

Monasterevin

Biodiversity Action Plan 2021-25



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



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Plan produced by:

Green Pine Consultants 



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Acknowledgements & Contact Details

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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 Monasterevin Tidy Towns for nominating Monasterevin 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:

Monasterevin Tidy Towns

or

Kildare County Council Heritage Officer:

Phone: 045 980791

Fax: 045 980835

Email: 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 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 John Cullen, Anne Thomson, Helena Kelly, Teresa Troy, Dr Fiona MacGowan, Suzanne Behan & Brian Gaynor.

Section 1:

Introduction

Monasterevin is a town of almost 5,000 residents situated in the commuter belt in the west of County Kildare on the southern edge of the Bog of Allen. In recent years, it has experienced an increase in population, which is evident in the number of new housing estates on the edge of the town. It is a busy shopping town and historically a market town for the area. An area rich in history, culture and nature.

As residents of Monasterevin we are fortunate to be surrounded by beautiful landscapes, the 'Broad Barrow' and its fertile banks skirting the town to the east, the Grand Canal with its historic towpaths, which in the near future will form part of the Blue Way, wide streets lined with mature trees, the mixed woodland of Moor Abbey Wood, such an important amenity for our community during this pandemic and the hinterland of bogland and mixed farmland. This landscape not only provides us with the amenity of many beautiful walkways and scenery but also a rich variety of different habitats for plant and animal life.

However, many factors including our way of life has brought about climate change and biodiversity loss, serious issues which are impacting not only on our lives and our future but the life and future of the same plant and animal life which creates this beautiful landscape where we live. As individuals, neighbourhoods and as a community we need to take action.

Our community has become richer in many ways, culturally, socially, with a broader knowledge base to draw upon. The Monasterevin Biodiversity Action Plan was developed for our community, an opportunity for our community to work together to change our future and the future of this beautiful town.

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 Monasterevin. 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, Monasterevin 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 reconnaissance 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

Monasterevin is set within a landscape that is rich in biodiversity starting with the River Barrow running parallel to the Main Street while being crossed by a branch of the Grand Canal via an aqueduct. Not only is the town blessed with both natural and manmade aquatic habitats but it also features mixed woodland habitats in Moore Abbey Woods at the south. Then the further outskirts of the town reach out to the edges of the Bog of Allen with several cutover raised bogs within a few kilometres. The closest at Clonanny is only 1km northwest of the Main Street. Monasterevin is known as the 'Venice of Ireland' due to its prominent waterways and impressive feats of engineering with an aqueduct, a rail bridge and a draw bridge all in the north of the town. Mature deciduous trees are also a prominent feature of the old part of the town along Drogheda Street and in the beautiful row of gardens along the river Barrow on Main Street. Such trees form a huge part of the character of Monasterevin and together with the River Barrow and the Grand Canal bring nature and biodiversity right into the everyday lives of Monasterevin residents and visitors. Please note that further details on your local conservation site details can be found at: www.npws.ie/protected-sites/

Monasterevin is known as the 'Venice of Ireland' due to its prominent waterways and impressive feats of engineering including an aqueduct, rail bridge and draw bridge.



Main Biodiversity Sites

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

Site of Biodiversity Interest

River Barrow: Beautifully described by the celebrated poet and one-time Monasterevin resident Gerard Manley Hopkins as the ‘burling Barrow brown’, the Barrow is an integral part of the town. It is the second longest river in Ireland with its journey starting in the Slieve Bloom mountains of neighbouring Co. Laois. It is a large, broad river at Monasterevin but remarkably still is only at the early parts of its route all the way to the sea at Hook Head. The full length of the River Barrow together with its sister river the Nore form a Special Area of Conservation (SAC 002162) because this mighty river is home to a long list of species and habitats that are of international biodiversity value – including the Otter who are occasionally glimpsed from one of Monasterevin’s many bridges.



River Barrow Wildlife Garden: Thanks to the hard work of the local community a new community garden space has been created along the River Barrow on Main Street. The garden includes trees and a wildflower meadow running down to the river. Ornamental pollinator friendly flowerbeds have been created towards Main Street that will add visual interest and provide additional food for native pollinators.

Grand Canal (pNHA 002104): The Barrow line branch of the Grand Canal that goes from Lowtown to Athy via Monasterevin. According to the NPWS site synopsis ‘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’. This encapsulates the value of the Grand Canal to Monasterevin bringing nature right into the heart of the town with its associated bird and plantlife as well as fish. In addition, the Barrow Way along the banks of the canal provides beautiful walks for all in Monasterevin.



Moore Abbey Woods: Moore Abbey Wood is a mixed woodland, approximately 250 acres in size, and contains a variety of broadleaves and conifers. There are a variety of wildflowers, including spring bluebells, and many butterflies, including the pearl-bordered fritillary. It is also home to a healthy population of red squirrels. There are several trails in the wood which are open to the public.



St John’s Church of Ireland: The grounds of the church are a haven for wildlife in the centre of the town. The headstones are home to many species of lichen and moss and in recent years a section of the grass has been managed as a wildflower meadow. There are also some fine examples of yew trees on the grounds, a native tree which has long been associated with graveyards in Ireland.

Recent Progress

A lot of work has been carried out in recent years to enhance the town's biodiversity including the development of the community wildlife garden, management of selected grass areas as wildflower meadows, and much more. 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. In the short timespan between the training and the production of this Plan the local community has already completed / started delivering a number of the actions:

- Harvesting of willow from the children play park.
- Planting of 20 raspberries canes gifted to us from a volunteer who was removing them from their garden.
- Upgrading work practice in the park and gardens, longer time span between grass cutting, none use of chemicals where possible, compost bin and water butt
- Worked with St. Pauls new LCA class and TY plus some community volunteers in planting 1200 native bluebells and 240 alliums, 100 snowdrops, daffodils in the areas of Riverside park, Togher Road, Mill Race and Triangle on the Athy road.
- Planting of hedge in Riverside park.
- Grass verge on Canal road not cut for the season -pollinator space.
- Connected with some housing estates to discuss the Towns Biodiversity plan and to support them in their action plans.
- Connected with Coillte, local councillors and Kildare County Council to support a safe walking link from the town to Moore Abbey Woods.

Several areas of grassland in the town are now being managed as wildflower meadow



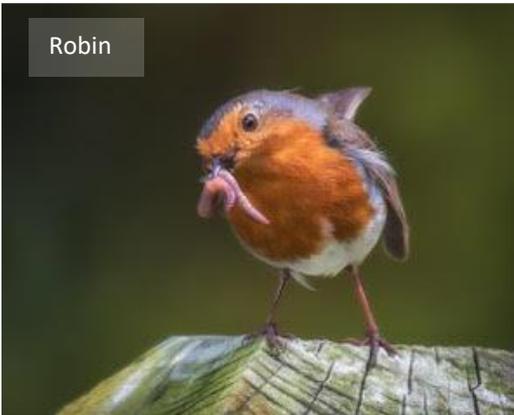
In autumn 2020, over 1,200 spring bulbs were planted on grass verges in the town

Wildlife of Kildare

Badger



Robin



Red Squirrel



Great Spotted Woodpecker



Rabbit



A collection of photos courtesy of Kildare wildlife photographer Suzanne Behan

Grey Wagtail



Red Fox



Mute Swan



Kingfisher



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 Monasterevin 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!

Target 1.1 Make the town's public spaces more biodiversity friendly			
No.	Action	Who	When
	managed as part of an overall contract for meadow management across the town. B. Infill planting in the flower beds with more pollinator friendly perennials and bulbs e.g. alliums.		
1.1.6	Explore the opportunity to plant a community orchard including both fruit and nut plant species. This should act as the site for the local heritage orchard conservation project (see Action 1.4.2)		
1.1.7	Explore the opportunity to carry out the following biodiversity habitat enhancement works on the green beside Monasterevin AFC & St Evin's Park: <ul style="list-style-type: none"> Discuss planting climbers on the concrete block wall along the path from Togher Road entrance to soccer pitch. Species mix can include native Ivy (<i>Hedera helix</i>), Honeysuckle and <i>Pyracantha</i>. Plants to be planted @ 3/m. Manage the part of the main grassland as wildflower meadow. Plant stands of trees, both native and traditional Irish fruit trees, on selected parts of the main grassland. 	Rep. MTT will discuss with soccer club	2021
1.1.8	Discuss with Cemetery committee about the following biodiversity habitat enhancement works that could be carried out at Monasterevin Cemetery: <ul style="list-style-type: none"> A. Plant climbers on the concrete block wall on the town side (northern boundary). Species mix can include native Ivy (<i>Hedera helix</i>), Honeysuckle and <i>Pyracantha</i>. Plants to be planted @ 3/m. B. Manage sections of the lawn space around the base of trees as a bulb and short cut wildflower meadow. Augment the Daffodil planting with other pollinator friendly bulbs (Snowdrops, Crocuses, Bluebells, Wood anemones). C. Harvest acorns from local Oak trees and grow as saplings to be planted on the lawn area and elsewhere connect with St. Paul's School. These will act as the next generation of trees. D. Manage the grass area at the southern side of the cemetery as wildflower meadow by cutting and lifting the grass at the end of the growing season. Augment with native wildflower seed including Yellow Rattle. Plant a native hedgerow against the boundary wall at this area by use of the free trees provided. 	Rep. MTT to meet Committee	2021
1.1.9	Discuss with residence committee about managing the grass verge on the Dublin Road in front of Hopkin's Haven as a bulb and shortcut wildflower meadow. Add pollinator friendly bulbs into the verge such as Snowdrops, Crocus spp. and Alliums.	MTT	2021

Target 1.2 Make the town's private lands more biodiversity friendly			
No.	Action	Who	When
1.2.1	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.	For discussion	2022
1.2.2	Maintain the sections of the wildflower meadow in the Church of Ireland grounds as wildflower meadow by cutting and lifting in Aug-Sept (and ideally again in March-April).	Rep. MTT	2021-25

Target 1.2 Make the town's private lands more biodiversity friendly			
No.	Action	Who	When
1.2.3	Explore the opportunity to enhance the community amenities using natural features for resident in St Evin's Park using the western side of the main green space. This could include natural trails with tree planting, wildflower meadow, natural play features (mounds, boulders, tree logs, etc.). All resident associations will be assisted in these actions.	MTT to connect with Residents Association	2021
1.2.4	<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"> A. Plant native hedgerows or climbers against internal boundary concrete walls and along the front boundaries of residential estates in the town. B. Manage sections of residential green spaces as wildflower meadows C. 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 residents. D. 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. E. Install bird and bat boxes at suitable locations. <p>Target 1-2 residential estates each year of the Action Plan to work with (all actions should be agreed with the residents). This could include the front boundary of the Old Millrace estate or the internal boundary walls in Abbeygate.</p>	Rep MTT - Discuss with residential committees	2021-22
1.2.5	Explore the opportunity to plant a beech hedge hazel and wild rose around the perimeter of the grounds in Monasterevin AFC.	MTT discuss with soccer club	2021-2023
1.2.6	Engage with the Muiríosa Foundation and the Sisters of Charity of Jesus & Mary Services about developing a landscape masterplan for their grounds that would maximise social, health and ecological benefits.	Rep. MTT to discuss with KCC	2021
1.2.7	Explore the opportunity to install large raised beds or containers in front of the old Finlay's Garage. Plant with pollinator friendly plant mixes and small native tree species (if the planters are large enough to support them).	To check with Earley's estate agent, Portarlinton	2021
1.2.8	<p>Explore the opportunity to maximise biodiversity potential of Monasterevin GFC Fr Prendergast Memorial Park by (actions to be agreed with the GAA):</p> <ul style="list-style-type: none"> A. Planting climbers along the concrete panel walls on the entrance road. B. Planting a beech hedge or climbers along the boundary with Woodview estate. C. Planting pollinator friendly climbers at intervals along the boundary wall with Brocan Wood (these should not interfere with the use of the wall for advertising). D. Installing Swift boxes and a caller on the club house. 	MTT discuss with Monasterevin GAA	2021-2022
1.2.9	<p>Explore the opportunity to maximise biodiversity potential of Ballykelly GFC Stephen O'Rourke Memorial Park by (actions to be agreed with the GAA):</p> <ul style="list-style-type: none"> A. Planting native trees on unused corners of the grounds. B. Installing Swift boxes and a caller on the club house. 	MTT with local wildlife charities	2021

Target 1.3 Make the town's surrounding lands more biodiversity friendly			
No.	Action	Who	When
1.3.1	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.	Rep. MTT	2021-2022
1.3.2	Explore with Coillte the possibility of carrying out the following habitat and landscape enhancement works at Moore Abbey Woods: <ul style="list-style-type: none"> A. Manage the grass space beside the car park as a wildflower meadow. B. Clear back selected areas of vegetation on the northern side to restore views to Moore Abbey. C. Manage the section of clear fell woodland on the southern end as open biodiversity habitat to conserve existing populations of invertebrates and wildflowers. 	Rep MTT to engage with Coillte	2021
1.3.3	Engage with Transport Infrastructure Ireland about the management of the motorway embankment adjacent to Moore Abbey Woods to maintain the species rich sward. It requires control of scrub encroachment and cutting and lifting of the grass each year in August-September.	Rep MTT to engage with the Climate Action Officer	2021
1.3.4	Explore the opportunities for managing / maintaining the habitat at the southwestern boundaries of the forest at Clonegath as a wildlife corridor. Fifteen species of butterflies have been recorded here. Engage with the neighbouring landowners and Coillte.	Rep MTT	2021-2025

Target 1.4 Deliver species-specific conservation projects			
No.	Action	Who	When
1.4.1	Participate in local Swift conservation efforts such as Wild Kildare's project by: <ul style="list-style-type: none"> ● Installing boxes and callers on suitable locations in the town. ● Lobby for Swift bricks to be included in future developments e.g., the new primary school. ● Carry out surveys of Swift population numbers locally and the uptake of installed nesting boxes / bricks (see Action 3.1.1). ● Organise / facilitate a Swift talk 	Local wildlife charities such as Wild Kildare	2023
1.4.2	Conserve local heritage fruit and nut trees by carrying out a survey of the town (see Action 3.1.10) and taking appropriate conservation actions for them. This should include propagating these trees and planting at selected locations throughout the town (see Action 1.1.6).	MTT	2021-2025
1.4.3	Discuss with Coillte if they could carry out a native bluebell conservation project in Moore Abbey Woods. This should involve a survey of bluebell species (see Action 3.1.7), implementing control measures for the non-native Spanish bluebells and hybrids, and awareness raising program amongst local people.	Rep MTT to engage with Coillte	2021
1.4.4	Carry out a red squirrel conservation project. This should involve: <ul style="list-style-type: none"> ● A survey of local red and grey squirrel population numbers (see Action 3.1.5). ● The development of a red squirrel feeding station and information point in Moore Abbey Woods. ● Mapping, protecting and restoring ecological corridors for red squirrels across the town and in the surrounding landscape. This should include exploring the potential for an ecological bridge across the M7 connecting the different areas of forestry. 	Rep MTT to engage with Coillte	2021

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 interpretation posts at selected locations on the Grand Canal walk. These should cover the history of the canal and the wildlife found on it.		2025
2.1.2	Install interpretation posts at selected locations within Moore Abbey Woods. These should cover the heritage of the area including biodiversity.		2025
2.1.3	Explore the potential for a waymarked looped walk around the town connecting various sites of natural, built and cultural heritage such as the Grand Canal, River Barrow, town centre, local forests etc. Any trail should include interpretation of local biodiversity.		2025
2.1.4	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. They should also include: <ul style="list-style-type: none"> Wildlife of Moore Abbey Wood talk and walk covering red squirrels, bluebells, pine martens, etc. Wildlife of the River Barrow Wildlife of the Grand Canal <p>These can be delivered as Monasterevin only events or in partnership with other neighbouring communities where appropriate.</p>	MTT	2021-2025
2.1.5	Use any vacant shop fronts on Main Street to display / interpret the local natural, built and cultural heritage of Monasterevin. This should include repainting the wildflower murals on the front of the vacant garage (the old Finlays Garage).		2024
2.1.6	Use local social media to raise awareness of local biodiversity and conservation issues.		
2.1.7	Run a Willow-work community workshop using the Willow thinning from the bank between the river and the playground.	Rep MTT	2023
2.1.8	Work with the owners of the riverside gardens on Main Street to raise awareness of biodiversity-friendly gardening perhaps by passing on a copy of the Gardener's version of the All-Ireland Pollinator Plan available at www.pollinators.ie/resources		
2.1.9	Explore the potential to paint a biodiversity-awareness mural on the wall at entrance to The Pastures estate		

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 (www.pollinators.ie/resources).	MTT	2021
2.2.2	Support the local schools with wildlife events / activities. Where possible this should be using the different areas of habitat on the campus. This can be a wildlife walk, talk, or workshop.		2023

Target 2.2 Support education opportunities in schools at all levels

No.	Action	Who	When
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.		2023

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.		
2.3.2	Participate in, and if necessary help organise, a series of county wide farm talks / walks (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.		
2.3.3	Engage with management and the residents of the Direct Provision Centre at the Hazel Hotel about establishing a program for voluntary conservation activities for residents. This program could utilise the outdoor spaces for this purpose. Suggested activities could include a wildflower or tree growing program using seed sourced locally, which can then be used as part of volunteer planting days in the community.		
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.		
2.3.6	Implement a policy of no Invasive plant species in new planting schemes in the town. For example- this should include no Laurel (<i>Prunus laurocerasus</i>) planting in any new schemes.		
2.3.7	Engage with Kildare County Council on any new developments in the town that they should incorporate best practice green infrastructure design principles (e.g. bioswales) and biodiversity features (e.g. Swift bricks, see Action 1.4.1). This should ideally be done at the planning stage. Where plans have developed beyond planning, engage with the developers about the benefits that green infrastructure design can deliver for them.		
2.3.8	Engage with Waterways Ireland about management practices along the Grand Canal including the use of herbicide.		

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:

Target 3.1 Build a baseline of data on local biodiversity and track changes			
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 Action 1.4.1).	MTT and local wildlife charities such as Wild Kildare	2021-2025
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 NBDC		
3.1.4	Develop at least 2 butterfly transects in the town and submit records to the NBDC		
3.1.5	Monitor squirrel (red and grey) population numbers (see Action 1.4.4).		
3.1.6	Carry out an otter survey of the River Barrow and Grand Canal.		
3.1.7	Carry out a survey of bluebells in Moore Abbey Wood (see Action 1.4.3).		
3.1.8	Record all biodiversity records onto the National Biodiversity Data Centre. Encourage other members of the community to do likewise.		
3.1.9	Record and map all biodiversity actions delivered at: https://pollinators.biodiversityireland.ie/		
3.1.10	Carry out a survey of heritage varieties of fruit and nut trees and bushes in the town (see Action 1.4.2).		

Target 3.2 Measure progress of this Plan on a regular basis			
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.

Target 4.1 Build the capacity within the community to manage and record biodiversity			
No.	Action	Who	When
4.1.1	Identify all wildlife groups active in Monasterevin and make contact and offer help / partner on local projects.	MTT	2021-2025
4.1.2	Identify sources (sites) of native wildflowers (this should include Yellow Rattle) as places for community seed collections - this can include other donor sources in the county		
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.		
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.		2021

Target 4.2 Build up local resources of materials and equipment to manage and record biodiversity			
No.	Action	Who	When
4.2.1	Explore options for acquiring a polytunnel, or part of, for community use. 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.		2021
4.2.2	Source meadow maintenance equipment for community use. Options available are to 1) purchase equipment, potentially in partnership with other local towns and villages; and 2) work with the private sector to build up their capacity for managing meadows (hire companies and / or local landscape contractors). If working with other local groups then an annual schedule for its use, maintenance /servicing plans, insurance & other costs should be agreed in advance.		
4.2.3	Build up a stock of biodiversity educational resources. Liaise with the local library.	Rep MTT	2021
4.2.4	Build up a stock of biodiversity recording equipment such as bat detectors, moth traps, etc.	MTT	2021-2025

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"> https://www.batconservationireland.org/ https://kildarebatgroup.wordpress.com/
Birdwatching	<ul style="list-style-type: none"> http://www.birdwatchkildare.com/?page_id=23 https://birdwatchireland.ie/irelands-birds-birdwatch-ireland/ www.irishbirding.com
Children's Biodiversity Activities	<ul style="list-style-type: none"> https://birdwatchireland.ie/our-work/fun-learning/for-kids/ https://www.woodlandtrust.org.uk/blog/2020/03/kids-nature-activities-self-isolation/ https://www.rspb.org.uk/fun-and-learning/
General Biodiversity Issues	<ul style="list-style-type: none"> https://www.biodiversityireland.ie/ www.npws.ie
Habitat Boxes	<ul style="list-style-type: none"> https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Pollinator-How-to-Guide-1-ALT_FINAL.pdf https://birdwatchireland.ie/app/uploads/2019/09/Nestboxes-factsheet.pdf https://www.batconservationireland.org/wp-content/uploads/2015/05/BCIrelandGuidelines_BatBoxes.pdf
Hedgerows	<ul style="list-style-type: none"> https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Pollinator-How-to-Guide-3-FINAL-1.pdf https://www.heritagecouncil.ie/content/files/conserving_hedgerows_2mb.pdf https://63273-649646-raikfcquaxqncofqfm.stackpathdns.com/wp-content/uploads/2019/04/Hedgerow-CasestudyASPaul21-Send-for-New-Website.pdf https://mosart.ie/wp-content/uploads/2016/02/Irish-Hedgerows-Networks-for-Nature.pdf www.hedgelaying.ie
Interpretative Signage	<ul style="list-style-type: none"> https://www.nature.scot/sites/default/files/2019-11/Guidance%20-%20Natural%20heritage%20interpretation_1.pdf https://www.heritagecouncil.ie/content/files/bored_of_boards_1mb.pdf https://pollinators.ie/resources/signage-templates/
Invasive Alien Species	<ul style="list-style-type: none"> https://invasivespeciesireland.com/ https://www.fisheriesireland.ie/Invasive-Species/invasive-species.html
Local Biodiversity News	<ul style="list-style-type: none"> https://www.facebook.com/Wild-Kildare-1437313092971392/ http://www.birdwatchkildare.com/ https://kildarebatgroup.wordpress.com/ http://www.kildare.ie/CountyCouncil/Heritage/Biodiversity/
Nature Trails	<ul style="list-style-type: none"> http://www.walkingroutes.ie/WalkingTrails/Kildare
Orchards	<ul style="list-style-type: none"> http://www.irishseedsavers.ie/blog/wp-content/uploads/2014/10/CreatingAnOrchard.pdf https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/11466/1973262.pdf http://www.wetlandsystems.ie/goephow.html https://www.theorchardproject.org.uk/
Peatlands	<ul style="list-style-type: none"> www.ipcc.ie www.bordnamona.ie/transform/biodiversity www.abbeyleixbog.ie
Pollinator Friendly Planting Schemes	<ul style="list-style-type: none"> https://pollinators.ie/resources/ https://pollinators.ie/wordpress/wp-content/uploads/2018/04/Planting-Code-2018-WEB.pdf www.rhs.org.uk
Pollinators	<ul style="list-style-type: none"> https://pollinators.ie/
Recording Biodiversity	<ul style="list-style-type: none"> https://www.biodiversityireland.ie/record-biodiversity/
Reducing Herbicide Use	<ul style="list-style-type: none"> https://greensideup.ie/16-natural-alternatives-to-herbicide-why-you-should-use-them/
Schools & Biodiversity	<ul style="list-style-type: none"> https://greenschoolsireland.org/biodiversity/ https://pollinators.ie/schools/ http://www.heritageinschools.ie/teachers-resources/strand/living-things-science/p3?q=&c=

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

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 info@countykildarelp.ie . Website: www.countykildarelp.ie/
Kildare County Council	For additional information in relation to funding for biodiversity and heritage projects, contact the Heritage Officer - Tel. 045 980791 or email heritageofficer@kildarecoco.ie
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. https://www.communityfoundation.ie/insights/news/environment-and-nature-fund-2019
Heritage Council	The Heritage Council supports a wide range of heritage projects throughout the country through our annual grants programme. https://www.heritagecouncil.ie/funding
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: http://watersandcommunities.ie/community-water-officers/
Trees on the Land	This charity aims to increase the amount of native Irish trees across Ireland. https://www.treesontheland.com/
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. https://www.agriculture.gov.ie/media/migration/forestry/grantandpremiumschemes/2015/NeighbourWoodScheme240717.pdf

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 heritageofficer@kildarecoco.ie
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: admin@kildareppn.ie Website: https://www.kildareppn.ie/
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 info@countykildarelp.ie . Website: www.countykildarelp.ie/
Wild Kildare	Local volunteer environmental organisation.	https://www.facebook.com/Wild-Kildare-1437313092971392/
Irish Wildlife Trust	National environmental charity covering all aspects of biodiversity.	https://iwt.ie/
BirdWatch Ireland Kildare	For information on Ireland's birds.	https://birdwatchireland.ie/
National Parks and Wildlife Service	Responsible for managing the Irish State's nature conservation responsibilities.	https://www.npws.ie/
All-Ireland Pollinator Plan	National Plan with the aim of creating an Ireland where pollinators can survive & thrive.	https://pollinators.ie/
National Biodiversity Data Centre	National centre for the collection, collation, management, analysis and dissemination of data on Ireland's biological diversity.	https://www.biodiversityireland.ie/
Vincent Wildlife Trust	National environmental charity with the aim of conserving and research into selected Irish mammals.	https://www.vincentwildlife.ie/
Botanical Society of Britain & Ireland	National organisation that promotes the study, understanding and enjoyment of British and Irish botany.	https://bsbi.org/ireland
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.	http://watersandcommunities.ie/
Monasterevin Tidy Towns	Local Tidy Towns group.	https://www.facebook.com/MonasterevinTT/

Bat Conservation Ireland	An all-Ireland charity that promotes the conservation of bats and their habitats.	https://www.batconservationireland.org/
Kildare Bat Group	Members of Bat Conservation Ireland with a particular interest in Kildare bats.	https://kildarebatgroup.wordpress.com/
Kildare Animal Foundation	A local non-profit organisation dedicated to the welfare of cats, dogs and small animals.	https://animalfoundation.ie/
Irish Peatland Conservation Council	A national charitable organisation with the aim of conserving and protecting a representative sample of Irish bogs, and to campaign on bog-related issues.	http://www.ipcc.ie/
Kildare Community 4 Climate Action	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.	https://www.facebook.com/KildareC4CA/



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/>

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:

Local Site Considerations	Soil - is it very wet or free draining?
	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.
	For larger planting schemes, do you need to prepare the site for planting?
	Do you need to protect against rabbits / hares / deer?
	Check for overhead powerlines or underground services.
Practical Design Considerations	Consider safety and sightlines - set back from primary paths in public spaces or at road junctions
	Consider whether anti-social behaviour is a problem in the area and manage for it in advance
	Where possible, include other community amenities as part of larger planting schemes - paths, outdoor classrooms, natural play, picnic tables, etc.
	Consider neighbouring houses before planting.
	Where possible, plant small groups of trees in public spaces instead of lots of individual trees. This will be easier to maintain.
	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.
Community & Stakeholder Consultation	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.
	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.
	Agree a plan for managing around the base of individual trees to avoid damage from lawnmowers and strimmers.

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"> • Japanese anemones (<i>Anemone</i> x hybrid) – pink and white (autumn); • Verbena bonariensis (late summer); • Foxgloves (<i>Digitalis</i> spp) (early summer) – both pink and white varieties; • Mullein (<i>Verbascum</i> spp) (summer); • Fennel (<i>Foeniculum vulgare</i>); • Teasel (<i>Dipsacus</i> sp.) - Goldfinches love their seeds in winter. • Some Rudbeckia daisies will add bold colour too. 	<ul style="list-style-type: none"> • Sedum ‘Autumn Joy’ (autumn); • Masterwort (<i>Astrantia major</i>) (available in various shades of pink and white, long flowering from summer into autumn); • Yarrow (<i>Achillea</i> spp) (summer into autumn); • Avens (<i>Geum</i> sp.) – brightly coloured with long-lasting flowers; • Columbine/Granny’s bonnet (<i>Aquilegia</i> sp) (early summer) • Macedonian scabious (<i>Knautia macedonica</i>). • Hardy Geraniums/Cranesbills (<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. • Lenten Hellebores (<i>Helleborus orientalis</i>) will give winter and spring interest. • Penstemons: A semi-woody perennial with tubular flowers that last from early summer right through to late autumn. • Lady’s mantle (<i>Alchemilla mollis</i>): attractive green flowers and leaves that flop over bed edges.

Also consider:

- Herb species are great for pollinators as well as providing food for ourselves: chives, thyme, rosemary, oregano / marjoram and sage.
- Native wildflowers add great colour and biodiversity interest & will be a great addition to flowerbeds. Some may be crucial for different species of native biodiversity as food plants.

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

Native Hedgerow Mix Species to Select From

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

Planting & Managing a Native Hedgerow for Biodiversity

- 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 the it can flower and fruit
- Cut outside the bird nesting season (1st March-31st 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"> • Pedunculate oak (<i>Quercus robur</i>) – prefers neutral/limestone soils • Sessile oak (<i>Quercus petraea</i>) – prefers slightly acid soils • Willow (<i>Salix</i> spp) – good for damp/waterside conditions • Hazel (<i>Corylus avellana</i>) – likes neutral to limey soils • Alder (<i>Alnus glutinosa</i>)– good for damp/waterside conditions • Aspen (<i>Populus tremula</i>) • Silver birch (<i>Betula pendula</i>) • Downy birch (<i>Betula pubescens</i>) - good for damp/ waterside conditions • Yew (<i>Taxus baccata</i>) – note that ‘fastigiata’ is the upright form (Irish Yew) • Holly (<i>Ilex aquifolium</i>) • Rowan / Mountain ash (<i>Sorbus aucuparia</i>) – flowers and fruit for spring and autumn interest • Whitebeam (<i>Sorbus aria</i>) – flowers and fruit for spring and autumn interest • Crab apple (<i>Malus sylvestris</i>) – flowers and fruit for spring and autumn interest • Wild cherry (<i>Prunus avium</i>) – flowers in spring and colourful fruit and leaves in autumn 	<ul style="list-style-type: none"> • Fruit bushes e.g. the native Raspberry (<i>Rubus idaeus</i>) and Blackberry (<i>Rubus fruticosus</i>). Also Currants and Gooseberries (<i>Ribes</i> spp.). • Ling heather (<i>Calluna vulgaris</i>) - prefers acid/peaty soil conditions • Bell heather (<i>Erica cinerea</i>) - prefers acid/peaty soil conditions • Broom (<i>Cytisus scoparius</i>) terrific colour, blooming through April & May. • Firethorn (<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. • Honeysuckle/Woodbine (<i>Lonicera periclymenum</i>) – a climber with beautifully scented flowers, particularly in the evening when they attract nectar-seeking moths. • Dog rose (<i>Rosa canina</i>) – a climber with beautiful flowers in June and red rosehips in autumn. • Elder (<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) • Spindle tree (<i>Euonymus europaeus</i>) – strikingly beautiful orange seeds carried in bright pink capsules called ‘cardinals’ hats’ • Blackthorn (<i>Prunus spinosa</i>) – featuring sloe berries in autumn • Purging Buckthorn (<i>Rhamnus catharticus</i>) – an uncommon shrub – the favourite food plant of the Brimstone butterfly • Alder-buckthorn (<i>Frangula alnus</i>) – a rare native also favoured by the Brimstone butterfly. • Privet (<i>Ligustrum vulgare</i>) • Guelder rose (<i>Viburnum opulus</i>) – beautiful flowers and berries. • Gorse (<i>Ulex europaeus</i>) – the heady, coconut aroma of its bright yellow flowers is the smell of an Irish summer’s day.

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

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

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 (✓)
Wildflower Meadows		
Polytunnel	It is useful to have at least one community polytunnel to grow wildflower plugs from locally harvested seed that can then be planted out into local public meadows. It is ideally located in a secure place where a 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"> • 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) • Brush cutter • Hand held scythe, hay forks and rakes 	
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.	
Everyday Habitat Management		
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.	
Citizen Science & Community Events		
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



Examples of Equipment for Citizen Science and Community Events



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.

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.

Pollinator Beds



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.



Green walls can soften grey urban spaces and deliver a wide range of other benefits such as sequester carbon, reduce the urban heat island effect, increase biodiversity, etc.



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 (Monasterevin 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 and the aesthetic values of nature.

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

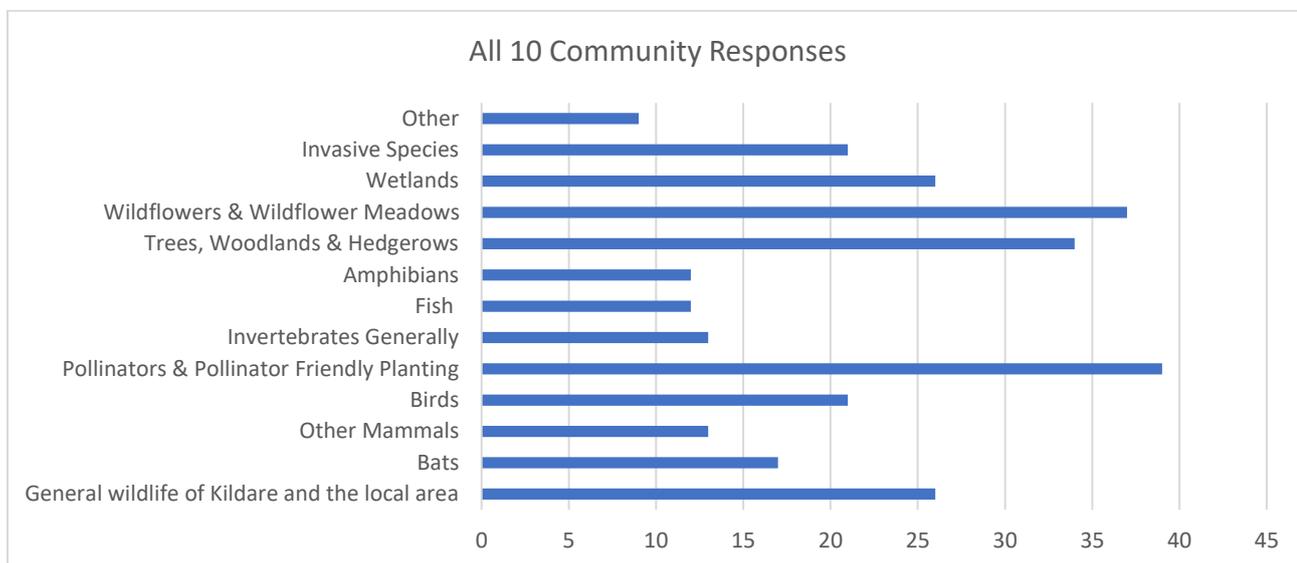
The responses highlight a range of sites both in the town and in the surrounding landscape that are seen as important for biodiversity. The biodiversity hotspots that were mentioned by most Monasterevin respondents were More Abbey Woods, the canal and the River Barrow. The tree line on Drogheda Street and the Dublin Road as well as the roadside verges were also mentioned.

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

The majority of respondents stated that they would be interested in getting involved in helping biodiversity in Monasterevin, with nobody stating that they wouldn't be interested. The main ways that the respondents stated that they would like to get involved included getting involved in protecting the mature trees in the town, planting and maintaining areas for wildlife and encouraging Kildare County Council to not allow the use of known invasive plant species in new developments and planting schemes.

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)

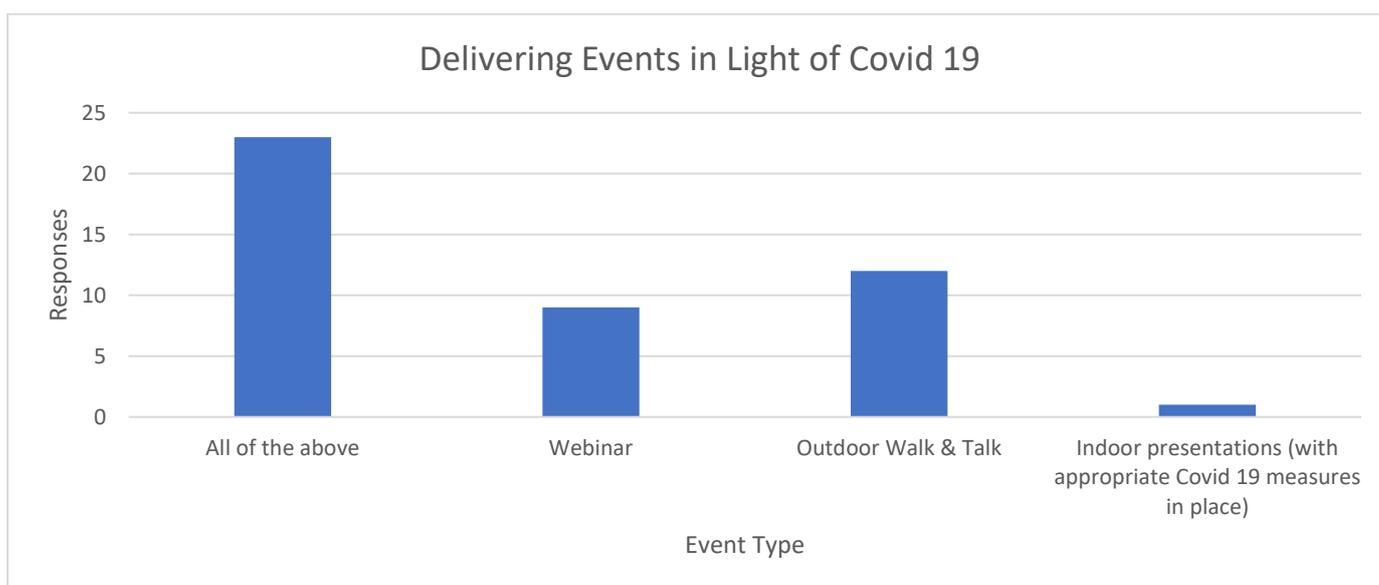
Events related to pollinators and pollinator-friendly planting, wildflowers and wildflower meadows, and trees, woodlands and hedgerows were the most popular responses with each of these receiving over 30 mentions each. Events about general wildlife of Kildare, invasive species, birds and wetlands were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

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

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