

# Celbridge

## Biodiversity Action Plan 2021-25



The European  
Agricultural Fund for  
Rural Development:  
Europe investing in  
rural areas



Tionscadal Éireann  
Project Ireland  
**2040**

LEADER is funded by the Irish Government through the Department of Rural and Community Development

Plan produced by:

Green Pine Consultants



Dr Fiona Mac Gowan, Consultant Ecologist & Botanist

## Contents

Acknowledgements & Contact Details .....	ii
Section 1: Introduction.....	1
Process to Produce This Plan.....	2
What is Biodiversity?.....	2
Section 2: Biodiversity in Our Area .....	3
Main Biodiversity Sites.....	4
Recent Progress.....	6
Wildlife of Kildare.....	7
Section 3: A Call to Action .....	8
Objective 1: Making Celbridge biodiversity friendly .....	9
Objective 2: Raising awareness of local biodiversity & how to protect it .....	14
Objective 3: Collecting evidence to track change & measure success.....	16
Objective 4: Build local capacity to manage & record biodiversity.....	17
Mapping the Actions.....	18
Section 4: Resources .....	19
Links to useful online resources.....	20
Potential project funders.....	21
Useful contacts & sources .....	22
Habitat Management Guidelines.....	24
Planting for Biodiversity .....	26
Invasive Alien Species.....	29
Equipment Checklist.....	30
Mood Board.....	32
Section 5: Results of Questionnaire .....	36

## Acknowledgements & Contact Details

This action plan was produced as part of the Kildare Community Biodiversity Project (14LDRKLD110901) which received grant aid from Kildare LCDC through the LEADER programme. This programme is financed by the Government of Ireland under the Rural Development Programme 2014-2020 and by the European Agricultural Fund for Rural Development.

The project represented a collaboration between the Rural Development Team in County Kildare LEADER Partnership CLG and the Heritage Section in Kildare County Council. The project launched in February 2020 and culminated in February 2021.

County Kildare LEADER Partnership CLG and Kildare County Council would like to thank members of the community for their involvement and engagement with the process to develop this action plan. We would also like to thank Celbridge Tidy Towns for nominating Celbridge to take part in the project when expressions of interest were initially sought and for their role in encouraging others in the community to get involved.

Finally, we would like to thank Brian Gaynor from Green Pine Consultants and consultant ecologist and botanist, Dr. Fiona MacGowan, for their commitment and dedication to the project and for sharing their expertise generously with the community. They liaised directly with communities, delivered a dedicated programme of training sessions, produced a very helpful series of newsletters, and brought this plan together.

We hope that the Biodiversity Action Plan will be beneficial in guiding local actions to promote and protect biodiversity in the coming years.

### **Getting Involved:**

If you wish to get involved with any of the actions outlined in this Plan, please contact either:

Celbridge Tidy Towns by Facebook: <https://www.facebook.com/celbridge.tidytowns/> or [www.celbridgetidytowns.com](http://www.celbridgetidytowns.com)

or

Kildare County Council Heritage Officer:

Phone: 045 980791

Fax: 045 980835

Email: [heritageofficer@kildarecoco.ie](mailto:heritageofficer@kildarecoco.ie)

Website: <http://www.kildare.ie/countycouncil/Heritage/index.html>

If you would like to apply for LEADER funding towards implementing some actions in the Plan, please email the LEADER team on [info@countykildarelp.ie](mailto:info@countykildarelp.ie) or call us on 045 895450.

You can also check out our website: <https://www.countykildarelp.ie/>

**Photographs:** Photos used in this Plan are courtesy of members of Celbridge Tidy Towns, Dr Fiona MacGowan, Suzanne Behan and Brian Gaynor.

# Section 1:

## Introduction

Celbridge (*Cill Droichid*) is a town situated on the River Liffey in County Kildare. It is 23 km (14 miles) west of Dublin, it is located at the intersection of the R403 and R405 regional roads and also equidistant from the Royal and Grand canals and main railway lines. Celbridge is the third largest town in County Kildare by population, with over 20,000 residents. The Irish name *Cill Droichid* means ‘the church by the bridge’ that relates to the Saint Mochua church in Tea Lane graveyard.

Celbridge grew up as a small village built along one bank of the river Liffey and up to around 1975 held a population of less than 2,000 people. At the time of producing this plan the population stands at around 22,000 people. Excluding the five main cities, Celbridge is the 16th largest town in the country as of the 2016 census.

Celbridge is steeped in history from its connections with Castletown House, Tea Lane graveyard, Famine Workhouse, mills, many notable houses, Celbridge Abbey, Arthur Guinness and Dean Swift just to name a few.

The town is well served with numerous sporting organisations, dance and drama groups, community and social groups.

Celbridge has traditionally done well in the national Tidy Towns competition and has been awarded five silver medals in a row up to 2019.

This Biodiversity Action Plan aims to guide the local community and stakeholders in their efforts to protect and restore some of this natural heritage and maximise the benefits that nature can provide for the people of Celbridge. The Plan is not intended to be a static document but rather to be regularly reviewed and updated over its life.

A healthy natural world is crucial to our way of life; it provides us with clean air & water, food, shelter, and much more!



# Process to Produce This Plan

At the end of 2019, Celbridge Tidy Towns submitted an Expression of Interest to be part of an upcoming initiative entitled the *Kildare Community Biodiversity Project*. The project was an initiative between County Kildare LEADER Partnership and the Heritage Officer in Kildare County Council. It was funded by the LEADER programme for 2014-2020. Green Pine Consultants and Dr. Fiona MacGowan were contracted to deliver the project. The team brought together qualifications in biology, ecology, botany, and landscape architecture, as well as skills in working with community groups.



The project kicked off in February 2020 with a launch night in Newbridge Town Hall. There were over 75 people in attendance from the ten communities that were selected to take part. The project involved recce visits to assess biodiversity in each community, as well as a series of free public training workshops, and the development of local Biodiversity Action Plans. Due to Covid 19 restrictions, the training sessions took place in September and October via Zoom Meetings. These were open to all stakeholders and members of the public with an interest in making their locality a better place for people and nature. During this process, the views of all participants were sought during the workshops and through a questionnaire. Several community groups attended the training sessions and their input was invaluable to the production of this Plan.

## What is Biodiversity?

Biodiversity refers to the variety and variability of all living things including plants, animals, microbes, fungi and people. It also includes the places where plants and animals live (known as habitats), the interactions among living things (the web of life) and their environment (ecology).

Biodiversity is all around us, everywhere and in our everyday life. It forms complex systems that sustain life on Earth. Each part of the system is important no matter how small or trivial it may seem to us. Think of it as a puzzle; having a biodiverse system allows us to see the full puzzle but when we start to remove different pieces, or species, the picture loses important parts.

We rely completely on biodiversity to provide us with the basic elements we need such as clean air and water, food, fuel, building products and medicines. We also rely on it for the many free 'services' such as nutrient recycling, pollination and water filtration etc. It is therefore vital that we make space for nature in our towns, villages and countryside for us to continue living full and healthy lives.

*"Biodiversity underpins the functioning of the ecosystems on which we depend for food and fresh water, health and recreation, and protection from natural disasters. Its loss also affects us culturally and spiritually. This may be more difficult to quantify, but is nonetheless integral to our wellbeing"*

*Ban Ki-moon, Secretary General of the United Nations*

# Section 2:

# Biodiversity in Our Area

Celbridge was originally built on the banks of the River Liffey but has now spread well beyond those banks as it is within commuting distance of Dublin city. With a proud, history stretching back centuries, the town features many beautiful treasures of Georgian and Victorian architecture with the wonderful Castletown House and Estate taking pride of place. The Castletown Estate gives a beautiful wooded backdrop to the north of the town. The Estate provides access to Celbridge residents to many different habitat types from wetland to woodland to a huge expanse of wildflower meadow each summer. Please note that further details on your local conservation sites can be found at:  
[www.npws.ie/protected-sites/](http://www.npws.ie/protected-sites/)

Celbridge has many sites of natural heritage interest including the grounds of Castletown House, the old stone walls and the River Liffey.



# Main Biodiversity Sites

There are numerous places of important biodiversity value in Celbridge. The following are some of the main ones in and around the town.

## Site of Biodiversity Interest



**Old Stone Walls and Buildings in Celbridge:** The historic stone walls and buildings in the town are rich in different species of wildflowers and ferns that are specially adapted to these conditions.

**Castletown House:** Situated at the end of an avenue extending from the main street. It is Ireland's original and largest Palladian country house. The grounds contain some of the best publicly accessible hay meadows in the country as well as mature woodland. The grounds also contain different ponds, streams and the mighty River Liffey which runs along the southern end of the estate.

**Celbridge Poor Law Union Burial Ground:** This is one of the most important heritage sites in the town. It was used during the Famine years as a burial site for some of the local people who perished during this period. The site was refurbished in recent years and the new grounds management includes the creation of wildflower meadows which conserves an increasingly rare part of our natural heritage. This habitat is vital in our national efforts to conserve our native pollinators. The site also has rows of Yew (*Taxus baccata*) trees which are an important part of the heritage of Irish cemeteries.



**Statue of the Virgin Mary:** This site forms a focal point at the end of Main Street. The flowerbeds to the front of the statue are highly decorative and visually appealing when in full bloom. Added to the visual quality of the planting, the planting mixes include several plants that are great for pollinators.

**Celbridge Abbey:** The grounds, which are at the opposite end of the main street to Castletown House, are home to many fine examples of mature trees. These act as an important habitat for many species of birds and other wildlife in the town. The extent of grassland within the grounds also offers the opportunity to create wildflower meadows which would further enhance the site for biodiversity.



## Site of Biodiversity Interest

**River Liffey:** This river is famous as the river of Dublin city but before that it rises in the Wicklow Mountains and meanders its way through much of the plains of Kildare. Although not given conservation status, the Liffey is a font of biodiversity especially as it winds through the heart of the urban landscape of Celbridge.

**Donadea Wood (pNHA 001391):** A jewel in north Kildare's crown, this forest hosts a wonderful variety of mature conifers and deciduous trees. The site is a proposed Natural Heritage Area (pNHA) which gives it protection under Irish law for its biodiversity value. It is a Coillte forest and therefore there is public access all year round so its biodiversity can be enjoyed by all.

**Ballynafagh Bog (SAC 000391):** A raised bog of international conservation value lying just 5km to the west of Clane, this bog is a Special Area of Conservation (SAC). This site features good examples of actively peat-forming bog sub-habitats along with cutover bog edged with scrub and birch and willow dominated woodland.



**Ballynafagh Lake (SAC 001387):** This SAC is a great example of an original man-made site turning into a site rich in biodiversity. The site was originally constructed as a reservoir for the Grand Canal and is still linked to the canal via the Blackwood Feeder. Over time the open water has filled in from the edges with a great mix of plant species followed by a wonderful variety of insects including beautiful Dragonflies, Damselflies and Ireland's only protected butterfly species the Marsh Fritillary. Birdlife is also great here and best of all, the site has a looped walk ensuring the public can also share in the wildlife wonders of the area.



**Grand Canal (pNHA 002104); Royal Canal (pNHA 002103):** Celbridge is in a great position being located midway between the Royal and Grand Canals. A jewel of a landscape feature to have on your doorstep, the canals really came into their own as a wonderful ecosystem service during the pandemic with lots of locals walking. They are protected as proposed Natural Heritage Areas for their habitats and species. According to the NPWS site synopses: 'The Grand Canal is a man-made waterway linking the River Liffey at Dublin with the Shannon at Shannon Harbour and the Barrow at Athy. The Grand Canal proposed Natural Heritage Area (pNHA) comprises the canal channel and the banks on either side of it. The canal system is made up of a number of branches - the Main Line from Dublin to the Shannon, the Barrow Line from Lowtown to Athy, the Edenderry Branch, the Naas and Corbally Branch and the Milltown Feeder. The Kilbeggan Branch is dry at present, but it is hoped to restore it in the near future. Water is fed into the summit level of the canal at Lowtown from Pollardstown Fen, itself a pNHA. A number of different habitats are found within the canal boundaries - hedgerow, tall herbs, calcareous grassland, reed fringe, open water, scrub and woodland.'

'The Royal Canal is a man-made waterway linking the River Liffey at Dublin to the River Shannon near Tarmonbarry. There is a branch line from Kilashee to Longford Town. The canal NHA comprises the central channel and the banks on either side of it. The main water supply is from Lough Owel (also an NHA) via a feeder channel into the canal at Mullingar. The ecological value of the canal lies more in the diversity of species it supports along its linear habitats than in the presence of rare species. It crosses through agricultural land and therefore provides a refuge for species threatened by modern farming methods.'

# Recent Progress

A lot of work has been carried out in recent years already to enhance the town's biodiversity. The following are some examples of these:

- Wildlife information boards have been installed at two key sites.
- Wildlife information boards were presented to the eight local schools.
- Castletown Demesne won the 2018 Green Flag Pollinator award.
- Bird boxes have been installed at various locations across the town to increase nesting habitat.
- A pilot scheme to manage grass mowing to support biodiversity was carried out.
- In December 2020, Celbridge GAA began planting new hedgerows along two of the boundaries within the grounds. In total, over 2,000 hedging plants were planted! This was one of the actions identified as part of the biodiversity training carried out during 2020. The project was delivered with the support of the charity 'Trees on the Land'.
- Pollinator friendly trees were planted at the Workhouse Graveyard.
- Ongoing litter removal events from all local waterways feeding into the Liffey river have been carried out.
- In autumn 2020, members of the local community took part in the Kildare Community Biodiversity Project. It involved three biodiversity training sessions (all online) and led to the production of this Action Plan.

Castletown Demesne won the 2018 Green Flag Pollinator award



Celbridge GAA planted 2,000 hedgerow plants in the 2020-21 tree planting season



# Wildlife of Kildare



# Section 3: A

## Call to

## Action

This is a shared plan of action for the town to build on the recent progress made to improve areas for biodiversity and to start developing other opportunities to maximise the town's full biodiversity potential. In doing so this will hopefully engage new people and groups in managing their local green space with biodiversity in mind. The plan has four main objectives, each with several targets and actions:

1. **Objective 1:** Making Celbridge wildlife friendly
2. **Objective 2:** Raising awareness of local wildlife and how to protect it.
3. **Objective 3:** Collecting evidence to track change and measure success.
4. **Objective 4:** Build local capacity to manage and record biodiversity.



**Did you know:** Irish pollinators are estimated to contribute €59 million annually to the Irish economy!

# Objective 1: Making Celbridge biodiversity friendly

All types of land can be used to increase the levels of biodiversity in the town including built features and green spaces. Each landowner whether public or private can also play their part in enhancing their lands for biodiversity.

Target 1.1 Make the town's public spaces more biodiversity friendly			
No.	Action	Who	When
1.1.1	<p>Consult with the OPW and Kildare County Council to explore the opportunity to work with all landowners and stakeholders of Castletown House and surrounding lands to enhance and increase visitor awareness of the biodiversity value of the estate:</p> <ul style="list-style-type: none"> <li>A. Plant semi-mature Oak (<i>Quercus robur</i>) to fill gaps along the visitor vehicular road entrance to the Estate.</li> <li>B. Plant native trees around the car park.</li> <li>C. Develop and implement a strategic plan for the control / eradication of Cherry Laurel within the Estate grounds and woodland.</li> <li>D. Continue to manage the fields in front of the House as hay meadows. Work with the Estate to deliver community wildflower seed harvesting for use in local meadows.</li> <li>E. Develop and implement a management plan for the wood and the Upper Pond.</li> </ul>	Celbridge Tidy Towns (CTT); Kildare County Council (KCC)	
1.1.2	Continue to manage the wildflower meadows in the Poor Law Union Burial Ground. Plan to plant rowan and crab trees along the back wall along with spring flowering	CTT	2021
1.1.3	<p>Explore the opportunity to further enhance the grounds of Tea Lane Graveyard for biodiversity:</p> <ul style="list-style-type: none"> <li>A. Manage sections of the grassland within the graveyard as a bulb and shortcut wildflower meadow.</li> <li>B. Plant the roadside flower bed with pollinator friendly planting @ 9-11 plants per m<sup>2</sup> at p9 pot size.</li> </ul>		
1.1.4	<p>Develop a themed pollinator / wildlife friendly waymarked trail along the River Liffey through Celbridge such as a 'Pollinator Blueway'. This would include the management of grass verges, roundabouts, planters and flowerbeds and larger public green spaces /parks along the route and the installation of waymarker information posts. Key sites along the route that could be considered as part of the initiative include:</p> <ul style="list-style-type: none"> <li>• The Mill, Celbridge Community Centre</li> <li>• Abbey Gardens and Playground</li> <li>• Riverview &amp; River Lawns, Abbey Farm</li> <li>• Temple Mills House</li> <li>• Main Street</li> </ul>	CTT & volunteers	2021/22
1.1.5	Continue to maintain the flower beds at the Statue of the Virgin Mary.	CTT	ongoing
1.1.6	<p>Explore the opportunity to enhance the grounds of the Celbridge Abbey Car Park for biodiversity:</p> <ul style="list-style-type: none"> <li>A. Manage the lawn space on the riverside as wildflower meadow, mowing the fringe along the car park.</li> <li>B. Replace selected shrub planting on the roadside with a pollinator friendly herbaceous border.</li> </ul>		Spring flowering bulbs planting 2020  Bluebells and other suitable

## Target 1.1 Make the town's public spaces more biodiversity friendly

No.	Action	Who	When
	C. Replace selected shrubs growing under the stand of mature pine trees (on the townside) and manage for native woodland ground flora. Plant native bluebell bulbs in this area. This work commenced in 2020 to clear some vegetation.		bulbs planting 2021  Grass mowing plan pending KCC cutting contract
<b>1.1.7</b>	Explore the opportunity to enhance biodiversity within Donaghcumper Cemetery including planting native climbers and hedgerows along the boundary walls.	CTT & KCC	
<b>1.1.8</b>	Use pollinator friendly planting in all containers and hanging baskets in the town.	CTT flowering sub committee	2021
<b>1.1.9</b>	<p>Create pollinator friendly flower beds at key / suitable traffic islands and roundabouts in the town. Examples include:</p> <ul style="list-style-type: none"> <li>• M4 Business Park roundabout - infill planting required</li> <li>• Roundabout at St Wolstan's Community School and Celbridge Athletic Club - replace shrub planting</li> </ul> <p>The flower bed at the R403 - Clane Rd/Shackleton Rd Junction is a good example of the visual and biodiversity benefits from these types of planting schemes.</p> <p>Long wall leading from St. Wolstan's to NKETS school - plant native climbers to soften view.</p>	CTT	Spring 2021
<b>1.1.10</b>	Incorporate natural play into the 2 playgrounds or surrounding green space at Willowbrook Park (see Action 1.1.13) and Abbey Park (see Action 1.1.10).	CTT; KCC Masterplan	
<b>1.1.11</b>	<p>Explore the opportunity to manage the wider grass verges on approach roads as wildflower meadows and for native tree / hedgerow planting.</p> <p>An example of where to potentially start is the:</p> <ul style="list-style-type: none"> <li>• R405 near the M4 Business Park - new native hedgerow with Oak trees along the field boundaries (roadside)</li> <li>• R449 - infill planting along the banks with native trees such as Oak, Birch, Hazel, etc. Manage the inner verges as wildflower meadow.</li> </ul>	Pending KCC feedback	
<b>1.1.12</b>	Develop and implement a masterplan for Willowbrook Park. This plan should follow best practice green infrastructure design principles and include the creation of community friendly biodiversity habitat (e.g. wildflower meadows, community woodland, pollinator friendly flowerbeds, etc.) and natural play.	CTT; KCC	2022
<b>1.1.13</b>	<p>Explore opportunities to enhance the grounds of The Mill - Celbridge Community Centre for people and biodiversity:</p> <ol style="list-style-type: none"> <li>A. Install Swift boxes on the community centre building (see Action 1.4.1)</li> <li>B. Plant the tubs with pollinator friendly plants (see Action 1.1.8)</li> <li>C. Redesign the car park area to make it a more people friendly space.</li> </ol>	CTT & volunteers; The Mill	2021
<b>1.1.14</b>	Carry out pollinator planting and native tree planting at Derrybeg Farm.	CTT & volunteers; Derrybeg Farm	2021

## Target 1.2 Make the town's private lands more biodiversity friendly

No.	Action	Who	When
<b>1.2.1</b>	Run a 'Free Garden Tree Giveaway' on a Saturday morning in Feb/March. Tree mix (whips only) to include: Rowan, Birch, Hazel and Wild Cherry.	CTT, KCC	2021-25 (Feb/March)
<b>1.2.2</b>	<p>Explore the opportunity to carry out the following habitat and visual enhancement works in residential estates in the town:</p> <ul style="list-style-type: none"> <li>● Plant native hedgerows or climbers against internal boundary concrete walls and along the front boundaries of residential estates in the town.</li> <li>● Manage sections of residential green spaces as wildflower meadows, either bulb, shortcut or hay meadows. For bulb meadows species such as Snowdrops, Bluebells, Crocus spp., Muscari, etc. can be planted.</li> <li>● Create pollinator friendly planting beds by renovating existing shrub / flower beds or creating new ones at suitable locations in estates. The management of these should be taken on by the local residents.</li> <li>● Plant copses of trees on residential green spaces and manage the grass underneath as bumblebee nesting habitat (left uncut). Plant bulbs and wildflowers into these areas to add colour and increase the biodiversity value.</li> <li>● Install bird and bat boxes at suitable locations.</li> <li>● Where possible create a wildlife pond. Secure with fencing if necessary.</li> </ul> <p>Target 1-2 residential estates each year of the Action Plan to work with (all actions should be agreed with the residents). These can then act as 'champions' within the town for other estates in subsequent years.</p>	Residents, CTT, KCC	2021-25
<b>1.2.3</b>	Explore the opportunities with the housing estates adjoining the Liffey (Abbey Farm) about enhancing the green spaces beside the river. This can include more tree planting and managing the grass as wildflower meadow.	CTT	Some work to enhance river area commencing in Oct 2020.
<b>1.2.4</b>	Replace the Leyland hedge in Elm Park with a native hedgerow mix and manage a strip to the front of the proposed new hedge as wildflower meadow by cutting and lifting 1-2 times per year.	CTT & volunteers	Commenced 2020
<b>1.2.5</b>	Explore the opportunity, with the residents of the Grove and surrounding housing estates, to develop and implement a masterplan for the larger green spaces. This plan should follow best practice green infrastructure design principles and include the creation of community friendly biodiversity habitat (e.g. wildflower meadows, community woodland, pollinator friendly flowerbeds, etc.) and natural play.	CTT & volunteers	2021
<b>1.2.6</b>	<p>Explore the opportunities to enhance the green infrastructure and biodiversity enhancement features in Celbridge Athletic Club:</p> <ol style="list-style-type: none"> <li>A. Plant a native hedgerow along the front boundary.</li> <li>B. Manage the grassland at the end of the grounds as a wildflower meadow / small native block of trees with a walking track.</li> </ol>	CTT & volunteers; Celbridge AC	Oct/Nov 2020 onwards - initial engagement made

## Target 1.2 Make the town's private lands more biodiversity friendly

No.	Action	Who	When
1.2.7	<p>Explore the opportunities to enhance the green infrastructure and biodiversity enhancement features in Celbridge GAA:</p> <ul style="list-style-type: none"> <li>A. Plant a native hedgerow along the boundary of the pitches beside the Tennis Club.</li> <li>B. Manage the grassland under the powerlines are a wildflower meadow with a walking track (mown grass or hardstanding)</li> <li>C. Augment hedgerow and boundary tree planting to allow for potential impacts of Ash Dieback.</li> <li>D. Plant a beech hedgerow along the fence boundary with St Patrick's National School.</li> <li>E. Install Swift boxes on the club house</li> <li>F. Develop a walking track around the perimeter of the grounds that includes information posts about biodiversity</li> <li>G. Replace the Laurel and Leylandii hedges with native or beech hedging.</li> </ul>	CTT & volunteers; Celbridge GAA	Trees 2020  Interested in other initiatives in 2021 and going forward
1.2.8	<p>Explore the opportunities to enhance the green infrastructure and biodiversity enhancement features in Celbridge Town AFC: and Ballyoulster FA</p> <ul style="list-style-type: none"> <li>A. Plant a native hedgerow around the perimeter of the grounds where there are gaps in existing hedges or where there is no planting.</li> <li>B. Plant blocks of native trees on unused corners of the grounds such as at the northern end.</li> <li>C. Develop a walking track around the perimeter of the grounds that includes information posts about biodiversity</li> </ul>	CTT & volunteers; Celbridge AFC; Ballyoulster FA	2020-2022
1.2.9	Explore the opportunity to enhance the outdoor spaces of the St John of God campus that will maximise the social, health, economic and biodiversity benefits for residents, staff and visitors.	CTT & volunteers	2021
1.2.10	Explore the opportunity to enhance the outdoor space within Grove House to maximise the social, health, economic and biodiversity benefits for hospital residents, staff and visitors.	To be explored	
1.2.11	Explore opportunities with local businesses to enhance their premises for biodiversity and maximise the benefits for their own business and property needs.	CTT & volunteers	2021
1.2.12	Explore the opportunity to work with Celbridge Elm Hall Golf Club to enhance their grounds for biodiversity. Introduce them to the All-Ireland Pollinator Plan specifically for Golf Clubs (available at <a href="http://www.pollinators.ie/resources">www.pollinators.ie/resources</a> )	CTT	2021
1.2.13	<p>Maximise the potential of National School campuses for outdoor learning and biodiversity including the following:</p> <ul style="list-style-type: none"> <li>• Develop dedicated wildlife gardens / outdoor learning classroom spaces around the grounds.</li> <li>• Look at Sensory beds in school grounds for people with learning difficulties and ADHD</li> <li>• Manage sections of lawn space as wildflower meadows including spring bulbs.</li> <li>• Plant native trees and hedgerows along the boundaries and where space allows.</li> <li>• Install habitat boxes such as Swift boxes at suitable locations on the buildings.</li> <li>• Include signage, made by school pupils as classroom activities.</li> </ul>	CTT & volunteers; <a href="#">Scoil na Mainstreach</a> ; Scoil Mucha/ Aghards; Scoil Brid North Kildare Primrose Hill	2020-21 for tree planting will take trees.  Spring 2021  2021-22

## Target 1.2 Make the town's private lands more biodiversity friendly

No.	Action	Who	When
<b>1.2.14</b>	<p>Maximise the potential of Secondary School campuses for outdoor learning and biodiversity including the following:</p> <ul style="list-style-type: none"> <li>• Develop dedicated wildlife gardens / outdoor learning classroom spaces around the grounds.</li> <li>• Manage sections of lawn space as wildflower meadows including spring bulbs.</li> <li>• Plant native trees and hedgerows along the boundaries and where space allows.</li> <li>• Install habitat boxes such as Swift boxes at suitable locations on the buildings.</li> <li>• Include signage, made by school pupils as classroom activities.</li> </ul>	CTT & volunteers	2021

## Target 1.3 Make the town's surrounding lands more biodiversity friendly

No.	Action	Who	When
<b>1.3.1</b>	Participate in a Himalayan Balsam control project for the River Liffey catchment area. The study should include other Invasive Species recorded.	KCC to lead, CTT with neighbouring towns, & other stakeholders	2021-25
<b>1.3.2</b>	Carry out a hedgerow resilience project by augmenting existing hedgerows in the surrounding landscape with new trees such as Oak, Wild Cherry, etc. This will future-proof hedgerows against the potential impacts of Ash Dieback.	CTT and Kildare Heritage Office	2021-25

## Target 1.4 Deliver species-specific conservation projects

No.	Action	Who	When
<b>1.4.1</b>	Continue to develop and promote the town as a 'Swift Town' by creating nesting opportunities (Swift boxes on existing buildings and bricks for new developments including new residential and industrial sites), raising awareness locally of the issues facing the species and monitoring existing and new nest box sites. This is already being delivered in partnership with Wild Kildare who require local people to help monitor population numbers.	CTT & volunteers, local eNGOs, KCC	2021-23
<b>1.4.2</b>	Run a hedgehog conservation project by developing hedgehog corridors throughout the town, focusing on residential gardens, and raising awareness of it and other urban wildlife.	CTT & volunteers, Selected eNGOs, Residents, KCC.	2021/22
<b>1.4.3</b>	Carry out a Brimstone butterfly project: plant their larval food plant the native Buckthorn bush and run a promotional event about the species / project. Source native Purging buckthorn ( <i>Rhamnus cathartica</i> ). May be suitable ground along river banks.	CTT & volunteers	2021-25

# Objective 2: Raising awareness of local biodiversity & how to protect it

It is important to raise awareness so that the public, community & residential groups, and businesses know how to help our wildlife.

## Target 2.1 Increase the number of people within the community who are aware of their local biodiversity and who understand the need to conserve it

No.	Action	Who	When
2.1.1	Install a series of interpretation posts at selected locations along the Liffey as part of the proposed 'Pollinator Blueway' (see Action 1.1.4). These should focus on pollinators but also include information on other wildlife.	CTT & volunteers	2021
2.1.2	Explore the potential for a series of urban looped walks around the town connecting various sites of natural, built and cultural heritage. Any trail should include interpretation of local biodiversity. Erect a central sign about the Heritage trail.		
2.1.3	<p>Run a minimum of 2 wildlife related events (e.g. walks, talks, workshops) each year. This should use the results of the questionnaire in the back of this Plan as a guide for topics of interest and how to deliver them during Covid 19. Suggested events could include:</p> <ul style="list-style-type: none"> <li>• Wildflower seed collecting at the meadows in Castletown House</li> <li>• Wildlife walk of Castletown House</li> <li>• A wildlife walk exploring the biodiversity of the old town walls</li> <li>• A talk about local woodlands including Killadoon Woodland.</li> </ul> <p>These can be delivered as Celbridge only events or in partnership with other neighboring communities where appropriate.</p>	CTT & volunteers	
2.1.4	Use vacant shop front windows as noticeboards on Main Street to display / interpret the local natural, built and cultural heritage of Celbridge.		
2.1.5	Continue to use local social media to raise awareness of local biodiversity and conservation issues.	CTT	Ongoing
2.1.6	Explore the opportunity to run a public open day in the grounds of Hewlett Packard Enterprises to explore the meadows and woodland habitat created.		
2.1.7	Encourage the GAA club to look into the GAA's 'Green Club' project.		
2.1.8	Support the great work being delivered by the ACRE Project.		

## Target 2.2 Support education opportunities in schools at all levels

No.	Action	Who	When
2.2.1	Ensure the local schools have copies of the All-Ireland Pollinator Plan guides for schools and the Junior All-Ireland Pollinator Plan and are aware of all the resources available at <a href="http://www.pollinators.ie/resources">www.pollinators.ie/resources</a>	CTT & volunteers	2021
2.2.2	Support the local schools with wildlife events / activities. Where possible this should utilise the different areas of habitat on the campus. This can be a wildlife walk, talk, or workshop.	CTT & volunteers	2021-25
2.2.3	Install signage to maximise outdoor learning about the different areas of biodiversity habitat on the school grounds. These can be created by the school pupils as part of art class activities.	CTT & volunteers	2021-23

**Target 2.3 Provide clear information to different sectors within the community on how they can take actions to enhance their spaces for biodiversity**

No.	Action	Who	When
2.3.1	Run a half day weed control workshop to raise awareness of the harmful effects of herbicide use on human health and for biodiversity to different landowners around the town. This workshop should also cover alternative weed control solutions where weed control is necessary and encourage a change of mindset in other situations where ‘weeds’ could be allowed to grow. Consider organising this event in partnership with other local communities.	KCC, CTT & volunteers	
2.3.2	Participate in, and if necessary, help organise, a series of county-wide farm talks (min. of 2 per year) that will positively enhance biodiversity in the landscape e.g. utilizing farm green infrastructure for the farm business, farm woodland grants, etc. Communicate the details of each event with the local farming community.	Collective of Co. Kildare groups with Kildare Heritage Office	2021-25
2.3.3	Develop an Estate Mentoring Scheme for residential committees on how they can enhance biodiversity in their estates. This would be similar to the scheme run by Ennis Tidy Towns. <a href="http://ennistidytowns.com/project/estate-mentoring-programme/">(<a href="http://ennistidytowns.com/project/estate-mentoring-programme/">http://ennistidytowns.com/project/estate-mentoring-programme/</a>)</a> .  Develop a list of ‘champions’ from residential estates who have delivered actions that improve their estates for residents and biodiversity who can support other interested residential groups.	CTT & volunteers	
2.3.4	Ensure the different sectors within the community have copies of the relevant All-Ireland Pollinator Plan resource guides e.g. sporting organisations, faith communities, etc.		
2.3.5	Post links to the All-Ireland Pollinator Plan guides on local social media each year.	CTT	
2.3.6	Implement a policy of no Invasive plant species in new planting schemes in the town.	CTT & volunteers	
2.3.7	Engage with Kildare County Council to ensure that all new developments in the town incorporate best practice green infrastructure design principles (e.g. use of bioswales) and biodiversity features (e.g. Swift bricks, see Action 1.4.1). Make submission to the Celbridge Area Plan and County Development Plan when it’s up for review.  Green infrastructure design should ideally be done at the planning and design stage. Where plans have developed beyond planning, engage with the developers about the benefits that green infrastructure design can deliver for them.	CTT & volunteers	

# Objective 3: Collecting evidence to track change & measure success

To ensure that our actions are making a difference we need to gather a baseline of data on our wildlife and then measure our success or lack thereof against this. This data can be gathered through regular surveys and Citizen Science efforts. This plan sets out the following targets to achieve this:

<b>Target 3.1 Build a baseline of data on local biodiversity and track changes</b>			
No.	Action	Who	When
3.1.1	Monitor the Swift population numbers in the town annually and the uptake of newly installed Swift boxes. See <a href="http://www.swiftconservation.ie">www.swiftconservation.ie</a> for more information.	CTT & volunteers with the Wild Kildare	ongoing
3.1.2	Facilitate Wild Kildare's 'Moth Atlas' for the county		
3.1.3	Develop at least 2 bumblebee transects in the town and submit records to the National Biodiversity Data Centre (NBDC)	CTT & volunteers	
3.1.4	Develop at least 2 butterfly transects in the town and submit records to the NBDC	CTT & volunteers	
3.1.5	Develop a green infrastructure map of the town that identifies the various green spaces and biodiversity features within the town. This will identify existing ecological corridors, and any gaps, that will help guide future planning and development. Liaise with Maynooth University Biodiversity Group on this. The findings of the habitat mapping should be incorporated into the Local Area Plan.	CTT & volunteers	
3.1.6	Carry out a tree survey of the town.	CTT, KCC	
3.1.7	Record all biodiversity records onto the NBDC. Encourage other members of the community to do likewise.		
3.1.8	Record and map all biodiversity actions delivered at: <a href="https://pollinators.biodiversityireland.ie/">https://pollinators.biodiversityireland.ie/</a>		
3.1.9	Carry out a detailed survey of Willowbrook Park with Maynooth University.	CTT & volunteers, KCC	

<b>Target 3.2 Measure progress of this Plan on a regular basis</b>			
No.	Action	Who	When
3.2.1	Set up a sub-committee that will be responsible for carrying out an annual review and steering the delivery of this BAP. This should include representatives of different sectors within the community.		2021
3.2.2	The sub-committee shall carry out an annual review of the Action Plan.		2021, 2022 & 2024
3.2.3	Carry out a more detailed mid-term review of the Action Plan.		2023
3.2.4	Carry out a full detailed review of the Action Plan in the final year.		Summer 2025
3.2.5	Plan for the updating / renewing of a subsequent 5-year plan to run from 2026-2030.		2025

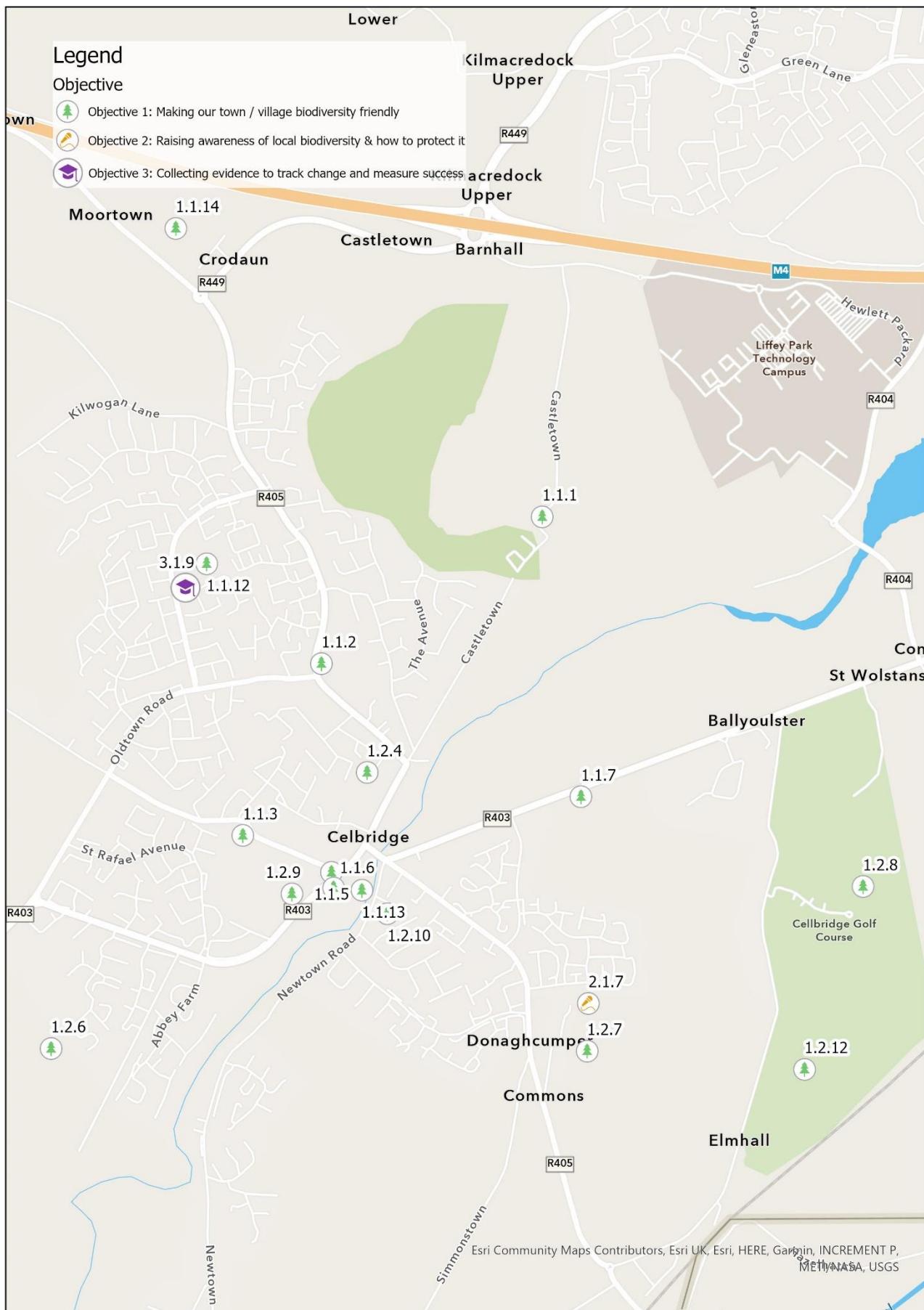
# Objective 4: Build local capacity to manage & record biodiversity

The following targets and actions aim to ensure that we have the resources and capacity to carry out the actions identified in Objectives 1-3.

<b>Target 4.1 Build the capacity within the community to manage and record biodiversity</b>			
No.	Action	Who	When
4.1.1	Identify all wildlife groups active in Celbridge and make contact and offer help / partner on local projects.		
4.1.2	Identify sources of native wildflowers (this should include Yellow Rattle) as places for community seed collections - this can include other donor sources in the county & country (i.e. certified native seed or tree suppliers)		
4.1.3	Create an email list of local volunteers who can be called upon for practical conservation volunteering events throughout the year such as management of wildflower meadows, invasive species removal, tree planting, etc. (ensure GDPR guidelines are taken)		
4.1.4	Hold an event to communicate this BAP to the local community.		
4.1.5	Participate in a meeting of all 10 Kildare 2020 BAP applicants to discuss opportunities for collaboration to deliver selected projects outlined in this Plan.		
4.1.6	Explore the potential of joining the River Liffey & Basin Trust and advocate for the local area plan to incorporate strong policies that will achieve a greater setback of future development along the River Liffey.		

<b>Target 4.2 Build up local resources of materials and equipment to manage and record biodiversity</b>			
No.	Action	Who	When
4.2.1	Install a community polytunnel at a secure location. This will be used to grow all the town's flowers and plants for use in new community planting schemes. This will create the opportunity to raise funds by selling native plants and pollinator friendly plants.		
4.2.2	Source meadow maintenance equipment for community use. Options available are to 1) purchase equipment, potentially in partnership with other neighbouring towns and villages; 2) work with the private sector to build up their capacity for managing meadows (hire companies and / or local landscape contractors), or 3) to work with KCC for them to build internal capacity / resources.  If working with other neighbouring groups then an annual schedule for its use, maintenance /servicing plans, insurance & other costs should be agreed in advance.		
4.2.3	Build-up stock of biodiversity educational resources. Liaise with the local library.		
4.2.4	Build up a stock of biodiversity recording equipment such as bat detectors, moth traps, etc.		

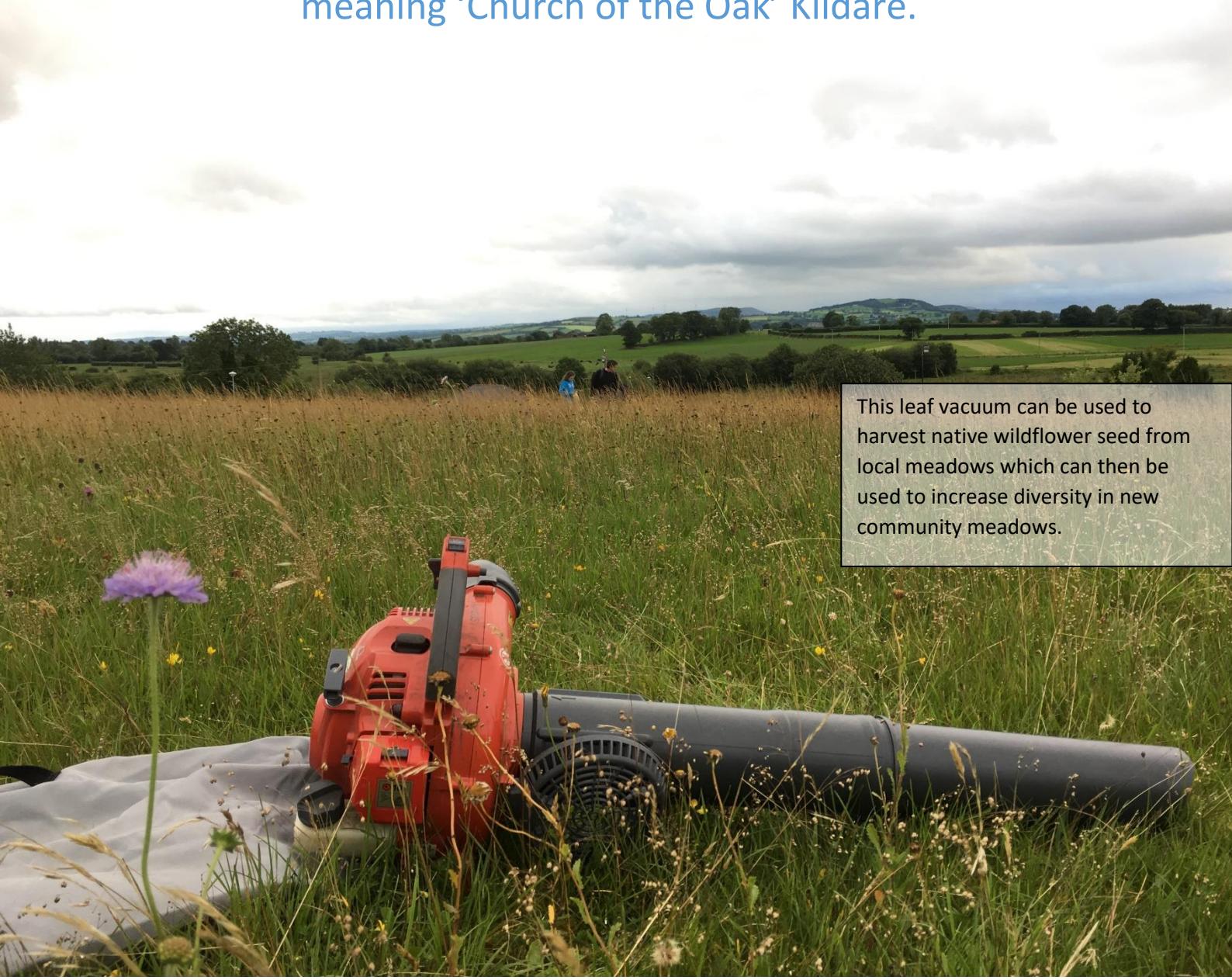
# Mapping the Actions



# Section 4: Resources

It is not necessary to re-invent the wheel in order to deliver this plan. There are numerous people, organisations, publications and online resources available to achieve the best possible outcomes. Some of these are outlined in this section, although this is not intended to be an exhaustive list. It will also be important that as new information becomes available that this should be considered and actions delivered or adjusted accordingly.

**Did you know:** Of the 62,000 townland names in Ireland, 13,000 have reference to trees and 1,600 have some derivation of 'dair' the Irish word for oak. For example, Cill Dara (Kildare) meaning 'Church of the Oak' Kildare.



This leaf vacuum can be used to harvest native wildflower seed from local meadows which can then be used to increase diversity in new community meadows.

# Links to useful online resources

The following is a list of useful links to guides on a range of common biodiversity subjects.

Subject	Link(s)
Bats	<ul style="list-style-type: none"> <li>• <a href="https://www.batconservationireland.org/">https://www.batconservationireland.org/</a></li> <li>• <a href="https://kildarebatgroup.wordpress.com/">https://kildarebatgroup.wordpress.com/</a></li> </ul>
Birdwatching	<ul style="list-style-type: none"> <li>• <a href="http://www.birdwatchkildare.com/?page_id=23">http://www.birdwatchkildare.com/?page_id=23</a></li> <li>• <a href="https://birdwatchireland.ie/irelands-birds-birdwatch-ireland/">https://birdwatchireland.ie/irelands-birds-birdwatch-ireland/</a></li> <li>• <a href="http://www.irishbirding.com">www.irishbirding.com</a></li> </ul>
Children's Biodiversity Activities	<ul style="list-style-type: none"> <li>• <a href="https://birdwatchireland.ie/our-work/fun-learning/for-kids/">https://birdwatchireland.ie/our-work/fun-learning/for-kids/</a></li> <li>• <a href="https://www.woodlandtrust.org.uk/blog/2020/03/kids-nature-activities-self-isolation/">https://www.woodlandtrust.org.uk/blog/2020/03/kids-nature-activities-self-isolation/</a></li> <li>• <a href="https://www.rspb.org.uk/fun-and-learning/">https://www.rspb.org.uk/fun-and-learning/</a></li> </ul>
General Biodiversity Issues	<ul style="list-style-type: none"> <li>• <a href="https://www.biodiversityireland.ie/">https://www.biodiversityireland.ie/</a></li> <li>• <a href="http://www.npws.ie">www.npws.ie</a></li> </ul>
Habitat Boxes	<ul style="list-style-type: none"> <li>• <a href="https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Pollinator-How-to-Guide-1-ALT_FINAL.pdf">https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Pollinator-How-to-Guide-1-ALT_FINAL.pdf</a></li> <li>• <a href="https://birdwatchireland.ie/app/uploads/2019/09/Nestboxes-factsheet.pdf">https://birdwatchireland.ie/app/uploads/2019/09/Nestboxes-factsheet.pdf</a></li> <li>• <a href="https://www.batconservationireland.org/wp-content/uploads/2015/05/BCIrelandGuidelines_BatBoxes.pdf">https://www.batconservationireland.org/wp-content/uploads/2015/05/BCIrelandGuidelines_BatBoxes.pdf</a></li> </ul>
Hedgerows	<ul style="list-style-type: none"> <li>• <a href="https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Pollinator-How-to-Guide-3-FINAL-1.pdf">https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Pollinator-How-to-Guide-3-FINAL-1.pdf</a></li> <li>• <a href="https://www.heritagecouncil.ie/content/files/conserving_hedgerows_2mb.pdf">https://www.heritagecouncil.ie/content/files/conserving_hedgerows_2mb.pdf</a></li> <li>• <a href="https://63273-649646-raikfcquaxqncofqfm.stackpathdns.com/wp-content/uploads/2019/04/Hedgerow-CasestudyASPaul21-Send-for-New-Website.pdf">https://63273-649646-raikfcquaxqncofqfm.stackpathdns.com/wp-content/uploads/2019/04/Hedgerow-CasestudyASPaul21-Send-for-New-Website.pdf</a></li> <li>• <a href="https://mosart.ie/wp-content/uploads/2016/02/Irish-Hedgerows-Networks-for-Nature.pdf">https://mosart.ie/wp-content/uploads/2016/02/Irish-Hedgerows-Networks-for-Nature.pdf</a></li> <li>• <a href="http://www.hedgelaying.ie">www.hedgelaying.ie</a></li> </ul>
Interpretative Signage	<ul style="list-style-type: none"> <li>• <a href="https://www.nature.scot/sites/default/files/2019-11/Guidance%20-%20Natural%20heritage%20interpretation_1.pdf">https://www.nature.scot/sites/default/files/2019-11/Guidance%20-%20Natural%20heritage%20interpretation_1.pdf</a></li> <li>• <a href="https://www.heritagecouncil.ie/content/files/bored_of_boards_1mb.pdf">https://www.heritagecouncil.ie/content/files/bored_of_boards_1mb.pdf</a></li> <li>• <a href="https://pollinators.ie/resources/signage-templates/">https://pollinators.ie/resources/signage-templates/</a></li> </ul>
Invasive Alien Species	<ul style="list-style-type: none"> <li>• <a href="https://invasivespeciesireland.com/">https://invasivespeciesireland.com/</a></li> <li>• <a href="https://www.fisheriesireland.ie/Invasive-Species/invasive-species.html">https://www.fisheriesireland.ie/Invasive-Species/invasive-species.html</a></li> </ul>
Local Biodiversity News	<ul style="list-style-type: none"> <li>• <a href="https://www.facebook.com/Wild-Kildare-1437313092971392/">https://www.facebook.com/Wild-Kildare-1437313092971392/</a></li> <li>• <a href="http://www.birdwatchkildare.com/">http://www.birdwatchkildare.com/</a></li> <li>• <a href="https://kildarebatgroup.wordpress.com/">https://kildarebatgroup.wordpress.com/</a></li> <li>• <a href="http://www.kildare.ie/CountyCouncil/Heritage/Biodiversity/">http://www.kildare.ie/CountyCouncil/Heritage/Biodiversity/</a></li> </ul>
Nature Trails	<ul style="list-style-type: none"> <li>• <a href="http://www.walkingroutes.ie/WalkingTrails/Kildare">http://www.walkingroutes.ie/WalkingTrails/Kildare</a></li> </ul>
Orchards	<ul style="list-style-type: none"> <li>• <a href="http://www.irishseed savers.ie/blog/wp-content/uploads/2014/10/CreatingAnOrchard.pdf">http://www.irishseed savers.ie/blog/wp-content/uploads/2014/10/CreatingAnOrchard.pdf</a></li> <li>• <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/11466/197326.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/11466/197326.pdf</a></li> <li>• <a href="http://www.wetlandsystems.ie/goephaw.html">http://www.wetlandsystems.ie/goephaw.html</a></li> <li>• <a href="https://www.theorchardproject.org.uk/">https://www.theorchardproject.org.uk/</a></li> </ul>
Peatlands	<ul style="list-style-type: none"> <li>• <a href="http://www.ipcc.ie">www.ipcc.ie</a></li> <li>• <a href="http://www.bordhamona.ie/transform/biodiversity">www.bordhamona.ie/transform/biodiversity</a></li> <li>• <a href="http://www.abbeyleix bog.ie">www.abbeyleix bog.ie</a></li> </ul>
Pollinator Friendly Planting Schemes	<ul style="list-style-type: none"> <li>• <a href="https://pollinators.ie/resources/">https://pollinators.ie/resources/</a></li> <li>• <a href="https://pollinators.ie/wordpress/wp-content/uploads/2018/04/Planting-Code-2018-WEB.pdf">https://pollinators.ie/wordpress/wp-content/uploads/2018/04/Planting-Code-2018-WEB.pdf</a></li> <li>• <a href="http://www.rhs.org.uk">www.rhs.org.uk</a></li> </ul>
Pollinators	<ul style="list-style-type: none"> <li>• <a href="https://pollinators.ie/">https://pollinators.ie/</a></li> </ul>
Recording Biodiversity	<ul style="list-style-type: none"> <li>• <a href="https://www.biodiversityireland.ie/record-biodiversity/">https://www.biodiversityireland.ie/record-biodiversity/</a></li> </ul>
Reducing Herbicide Use	<ul style="list-style-type: none"> <li>• <a href="https://greensideup.ie/16-natural-alternatives-to-herbicide-why-you-should-use-them/">https://greensideup.ie/16-natural-alternatives-to-herbicide-why-you-should-use-them/</a></li> </ul>
Schools & Biodiversity	<ul style="list-style-type: none"> <li>• <a href="https://greenschoolsireland.org/biodiversity/">https://greenschoolsireland.org/biodiversity/</a></li> <li>• <a href="https://pollinators.ie/schools/">https://pollinators.ie/schools/</a></li> <li>• <a href="http://www.heritageinschools.ie/teachers-resources/strand/living-things-science/p3?q=&amp;c=">http://www.heritageinschools.ie/teachers-resources/strand/living-things-science/p3?q=&amp;c=</a></li> </ul>

Subject	Link(s)
	<ul style="list-style-type: none"> <li>● <a href="https://www.eckilkenny.ie/images/Biodiversity_Plan_for_Schools.pdf">https://www.eckilkenny.ie/images/Biodiversity_Plan_for_Schools.pdf</a></li> <li>● <a href="http://www.heartoftheglens.org/cms/wp-content/uploads/2017/12/Teachers-Outdoor-Learning-Resource.pdf">http://www.heartoftheglens.org/cms/wp-content/uploads/2017/12/Teachers-Outdoor-Learning-Resource.pdf</a></li> <li>● <a href="http://www.ipcc.ie/discover-and-learn/resources/">http://www.ipcc.ie/discover-and-learn/resources/</a></li> </ul>
<b>Swifts</b>	<ul style="list-style-type: none"> <li>● <a href="https://birdwatchireland.ie/our-work/surveys-research/research-surveys/swift-surveys/">https://birdwatchireland.ie/our-work/surveys-research/research-surveys/swift-surveys/</a></li> <li>● <a href="http://www.swiftconservation.ie/">www.swiftconservation.ie/</a></li> </ul>
<b>Tree Identification &amp; Selection</b>	<ul style="list-style-type: none"> <li>● <a href="https://www.treecouncil.ie/nativeirishtrees">https://www.treecouncil.ie/nativeirishtrees</a></li> <li>● <a href="https://drive.google.com/file/d/0B-qemRFHRDRSVnh3bmxGOEVaMHc/edit">https://drive.google.com/file/d/0B-qemRFHRDRSVnh3bmxGOEVaMHc/edit</a></li> <li>● <a href="http://www.clarecoco.ie/services/planning/publications/tree-design-guide-for-towns-and-villages-in-co-clare-2017-28115.pdf">http://www.clarecoco.ie/services/planning/publications/tree-design-guide-for-towns-and-villages-in-co-clare-2017-28115.pdf</a></li> </ul>
<b>Wildflower Meadows</b>	<ul style="list-style-type: none"> <li>● <a href="https://pollinators.ie/wordpress/wp-content/uploads/2018/04/How-to-guide-Wildflower-Meadows-2018-WEB.pdf">https://pollinators.ie/wordpress/wp-content/uploads/2018/04/How-to-guide-Wildflower-Meadows-2018-WEB.pdf</a></li> </ul>
<b>Wildflowers</b>	<ul style="list-style-type: none"> <li>● <a href="http://www.wildflowerofireland.net/index.php">http://www.wildflowerofireland.net/index.php</a></li> <li>● <a href="http://www.bsbi.org">www.bsbi.org</a></li> </ul>
<b>Wildlife Ponds</b>	<ul style="list-style-type: none"> <li>● <a href="https://www.wildlifetrusts.org/actions/how-build-pond">https://www.wildlifetrusts.org/actions/how-build-pond</a></li> <li>● <a href="https://invasivespeciesireland.com/wp-content/uploads/2017/10/AQUATICS_BOOK5.pdf">https://invasivespeciesireland.com/wp-content/uploads/2017/10/AQUATICS_BOOK5.pdf</a></li> </ul>
<b>Woodland</b>	<ul style="list-style-type: none"> <li>● <a href="http://www.woodlandofireland.com/sites/default/files/Management%20Guidelines%20for%20Ireland%27s%20Native%20Woodlands%202017.pdf">http://www.woodlandofireland.com/sites/default/files/Management%20Guidelines%20for%20Ireland%27s%20Native%20Woodlands%202017.pdf</a></li> <li>● <a href="https://www.forestryfocus.ie/social-environmental-aspects/biodiversity-and-nature-conservation/biodiversity-in-forests/conservation-and-restoration/">https://www.forestryfocus.ie/social-environmental-aspects/biodiversity-and-nature-conservation/biodiversity-in-forests/conservation-and-restoration/</a></li> <li>● <a href="http://www.woodlandofireland.com/sites/default/files/Silvicultural%20Guidelines%20for%20Native%20Trees.pdf">http://www.woodlandofireland.com/sites/default/files/Silvicultural%20Guidelines%20for%20Native%20Trees.pdf</a></li> <li>● <a href="https://www.wildlifetrusts.org/wildlife-advice/how-manage-woodland-wildlife">https://www.wildlifetrusts.org/wildlife-advice/how-manage-woodland-wildlife</a></li> </ul>

## Potential project funders

The following table outlines some of the potential sources of funding to help deliver the actions outlined in this Plan. It is also worth remembering other traditional forms of fundraising such as working with local businesses, bucket collections, table quizzes, etc.

Fund / Funding Body	Description
LEADER Programme, County Kildare LEADER Partnership CLG	To discuss potential project ideas and the availability of funding, contact the County Kildare LEADER Partnership offices at (045) 895 450 or email <a href="mailto:info@countykildarelp.ie">info@countykildarelp.ie</a> . Website: <a href="http://www.countykildarelp.ie">www.countykildarelp.ie</a>
Kildare County Council	For additional information in relation to funding for biodiversity and heritage projects, contact the Heritage Officer - Tel. 045 980791 or email <a href="mailto:heritageofficer@kildarecoco.ie">heritageofficer@kildarecoco.ie</a>
Community Environment Action Fund – Kildare County Council	Formerly known as LA21, this fund covers small community environmental projects.
Community Foundation for Ireland	The Community Foundation for Ireland has funded biodiversity surveys and action plans under their Environment and Nature programme. <a href="https://www.communityfoundation.ie/insights/news/environment-and-nature-fund-2019">https://www.communityfoundation.ie/insights/news/environment-and-nature-fund-2019</a>
Heritage Council	The Heritage Council supports a wide range of heritage projects throughout the country through our annual grants programme. <a href="https://www.heritagencouncil.ie/funding">https://www.heritagencouncil.ie/funding</a>
Waters & Communities	Their aim is to support communities and stakeholders in the delivery of local water quality projects and initiatives and have an annual grant package available. Contact your local officer to discuss potential projects by searching: <a href="http://watersandcommunities.ie/community-water-officers/">http://watersandcommunities.ie/community-water-officers/</a>
Trees on the Land	This charity aims to increase the amount of native Irish trees across Ireland. <a href="https://www.treesontheland.com/">https://www.treesontheland.com/</a>
NeighbourWood Scheme	This Forestry Service grant supports the creation and enhancement of new native community woodland schemes over 1ha in size (up to 12ha size) including the improvements to woodland facilities such as trail infrastructure. <a href="https://www.agriculture.gov.ie/media/migration/forestry/grantandpremiumschemes/2015/NeighbourWoodScheme240717.pdf">https://www.agriculture.gov.ie/media/migration/forestry/grantandpremiumschemes/2015/NeighbourWoodScheme240717.pdf</a>

# Useful contacts & sources

To help deliver the actions it will be important to work with a range of local and national stakeholder groups. The following outlines some of these. It is worth remembering that there may also be local individuals in your community who have particular interests and skillsets worth tapping into to deliver the actions. Remember that skills other than ecological skills can be an important asset when delivering certain actions.

Organisation / Group	Area of Expertise	Contact Details
Kildare County Council	The local Heritage Officer is available to discuss and provide information on biodiversity and heritage related matters and projects.	Tel. 045 980791 or email <a href="mailto:heritageofficer@kildarecoco.ie">heritageofficer@kildarecoco.ie</a>
Kildare Public Participation Network	Public Participation Networks (PPNs) act as an independent structure to facilitate public participation in policy and decision making with the local authorities.  Community and voluntary, social inclusion, and environmental groups are encouraged to join Kildare PPN.	Telephone: 045 980700 Email: <a href="mailto:admin@kildareppn.ie">admin@kildareppn.ie</a> Website: <a href="https://www.kildareppn.ie/">https://www.kildareppn.ie/</a>
County Kildare LEADER Partnership CLG	If your idea is eligible in principle for LEADER funding, a Project Development Officer will work with you to develop specifications of your project, help you with procurement, and assist in bring forward an application for funding. Funding is available in the following categories: capital, training, marketing, and analysis and development	Telephone: (045) 895 450. Email <a href="mailto:info@countykildarelp.ie">info@countykildarelp.ie</a> . Website: <a href="http://www.countykildarelp.ie/">www.countykildarelp.ie/</a>
Wild Kildare	Local volunteer environmental organisation.	<a href="https://www.facebook.com/Wild-Kildare-1437313092971392/">https://www.facebook.com/Wild-Kildare-1437313092971392/</a>
Irish Wildlife Trust	National environmental charity covering all aspects of biodiversity.	<a href="https://iwt.ie/">https://iwt.ie/</a>
BirdWatch Ireland Kildare	For information on Ireland's birds.	<a href="https://birdwatchireland.ie/">https://birdwatchireland.ie/</a>
National Parks and Wildlife Service	Responsible for managing the Irish State's nature conservation responsibilities.	<a href="https://www.npws.ie/">https://www.npws.ie/</a>
All-Ireland Pollinator Plan	National Plan with the aim of creating an Ireland where pollinators can survive & thrive.	<a href="https://pollinators.ie/">https://pollinators.ie/</a>
National Biodiversity Data Centre	National centre for the collection, collation, management, analysis and dissemination of data on Ireland's biological diversity.	<a href="https://www.biodiversityireland.ie/">https://www.biodiversityireland.ie/</a>
Vincent Wildlife Trust	National environmental charity with the aim of conserving and research into selected Irish mammals.	<a href="https://www.vincentwildlife.ie/">https://www.vincentwildlife.ie/</a>
Botanical Society of Britain & Ireland	National organisation that promotes the study, understanding and enjoyment of British and Irish botany.	<a href="https://bsbi.org/ireland">https://bsbi.org/ireland</a>
The Local Authority Waters Programme (Waters & Communities)	A shared service working with Local Authorities and State agencies to meet obligations under the EU Water Framework Directive for the development and implementation of River Basin Management Plans in Ireland.	<a href="http://watersandcommunities.ie/">http://watersandcommunities.ie/</a>
Celbridge Tidy Towns	Local Tidy Towns group.	<a href="https://www.facebook.com/celbridge.tidytowns/">https://www.facebook.com/celbridge.tidytowns/</a> or <a href="http://www.celbridgetidytowns.com">www.celbridgetidytowns.com</a>

<b>Bat Conservation Ireland</b>	An all-Ireland charity that promotes the conservation of bats and their habitats.	<a href="https://www.batconservationireland.org/">https://www.batconservationireland.org/</a>
<b>Kildare Bat Group</b>	Members of Bat Conservation Ireland with a particular interest in Kildare bats.	<a href="https://kildarebatgroup.wordpress.com/">https://kildarebatgroup.wordpress.com/</a>
<b>Kildare Animal Foundation</b>	A local non-profit organisation dedicated to the welfare of cats, dogs and small animals.	<a href="https://animalfoundation.ie/">https://animalfoundation.ie/</a>
<b>Irish Peatland Conservation Council</b>	A national charitable organisation with the aim of conserving and protecting a representative sample of Irish bogs, and to campaign on bog-related issues.	<a href="http://www.ipcc.ie/">http://www.ipcc.ie/</a>
<b>Kildare Community 4 Climate Action</b>	This is a network of groups and individuals who are working together for climate action and community resilience in Kildare. The network originated as a result of the LEADER-funded “Communities 4 Climate Action” training programme that was held in 2019.	<a href="https://www.facebook.com/KildareC4CA/">https://www.facebook.com/KildareC4CA/</a>



*The All-Ireland Pollinator Plan is one of the best sources of information on how to make our community spaces better for pollinators and wildlife in general. Check out the resources section of their website here:*

[\*https://pollinators.ie/resources/\*](https://pollinators.ie/resources/)

# Habitat Management Guidelines

## Wildflower Meadows:

Before creating any new meadows, it is important to consider and plan for the maintenance requirements. If the proper planning is not done at the outset it may cause considerable hassle down the line. This is particularly important for the end of season cut of a hay meadow as the grass could be knee height. Remember meadows are managed landscapes! You will need to consider the following:

- Who is going to cut the meadow?
  - Is it volunteers, the local authority or a contractor?
  - Or for larger meadows can it be conservation grazed?
- How are they going to cut it?
  - Have they got the right equipment suitable for the site?
- How are you going to gather and remove the cuttings from the site?
- What are you going to do with the cuttings after they have been removed from the site?

There are a few different types of wildflower meadows that you may consider depending on your site and preferences. Each requires different management. We have listed two such types of meadows here:

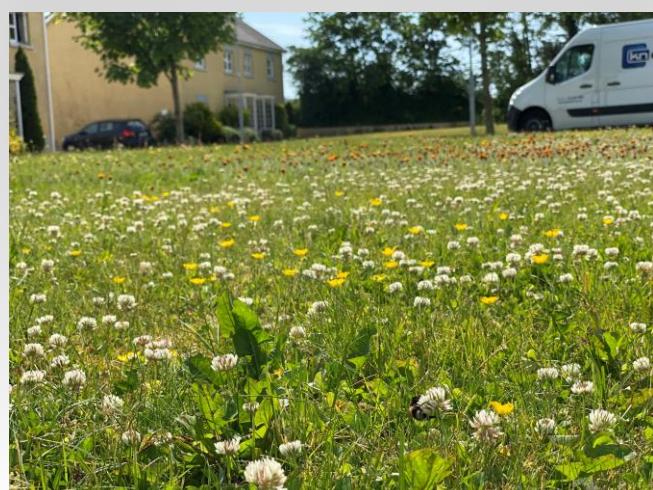
### Hay Meadows:

- Cut 1-2 times per year, once at the beginning of the season to remove any winter growth and a final cut in mid-August to September (if there are late flowering species then you may consider delaying the cut)
- Mow the fringes along paths, car parks and roadsides
- Mow paths through larger meadows to encourage people to use them
- Put up signs to let people know what you are doing
- Increase species diversity as needed by harvesting local seed and either over-seeding it on the grass after it has been cut or by growing the seed on as plug plants for planting out the following spring.
- Control listed noxious weeds.



### Short Cut Meadows:

- Cut approximately every 6 weeks from mid-April through to autumn
- Mow the fringes along paths, car parks and roadsides
- Mow paths through larger meadows to encourage people to use them
- Put up simple signs to let people know what you are doing
- Increase species diversity as needed by harvesting local seed and either over-seeding it on the grass after it has been cut or by growing the seed on as plug plants for planting out the following spring.



For more information visit the All-Ireland Pollinator Plan website and resources page:

<https://pollinators.ie/wordpress/wp-content/uploads/2018/04/How-to-guide-Wildflower-Meadows-2018-WEB.pdf>

## **Designing and Planning for New Tree Planting in Community Spaces:**

For the creation of new areas of community woodlands, copses, avenues or individual trees on community spaces the most important thing to remember is ‘Right Tree Right Place’. Remember that for all larger woodland creation projects and works on existing woodlands, you should always seek expert advice before proceeding.

The following are some of the practical considerations that should help guide you in the design and planning for smaller tree planting projects:

<b>Local Site Considerations</b>	<p>Soil - is it very wet or free draining?</p> <p>Is the site designated (as natural, built or archaeological) or adjoining a designated site or site of particular biodiversity interest? If so, check with relevant organisation for approval.</p> <p>For larger planting schemes, do you need to prepare the site for planting?</p>
<b>Practical Design Considerations</b>	<p>Do you need to protect against rabbits / hares / deer?</p> <p>Check for overhead powerlines or underground services.</p>
<b>Community &amp; Stakeholder Consultation</b>	<p>Consider safety and sightlines - set back from primary paths in public spaces or at road junctions</p> <p>Consider whether anti-social behaviour is a problem in the area and manage for it in advance</p> <p>Where possible, include other community amenities as part of larger planting schemes - paths, outdoor classrooms, natural play, picnic tables, etc.</p> <p>Consider neighbouring houses before planting.</p> <p>Where possible, plant small groups of trees in public spaces instead of lots of individual trees. This will be easier to maintain.</p> <p>When planting trees at larger sizes you'll need to stake and tie them. Remember to adjust tree ties each year and remove after 2-3 years.</p>
	<p>Consult with local community to gain support for the works. Be innovative with how you engage local families and children in the development of the woodland e.g. dedicate a tree to each family resident next to the project, carry out volunteer tree planting events, develop ancillary amenities such as benches and natural play, etc.</p> <p>Communicate the plans with the person or organisation responsible for maintaining the green spaces (i.e. local authority, contractor or local volunteer) to avoid accidental damage to the trees.</p> <p>Agree a plan for managing around the base of individual trees to avoid damage from lawnmowers and strimmers.</p>

For more practical information, check out the Trees on the Land website: <https://www.treesontheland.com/planting-guide>

## Managing for Pollinators:

- Think about their essential needs – food, water, & shelter – and try to provide these where possible because just like us they cannot survive without them.
- Use pollinator friendly perennials (and small shrubs such as lavender) instead of annual bedding plants in flower beds and containers (see Appendix 2 for some options).
- For butterflies and moths, consider the larval foodplants of these species. For example, the nettle is the foodplant for the caterpillars of 5 species of butterfly.
- Minimise the use of herbicide for managing weeds. Where possible try to embrace these native wildflowers for their visual interest and biodiversity value.
- Check out the All-Ireland Pollinator Plan for lots of practical tips and ideas on managing for pollinators: <https://pollinators.ie/>



Did you know: 100 crops provide 90% of the world's food. Of these, 71 are pollinated by bees!



# Planting for Biodiversity

Pollinator-friendly plant list recommended for community / garden flowerbeds	
Herbaceous Perennials – tall for the back of beds	Herbaceous Perennials – short for the front of beds
<ul style="list-style-type: none"> <li><b>Japanese anemones</b> (<i>Anemone x hybrid</i>) – pink and white (autumn);</li> <li><b>Verbena bonariensis</b> (late summer);</li> <li><b>Foxgloves</b> (<i>Digitalis</i> spp) (early summer) – both pink and white varieties;</li> <li><b>Mullein</b> (<i>Verbascum</i> spp) (summer);</li> <li><b>Fennel</b> (<i>Foeniculum vulgare</i>);</li> <li><b>Teasel</b> (<i>Dipsacus</i> sp.) - Goldfinches love their seeds in winter.</li> <li>Some <b>Rudbeckia daisies</b> will add bold colour too.</li> </ul>	<ul style="list-style-type: none"> <li><b>Sedum 'Autumn Joy'</b> (autumn);</li> <li><b>Masterwort</b> (<i>Astrantia major</i>) (available in various shades of pink and white, long flowering from summer into autumn);</li> <li><b>Yarrow</b> (<i>Achillea</i> spp) (summer into autumn);</li> <li><b>Avens</b> (<i>Geum</i> sp.) – brightly coloured with long-lasting flowers;</li> <li><b>Columbine/Granny's bonnet</b> (<i>Aquilegia</i> sp) (early summer)</li> <li><b>Macedonian scabious</b> (<i>Knautia macedonica</i>).</li> <li><b>Hardy Geraniums/Cranesbills</b> (<i>Geranium</i> spp) in a mix of colours, blue, pink and white. These plants (particularly blue varieties such as 'Johnson's blue') partner well with Lady's mantle (<i>Alchemilla mollis</i>) which are particularly lovely planted along the edges of beds.</li> <li><b>Lenten Hellebores</b> (<i>Helleborus orientalis</i>) will give winter and spring interest.</li> <li><b>Penstemons:</b> A semi-woody perennial with tubular flowers that last from early summer right through to late autumn.</li> <li><b>Lady's mantle</b> (<i>Alchemilla mollis</i>): attractive green flowers and leaves that flop over bed edges.</li> </ul>
Also consider:	
<ul style="list-style-type: none"> <li>Herb species are great for pollinators as well as providing food for ourselves: chives, thyme, rosemary, oregano / marjoram and sage.</li> <li>Native wildflowers add great colour and biodiversity interest &amp; will be a great addition to flowerbeds. Some may be crucial for different species of native biodiversity as food plants.</li> </ul>	

## General list of shrub and tree species recommended for biodiversity enhancement:

Native Hedgerow Mix Species to Select From	Planting & Managing a Native Hedgerow for Biodiversity
--	--

The main hedging species is:

- Hawthorn / Whitethorn (*Crataegus monogyna*)

Smaller percentages of the following species:

- Elder (*Sambucus nigra*)
- Blackthorn (*Prunus spinosa*)
- Hazel (*Corylus avellana*)
- Holly (*Ilex aquifolium*)
- Privet (*Ligustrum vulgare*)
- Spindle (*Euonymus europaeus*)
- Guelder rose (*Viburnum opulus*)
- Dog rose (*Rosa canina*)

Trees such as Oak (*Quercus robur*), Crab apple (*Malus sylvestris*), etc. should be planted randomly along the length

- Plant @ 4-8 plants per metre
- Plant in a double staggered row where possible
- Allow 1.5-2m width for a mature hedge – the wider the better!
- Cut on a 3-year cycle so that it can flower and fruit
- Cut outside the bird nesting season (1<sup>st</sup> March-31<sup>st</sup> August) unless for road safety reasons

## Pollinator-friendly trees and shrubs recommended for community / garden flowerbeds

Wildlife-friendly tree species	Wildlife-friendly shrub species
<ul style="list-style-type: none"> <li><b>Pedunculate oak</b> (<i>Quercus robur</i>) – prefers neutral/limestone soils</li> <li><b>Sessile oak</b> (<i>Quercus petraea</i>) – prefers slightly acid soils</li> <li><b>Willow</b> (<i>Salix</i> spp) – good for damp/ waterside conditions</li> <li><b>Hazel</b> (<i>Corylus avellana</i>) – likes neutral to limey soils</li> <li><b>Alder</b> (<i>Alnus glutinosa</i>) – good for damp/ waterside conditions</li> <li><b>Aspen</b> (<i>Populus tremula</i>)</li> <li><b>Silver birch</b> (<i>Betula pendula</i>)</li> <li><b>Downy birch</b> (<i>Betula pubescens</i>) - good for damp/ waterside conditions</li> <li><b>Yew</b> (<i>Taxus baccata</i>) – note that ‘fastigiata’ is the upright form (Irish Yew)</li> <li><b>Holly</b> (<i>Ilex aquifolium</i>)</li> <li><b>Rowan / Mountain ash</b> (<i>Sorbus aucuparia</i>) – flowers and fruit for spring and autumn interest</li> <li><b>Whitebeam</b> (<i>Sorbus aria</i>) – flowers and fruit for spring and autumn interest</li> <li><b>Crab apple</b> (<i>Malus sylvestris</i>) – flowers and fruit for spring and autumn interest</li> <li><b>Wild cherry</b> (<i>Prunus avium</i>) – flowers in spring and colourful fruit and leaves in autumn</li> </ul>	<ul style="list-style-type: none"> <li><b>Fruit bushes</b> e.g. the native Raspberry (<i>Rubus idaeus</i>) and Blackberry (<i>Rubus fruticosus</i>). Also Currants and Gooseberries (<i>Ribes</i> spp.).</li> <li><b>Ling heather</b> (<i>Calluna vulgaris</i>) - prefers acid/peaty soil conditions</li> <li><b>Bell heather</b> (<i>Erica cinerea</i>) - prefers acid/peaty soil conditions</li> <li><b>Broom</b> (<i>Cytisus scoparius</i>) terrific colour, blooming through April &amp; May.</li> <li><b>Firethorn</b> (<i>Pyracantha</i>)* - a very thorny climber, good for wall cover with creamy blossoms in summer and colourful berries in autumn. Different species have different coloured berries ranging from yellow through orange to scarlet red.</li> <li><b>Honeysuckle/Woodbine</b> (<i>Lonicera periclymenum</i>) – a climber with beautifully scented flowers, particularly in the evening when they attract nectar-seeking moths.</li> <li><b>Dog rose</b> (<i>Rosa canina</i>) – a climber with beautiful flowers in June and red rosehips in autumn.</li> <li><b>Elder</b> (<i>Sambucus nigra</i>) – creamy flowers (most important ingredient in a very tasty cordial!) in June and black berries in autumn (only edible when cooked, great for jams and jellies)</li> <li><b>Spindle tree</b> (<i>Euonymus europaeus</i>) – strikingly beautiful orange seeds carried in bright pink capsules called ‘cardinals’ hats’</li> <li><b>Blackthorn</b> (<i>Prunus spinosa</i>) – featuring sloe berries in autumn</li> <li><b>Purging Buckthorn</b> (<i>Rhamnus catharticus</i>) – an uncommon shrub – the favourite food plant of the Brimstone butterfly</li> <li><b>Alder-buckthorn</b> (<i>Frangula alnus</i>) – a rare native also favoured by the Brimstone butterfly.</li> <li><b>Privet</b> (<i>Ligustrum vulgare</i>)</li> <li><b>Gelder rose</b> (<i>Viburnum opulus</i>) – beautiful flowers and berries.</li> <li><b>Gorse</b> (<i>Ulex europaeus</i>) – the heady, coconut aroma of its bright yellow flowers is the smell of an Irish summer’s day.</li> </ul>

\*indicates a species not native to Ireland but non-invasive and wildlife friendly.

## Selecting Plants

Point of Note	Reason
Use native plants including wildflowers where possible	<ul style="list-style-type: none"> <li>Native wildlife has adapted alongside these species and so they will typically support more wildlife than exotic species</li> <li>It conserves our local flora</li> </ul>
For native species; only use Irish provenance stock	<ul style="list-style-type: none"> <li>They are better suited to the Irish climate</li> <li>It helps conserve local genetics</li> <li>Minimise the risk of importing new pests and diseases.</li> <li>Supports local Irish growers</li> </ul>

# Invasive Alien Species

Invasive Alien Species (IAS) are plants or animals that were introduced and are causing problems for native biodiversity. It is important that we can recognise the main IAS and take appropriate steps to control them:

- Avoid using IAS in new planting schemes and where possible remove existing ones. Encourage other local groups, landowners and the local authority to do the same.
- Raise awareness of IAS by delivering talks and posting on social media about them and the problems they cause.
- Carry out IAS surveys and submit records to the National Biodiversity Data Centre and the local authority.

Species	Problem(s)
<b>Some of the Common Terrestrial Plant IAS</b>	
Himalayan Balsam ( <i>Impatiens glandulifera</i> )	<ul style="list-style-type: none"> <li>• Can dominate riverbanks and outcompete native flora</li> </ul>
Japanese knotweed ( <i>Fallopia japonica</i> )	<ul style="list-style-type: none"> <li>• Can dominate riverbanks and outcompete native flora</li> <li>• Can negatively impact built structures</li> </ul>
Giant Hogweed ( <i>Heracleum mantegazzianum</i> )	<ul style="list-style-type: none"> <li>• Can dominate riverbanks and outcompete native flora</li> <li>• Can cause serious skin burns to humans</li> </ul>
Giant Rhubarb ( <i>Gunnera tinctoria</i> )	<ul style="list-style-type: none"> <li>• Can dominate riverbanks and outcompete native flora</li> </ul>
Monbretia ( <i>Crocosmia</i> spp.)	<ul style="list-style-type: none"> <li>• Can dominate grassy areas and outcompete native ground flora</li> </ul>
Spanish Bluebell ( <i>Hyacinthoides hispanica</i> and hybrids)	<ul style="list-style-type: none"> <li>• They hybridize with native Bluebells</li> </ul>
Cherry laurel ( <i>Prunus laurocerasus</i> )	<ul style="list-style-type: none"> <li>• Can take over woodland and prevent native ground flora &amp; saplings from growing.</li> </ul>
Rhododendron ( <i>ponticum</i> )	<ul style="list-style-type: none"> <li>• Can take over woodland and prevent native ground flora &amp; saplings from growing.</li> </ul>
Pheasant Berry ( <i>Leycesteria Formosa</i> )	<ul style="list-style-type: none"> <li>• Can take over native woodland and prevent native ground flora &amp; saplings from growing.</li> </ul>
<b>Some of the Common Aquatic Plant IAS</b>	
Floating pennywort ( <i>Hydrocotyle ranunculoides</i> )	<ul style="list-style-type: none"> <li>• Can grow up to 20cm per day and may quickly dominate a waterbody.</li> <li>• Forms thick mats which can look like land &amp; so be a danger to people &amp; livestock</li> <li>• Impedes water flow and chokes waterways which can make it difficult for boats and angling and can increase the risk of flooding.</li> <li>• Poses a threat to plants and fish by blocking out light and impeding access to fish feeding and resting spaces.</li> </ul>
Curly Leaved Waterweed ( <i>Lagarosiphon major</i> )	<ul style="list-style-type: none"> <li>• Capable of forming very dense infestations in suitable habitats &amp; occupying the full water column in waters up to 6m deep with significant impacts on native wildlife.</li> <li>• Serious threat to tourism, angling, boating &amp; other recreational pursuits as well as conservation goals.</li> </ul>
Parrot's feather ( <i>Myriophyllum aquaticum</i> , <i>Myriophyllum brasiliense</i> , <i>Myriophyllum proserpinacoides</i> )	<ul style="list-style-type: none"> <li>• Can produce a thick raft of vegetation.</li> <li>• A fragment as small as 5mm can re-grow.</li> <li>• Poses a threat to plants &amp; fish by blocking out light &amp; reducing oxygen levels.</li> <li>• Can choke waterways so increasing the risk of flooding.</li> </ul>
New Zealand pigmyweed ( <i>Crassula helmsii</i> )	<ul style="list-style-type: none"> <li>• Can regenerate from tiny fragments &amp; therefore easily takes over new areas.</li> <li>• Forms very dense mats which overgrow native plants and reduces light levels.</li> </ul>
Water primrose ( <i>Ludwigia grandiflora</i> )	<ul style="list-style-type: none"> <li>• Currently only recorded from one site in Ireland.</li> <li>• Grows into a thick carpet which can out-grow native species and clog waterways.</li> </ul>
Water fern ( <i>Azolla filiculoides</i> )	<ul style="list-style-type: none"> <li>• Produces a thick mat of floating vegetation.</li> <li>• Danger can lie when people and livestock attempt to walk on it.</li> <li>• The plants are so small, at no bigger than 2.5cm, that it can easily be transported on other plants as a contaminant.</li> <li>• Reduces oxygen levels in the water.</li> </ul>

# Equipment Checklist

The following is a list of some useful equipment to help manage your wild habitat and carry out Citizen Science work. Please make sure that any tools or machinery are only operated by suitably trained persons, that they are kept in good repair, all necessary health and safety precautions are followed, and that they are fully insured. The same applies to any contractors hired to undertake works on your behalf. Please note that due to Covid 19 it is worth considering any other special health measures and equipment that may need to be taken when carrying out community work.

Equipment	Description	Tick (✓)
<b>Wildflower Meadows</b>		
Polytunnel	It is useful to have at least one community polytunnel to grow wildflower plugs from locally harvested seed that can then planted out into local public meadows. It is ideally located in a secure place where dedicated person(s) responsible for managing the plugs can have access to it. Suitable venues include a community garden / allotment garden and in schools (where the pupils can grow some trays on as part of a school project). These can double up during the main growing season for fruit and vegetable growing.	
Meadow Cutting Tools / Machinery	For larger meadows: consider using a local contractor with the right equipment. Where it's not practical to get a contractor then some of the following machinery / tools may be considered: <ul style="list-style-type: none"> <li>• Power scythe with hay rake and mini-baler or a buck rake (this could be purchased in partnership with other local groups or by Kildare County Council)</li> <li>• Brush cutter</li> <li>• Hand held scythe, hay forks and rakes</li> </ul>	
Seed Harvesting	There are a few ways of harvesting your own wildflower seed. For most, it may be simply harvesting seed by hand, in which case you will need something to put it into e.g. a paper yogurt cup or cotton pillow sack are ideal. To collect certain seed such as Yellow Rattle seed on a larger scale it would be worth purchasing or hiring a leaf vacuum.	
Seed Storage	To dry the collected wildflower seed you can simply spread it out in cardboard box(es). If the seed is fully dry when collected it can also be stored in breathable pillow cases / sacks in a cool dry room. Do not store in plastic bags or containers as the seeds may sweat and spoil.	
<b>Everyday Habitat Management</b>		
Hand Tools	It is useful to have a stock of general tools available for carrying out community volunteer days such as tree planting, basic invasive species control of selected species, etc. You can always ask volunteers to bring their own but it is useful to have some spares. These will include: spades, loppers, saws, rakes, wheelbarrows, buckets, lump hammer, mattock, etc.	
Hand Held Power Tools	Similar to the hand tools above, having some hand-held power tools for the group may be useful. A cordless drill is probably the most important of these. Other power tools may be available either privately from members / volunteers or through rental hire as needed.	
Safety Equipment	It is very important that all volunteers have the necessary protective clothing for the jobs being carried out. Some of the basic equipment worth having a supply of include Hi-Viz vests, ear muffs, gloves, dust masks, visors and safety goggles.	
<b>Citizen Science &amp; Community Events</b>		
Identification resources	There are identification books for all the common species groups and habitats. The National Biodiversity Data Centre also has swatches available from their online shop.	
Bats	Consider having a few bat detectors (and torches!) for bat events, as most people may not have one. The Magneta Bat5 is a good starter model.	
River Sampling	River sampling events are great for families and children. For these you'll need some trays or buckets, charts and fishing nets.	
Butterfly and Bumblebee Events	Pollinator workshops and events are always popular to run during the summer. They are even better when there is a field element to it and it is useful to have a few butterfly nets and some potting jars to help identify specimens.	
Moth Identification	Another really great Citizen Science project is the identification of moths. It is useful for the community to have (or have access to) a few moth light traps with suitable batteries and chargers and the identification guide books (both for micro and macro moths).	
Bird Identification	For bird identification events it can be useful to have a few spare pairs of binoculars (although it is normal to ask people to bring their own).	

## Examples of Wildflower Meadow Maintenance Equipment



Polytunnel used to grow plugs



Pillow cases used to store dry wildflower seed



Leaf vacuum used to harvest wildflower seed



A power scythe is ideal for cutting smaller to medium sized meadows



The hay rake can help gather hay for ease of collection



Larger machinery may be necessary for bigger meadows

## Examples of Equipment for Citizen Science and Community Events



Moth trap used to identify moths



Swatches from the NBDC



Butterfly nets

**Did you know:** The National Biodiversity Data Centre has taken in over 650,000 species sightings as of November 2020

# Mood Board

## Interpretation



A biodiversity sign, useful on sites with lots of natural interest.



Murals are a great option to brighten up a dull wall.



Biodiversity interpretation post, a relatively inexpensive option.

## Sculptures



A bespoke sculptural feature in Ennis Town Centre.



An artistic willow weave sculpture on the roundabout beside Kildare Shopping Centre.

## Pollinator Beds

## Wildflower Meadows



Encourage people to use them by mowing paths and installing seating and breakout points.



They are great for natural play and add interest to otherwise dull mown grasslands.



They can be used in a range of different settings to deliver multiple economic, social & environmental benefits.



They are a part of our cultural heritage and landscape and can be used to encourage tourism.



Use native wildflowers in mixes where possible as they have added benefits for wildlife and they are every bit as attractive as non-native species.



Perennial pollinator-friendly plants add visual interest, reduce annual work and costs, and are great for wildlife.

## Natural Play



Natural play uses natural features to create play opportunities.



They can be much more cost effective to install and maintain and are often much more interesting.



Natural features such as earth banks and planting make great play features and can be used in combination with slides, etc.



Natural habitats such as meadows and woodlands are great natural playgrounds.

## Edible Woodlands



Forest gardening is a way of managing woodlands for productive uses such as wild food and timber products. Each layer of the woodland is managed for this including the canopy, shrub and ground floor. They have been developed in a wide range of settings including private gardens, schools, public green spaces, residential spaces (such as above in Manchester, England), etc.



Edible hedges are a form of linear woodland which uses a wide range of berry and nut species to create a hedge.

# Greening the Grey



Bioswales can be used in urban areas to manage and treat rainwater runoff from roads, car parks and other hard surfaces. They allow the water to drain slowly into the ground. Vegetation helps treat the water and add biodiversity value & visual interest.



Green roofs, even on small canopies such as above, deliver a wide variety of environmental benefits such as clean air, retain and improve water quality, have air cooling effects add visual interest and are great for biodiversity.



This bioswale, in an urban park setting, is allowed to fill up during heavy rain water events and drain slowly after. It has become an amenity within the park and has significantly increased the amount of biodiversity within the park. Residential and public green spaces should be designed to deliver multiple benefits like this park achieves.

In a lot of cases green walls can simply be created by planting climbers such as native ivy (*Hedera helix*) on bare walls – they are particularly good to cover up dull block work walls (photo above shows a newly planted wall in Portlaoise).

# Section 5:

# Results of

# Questionnaire



**Did you know:** 5 native butterfly species rely on the common nettle as their larval foodplant

The purpose of the questionnaire was to gather information from the ten communities on biodiversity-related issues relevant to them and their local area. It gathers information about the importance of biodiversity in their everyday lives, local sites or features of biodiversity value, preferences for events going forward, and their willingness to get involved in delivering actions such as those set out in this plan.

It was delivered as an online survey using Google Forms during the training period from September to November 2020. All participants were invited to complete the questionnaire as part of the training. Forty-five people responded to the questionnaire and the results are explained below.

**Question 1: How important is the natural environment to your everyday life?**

All 45 participants from across the ten communities answered this question. Options were provided on a scale of 1 to 5, with 5 being 'very important' and 1 being 'not important'.

There were thirty-five respondents who gave it a rating of 5, nine gave it a rating of 4 and one gave it a rating of 3.

**Conclusion:** Overall the natural environment is very important in the everyday lives of the people who responded to this questionnaire. This would suggest that it is important that we conserve biodiversity in local communities and there will be an appetite amongst them to see actions carried out that will do this.

**Question 2: List 3 ways that you think nature and biodiversity can deliver benefits for your community or site of interest (Celbridge Responses Only).**

The responses listed a range of different ecosystem services that benefit the town. The most commonly listed benefit was the importance that nature has for our physical and mental health and well-being. It was also recognised that habitat creation helps conserve local species of wildlife such as birds and pollinators. Other benefits listed include the importance for education, the provision of clean air and water, and the aesthetic and sensory values of nature.

**Question 3: List your top 3 biodiversity hot spots in your locality (Celbridge Responses Only).**

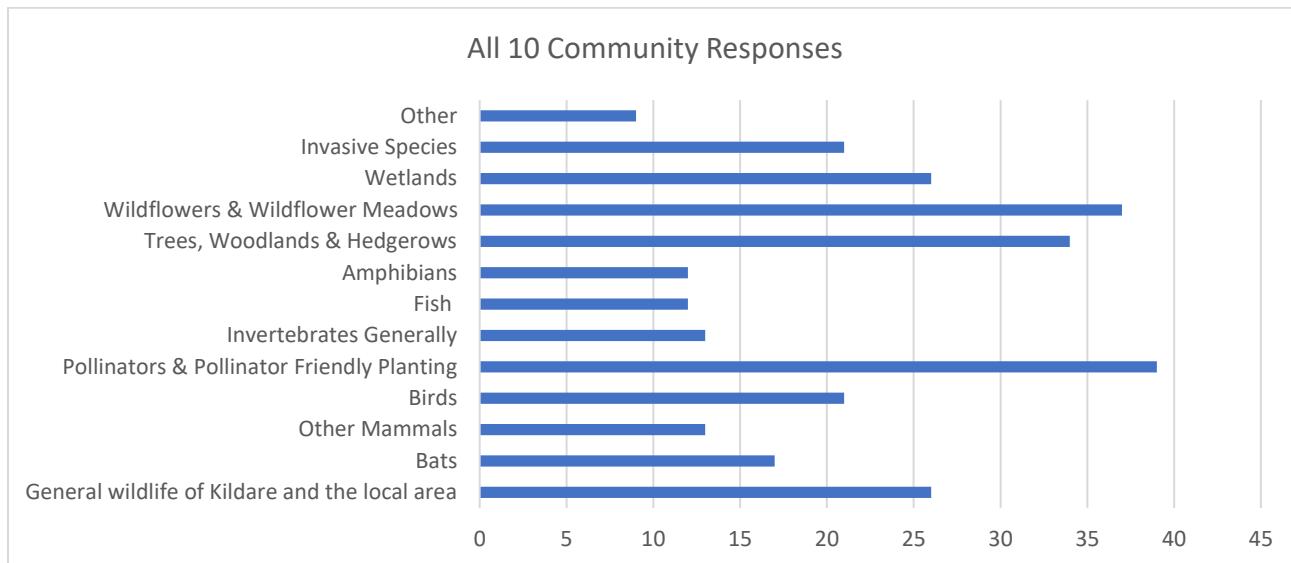
The responses highlight a range of sites both in the town and in the surrounding landscape that are seen as important for biodiversity. The biodiversity hotspots that were mentioned by most Celbridge respondents were the River Liffey and the grounds of Castletown House. The residential green spaces were also recognised as being an important part of the biodiversity infrastructure of the town with the wildflower meadow in Dara Court highlighted. One other site outside the town – Kilwogan wetlands - was also listed as part of the responses.

**Question 4: Would you like to get involved in helping biodiversity in your local area? (Celbridge Responses Only).**

All respondents stated that they would be interested in getting involved in helping biodiversity in Celbridge. This included helping with recording biodiversity (Citizen Science), tree planting, helping to create and manage wildflower meadows and pollinator-friendly flowerbeds, and generally helping out with biodiversity related projects organised in the town.

**Question 5: To raise awareness of local biodiversity, which of the following would you like to be covered through community training events such as evening talks, webinars, walks, etc. (responses for 10 groups)**

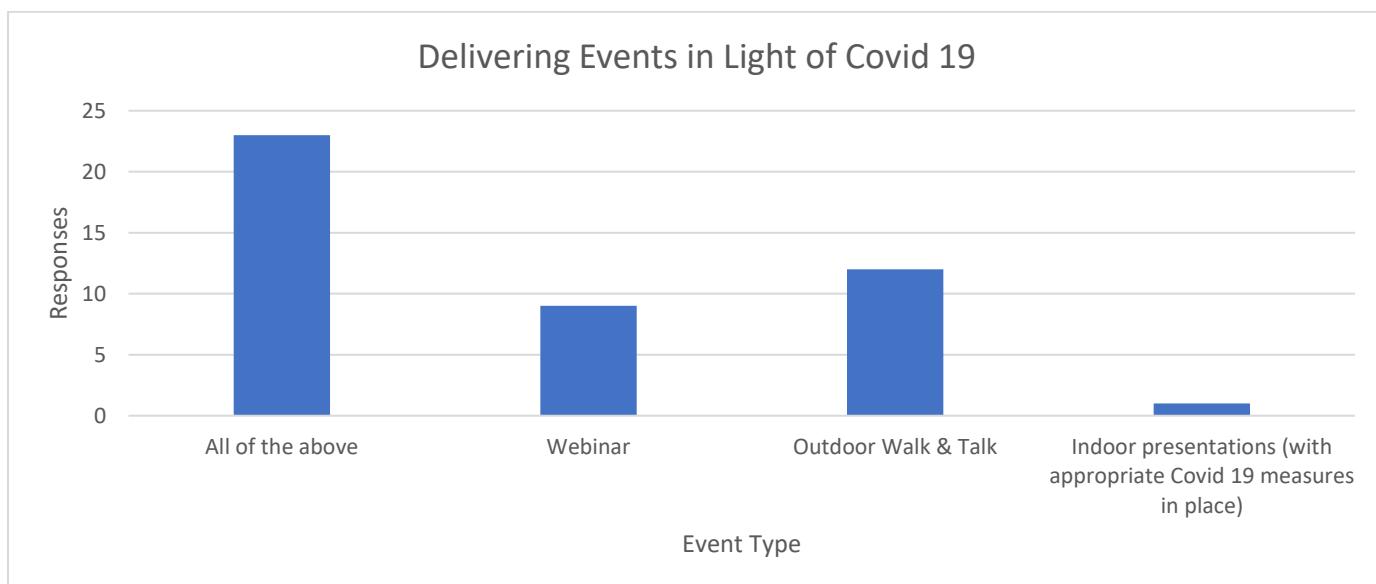
Events related to pollinators and pollinator-friendly planting, wildflowers and wildflower meadows, and trees, woodlands and hedgerows were the most popular responses with each of these receiving over 30 mentions each. Events about general wildlife of Kildare, invasive species, birds and wetlands were also popular with each receiving over 20 mentions each. The full list of responses is shown below.



There were no 'other' suggestions from the respondents from Celbridge.

**Question 6: Covid 19 has changed how talks / workshops / presentations are delivered, at least in the short term, with webinars becoming more widely used. Which of the following would be your preferred format for community biodiversity events during this period?**

The majority of the responses were for a mix of different event types, with each obviously taking appropriate measures in relation to Covid 19. Of the singular event types, outdoor walks and talks were the most favoured, followed by webinars.



Responses shown: All 10 communities

This Biodiversity Action Plan was produced as part of the Kildare Community Biodiversity Project. This project was jointly managed by County Kildare LEADER Partnership CLG and Kildare County Council.

The Kildare Community Biodiversity Project was funded under the LEADER Programme 2014-2020.



LEADER is funded by the Irish Government through the Department of Rural and Community Development

Produced by:



Bridge Street Centre, Portlaoise, Co. Laois.

(M) +353 (0)87 7829477 (E) [greenpineconsultants@gmail.com](mailto:greenpineconsultants@gmail.com)

(W) [www.greenpineconsultants.com](http://www.greenpineconsultants.com)



Dr Fiona Mac Gowan, Consultant Ecologist & Botanist

The Cross of Newtown, Ballyroan, Co. Laois.

(M) +353 (0)87 2238262 (E) [fmacgowan@gmail.com](mailto:fmacgowan@gmail.com) (Instagram) macgowan\_ecology