

Clane

Biodiversity Action Plan 2021-25



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Plan produced by:

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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 Clane Tidy Towns for nominating Clane 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:

Clane Tidy Towns by email to clanetidytowns@gmail.com

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 members of Clane Tidy Towns, Dr Fiona MacGowan, Suzanne Behan and Brian Gaynor.

Section 1:

Introduction

Clane, in County Kildare, is a bustling small town on the banks of the River Liffey boasting a wonderful sense of community. Located on a natural fording point of the river, historic sites include a Norman Motte on a hill formed during the ice age, an Abbey said to be established by St. Ailbe around 520 AD, and a Friary dating back to 1258. Remains of The Pale can still be seen near Clongowes Wood College.

Although the population of Clane has increased substantially in recent decades, Main Street retains much of its traditional charm, and nearby amenities such as the Liffeside Walk, the Grand Canal and Donadea Forest Park are being appreciated by more visitors than ever. The people of Clane also maintain a rich tapestry of community groups. Clane Tidy Towns has organised Clane's entry in the national competition since 1973, achieving numerous Bronze medals in recent years.

Biodiversity has featured prominently in these activities, with a waste treatment facility converted into the Liffeside Nature Park in the early 2000's, the John Sullivan Resource Centre developing a rich biodiversity and garden trail, and the parish recently establishing a wildflower labyrinth to the rear of the church – ideal for those who might like to step out of the hustle and bustle on Main Street and enjoy a quieter moment.

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 Clane. 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, Clane 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

Clane has ancient origins as a settlement on a bend of the River Liffey meanders. The town has since developed like many Irish towns by turning its back on the river. However, a recent housing development along the river incorporates a lovely riverside walk. The walker will be rewarded with beautiful views across the Kildare plains with graceful Willow trees and the occasional sapphire glimpse of a Kingfisher. Clane is situated in the fertile lands of northeast Kildare in the Liffey Plain and is surrounded by rich farmland to the east of the Bog of Allen which stretches away to the west. The town has developed rapidly in recent decades due to its proximity to Dublin City but luckily there are still several sites of rich biodiversity within Clane's locality. Clane has a tremendous variety of habitats within its locality, such as Donadea Wood, Ballynafagh Bog and Ballynafagh Lake. The bog is an acidic raised bog habitat whereas Ballynafagh Lake features alkaline fen and lake habitats thus hosting a different set of species and furthering the biodiversity riches of this north Kildare area. Please note that further details on your local conservation sites can be found at:

www.npws.ie/protected-sites/

Clane, which lies along the banks of the River Liffey, is rich in historic sites and features of natural heritage interest such as the Franciscan Friary.



Main Biodiversity Sites

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

Site of Biodiversity Interest

River Liffey & Alexandra Park: 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 for the many villages and towns such as Clane as it flows through them. The park at Alexandra has pockets of woodland and grassy margins that are important habitat for wildlife along the river. The larger grass spaces have the potential to be managed in a way that supports even more wildlife and add interest for the local community.



Franciscan Friary & Graveyard: The old stone walls and headstones support a variety of plants and animals with particularly noticeable moss and lichen species. The high tops of the walls feature plant species that would have been used medicinally by the Clane friars centuries ago. The descendants of these plants have managed to survive at Clane Friary thus providing a window to the past. A good

example is Mallow (*Malva sylvestris*), a species associated with old ruins in Ireland, it was extensively used for medicinal and veterinary purposes in the past. The grassy areas around the Friary would make a pretty backdrop rich in biodiversity if they were to be managed as a wildflower meadow.

John Sullivan Resource Centre Biodiversity Garden (Irish Wheelchair Association): Thanks to the work of a local horticulturist, centre members, centre staff and local volunteers, a section of the grounds has been developed into a Biodiversity Garden which has become a haven for wildlife. Its main features are a heritage orchard, wildflower meadow, wildlife pond, native beehives, native and wildlife friendly hedging, native woodland, and a butterfly corner. The activities in the garden can be seen online here: <https://iwaclanebiodiversitygarden.wordpress.com/>. There is a garden trail through the garden for visitors to explore!

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.

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:

- Planting native hedgerows and trees to screen bare walls and along approach roads. In the 2020-21 tree planting season, 750 native trees were planted for this purpose.
- Establishing pollinator friendly maintenance regimes in several prominent locations.
- Hosting talks and walks featuring local biodiversity in the schools and for the general public.
- Contributing to targeted wildlife surveys including those for the Daubenton Bat, Swift, and Yellowhammer.
- Removing invasive Himalayan Balsam from tributaries of the Liffey.
- Promoting spawning habitat for trout in the village stream.
- Supporting development and enhancement of sites including the Biodiversity Garden at the John Sullivan Centre, the wildflower Labyrinth to the rear of the church, and the Liffeside Nature Park.
- 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.

'900 native trees were planted in the 2020-21 tree planting season'



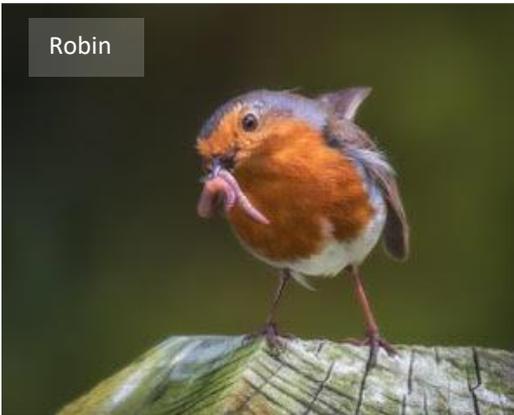
'Local volunteers have led efforts to tackle invasive species on local rivers and streams'

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 Clane 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 Clane 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	Explore the opportunity to increase areas of wildflower meadow and native woodland habitat along the green space of the Liffeside Nature Park / Alexandra Walk. It is recommended that a landscape plan be developed for this space.	CTT KCC Alexandra Walk/Manor	2023
1.1.2	Explore the opportunity to carry out the following biodiversity habitat enhancement works within the 'Stream Park & Playground': <ul style="list-style-type: none"> A. Design and implement a woodland / rain garden in place of the flagstone paving and incorporating the lawn area. This should include native shade tolerant herbaceous planting (wildflowers and ferns), paths, seating, sensory garden elements and a sculptural feature. B. Design and implement a natural play area in the southern section of the playground. C. Augment the herbaceous perennial bed with additional pollinator friendly plants. D. Use alternative tree friendly methods of hanging ornaments. 	CTT CCC KCC	2021
1.1.3	Convert the entire traffic island at the Millicent Road-Main Street Junction into a pollinator friendly flower bed. Plant @ 11 plants / m ² at p9 pot size. In parallel with 1.1.2.	CTT KCC	2021
1.1.4	Explore the opportunity to manage part of the lawn space beside Franciscan Friary & Graveyard as a wildflower meadow. This can be created as part of the reinstatement of the green area once construction works in the area have been completed. Use free draining, nutrient poor soil to create the meadow. Also explore the opportunity to plant a native hedgerow along the fence.	Westgrove Shopping Centre, CTT	2022
1.1.5	Consider managing the lawn space in front of the Abbey Community Centre as a wildflower meadow. This should continue into the graveyard. In parallel with 1.1.2.	CTT CCC	2021
1.1.6	Explore the opportunity to plant a native hedgerow along the front boundary of UPMC Kildare Hospital.	CTT UPMC	2022
1.1.7	Enhance existing or create new pollinator friendly flower beds on the three roundabouts on the Ring Road. Include art features on each depicting aspects of local heritage.	CTT KCC Supervalu	2021
1.1.8	Plant pollinator friendly bulbs into the daffodil planting on the wider green spaces at the Tesco Metro roundabout. Maintain as a wildflower meadow during the summer.	CTT	2021
1.1.9	Manage wider grass verges on approach roads as wildflower meadow.	KCC	2022
1.1.10	Explore the opportunities to enhance the green space in the Garda Station for community and biodiversity by: <ul style="list-style-type: none"> A. Removing selected trees along the front boundary and installing a railing and new native hedgerow. B. Managing the lawn spaces as wildflower meadow. C. Developing a pollinator friendly ornamental flower bed in the front lawn. 	Gardai OPW CTT	2021: A 2022: B 2023: C

Target 1.1 Make the town's public spaces more biodiversity friendly			
No.	Action	Who	When
1.1.11	Reinstate a native hedgerow along Nancy's Lane lost due to development.	KCC Abbottfield	2021
1.1.12	Promote biodiversity considerations into future redevelopment of public realm in Clane (e.g. progressing from town health-check)	KCC CTT CCC	2021-2025

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' each year on a Saturday morning in Feb/March. Tree mix (whips only) to include: Rowan, Birch, Hazel and Wild Cherry.	CTT	2021-2025
1.2.2	<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"> Plant native hedgerows or climbers against internal boundary concrete walls and along the front boundaries of residential estates in the town. Manage sections of residential green spaces as wildflower meadows, either bulb, shortcut or hay meadows. For bulb meadows species such as Snowdrops, Bluebells, Wood anemones, Crocus spp., Muscari, etc. can be planted. 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. 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. Install bird and bat boxes at suitable locations. Where possible create a wildlife pond. Secure with fencing if necessary. <p>Target 1-2 residential estates each year of the Action Plan to work with (all actions should be agreed with the residents). In Year 1, engage with estates that have taken part in the process of developing this plan such as Hillview Heights. These can then act as 'champions' within the town for other estates in subsequent years.</p>	CTT Residents' Assoc.	2021: Hillview Heights and Green Loughbollard
1.2.3	Explore the opportunity to replace the dying Cypress hedge along the front boundary of Abbeycourt estate with a native Yew hedge as per Yew Tree Square.	KCC Abbey Court R.A.	2021-2023
1.2.4	<p>Explore the opportunity to maximise the potential of the Hazel Hall Nursing Home grounds for residents and for biodiversity by:</p> <ol style="list-style-type: none"> Planting a native hedgerow along the front boundary for screening. Managing the grass verge on the front boundary as a bulb and shortcut wildflower meadow. Cut and lift every 6 weeks. Developing the lawn space to the back as a garden space for residents that incorporates biodiversity planting, other biodiversity features, new paths and seating. 	CTT Hazel Hall	2025
1.2.5	Explore the opportunity with Aldi to manage their lawn space adjacent to Main Street as a wildflower meadow. In parallel with 1.1.2.	CTT ALDI	2021

Target 1.2 Make the town's private lands more biodiversity friendly			
No.	Action	Who	When
1.2.6	Explore the opportunity to enhance biodiversity within Clane GAA grounds including: <ul style="list-style-type: none"> A. Plant an avenue of trees in the front boundary hedgerow. B. Infill planting using pollinator friendly herbaceous plants into the new planting bed at the entrance. C. Plant a beech hedge in place of the removed Leyland hedge. D. Install Swift boxes and a calling system on the club house (see Action 1.4.1). 	CTT GAA	2021-2023
1.2.7	Continue to maintain the wildlife garden in the Irish Wheelchair Association grounds.	IWA KCC (Heritage)	2021-2025
1.2.8	Explore the opportunity to plant additional native trees on the roadside at the entrance to Clane Business Park	CTT KCC	2022
1.2.9	Explore the opportunity to plant a hedgerow with trees between the pitches of Clane United AFC and Clane RFC. Plant 60m native hedge between Otomy and Clane United AFC.	CTT Clane RFC Clane Utd AFC	2021-2022
1.2.10	Explore maximising the potential of Scoil Mhuire grounds for outdoor learning and biodiversity including the following: <ul style="list-style-type: none"> A. Plant a native woodland trail along the northern boundary. Explore the potential to use local provenance Hazel tree saplings sourced from the Old Quarry nearby. B. Plant a row of Birch (<i>Betula pendula</i>) between the two pitches. C. Plant trees into the grass verges. Ensure the planting pits are backfilled with good quality topsoil. D. Remove the circular raised beds at the entrance and manage the lawn as wildflower meadow. Manage the grass verge opposite as wildflower meadow as well. Alternatively plant native trees into the beds and underplant with pollinator friendly herbaceous perennials. E. Install Swift boxes on the school building (see Action 1.4.1). 	CTT Scoil Mhuire	2022
1.2.11	Maximise the potential of Scoil Bhríde for outdoor learning and biodiversity including the following: <ul style="list-style-type: none"> A. Develop a wildlife garden & outdoor learning classroom in the fenced area with the water harvesting tank. This could include a wildlife pond, meadow and signs on the fence. B. Plant a row of native trees along the boundary with Scoil Phádraig Claonadh. C. Manage sections of the lawn area as wildflower meadow. D. If required, increase the number of Swift boxes on the school buildings. E. Replace the existing dying sections of the hedge at the front boundary with appropriate hedging. 	CTT Scoil Bhríde	2021
1.2.12	Ensure that best practice green infrastructure design and biodiversity enhancement features (e.g. Swift bricks, natural play, rain gardens/bioswales) are included in the redevelopment plans for Scoil Phádraig Claonadh.	CTT Scoil Phádraig	2021-2023
1.2.13	Explore the opportunity with the Church of St Patrick and St Bridget to enhance their green space for community use and biodiversity by: <ul style="list-style-type: none"> A. Replace the Laurel (<i>Prunus laurocerasus</i> 'Otto Luyken') beside the car park and the row of dead trees B. Planting an orchard using local heritage fruit and nut trees to the back half. Allow the grass underneath to grow as a meadow with mown paths. C. Managing the front section on the car park side as a wildflower meadow with the Labyrinth path design. A simple management plan for the space would be beneficial. D. Possible replacement of trees in courtyard. 	CTT Parish	2021

Target 1.2 Make the town's private lands more biodiversity friendly			
No.	Action	Who	When
1.2.14	Explore the opportunity with Clongowes College to enhance their campus for outdoor learning and biodiversity.	CTT Clongowes	2025
1.2.15	Explore the opportunity to plant a Yew hedge along the front boundary of Campbell's Tyre Yard.	CTT Campbell's	2021

Target 1.3 Make the town's surrounding lands more biodiversity friendly			
No.	Action	Who	When
1.3.1	Participate in a Himalayan Balsam control project for the River Liffey catchment area. The study should include other Invasive Species recorded.	KCC, Clane TT, with other local communities, LAWCO Officer, Local Angling Groups, Inland Fisheries Ireland/National Biodiversity Data Centre, ESB	KCC to start planning 2020
1.3.2	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. If following a survey of local Ash trees in Clane, it is noted that there are some Ash with resilience to Ash dieback then propagate these.	CTT Landowners	2024
1.3.3	Explore the potential to create a tree line along Loughbollard berm	KCC, Loughbollard Residents' Association	2022
1.3.4	Explore the potential to create a native orchard opposite Credit Union in the Hillview estate	KCC CTT	2021

Target 1.4 Deliver species-specific conservation projects			
No.	Action	Who	When
1.4.1	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 could be delivered in partnership with local wildlife charities such as Wild Kildare who require local people to monitor population numbers.	CTT, Local wildlife charities such as Wild Kildare	2021-25
1.4.2	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 riverbanks.	CTT	2021
1.4.3	Explore the potential to carry out conservation measures for the Black Poplar (<i>Populus nigra</i>) tree within the Liffeside Park.	KARE, CTT, Tennis Club, Central Park, Contact NPWS	2021
1.4.4	Carry out a conservation project on the local provenance Hazel (<i>Corylus avellana</i>) found near the Old Quarry. Grow saplings harvested from the trees and use these in local woodland and hedgerow planting schemes.	CTT	2022

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 2 or 3no. interpretation posts at selected locations in the 'Liffey Park'. These can cover the following topics: nettles and butterflies, wildflower meadows, woodland plants and animals, bird life and local cultural and built heritage, aquatic life, crayfish etc	CTT KCC Alexandra Walk/Manor	2023
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 (see Action 2.1.6).	CTT CCC Local History Group	2023
2.1.3	Run a minimum of 2 wildlife related events (e.g. walks, talks, workshops, webinars) 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. Events could include: <ul style="list-style-type: none"> • A talk on the Black Poplar tree • Wildflower seed harvesting session • Gardening for Biodiversity in your back garden These can be delivered as Clane only events or in partnership with other neighbouring communities where appropriate.	CTT IWA Schools Scouts etc	2021-2025
2.1.4	Use vacant shop fronts on Main Street to display / interpret the local natural, built and cultural heritage of Clane.	CTT, Local Heritage Group, Local Schools	2022-2023
2.1.5	Continue to use local social media to raise awareness of local biodiversity and conservation issues. Include short features on local wildlife – all types flora and fauna	CTT	2021
2.1.6	Install an interpretation panel in the 'Stream Park' that covers aspects of local heritage (e.g. forge) including biodiversity. In parallel with 1.1.2.	CTT, CCC, KCC	2021
2.1.7	Encourage Clane GAA to join the 'GAA Green Club' project: https://www.gaa.ie/stories/green-club-toolkit-questionnaire/	CTT GAA	2021
2.1.8	Raise awareness of local species of significance in Clane through Biodiversity Week talks and on information signs: Crayfish, Yellowhammer, Daubenton's Bat, Buzzard, Yew and Black Poplar.	CTT	2021-2025
2.1.9	Nancy Lane Heritage awareness project: install small information posts highlighting the natural and social history of this historic lane	CTT, CCC, Local Heritage Group	2021

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 www.pollinators.ie/resources	CTT, Green Schools Liaison	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	CTT, Green Schools Liaison	2021-2025

Target 2.2 Support education opportunities in schools at all levels

No.	Action	Who	When
	wildlife walk, talk, or workshop. Could include wildlife painting/drawing activities.		
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. See 1.2.10/11/12	CTT, Green Schools Liaison	2021-2025
2.2.4	Explore LEADER partnership biodiversity project across local schools	CTT, Green Schools Liaison	2021-2025

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 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 solutions where vegetation control is necessary and encourage a change of mindset in other situations where wildflowers could be allowed to grow. Consider organising this event in partnership with other local communities.	KCC CTT TidyTowns Network	2021-2022
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.	TidyTowns Network CTT IFA Wildlife Charities	2024
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. (http://ennistidytowns.com/project/estate-mentoring-programme/). 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	2022
2.3.4	Run a native wildlife patch competition in private gardens – integrate with citizen science - record and publish on the Biodiversity Data Centre. Note backyard biodiversity project. Raise awareness of the 'Gardening for Biodiversity' booklet: http://kildare.ie/CountyCouncil/Heritage/Publications/GardeningforBiodiversity/	CTT	2021
2.3.5	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.	CTT	2021
2.3.6	Post links to the All-Ireland Pollinator Plan guides on local social media each year.	CTT	2021-2025
2.3.7	Implement a policy of no Invasive plant species in new planting schemes in the town e.g. encourage alternatives to Cherry laurel (<i>Prunus laurocerasus</i>)	CTT	2021
2.3.8	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). 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.	CCC	2021-2025
2.3.9	Participate in any discussions on the setting up of a River Liffey Trust. Engage with Kildare Co. Co. Heritage Office, other Liffey-side villages and towns and the Liffey Valley Alliance in this process.	KCC CTT CCC	2021-2024

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.	Local wildlife charities such as Wild Kildare, CTT	2021-2025
3.1.2	Facilitate Wild Kildare's 'Moth Atlas' for the county	Wild Kildare, CTT	2023-2025
3.1.3	Develop at least 2 bumblebee transects in the town and submit records to the NBDC	CTT	2024
3.1.4	Develop at least 2 butterfly transects in the town and submit records to the NBDC	CTT	2024
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.	CTT	2024
3.1.6	Record all biodiversity records onto the National Biodiversity Data Centre app. Encourage other members of the community to do likewise.	CTT	2021-2025
3.1.7	Record and map all biodiversity actions delivered at: https://pollinators.biodiversityireland.ie/	CTT	2021-2025
3.1.8	Continue the Daubenton's bat survey annually	Local wildlife charities such as Kildare Bat Group	2021-2025

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.	BAP Workshop attendees	2021
3.2.2	The sub-committee shall carry out an annual review of the Action Plan.	BAP subcommittee	2021, 2022 & 2024
3.2.3	Carry out a more detailed mid-term review of the Action Plan.	BAP Workshop attendees	2023
3.2.4	Carry out a full detailed review of the Action Plan in the final year.	BAP Workshop attendees	Summer 2025
3.2.5	Plan for the updating / renewing of a subsequent 5-year plan to run from 2026-2030.	BAP Workshop attendees	2025

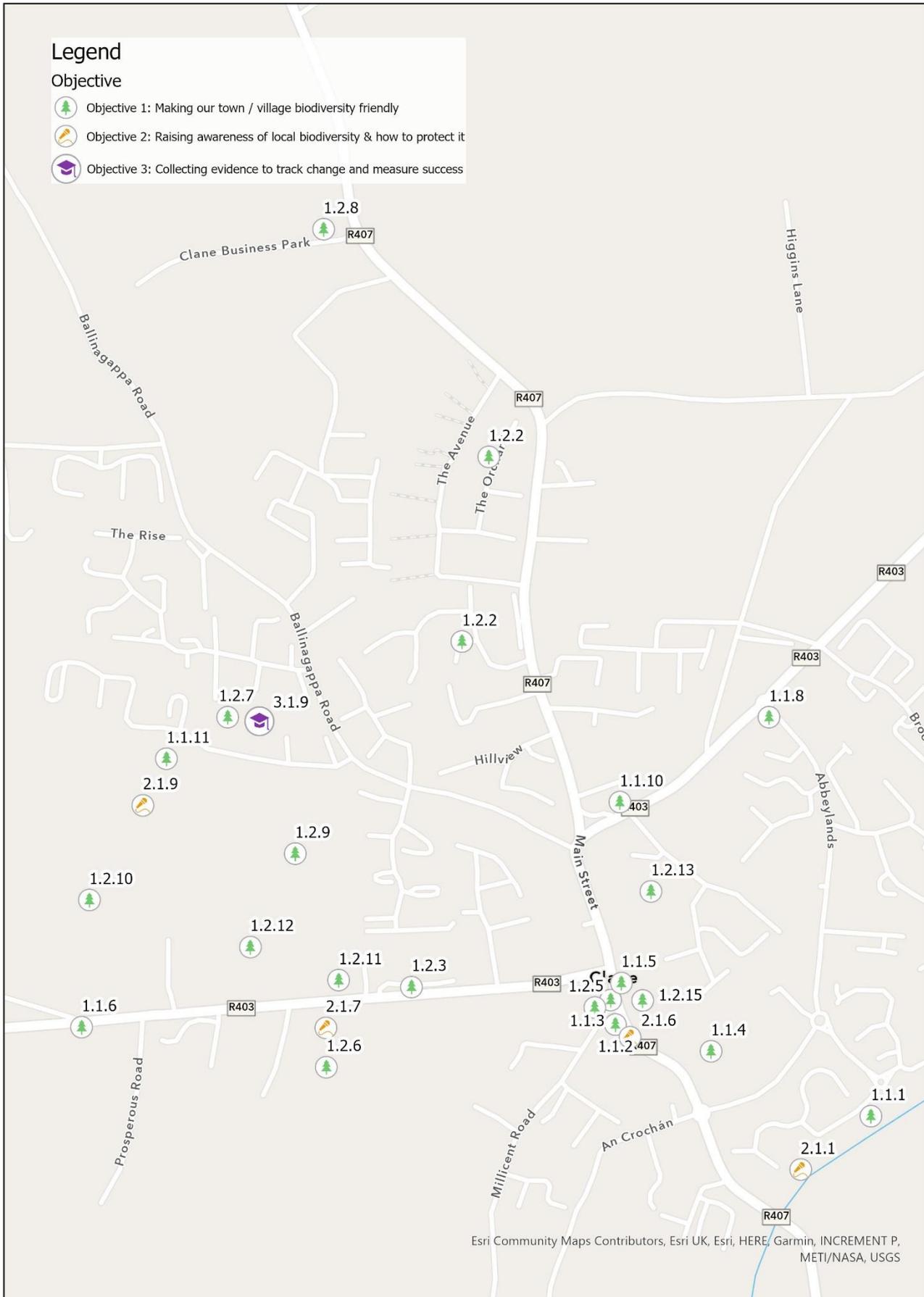
Objective 4: Build local capacity to manage & record biodiversity

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 Clane and make contact and offer help / partner on local projects.	CTT	2021
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	CTT	2021
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)	CTT	2021
4.1.4	Hold an event to communicate this BAP to the local community.	BAP Workshop Attendees	2021
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.	BAP Workshop Attendees	2021

Target 4.2 Build up local resources of materials and equipment to manage and record biodiversity			
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, plants, trees for use in new community planting schemes. This will create the opportunity to raise funds by selling native plants, trees and pollinator friendly plants.	CTT Men's Shed Local landowners	2021-2022
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.	CTT KCC Residents' Associations Other Tidy Town Groups	2021
4.2.3	Build up a stock of biodiversity educational resources. Liaise with the local library.	CTT Library Service	2022
4.2.4	Build up a stock of biodiversity recording equipment such as bat detectors, moth traps, etc.	CTT Library Service	2022/2023
4.2.5	Explore the opportunity to run a composting workshop in order to gain expertise in dealing with the cuttings from the hay/wildflower meadows.	CTT, KCC, Residents' Associations Other Tidy Town Groups	2022

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"> • 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	A shared service working with Local Authorities and State agencies to meet	http://watersandcommunities.ie/

Programme (Waters & Communities)	obligations under the EU Water Framework Directive for the development and implementation of River Basin Management Plans in Ireland.	
Clane Tidy Towns	Local Tidy Towns group.	clanetidytowns@gmail.com ; https://www.facebook.com/ClaneTidyTowns/
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/
Zero Waste Community Garden	Local community eco-garden.	https://www.facebook.com/zerowastegardenrathcoffey/
Irish Wheelchair Association John Sullivan Centre	Care providers to people with physical and sensory disabilities based in Clane.	http://kildare.ie/Voluntary/irish-wheelchair-association/clane.htm



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:

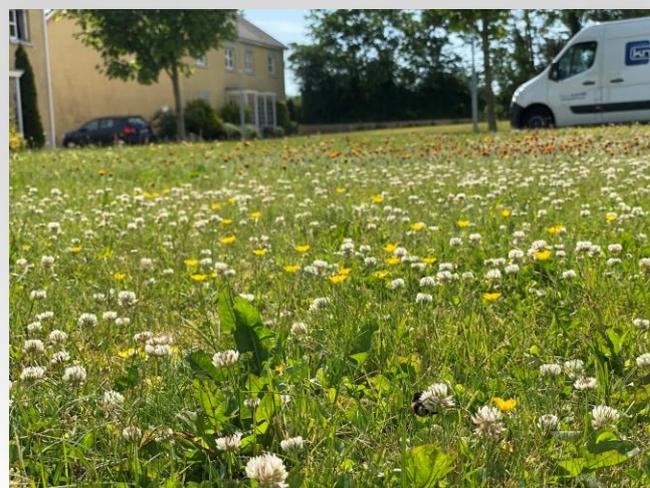
Hay Meadows:

- 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.
<p>Also consider:</p> <ul style="list-style-type: none"> • 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

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 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



Signs, either hand crafted or professionally produced, help increase awareness of local natural heritage interest and project actions.



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 (Clane Responses Only).

The responses listed a range of different ecosystem services that benefit the town. The most commonly listed benefits were the importance that nature has for our physical and mental health and well-being, and that it helps create a sense of place and pride in the community. 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 its role in producing food for us.

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

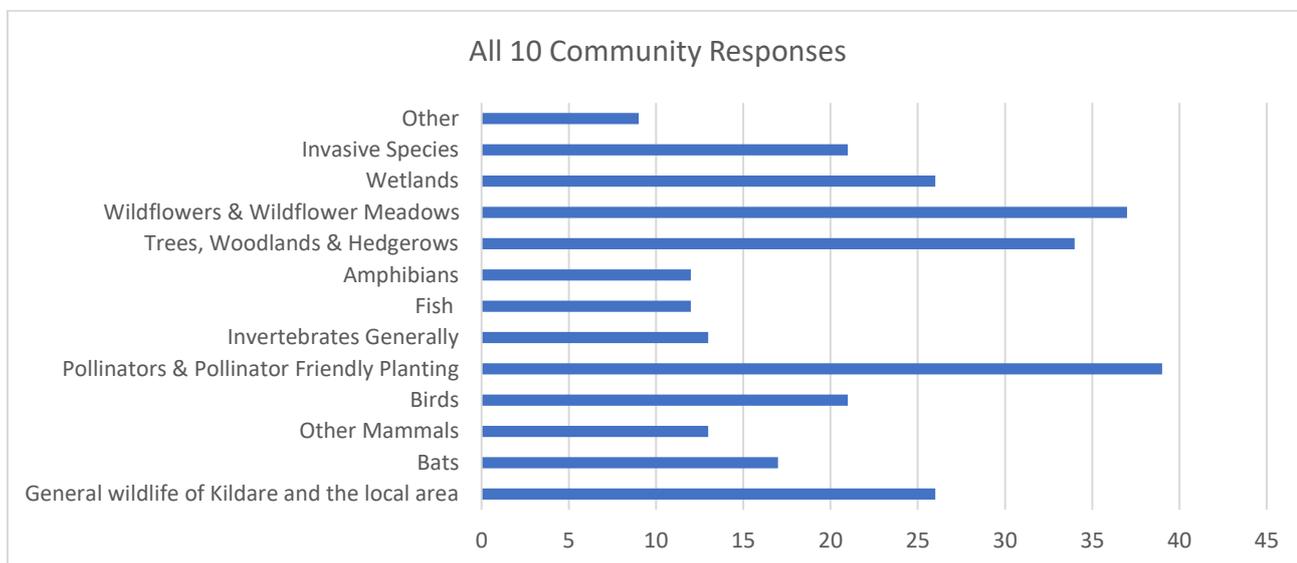
The responses highlight a range of sites both in the town and in the surrounding landscape that are seen as important for biodiversity. The biodiversity hotspot that was mentioned by most Clane respondents was the River Liffey and park / green spaces on its bank. Several sites within the town were mentioned including the Stream Park area, the Abbey Garden of Remembrance, Hillview Green, Clane Industrial Estate, Clane Business Park, school grounds, a small unused space near St. Bridget's Terrace, and the gardens at the Irish Wheelchair Association. Other sites around the town included approach road verges and tree lines, Loughbollard, the disused quarry.

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

All respondents stated that they would be interested in getting involved in helping biodiversity in Clane. The main ways that the respondents stated that they would like to get involved included planting trees, creating wildflower meadows, and helping organise and participate in biodiversity related events. Several respondents also highlighted their involvement with the Tidy Towns and are happy to support their projects.

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)

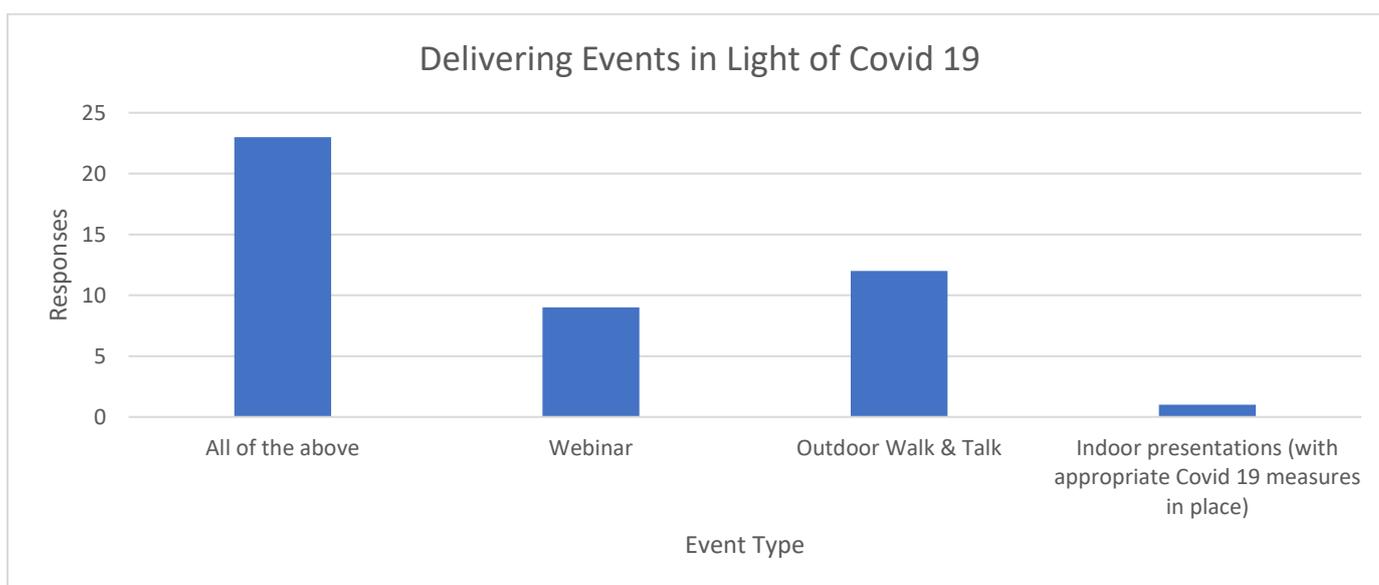
Events related to pollinators and pollinator-friendly planting, wildflowers and wildflower meadows, and trees, woodlands and hedgerows were the most popular responses with each of these receiving over 30 mentions each. Events about general wildlife of Kildare, invasive species, birds and wetlands were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

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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