conversion of tightly-mown lawns into wildflower meadows can be seen initially to some as untidy management or neglect but if the reasons for the new approach are clearly explained to the public widespread acceptance, approval and support usually follows. Public acceptance can be achieved through the provision of signs that explain the importance of pollinators and their habitats, meetings with community groups, school visits and social media.

### Monitoring Progress

The success of the plan can be monitored in a number of ways. Ideally, a small group of people (consisting of County Council staff and members of the Tidy Towns Committee) could meet twice a year outlining proposed actions (based on recommendations in the town pollinator plan) early in the year and a second meeting outlining actions that have been implemented. Informing the public of the reasons behind the measures undertaken is vital to the success of the plan but criticisms and positive suggestions should be noted. It is important to monitor the success of each of the measures but wildflower meadows will need particular attention, especially in the early years as the succession to wildflower meadow status is a gradual process and the benefits may not be apparent for some years after the process has begun. Invasive species are a problem at some sites (especially Winter Heliotrope but also Japanese Knotweed) and these will require ongoing attention until they are finally eradicated.

Monitoring of pollinator use of the sites is important and this can be done on a casual basis by noting the numbers of bees, bumblebees, hoverflies and butterflies using the sites (always choose a sunny, calm day if possible). The National Biodiversity Data Centre host a number of monitoring schemes and it would be a good idea to join at least one of these schemes e.g. the [Bumblebee Monitoring Scheme](#) (advice and identification assistance is provided for beginners) or the [Butterfly Monitoring Scheme](#). It would be a good idea to record the species and numbers using the sites and to note sites that appear to be more successful than others and to identify reasons why this may be the case (it could be related to the varieties and numbers of plants present or perhaps because there is not enough suitable nesting habitat available nearby).

Pollinator plan measures will need to be monitored throughout the year to ensure that adequate numbers of foraging plants are in place at critical times of the year. Grassland management measures will need to be assessed to measure the development of pollinator-friendly wildflowers.

A suggested monitoring programme could involve the following steps:

Measure	Timing	Recording Pollinator Plants	Recording Pollinator Activity
Assess early pollinator activity	Mid-February to mid-April (One or two visits over this period)	Record presence or absence of early flowering plants such as Willows, Bluebells Note plants with greatest levels of pollinator use. Record plants with lowest or zero level of pollinator use.	Record presence or absence of pollinator groups: bees, bumblebees, hoverflies, butterflies. Record numbers. Record to species level where confident of identification.
Assess late spring activity	Late April to May (One or two visits over this period)	Record presence or absence of pollinator-friendly plants. Note plants with greatest levels of pollinator use. Record plants with lowest or zero level of pollinator use.	Record presence or absence of pollinator groups: bees, bumblebees, hoverflies, butterflies. Record numbers. Record to species level where confident.
Assess early summer activity	June (One visit in this period)	Record presence or absence of pollinator-friendly plants. Note plants with greatest levels of pollinator use. Record plants with lowest or zero level of pollinator use.	Record presence or absence of pollinator groups: bees, bumblebees, hoverflies, butterflies. Record numbers. Record to species level where confident.
Assess late summer activity	July to August (One or two visits over this period)	Record presence or absence of pollinator-friendly plants. Note plants with greatest levels of pollinator use. Record plants with lowest or zero level of pollinator use.	Record presence or absence of pollinator groups: bees, bumblebees, hoverflies, butterflies. Record numbers. Record to species level where confident.
Assess early autumn activity (prior to mowing)	September (One visit in this period)	Record presence or absence of pollinator-friendly plants. Note plants with greatest levels of pollinator use. Record plants with lowest or zero level of pollinator use.	Record presence or absence of pollinator groups: bees, bumblebees, hoverflies, butterflies. Record numbers. Record to species level where confident.

### The Cost of Implementing the Plan

Pollinator plans can be implemented at minimal cost and with relatively limited effort by adopting a number of alterations to existing maintenance and planting policies. Most of the grassland management recommendations for example require significantly reduced mowing effort and this should result in an automatic reduction in the costs associated with mowing and strimming practices. Planting regimes may need to be adjusted (minimally in some cases) by making changes to the range of plants chosen for public spaces to a selection of equally colourful and attractive pollinator-friendly annual and perennial plants. Perennial plants tend to be much better sources of pollen and nectar for pollinators and if managed properly, a perennial mix will not need re-sowing.

Tree-planting (where required) should ideally be focussed on using native trees and shrubs and a number of useful contact details are provided in Appendix 1. Local plant suppliers should be informed of the new requirements associated with the pollinator plan (many garden centres and landscape

professionals are already aware of the need to stock pollinator-friendly flowers, shrubs and trees) but again, it is always best practice to plant native trees and shrubs of Irish provenance wherever possible.

A number of grants are available for some of the measures particularly in relation to native tree planting and these include the Public Woodland Scheme, Neighbourwood Scheme and the Native Woodland Scheme.

- The [Public Woodland Scheme](#) is a new initiative from the Department of Agriculture specifically designed to “encourage Public Bodies to establish new native woodlands on suitable bare land.” This scheme provides 100% funding for planting and maintenance for the first four years. Funding is also available for trails, signage and a woodland playground.
- The [Neighbourwood Scheme](#) run by the Department of Agriculture, Food and the Marine provides up to 85% funding for the establishment of new woodland, the enhancement of existing woodland and/or the provision of recreational facilities in woodland sites of between 0.1 ha to a maximum area of 12 ha.
- The [Native Woodland Scheme](#) is designed to protect and expand native woodland in Ireland. Grants are available for the conservation of existing woodland and the establishment of new woodland.

### **The Importance of Choosing Native Trees and Shrubs of Irish Provenance**

Many species of pollinating insects depend on native trees and shrubs for nectar and pollen sources particularly in spring (especially bees and hoverflies). Native trees and shrubs are also extremely important for the larval stage of many of our moth and butterfly species. Native trees and shrubs have adapted to Irish conditions and so too have many of our insects and birds. A Hawthorn tree imported from continental Europe for example may come into flower a number of weeks later than a Hawthorn of Irish provenance. Many Irish insects (and some bird species e.g. Blue Tit) time their breeding cycles to coincide with the period when native trees and shrubs come into flower and leaf. Any alteration to these established natural cycles could potentially have negative impacts on the breeding cycles of at least some native species. Imported trees also carry the risk of disease introduction (Ash Dieback, currently spreading throughout the country resulted from imported Ash) and invasive species such as the Oak Processionary Moth (which devastates oak trees) has recently been recorded in Ireland and may well have arrived on imported oak trees.

### **Yellow Rattle and its Biodiversity Significance**

Yellow Rattle is a native annual species that was formerly widespread and common in Ireland. It still occurs widely but is now largely confined to rough grassland areas and meadows. Yellow Rattle is favoured by many pollinators but its most significant value relates to its ability to improve conditions for wildflowers by parasitizing the roots of grasses. Grasses often out-compete wildflowers, especially in the first few years of establishment when nutrient levels are still relatively high. Most wildflower species prefer low nutrient levels in the soil and this is why it is very important to remove cuttings after mowing and never apply fertilisers to the meadow. Yellow Rattle is perhaps the single most important species in many wildflower meadows and should be considered for use in any single cut and lift grassland site.



## Dealing with Invasive Species

Invasive plant species are mostly plants that were originally introduced for a specific purpose, usually ornamental. Many introduced plant species do not spread and therefore do not pose a threat to our natural flora. A number of introduced species however have adapted to Irish conditions and several of these have become highly invasive and pose a threat to large areas of the Irish landscape. Invasive species generally have no natural enemies and often thrive in Ireland's mild and moist climate. *Rhododendron ponticum* is one of the best known invasive plant species and it now poses a serious threat to large areas of native woodland and other habitats in Ireland. Several invasive species have been encountered during survey work for the current pollinator plans. Japanese Knotweed and especially Winter Heliotrope appear to be widespread in many towns.

Japanese Knotweed is a highly invasive plant that can impede water flow by obstructing waterways. It can also damage built structures and it out-competes native flora. Japanese Knotweed is difficult to eradicate and usually needs specialist treatment. It is very important that the plant is not disturbed prior to treatment as it can regenerate from rhizome fragments and stem sections.

Winter Heliotrope has been the most frequently encountered invasive species and it can dominate large areas by out-competing native flora. Winter Heliotrope was ironically introduced as a winter food plant for bees. It can be controlled by using an application of a glyphosate-based herbicide after flowering in February to March or spraying in midsummer or later but before the foliage begins to die back. Repeated treatments may be necessary over a number of years.

## Wildflower Seeds

It is very important to ensure that when creating a wildflower meadow it is always best to allow nature take its course for the first few years. Given the correct management many species will colonise naturally. Wildflower seed mixes are not necessary at most sites but if results continue to be slow (in terms of species variety) it is vitally important that only locally sourced native wildflower seeds (of Irish provenance) are used. Garden plants should only be planted in designated flower beds and should never be introduced to natural habitats such as wildflower meadows.

This plan only relates to public lands managed by Cork County Council. Advice can of course be given to individuals, resident associations and private companies but all advice should be based on the measures recommended in the All-Ireland Pollinator Plan (and strictly adhered to in this plan).

## References

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## Useful Links

[All-Ireland Pollinator Plan](#)

[Bumblebee Conservation Trust](#)

[Councils: actions to help pollinators](#)

[Communities: actions to help pollinators](#)

[Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads. Transport Infrastructure Ireland \(formerly National Roads Authority\)](#)

## Appendix 1

Suggested pollinator-friendly flowers and shrubs that could be planted in a flowerbed or (in some cases) flower pots/boxes based on their suitability for bumblebees (long and short-tongued), solitary bees, hoverflies and butterflies for a flowerbed. A variety of plants have been chosen to ensure seasonal availability of pollen and nectar. A wider range of plants is available on the All-Ireland Pollinator Plan website [here](#).

English Name	Latin Name	Flowering	Native (N) or Non-Native (A)	Perennial Biennial Annual Tree or Shrub	Bumblebee Long-tongued	Bumblebee Short-tongued	Solitary Bees	Hoverflies	Butterflies
Crocus	Crocus species	Feb-Mar	A	P					
Arabis (Rock-cress)	Arabis alpina	Mar-May	A	P					
Grape Hyacinth	Muscari species	Mar-May	N/A	P					
Aubretia	Aubretia deltoidea	Apr-May	A	P					
Barberry	Berberis darwinii	Apr-May	A	P					
Borage	Borago officinalis	Apr-Oct	A	A					
Honesty	Lunaria annua	Apr-Jun	A	B					
Meadow-foam	Limnanthes douglasii	Apr-Sep	A	A					
Phacelia	Phacelia tanacetifolia	Apr-Dec	A	A					
Rosemary	Rosmarinus officinalis	Apr-Jun	A	Shrub					
Wallflower	Erysimum species	Apr-Jun	A	P					
Catmint	Nepeta species	May-Sep	A	P					
Hebe	Hebe species	May-July	A	Shrub					
Lily-of-the-valley	Convallaria majalis	May-Jun	A	P					
Lupin	Lupinus species	May-July	A	A/P					

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English Name	Latin Name	Flowering	Native (N) or Non-Native (A)	Perennial Biennial Annual Tree or Shrub	Bumblebee Long-tongued	Bumblebee Short-tongued	Solitary Bees	Hoverflies	Butterflies
Mignonette	Reseda odorata	May-Sep	A	A/B					
Mustard, White	Sinapsis alba	May-Sep	A	A					
Thyme	Thymus species	May-Aug	N/A	Shrub					
Allium (Garden)	Allium giganteum	June-Aug	A	P					
Anchusa	Anchusa azurea	June-Sep	A	P					
Anise hyssop	Agastache foeniculum	June-Oct	A	P					
Arnica	Arnica montana	June-Aug	A	P					
Bellflower	Campanula species	June-Sep	A	P					
Chicory	Chicorium intybus	June-Oct	A	P					
Gaillardia	Gaillardia species	June-Sep	A	A/P					
Hound's Tongue	Cynoglossum species	June-Aug	A	A/P					
Hyssop	Hyssopus officinalis	June-Oct	A	Shrub					
Jacob's Ladder	Polemonium caeruleum	June-Aug	A	P					
Lavender	Lavandula angustifolia	June-Aug	A	Shrub					
Lucerne	Medicago sativa	June-July	A	P					
Nemophila	Nemophila species	June-Oct	A	A					
Peony	Paeonia species	June-July	A	P					
Sage	Salvia officinalis	June-Aug	A	Shrub					
Salvia (May Night)	Salvia x sylvestris	June-Sep	A	P					
Sneezeweed	Helenium species	June-Oct	A	P					

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English Name	Latin Name	Flowering	Native (N) or Non-Native (A)	Perennial Biennial Annual Tree or Shrub	Bumblebee Long-tongued	Bumblebee Short-tongued	Solitary Bees	Hoverflies	Butterflies
Viper's bugloss	Echium vulgare	June-July	N/A	B					
Aster	Aster species	July-Oct	A	P					
Basil	Ocimum species	July-Sep	A	A/P					
Coneflower	Rudbeckia species	July-Oct	A	A/P					
Dahlia	Dahlia species	July-Sep	A	P					
Heuchera	Heuchera species	July-Sep	A	P					
Nasturtium	Tropaeolum majus	July-Sep	A	A					
Snapdragon	Antirrhinum majus	July-Sep	A	P					
Verbena	Verbena species	July-Nov	A	P					

## Appendix 2

Native or long-established pollinator-friendly flowers and shrubs that are highly beneficial to pollinators (especially bees).

English Name	Latin Name	Flowering	Native (N) or Non-Native (A)	Perennial Biennial Annual Tree or Shrub	Bumblebee Long-tongued	Bumblebee Short-tongued	Solitary Bees	Hoverflies	Butterflies
Primrose	<i>Primula vulgaris</i>	Dec-May	N	P					
Blackthorn	<i>Prunus spinosa</i>	Feb-May	N	Tree					
Gorse	<i>Ulex europaeus</i>	Feb-June	N	Shrub					
Marsh Marigold	<i>Catha palustris</i>	Feb-June	N	P					
Willow species	<i>Salix species</i>	Feb-May	N/A	Tree					
Butterbur	<i>Petasites hybridus</i>	Mar-May	N	P					
Cherry (Wild)	<i>Prunus avium</i>	Mar-May	N	Tree					
Coltsfoot	<i>Tussilago farfara</i>	Mar-Apr	N	P					
Comfrey (Common)	<i>Symphytum officinale</i>	Mar-June	N	P					
Dandelion	<i>Taraxacum officinale</i>	Mar-Oct	N	P					
Red Dead-nettle	<i>Lamium purpureum</i>	Mar-Oct	N	A					
Veronica species	<i>Veronica species</i>	Mar-Sep	N	A/P					
Bilberry	<i>Vaccinium myrtillus</i>	Apr-June	N	P					
Bluebell	<i>Hyacinthoides non-scripta</i>	Apr-June	N	P					
Charlock	<i>Sinapsis arvensis</i>	Apr-July	N	A					
Crab Apple	<i>Malus Sylvestris</i>	Apr-May	N	Tree					
Cuckoo flower	<i>Cardamine pratensis</i>	Apr-June	N	P					
Forget-me-nots	<i>Myosotis species</i>	Apr-Sep	N	A/P					
Bird Cherry	<i>Prunus Padus</i>	May-June	N	Tree					
Blackberry	<i>Rubus Fruticosus</i>	May-Sep	N	P					
Broom	<i>Cytisus scoparius</i>	May-June	N	P					
Buckthorn	<i>Rhamnus cathartica</i>	May	N	P					

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English Name	Latin Name	Flowering	Native (N) or Non-Native (A)	Perennial Biennial Annual Tree or Shrub	Bumblebee Long-tongued	Bumblebee Short-tongued	Solitary Bees	Hoverflies	Butterflies
Bugle	Ajuga reptans	May-July	N	P					
Cranesbill	Cranesbill species	May-Sep	N	P					
Hawkweed	Hieracium species	May-Nov	N	P					
Hawthorn	Crataegus monogyna	May-June	N	Tree					
Holly	Ilex aquifolium	May-June	N	Tree					
Mint species	Mentha species	May-Oct	N/A	P					
Poppy species	Papaver species	May-Oct	N/A	A/P					
St John's wort	Hypericum species	May-Aug	N	P					
Red Clover	Trifolium pratense	May-Sep	N	P					
Thrift	Armeria maritima	May-July	N	P					
Vetch species	Vicia species	May-Sep	N	A/P					
Yellow Rattle	Rhinanthus minor	May-Aug	N	P					
Agrimony	Agrimonia eupatoria	June-July	N	P					
Autumn Hawkbit	S. autumnalis	June-Oct	N	P					
Bird's-foot trefoil	Lotus corniculatus	June-Sep	N	P					
Carrot, Wild	Daucus carota	June-Aug	N	B					
Catsear	Hypochaeris radicata	June-Sep	N	P					
Figwort species	Scrophularia species	June-Sep	N	P					
Foxglove	Digitalis purpurea	June-Sep	N	B/P					
Heather, Bell	Erica cinerea	June-Oct	N	Shrub					
Heath cross-leaved	Erica tetralix	June-Sep	N	Shrub					
Knapweed	Centaurea nigra	June-Sep	N	P					
Hogweed	Heracleum sphondylium	June-Sep	N	B/P					
Mallow species	Malva species	June-Sep	N/A	P/Shrub					
Meadowsweet	Filipendula ulmaria	June-Aug	N	P					

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English Name	Latin Name	Flowering	Native (N) or Non-Native (A)	Perennial Biennial Annual Tree or Shrub	Bumblebee Long-tongued	Bumblebee Short-tongued	Solitary Bees	Hoverflies	Butterflies
Mullein	Verbascum species	June-Aug	N/A	B					
Oxeye Daisy	Leucanthemum vulgare	June-Aug	N	P					
Purple Loosestrife	Lythrum salicaria	June-Aug	N	P					
Radish, Wild	Raphanus species	June-July	A	A/P					
Ragwort	Senecio jacobea	June-Oct	N	B/P					
Raspberry	Rubus idaeus	June-Aug	N	B/P					
Red Bartsia	Odontites vernus	June-Sep	N	A					
Rose species	Rosa species	June-July	N/A	Shrub					
White Clover	Trifolium repens	June-Sep	N	P					
Fleabane	Pulicaria dysenterica	July-Sep	N	P					
Goldenrod	Solidago virgaurea	July-Oct	N	P					
Hemp-nettle	Galeopsis tetrahit	July-Sep	N	A					
Nipplewort	Lapsana communis	July-Oct	N	A/P					
Rosebay Willowherb	Chamerion angustifolium	July-Sep	N	P					
Scabious species	Scabiosa, Knautia, Succia	July-Aug	N	P					
Woundworts	Stachys species	July-Sep	N	A/P					
Stonecrop	Sedum species	July-Sep	N	P					
Teasel	Dipsacus species	July-Aug	N/A	B					
Thistle species	Cirsium & Carduus	July-Sep	N	A/P					
Wood sage	Teucrium scorodonia	July-Aug	N	P					
Heather (Ling)	Calluna vulgaris	Aug-Sep	N	Shrub					
Ivy	Hedera helix	Sep-Nov	N	Climber					



