COMMUNITY BIODIVERSITY ACTION PLAN

INAGH, CO. CLARE

2024-2029

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The Community Foundation for Ireland

COMHAIRLE CONTAE AN CHLÁIR
CLARE COUNTY COUNCIL

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1. Acknowledgements

We would like to thank the following people:

Senator Róisín Garvey for helping organise the visit

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The Good House

The Tidy Towns group

The Young at Heart

Inagh-Kilnamona GAA club

St. Flannan's National School

Oisín Duffy for providing photographs

All attendees at the evening event in the National School

Sean O'Farrell pictured with the Tidy Towns group at Cloonmackan Lough

2. Introduction
2.1 Inagh

Inagh is a charming village in Co. Clare situated on the N85 between Ennis and Ennistymon. It's name originates from the Irish word "Eidhneach", meaning Ivy.

The River Inagh runs through the village under the Inagh bridge which is a triple arched bridge thought to be built around the year 1790, it is not only a key piece of infrastructure for the village but is also an important architectural feature for the area. The River Inagh runs into the Atlantic Ocean at Lahinch. The River Inagh Estuary is a special area of conservation (SAC) that boasts habitats like salt marshes and dunes.

Like most Irish villages with watercourses, the River Inagh plays a huge part in the local history and heritage, both natural and cultural, to the village and surrounding areas. It is a focal point of the village and due to its location and ease of access makes it an important natural feature that locals can connect with. Having watercourses or significant landscape features within the village boundary offers a tangible connection to nature for those who live in the area. It can also lead to greater stewardship of these features and a deeper connection with our natural world.

Unlike the Karst landscape of the Burren nearby, which is a feature related to Limestone, the geology of Inagh is made of up mainly of Mudstone, Siltstone and Sandstone, which is the typical formation of the "Central Clare Group".

The River Inagh.

2. Introduction

2.2 Biodiversity Action Plans:

Biodiversity Action Plans are a great way of assessing and improving upon the biodiversity of an area. There are various types of these plans drawn up in Ireland: at the national level, county level and also for individual towns, villages and townlands (Community Biodiversity Action Plans CBAP).

Ireland is on its fourth National Biodiversity Action Plan (2023-2027); this plan lists 9 core objectives, which are as follows:

"- Build on the successes of previous NBAPs, while addressing shortfalls and the implementation challenges that they faced.
- Embed biodiversity at the heart of climate action.
- Achieve greater coherence between biodiversity policy and other policy areas.
- Achieve buy-in and ownership of the Plan across all levels of government and society.
- Expand the governance and oversight of the NBAP to ensure cross-departmental cooperation and policy alignment on biodiversity.
- Strengthen compliance and enforcement of existing legislation.
- Increase focus on the root causes of biodiversity loss rather than consequences of biodiversity loss.
- Determine biodiversity priorities, allocate financial and other resources, internalise the value of nature and recognise the cost of inaction.
- Significantly strengthen the science base and enhance data accessibility."

It is hoped that through the publication of plans such as this one, local communities will have the knowledge and information needed to take the steps to conserve, protect and enhance the habitats and species found in their area.

Local Biodiversity Action Plans (LBAPs) are a great way for local communities to get involved in learning about the wildlife in their local area, and getting best practice advice on how to improve the biodiversity.

This Community Biodiversity Action Plan includes information about the habitats and individual species found in Inagh, Co. Clare. It has maps, photographs and species lists which show the baseline of biodiversity found here during the initial surveys carried out by the ecologists. In addition to this, it also lists out a number of actions that can be taken by the locals in order to help enhance and protect the species and habitats found here, and a proposed timeframe for each action.
The actions contained in this local biodiversity action plan will be reviewed once a year by Inagh Tidy Towns group to ensure that targets and goals set are achievable within the stated timeframe and to discuss any issues that may arise during implementation and any needed updates to the plan.

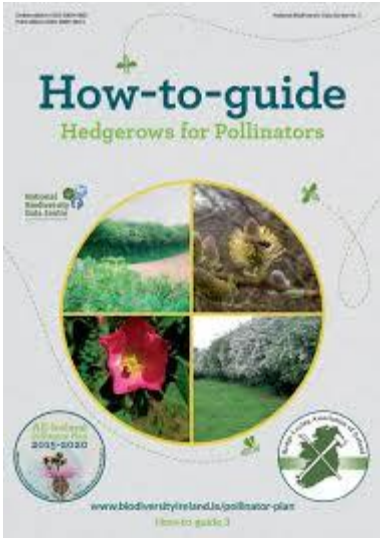
2. Introduction

2.2 Biodiversity Action Plans:

The All Ireland Pollinator Plan is a great resource to use for aiding in the creation and implementation of Biodiversity action plans.

“One third of our bee species are threatened with extinction from Ireland. This is because we have drastically reduced the amount of food (flowers) and safe nesting sites in our landscapes. The **All-Ireland Pollinator Plan** is about all of us, from farmers to local authorities, to schools, gardeners and businesses, coming together to try to create an Ireland where pollinators can survive and thrive. The first Plan covered the period 2015-2020 and a new version has been developed for 2021-2025” – All Ireland Pollinator Plan [Source: Pollinators.ie]

On their website they provide information specifically for local community groups, farmers, private land owners, businesses, sports clubs, schools, faith communities etc. as guidance on what actions they can take to help pollinators.



Pollinator guides provided by the National Biodiversity Data Centres Pollinator Plan. See Pollinators.ie

2. Introduction
2.3 What is Biodiversity?

Biodiversity

This term is widely used as shorthand for Biological Diversity, which refers to the variety of all life forms found on Earth. This includes plants, mammals, insects, amphibians, birds, fungi, fish, algae, bacteria and all other forms of known life.

Daisy (*Bellis perennis*)

Robin (*Erithacus rubecula*)

Species

This term refers to organisms that share similar characteristics and are grouped together as such. Each species is referred to in its common name and scientific name (in either Latin or Greek) throughout this report. Some examples of species are: Humans (*Homo sapien*), a Daisy (*Bellis perennis*) or a Robin (*Erithacus rubecula*).

Habitat

This is an area where a species lives and interacts with other species, they are defined by their makeup e.g. Topography, Vegetation, Geology etc. An example of a habitat is a Woodland.

A Woodland Habitat

3. Biodiversity in Inagh

3.1 S.W.O.T. Analysis

Strengths:

The enthusiasm of the Tidy Towns/Local Development Committee is very strong and they work to support members of the community that are in need and to also enhance the biodiversity of the village. There is great pride in their place.

There are community and cultural spaces in the village for meetings, presentations and community engagement on the subject of biodiversity, (for example the School hall and the Digital hub).

The River Inagh is an integral part of Inagh, it provides an important freshwater habitat and a recreational area.

The commitment and passion of Senator Róisín Garvey to enhancing biodiversity in Inagh and at a national level.

The local GAA club is working on creating a Biodiversity Area beside their sports pitch and this will help to raise the profile of Biodiversity within the community.

Weaknesses:

Inagh has a small population (204 according to the 2022 census), meaning that there are fewer people to help implement the actions in this plan.

Being a rural area, there is a chance that the youth may leave the village for further education and increased employment opportunities in larger towns and cities. This would leave an aging population behind.

Farmland activities in the surrounding areas can have a considerably positive or negative impact on what biodiversity will be found within Inagh.

There is a lack of public green spaces within the town, which limits actions that can be taken to improve biodiversity.

3. Biodiversity in Inagh

3.1 S.W.O.T. Analysis

Opportunities:

Create educational wildlife interpretation boards that showcase what biodiversity Inagh has to offer.

The enhanced biodiversity in and around the village will make Inagh more appealing to visitors.

Distribute the Biodiversity Action Plan among volunteers and local community groups, so that they may help implement the actions.

A newsletter could be utilised as a platform to keep the community engaged with biodiversity, by encouraging locals to submit sightings/photographs of plants and animals they see throughout the year.

Create a working group with representation from the various stakeholder groups in the village, to get greater buy-in and to share the workload.

Share the Biodiversity Action Plan with the farming community, with the hope of getting positive actions at farm level, to benefit the greater landscape.

Engage in knowledge transfer to upstream stakeholders to encourage improving the river habitat..

The amenity area next to the River Inagh has considerable potential, if the management is improved.

Apply for the next Phase of the Community Foundation of Ireland Fund.

Threats:

Biodiversity loss and habitat fragmentation due to poor land management and intensive agriculture.

Pollution of the River Inagh by wastewater, runoff and dumping.

The use of chemical fertilisers, herbicides and pesticides can have a devastating effect on biodiversity and may lead to runoff into the River Inagh.

Encroachment of invasive or alien non-native species along the River Inagh (Japanese Knotweed, Cotoneaster, Snowberry and Montbretia).

3. Biodiversity in Inagh

3.2 Study Area

The Study Area of this biodiversity action plan is outlined in the map below. All public owned areas inside the yellow lines. Particular interest was paid to the walking area adjacent to the River Inagh on the request of the Tidy Towns group.

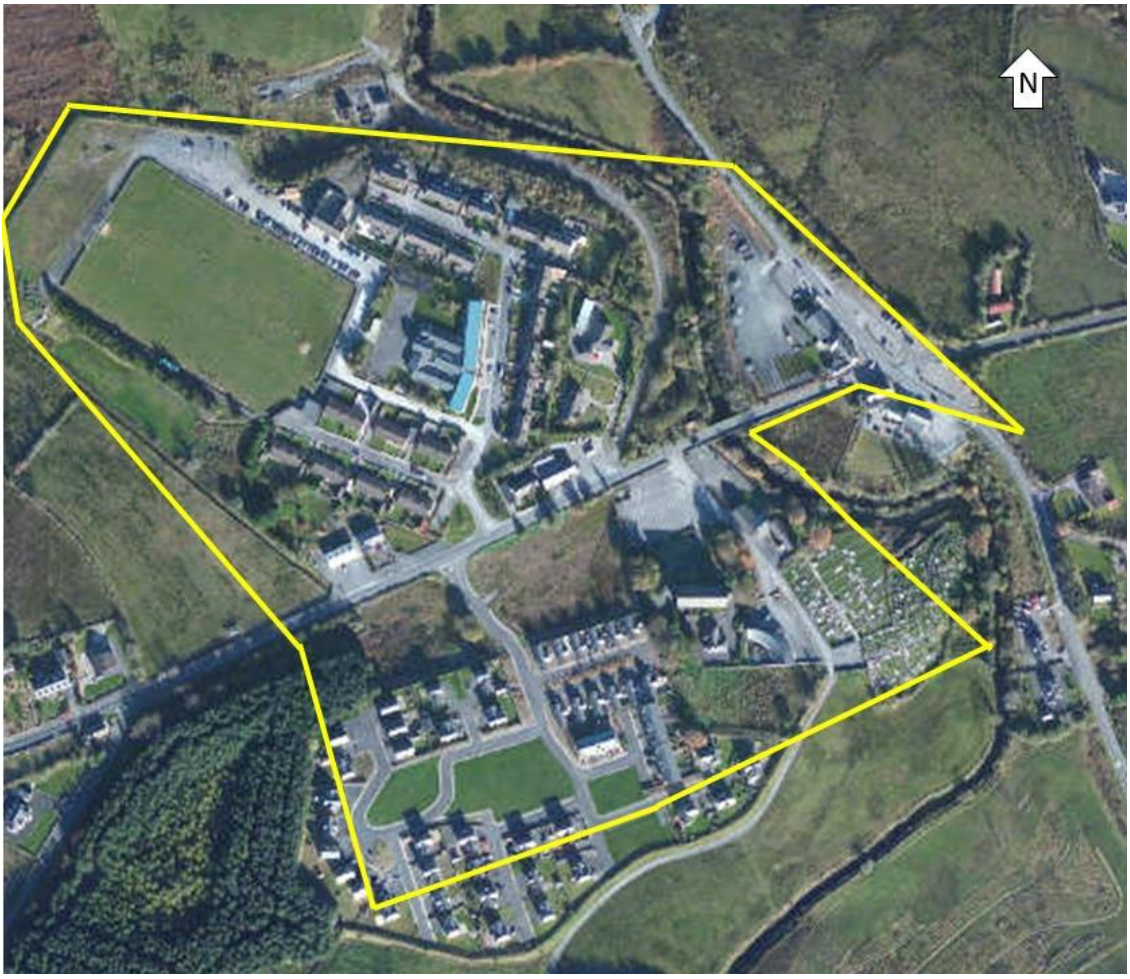


Figure 1.1: Aerial Map of Inagh showing the study area for the project.. Source: Modified by the author from maps.biodiversityireland.ie

4. Biodiversity Action Plan

4.0 List of Actions

1. Reduce mowing and creation of wildflower meadows
2. Pollinator friendly planting
3. Planting native trees
4. Removal and monitoring of invasive species
5. Sensory Garden
6. Follow best practice for hedgerow management
7. Bug hotels
8. Bird boxes
9. Bird feeders
10. Bat Boxes
11. Plant a Fruit Orchard
12. Reduce weeding of walls
13. Educational Signage
14. Reduce use of chemicals
15. Leaf litter piles
16. Further monitoring and Engagement
17. GAA grounds
18. School
19. Churchyard
20. Annaghdún estate
21. Review

Each action listed above is elaborated on in the following pages, with an introduction, followed by a What?, Where?, When?, How? and Why?. Also featured is the table shown below, this illustrates the effort, expense, complexity and time-frame for each of the actions.

Factor	Low	Medium	High
Effort			
Expense			
Complexity			
Time-frame			

4. Biodiversity Action Plan

4.1 Reduce Mowing and Creation of Wildflower Meadows

Longer areas of grass create a haven for native wildflowers and insects; most notably our wild bee species, of which one third are at risk of extinction, this is mainly due to lack of food and suitable nesting sites, all of which can be helped if we decide to give the lawnmower a break.

Factor	Low	Medium	High
Effort	✓		
Expense	✓		
Complexity	✓		
Time-frame	Year 1 of plan		

Road verges are very important for herbaceous plants, as they show us what natural grasslands would look like if not managed heavily for agriculture and they are a “haven” for these species to survive in.

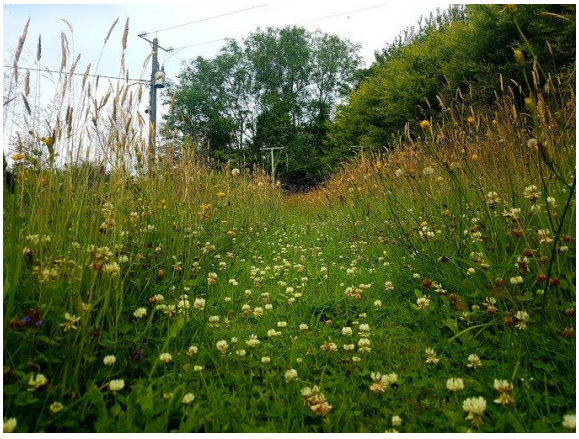
Example of a native wildflower meadow

Native wildflower meadows can be very pleasing to the eye and host plant species which are important for native insects to survive. For example, butterflies can be extremely picky about which plants they lay their eggs on, the Small Tortoiseshell prefers Nettles, the Common Blue needs Bird’s-Foot Trefoil while the brown butterflies are less selective and will use various grass species. Therefore it is important to have a good diversity of flowers and grasses in your meadow.

All of these plants and insects in return, provide a food source for our native birds and mammals.

There are various actions you can take to improve the appearance of your meadow and to make it look more managed e.g. mow a path through it or mow a small verge along the edge and also put up signage for education.

In Today’s society, short-mown grass is widely seen as being desirable, however it is creating a massive problem for wildlife. We are prioritising aesthetics over the health and wellbeing of our local nature.



Example of a native wildflower meadow

4. Biodiversity Action Plan

4.1 Reduce Mowing and Creation of Wildflower Meadows

Map showing areas proposed for native wildflower meadow.

Area of grass at junction along R460.

What?

Reduce the cutting of grassy areas to allow wildflowers to bloom. Encourage private landowners to take part also.

Where?

The areas marked on the map in yellow. This includes areas along the R460, the churchyard and grassy areas within Annaghdún estate.

When?

Starting in Spring, do an initial cut in late March/Early April and then a final cut in September.

How?

When cutting grass it is important to remove cuttings and dispose of properly i.e. composting.

Why?

To help create food sources for insects and to allow flowering plants to set seed.

Area of grass at junction along R460.

Area of grass at junction along R460.

4. Biodiversity Action Plan

4.2 Pollinator Friendly Planting

There are many areas in Inagh in which to plant flowers. It is a great way of increasing the beauty of a small town, but the majority of garden plants are bred to be pleasing to the human eye and not their usefulness for pollinators. Many popular varieties of flowers have very low levels of nectar and pollen and do not provide a good food source for our native insects. F1 and F2 hybrids should especially be avoided. Perennials would be a great addition to the flower beds as they would also reduce labour as they last several years and in general, are better sources of nectar and pollen.

The All Ireland Pollinator Plan's Pollinator Friendly Planting Code (link in Bibliography), should be followed for which species of flowers are best suited to be planted for each time of year.
Aside from choosing plants with a high nectar and pollen value, it is also important to have a variety, to provide a balanced diet for pollinators. Choose plants that flower at different times of the year to provide a year-round food supply.

If all beds and planters in Inagh were transitioned to pollinator friendly plants this would create a very valuable network of food for wild bees.

Lavender.

Mint.

Factor	Low	Medium	High
Effort		✓	
Expense		✓	
Complexity		✓	
Time-frame	Year 1-2 of plan		

4. Biodiversity Action Plan

4.2 Pollinator Friendly Planting

Map showing existing beds at points A and carpark at point B where additional planters are proposed.

What?

Ensure that any flowers or shrubs planted around the village have a high biodiversity value.

Where?

All areas throughout the village which have space for planting. The main bulk of this would be in the flowerbeds marked A on the map above. The addition of Planters or raised beds in the carpark marked B on the map is also encouraged. Where possible local home owners should try to implement this in their own gardens.

When?

When the yearly planting takes place, try to switch to more pollinator friendly species.

How?

Replace plants in flower beds, pots and planters with pollinator-friendly plants (See table on page 16). Ensure that early flowering plants are available in early Spring to create a food source for emerging queen bumblebees.
Record actions taken to help pollinators at pollinators.ie/record-your-actions.

Why?

To increase biodiversity value of planted areas.

Existing beds (marked A on map) for pollinator friendly planting.

Existing beds (marked A on map) for pollinator friendly planting.

Area of carpark (marked B on map) where a planter could be placed.

Area of carpark (marked B on map) where a planter could be placed.

4. Biodiversity Action Plan

4.2 Pollinator Friendly Planting

This is a list of pollinator friendly perennials that can be chosen from to plant in the village. This list was taken from Pollinators.ie as the All-Ireland Pollinator plan have an extensive, well researched list of pollinator friendly plants. Ensure variety in flowering time and colour when choosing plants.

Perennials

Name	Flowering period	Name	Flowering period	Name	Flowering period
Snowdrop	Jan-Mar	Foxglove	Jun-Aug	Calamint	Jul-Sep
Crocus	Jan-Apr	Lemon balm	Jun-Aug	Globe Thistle	Jul-Sep
Helleborus	Feb-Apr	Lamb's-ear	Jun-Sep	Scabious	Jul-Sep
Grape hyacinth	Mar-May	Echinacea	Jun-Sep	Tansy	Jul-Sep
Wallflower	Mar-Jul	Stonecrop	Jun-Sep	Aster	Jul-Sep
Comfrey	Apr-May	Sage	Jun-Sep	Angelica	Jul-Sep
Broom	Apr-Jun	Bergamot	Jun-Sep	Mint	Jul-Sep
Berberis	Apr-Nov	Heather	Jun-Sep	Mint	Jul-Sep
Lavender	May-Aug	Thyme	Jun-Sep	Oregano	Jul-Sep
Catmint	May-Sep	Hyssop	Jun-Sep	Rosemary	Nov-Dec
Allium	Jun-Jul	Fennel	Jun-Oct	Mahonia	Nov-Mar
Bellflower	Jun-Jul	Chives	Jul-Aug	Viburnum	Nov-Mar

4. Biodiversity Action Plan

4.3 Plant native trees

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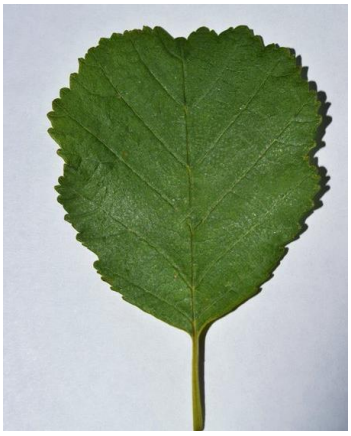
Factor	Low	Medium	High
Effort		✓	
Expense			✓
Complexity	✓		
Time-frame	Year 2-5 of plan		

The planting of native Irish trees is one of the best actions that can be taken for improving biodiversity.

A single tree can provide food and shelter for a wide range of small mammals, birds, insects and invertebrates as well as space for bryophytes and lichens.

Native Irish trees have evolved with the rest of our native flora and fauna and as well as producing flowers visited by pollinators and berries eaten by a range of birds and mammals, they can also be very important for a number of insects, who's entire lifecycles can revolve around on particular species of tree.

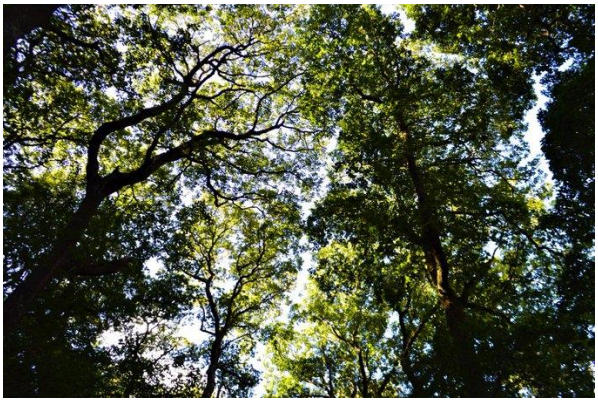
Our native trees have also adapted to our weather and climate, and there is a large choice of appropriate species, depending on the specific habitat. In this respect it is important to buy not only native species, but, where possible, locally sourced species, so that the generic integrity of the biodiversity in the area is not impacted.



Species like Alder (above) and Willow are particularly suited for wet or damp habitats.

Hawthorn is a great example of a native species that can be planted in a wide range of habitats. It is our most common tree along hedgerows and provides a beautiful display of flowers in late Spring/ early Summer, which are heavily visited by pollinators. Later in the season, these pollinated flowers will developed into "Haws", distinctive red berries appearing in Autumn, which provide a food source for birds. The tree is also known by the name "Whitethorn" and can provide a sturdy stockproof hedge after a number of years.

Wet or permanently damp areas can be challenging in regards to planting, but thankfully there are a number of our species which are tolerant of wet conditions, including Ash, Alder and Willow. Alder and Willow being particularly useful for planting in wetter areas, such as lake shore, riverbanks. Willows are also useful as they provide an early food sources for bumblebees and solitary bees when there are very few other species in flower.



A good diversity of native trees can help to assist a large number of native animals.

4. Biodiversity Action Plan

4.3 Plant native trees

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Map of Inagh showing location of River walk.

River Inagh walk.

What?

Plant native tree species. List to be chosen from on page 19. A mix of species should be chosen and some pollinator friendly trees should be chosen.

Where?

Along the Riverwalk and the area between the river walk and the 1916 monument. Additional areas can also be identified by the Tidy Towns group.

When?

It is best to plant between Autumn and Spring when the trees are dormant. In the areas where Japanese Knotweed is reoccurring, ensure it's complete eradication before planting.

How?

Select Native tree species from the list provided and plant in areas appropriate for the species.

Why?

To improve the biodiversity of the area. It could also be used to shade out the horsetails forming a monoculture along the path.

Areas of bare ground where native trees could be planted.

Areas of bare ground where native trees could be planted.

4. Biodiversity Action Plan

4.3 Plant native trees

The following table shows a list of native trees that can be chosen from to plant in the village. The maximum height of each tree is listed and should be taken into consideration when choosing which trees to plant to avoid the need for removal at a later date. Trees with a ☆ symbol next to their name are also pollinator friendly.

Native Trees

Name	Flowering Period	Height (metres)
Hazel	Jan-Mar	12m
Alder	Feb-Apr	28m
Willow ☆	Feb-June	30m
Aspen	Mar-Apr	20m
Blackthorn ☆	Mar-May	7m
Wild Cherry ☆	Apr-May	30m
Crabapple ☆	April-May	10m
Hawthorn ☆	Apr-Jun	15m
Rowan ☆	May-June	15m
Spindle	May-June	9m
Elder	May-July	15m
Guelder-Rose ☆	June-July	4m

4. Biodiversity Action Plan

4.4 Removal and monitoring of Invasive species

Invasive species are an ecological issue of high priority . They spread quickly and can be difficult to eradicate completely from an area especially in the case of Japanese Knotweed (*Fallopia japonica*) It can take years of monitoring and treatment to solve the issue.

Both high impact invasive species and non-native alien species can outcompete and displace our native flora and often create swathes of monocultures which are not good for our native biodiversity.

The invasive and non-native alien species observed in Inagh are mainly along the River Inagh. Japanese Knotweed (*Fallopia japonica*), which is listed as a "High Impact – Invasive Species". Non-native alien species which such as Montbretia (*Crocosmia x crocosmiiflora*), Snowberry (*Symphoricarpos albus*) and Cotoneaster (*Cotonester sp.*) were also identified along the River walk area. These species also have the ability to take over areas and outcompete our native flora.

Japanese Knotweed along the River Inagh had previously been treated, however, regeneration was spotted on both the riverside and the digital hub side of the walking path. This shows the difficulty of removing the species from an area, as the species can spread through rhizomes but also vegetatively. Due to the large stands of the species it can crowd out our native flora, lower the abundance and diversity of invertebrate species and also cause issues with erosion during the Winter, when the plant dies back, exposing bare soils.

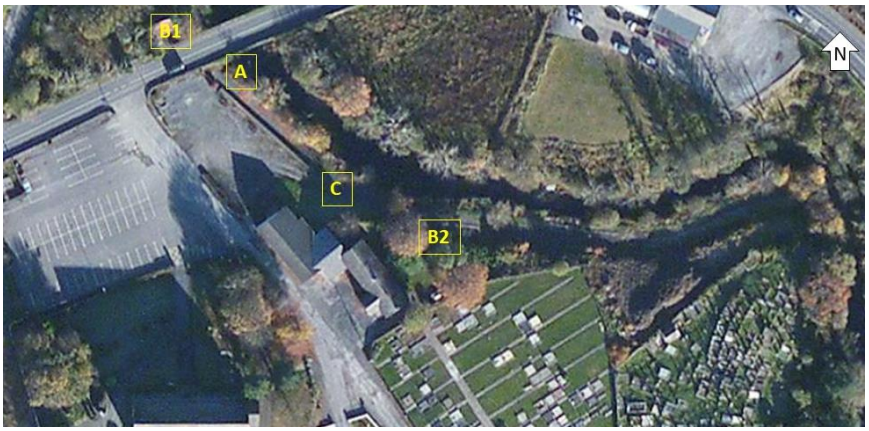
Factor	Low	Medium	High
Effort			✓
Expense		✓	
Complexity			✓
Time-frame	Year 1 – 5 of plan		

Established stand of Japanese Knotweed along the Bridge over the River Inagh.

New growth of Japanese Knotweed along the banks of the River Inagh.

4. Biodiversity Action Plan

4.4 Removal and monitoring of Invasive species



Map showing Snowberry and Cotoneaster at area marked A. Japanese Knotweed at areas marked B1 and B2 and Montbretia at C.

What?

Enlist a licensed sprayer to treat the invasive species. And remove the standing dead Japanese Knotweed for incineration. This should be done by a professional service.

Where?

The areas marked on the map above and any future locations they may be found at.

When?

Seek advice from licensed sprayer on the best time of year to treat each species.

Why?

To discourage the species from spreading, especially as it is along a river which can spread seed/plant particles downstream.

Snowberry at River Inagh.

Regeneration of Japanese Knotweed.

4. Biodiversity Action Plan

4.5 Sensory Garden

Factor	Low	Medium	High
Effort			✓
Expense			✓
Complexity			✓
Time-frame	Year 1-5 of plan		

Sensory gardens are a great way of getting people connected with the natural world. These are a particularly useful tool when dealing with children or those with sensory issues. They should stimulate all five senses.

Planting species with multiple benefits or that connect multiple senses can be very useful. Species such as Lavender (pictured below), come in a variety of different cultivated forms and can be used in a variety of areas. Most lavender species are popular with pollinators and also have the distinctive and pleasant aroma of Lavender.

The use of different textured paths, (Gravel, woodchip etc.) a wind chime, a bamboo xylophone and a water feature could be added for auditory effects.

Plants of various heights should be used and recycled materials e.g. an old ladder could be used to hold potted plants at various height levels.

Berry buses and fruit trees would be a nice addition to invoke the sense of taste. Blackcurrant, raspberry, gooseberry, blueberries and dwarf apple trees should be considered. The addition of a community pizza oven may also be considered.

Consider creating a herbal wheel in the Sensory Garden With Alliums, Anise Hyssop, Basil, Calundela, Catnip, Chives, Cilantro, Dill, Echinachae, Fennel, Lavender, Lemonbalm, Lemon Verbena, Mint, Monarda ‘bee balm’, Oregano, Rosemary, Sage and Thyme.

See page 41 of Appendix for further ideas.

Species of Elm are distinctive, not only due to their shape, but also due to the rough/coarse texture on their leaves.

Using more than one sense when identifying species can help compound the features needed for identification. Species of mint like Water Mint (above) have a distinctive and pleasant scent when the leaves are crushed.

Lavender.

4. Biodiversity Action Plan

4.5 Sensory Garden

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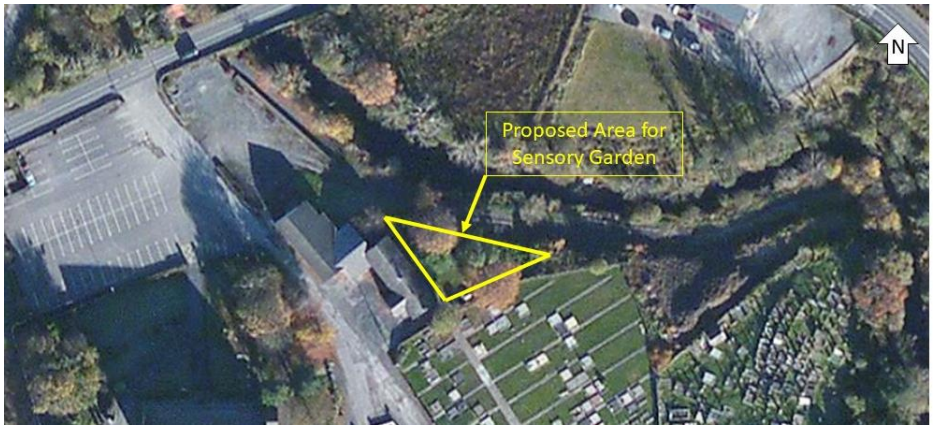


Map showing proposed location of sensory garden.

What?

Create a Sensory Garden as an area of quiet reflection to be immersed in nature. Local artists could be employed to create a biodiversity mural on the boundary wall. Use plants to screen out the boiler. Plants of various heights. Create a native wildflower meadow or a decked seating area on the area of rubble. Plant native hedgerow between sensory garden and river. For in depth ideas and details on what to plant please see Appendix (page 41).

Where?

The area surrounding the 1916 monument, behind the digital hub. This is marked on the map above.

How?

Select plants which engage the senses. Scented plants like Lavender and Mint. Plants with hairy and soft leave like Lamb's Ear and Trees like Aspen whose leaves rustle in the breeze.

Why?

To help the locals connect with biodiversity and spend time in nature. Spending time in nature is proven to be positive for mental health.

Proposed location of sensory garden.

Area of rubble where wildflower meadow could be created.

4. Biodiversity Action Plan

4.6 Follow best practice for hedgerow management

Hedgerows are important habitats in Ireland, they are a great network of "Wildlife Corridors" used by birds, mammals etc. as a way to travel throughout the landscape while also hiding from predators.

Hawthorn is the most common hedging plant in Ireland, its flowers in early spring are an important food source for pollinators and the berries provide food for birds in the autumn.

In Ireland, most of our hedgerows are over-managed and cut back to the same point each year, this inhibits the hedges ability to flower and fruit readily.
The All Ireland Pollinator Plans How-to-guide on Hedgerows for Pollinators (2016) states the following on hedgerow management:

" - *If hedgerows are to be trimmed, cut them on a two or three year cycle in rotation. This will result in there being some areas producing flowers each year.*
- *Where annual cutting is necessary try and cut a few centimetres further out each year (especially for whitethorn) – this will leave a small amount of older wood on which the plant can produce flowers.*
- *When planting up any gaps in hedgerows try and increase the diversity of species.*
- *Where ivy is a threat to the health or stability of trees control excessive levels on a rotational basis so that there is always some ivy available for wildlife*".

What?

Reduce cutting and manage hedgerows for biodiversity. Where possible, plant new hedges made up of native trees e.g. Spindle, Hawthorn, Guelder Rose, Rowan etc.

Where?

All hedges around the village, where it is not a serious road safety risk.

When?

All year long.

How?

By following best practice guidelines set out by The All Ireland Pollinator Plans How-to-guide on Hedgerows for Pollinators (2016).

Why?

To improve wildlife corridors for our native mammals and help hedgerows become a better source of food for wildlife.

Uncut hedgerow.

Factor	Low	Medium	High
Effort	✓		
Expense	✓		
Complexity	✓		
Time-frame	Year 1-2 of plan		

4. Biodiversity Action Plan

4.7 Nesting sites and Bug hotels

As previously mentioned, one of the major threats facing our wild bees is lack of nesting sites. By creating nesting sites and insect hotels this is providing a safe space for insects to lay their eggs and ensure their survival for the following year.
Because of modern land management practices, natural wild nesting sites are not as common as they once were.

Creation of nesting sites or hotels can be low-cost and easily done. Nesting sites should be added in areas where there is also a good food source for pollinators nearby. Ground nesting sites are also very important as more wild bees create nests this way, by mining cavities into bare earth.

What?
Help create habitat for wild bee species.

Where?
It is important that these are placed in areas where there is a food source nearby i.e. nectar-rich flowering plants. The sensory garden or along the river walk or the playground.

When?
These nesting sites should be made available in early spring to be used by emerging bees.

How?
Build insect hotels and clear a bit of vegetation from south facing slopes to allow areas for mining bees to create their nests. Reduce costs by recycling materials to build hotels. Record actions taken to help pollinators at pollinators.ie/record-your-actions.

Why?
To provide safe nesting sites for native wild bee species and help stop their decline.

A mining bee emerging from it's ground nest.

Example of a bee hotel

Factor	Low	Medium	High
Effort			✓
Expense		✓	
Complexity		✓	
Time-frame	Year 2-3 of plan		

4. Biodiversity Action Plan

4.8 Bird boxes

Nest boxes are becoming ever more important for the survival of our native birds. Each year, the number of natural nesting sites available is being reduced as trees are cut down and holes in walls and areas of our homes are being repaired.
Nest boxes provide a safe space for our native birds to lay their eggs and rear their young.

Different types of birds have different requirements, BirdwatchIreland.ie states the following:

"Blue Tit and Coal Tit will use nestboxes with a 25mm diameter hole, Great Tit and Tree Sparrow will use it if it has a hole of 28mm and House Sparrows use nestboxes with entrances of 32mm diameter. House Sparrows will also used 'terraced' nestboxes – which are essentially two or three nestboxes joined together. Starlings will use nestboxes if they have an entrance of 45mm and are around 25-30% bigger than the average nestbox.

If you have an open-fronted nestbox then it might attract Blackbirds, Robins or Wrens to nest. Blackbirds require a mostly-open front, Robins are okay with something half open, and Wrens will use something a bit more closed up.

In addition to the 'traditional' style of nestbox there are specialist nestboxes available for species like Treecreeper, Jackdaw, Barn Owl, Kestrel, Grey Wagtail, Dipper, Swallow, House Martin and Swift."

What?

Create nesting areas for birds.

Where?

Various areas throughout the village both in public land and in gardens. Hang the correct box in the correct way to suit the species you wish to attract. They could be placed along the river walk and near the sensory garden.

When?

Birdwatchireland.ie states that nesting boxes should be placed out before February each year.

How?

Place nesting boxes to suit several species of bird. Follow guidelines by Birdwatchireland.ie (link in bibliography) on best practices for making and hanging nesting boxes.

Why?

To create safe nesting areas for wild birds which helps the survival of the next generation.

Factor	Low	Medium	High
Effort		✓	
Expense		✓	
Complexity	✓		
Time-frame	Year 1-2 of plan		

4. Biodiversity Action Plan

4.9 Bird feeders

During the winter, it can be difficult for our native bird species to find enough food. Natural sources of food i.e. berries, nuts and seeds that were plentiful during Autumn are scarce. To help birds survive through the winter it is a great idea to place out feeders.
Different types of birds prefer different styles of feeders and different types of bird feed, information on this topic is readily available at Birdwatchireland.ie (Link in Bibliography).

There can be a lot of traffic at bird feeders leading to them being hotspots for transmission of bacteria and diseases between birds, therefore it is recommended that all feeders be cleaned regularly.

Sources of fresh water should also be left out for birds in winter for drinking and bathing.

What?
Provide sources of food for garden birds.

Where?
In public areas and in gardens, ensure feeders are in a quiet spot away from cats and any predators.

When?
Beginning in November and continuing on into March. If you wish, you can also fill your bird feeders all year round.

How?
Place various types of bird feeders. According to Birdwatchireland.ie sunflower seeds and peanuts are great options for attracting many species of bird.

Why?
To provide a source of food for birds which may be struggling throughout the winter months.


Robin visiting a bird feeder.

Factor	Low	Medium	High
Effort		✓	
Expense		✓	
Complexity	✓		
Time-frame	Year 1-2 of plan		

4. Biodiversity Action Plan

4.10 Bat boxes

Ireland has 9 resident species of bat, some are rarer than others. Bats are an extremely helpful species to have in your area. One individual bat can eat up to 2,000 insects each night, making them great at controlling insect populations. Contrary to popular belief, they are not blind and have good eyesight. Bats are a protected species, they are protected under the Wildlife Act (1976) and the EU Habitats Directive (92/43/EEC) this means it is an offence to intentionally disturb, kill or cause harm to any of our bat species. If you find a grounded bat, please contact Bat Conservation Ireland for advice.

Bat boxes can be useful for increasing roosting sites for bats in your area.

Bat Conservation Ireland have an online document that advises on making and placing of bat boxes (link in bibliography).

What?

Place bat boxes to increase roost sites for bats in the area.

Where?

Affix to trees and buildings on both public and private land, away from cats and predators. At least 3-5m above ground level is preferable. Along the River walk or at the school would be suitable.

When?

Bat boxes should be placed in April, as to be ready for roosting season. It is important not to disturb bat boxes from May to September.

How?

Bat boxes can either be purchased or made. Register your bat box with Bat Conservation Ireland's Bat Box Scheme.

Why?

To increase the number of safe roosting sites available for bats in the area.

Example of a bat box fixed to a tree.

Factor	Low	Medium	High
Effort		✓	
Expense		✓	
Complexity		✓	
Time-frame	Year 2-3 of plan		

4. Biodiversity Action Plan

4.11 Plant a fruit orchard

Fruit trees would be a great addition to the area. Along with being a source of food for the local people, birds and insects; they provide colour in most seasons with their flowers, foliage and fruits. A variety of trees should be planted, preferably ones that flower at different times so that there are both late and early blooming trees available for pollinators to feed on. If possible it is recommended to leave the grassy area surrounding the trees to become a native wildflower meadow as this would greatly enhance the biodiversity value of the area.

What?

Plant a variety of fruit trees to be utilised by the community

Where?

The playground, the churchyard or Annaghdún estate.

How?

Choose a good diversity of fruit trees that flower at different intervals in order to provide a variety of food to insects and birds as well as the local community.

Why?

To provide free fruit to the community and also increase the diversity of trees in the area.

A crop of apples.

Factor	Low	Medium	High
Effort			✓
Expense			✓
Complexity		✓	
Time-frame	Year 4-5 of plan		

4. Biodiversity Action Plan

4.12 Reduce weeding of walls

There are a few stone walls in Inagh which could act as a haven for our native fern species (pictures below). In places, the stone walls are barren of vegetation. There is often a misconception that all vegetation causes harm to the structural integrity of stone walls as Ivy sometimes can, but many native wildflowers and ferns do not cause any damage and having them present will increase biodiversity.

What?

Reduce weeding of native plant species found on walls.

Where?

Along the Inagh bridge and all stone walls found in Inagh village.

When?

All year long.

How?

When weeding, make sure to only weed out non-native plants and ones that appear to be causing structural damage to the wall.

Why?

To increase the biodiversity value of the walls, and allow these plants to thrive.

Mouse-ear-hawkweed (Pilosella officinarum) growing near the Inagh bridge.

Rustyback Fern (*Asplenium cetarach*) and Maidenhair Fern (*Asplenium trichomanes*) growing on stone walls in Inagh.

Factor	Low	Medium	High
Effort	✓		
Expense	✓		
Complexity	✓		
Time-frame	Year 1 of plan		

What?

Create educational signage.

Where?

The native wildflower area in the playground and the river walk.

When?

When the majority of actions in the plan have been taken.

How?

Educational signage on the range of plants, insects, birds etc. found in the locality. The species lists compiled for this report can be used as a guide for this.

Why?

To increase awareness of biodiversity in the area.

4.13 Educational signage

An important part of Biodiversity plans is education of the locals to ensure they are aware that biodiversity is important and also so that they can easily keep up with any projects happening locally. Signage is a great way of doing this as you can make information easily available to the public without them having to search for it.

Factor	Low	Medium	High
Effort			✓
Expense			✓
Complexity			✓
Time-frame	Year 5 of plan		

4.14 Reduce the use of chemicals

It is well documented that chemicals, such as herbicide, fungicide and pesticide are extremely harmful to the environment. Where possible, it would be beneficial to the local biodiversity to inhibit the use of these chemicals.

Factor	Low	Medium	High
Effort	✓		
Expense	✓		
Complexity	✓		
Time-frame	Year 3 of plan		

What?

Reduce the use of chemical herbicides and pesticides.

Where?

Identify areas that can be left natural, where chemicals are not needed.

When?

All year round.

How?

Hand weed where possible. Boiling water would be a cost effective way of doing this. A weed burning tool could also be used.

Why?

To reduce the use of harmful chemicals used in the area.

4.15 Leaf litter piles

Hedgehogs are charismatic mammals which are not often seen as they are nocturnal. In the UK, it is reported that hedgehogs are in a serious decline. Here in Ireland, studies are currently underway to assess the health of our hedgehog populations. Habitat loss and fragmentation has a large part to play in this as hedgehogs live in hedges, bushes and scraggly undergrowth in which they can hide out during the day.

Hedgehogs hibernate throughout most of the winter, they may wake up to feed if the weather is particularly mild. Providing safe, sheltered spaces for hedgehogs to hibernate is important for their survival.
In modern times, once the leaves start to fall from the trees, out come the rakes and the leaf blowers to tidy them up, and then off they go in the composting bin. Leaf litter piles are important hibernation sites for hedgehogs, it would be preferable if some were left in quiet, undisturbed areas as to facilitate their survival through the winter months. The following spring, the rotted leaves can be used as mulch.

What?
Do not remove leaf litter.

Where?
Leaf litter piles are best placed in a secluded, quiet area that is unlikely to be disturbed.

When?
In Autumn.

How?
Leaf Litter should be piled, instead of being removed to create hibernation spaces for Hedgehogs.

Why?
To provide hibernation areas for hedgehogs and the insects, which they, along with other animals, require for food.

Leaf Litter.

Factor	Low	Medium	High
Effort	✓		
Expense	✓		
Complexity	✓		
Time-frame	Year 1 of plan		

4.16 Further Monitoring and Engagement

As the actions in this plan are carried out, the species count for Inagh should keep increasing, therefore it is important to keep monitoring species throughout this process.

There are many monitoring schemes run by various groups that members of the public of all levels can get involved in, it can be fun as well as educational!

The National Biodiversity Data Centre runs many citizen science schemes including the Butterfly Monitoring Scheme, the Bumblebee Monitoring Scheme, Flower-insect timed counts (FIT counts), Dragonfly Dash etc. They also provide educational workshops/talks/training to members of the public on a wide range of subjects.

Birdwatch Ireland runs the Garden Bird Survey.

Casual sighting of plants, insects, amphibians, birds and mammals can be sent into the National Biodiversity Data Centre to be mapped at: records.biodiversityireland.ie.

What?

Get involved in national monitoring schemes and avail of workshops provided by Biodiversity Ireland and various other groups. Run nature walks led by local experts.

Where?

Either in public areas or even your own garden.

When?

Whenever is suitable to survey or view the species of interest. E.g. Garden bird survey in winter/spring when feeders are in use etc.

How?

Decide what schemes or events interest the community and join up!

Why?

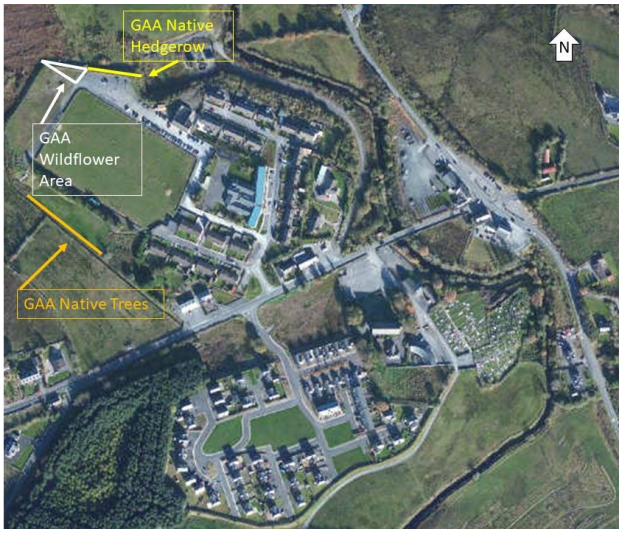
To help monitor the biodiversity in the locality. This will also help the community familiarise itself with the local wildlife.

A butterfly being identified during a survey.

Factor	Low	Medium	High
Effort			✓
Expense	✓		
Complexity		✓	
Time-frame	Year 4-5 of plan		

4. Biodiversity Action Plan

4.17 GAA Grounds



Map showing proposed area for wildflower meadow, native tree buffer strip and native hedgerow at GAA club.

Proposed area for wildflower meadow.

An area was identified on the GAA grounds for creation of a wildflower meadow by reduced mowing (see map and photograph). Starting in Spring, do an initial cut in late March/Early April and then a final cut in September. Cuttings should be removed from site and composted.
An area was also identified for planting a native hedgerow. For information on which tree species to plant please see table on page 19.
It was also proposed that a strip of native trees would be planted as a buffer strip along the river at the wet grassland adjacent to the GAA pitch. See above map for location.

4.18 School

Planters along safe route to school.

There are 6 planters along the new footpath for the safe route to school. These could be planted with culinary herbs that could be used by the community and are also good for pollinators. Rosemary, Chives, Thyme, Oregano, Mint, Lemonbalm, sage and fennel should be considered.

4. Biodiversity Action Plan

4.19 Church of the Immaculate Conception.

Grassy areas at the Church of the Immaculate Conception should be considered for native wildflower meadows if the Parish is agreeable. Members should also be approached about reducing use of herbicide on Church and Graveyard grounds. The pollinator plan has introduced guides for Faith Communities on how to increase biodiversity. Link in bibliography.

Church of the immaculate conception, Inagh.

4.20 Annaghdún Estate

There are vast areas of lawn in the estate that are of very low biodiversity level but have great potential. If the community would like to partake in the effort to increase biodiversity in Inagh, some of the following ideas may be considered:

1. Native wildflower meadow/reduced mowing.
2. Polytunnel
3. Community composting site.
4. Rockery.
5. Planting of native trees.
6. Planting of fruit trees and soft fruit bushes.

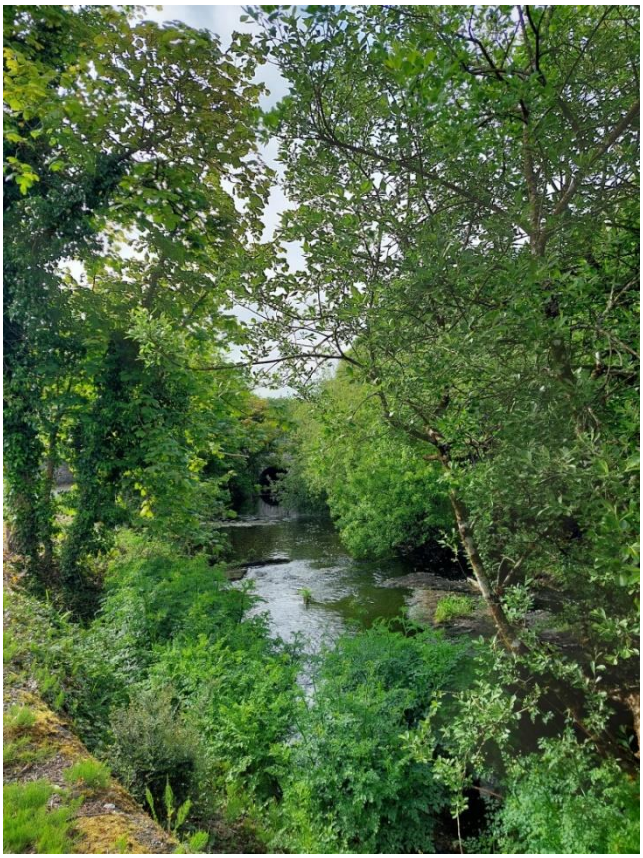
Any of these actions would help to improve the biodiversity and also the beauty of the area by providing colour and shade.

Possible site for rockery or soft fruit bushes.

Vast lawn area at Annaghdún estate.

4.21 Review

The actions contained in this local biodiversity action plan will be reviewed once a year by Inagh Tidy Towns group to ensure that targets and goals set are achievable within the stated timeframe and to discuss any issues that may arise during implementation and any needed updates to the plan.



Inagh Bridge and River.

5. Community Engagement

Upon arriving in Inagh, Senator Róisín Garvey introduced us to the Young at Heart active retirement group and we joined them for their monthly coffee morning.

Photograph from the engagement event with the "Young at Heart Group", who shared experiences and perspectives of Inagh and how nature has changed in that time.

We talked of how the Irish landscape has changed since the days of their youth, with many lamenting the loss of the Corncrake (*Crex crex*), whose call once so common, can now only be heard in a few sites in the North and West of the country.

After a much needed caffeine boost we made our way over to the newly installed playground in behind the crèche to check out the biodiversity. It was a pleasure to see native trees planted in the area. A small botanical survey of the green spaces in the playground produced a plant list with 68 species. It was lovely to see such diversity of native plants on display.
Just before leaving the playground an egg of the Orange-tip butterfly (*Anthocharis cardamines*) was spotted on Cuckoo flower (*Cardamine pratensis*) which is a great reminder of the web of life that our native wildflowers support.

The small yet distinctive orange coloured egg of the Orange-tip butterfly on Cuckoo flower.

After saying goodbye to the Young at Heart group we made our way to the local primary school to engage with 3rd, 4th, 5th and 6th class. We covered topics such as pollination, importance of hedgerows, native mammals and native trees. Marsh Orchids (*Dactylorhiza kerryensis*) were spotted growing in the school yard.

Marsh Orchid, which was spotted growing in the school yard.

5. Community Engagement

Our next order of business was meeting with officials from the local GAA club on their grounds near the school. They wanted some suggestions on how to create areas for biodiversity on the site. After a quick walk around and discussing the potential of the area we were shown a lovely wet grassland adjacent to the GAA pitch which boasted Marsh Orchids (*Dactylorhiza kerryensis*) and Ragged Robin (*Silene flos-cuculi*).

Ragged Robin a species which prefers wet and damp habitats, found near the GAA Pitch.

Our evening concluded with a public event on Biodiversity in Inagh National School. There was a great attendance from the local community and food provided by The Good House. Topics covered included: how to help out pollinators and farmland habitats. Members of the public were also able to look at some pond and stream life under a microscope.

Discussion with GAA members and Senator Róisín Garvey.

The following day we met with members of the tidy towns to discuss the making of this Biodiversity Action Plan. There was great input from the attendees and they really put their stamp on the contents of this plan by contributing ideas and making it their own.

We both enjoyed our time in Inagh, Co. Clare and look forward to visiting in the future and seeing the positive changes that are going to be made to help nature flourish in the village. We would like to thank the people of Inagh for making us feel most welcome for the duration of our visit.

Evening talk delivered by Mairéad Duffy and Sean O'Farrell.

6. Appendix

Table Species List from Inagh

Species Name	Common name	Location name	Grid reference	Date
Lonicera periclymenum	Honeysuckle	Inagh	R2081	19/05/2023
Ulex europaeus	Gorse	Inagh	R2081	19/05/2023
Rubus fructicosus.	Bramble	Inagh	R2081	19/05/2023
Acer pseudoplatanus	Sycamore	Inagh	R2018	19/05/2023
Hedera hibernica	Ivy	Inagh	R2081	19/05/2023
Vicia sepium	Bush vetch	Inagh	R2081	19/05/2023
Salix sp.	Willow	Inagh	R2081	19/05/2023
Bellis perennis	Daisy	Inagh	R2018	19/05/2023
Holcus lanatus	Yorkshire Fog	Inagh	R2081	19/05/2023
Ranunculus repens	Creeping Buttercup	Inagh	R2081	19/05/2023
Trifolium repens	White Clover	Inagh	R2081	19/05/2023
Crocosmia x crocosmiiflora	Montbretia	Inagh	R2018	19/05/2023
Sorbus aucuparia	Rowan	Inagh	R2081	19/05/2023
Senecio jacobea	Ragwort	Inagh	R2081	19/05/2023
Fraxinus excelsior	Ash	Inagh	R2081	19/05/2023
Saxifraga tridactylites	Rue-leaved Saxifrage	Inagh	R2018	19/05/2023
Taraxacum agg.	Dandelion	Inagh	R2081	19/05/2023
Poa annua	Annual Meadow grass	Inagh	R2081	19/05/2023
Geranium robertianum	Herb Robert	Inagh	R2081	19/05/2023
Valeriana officinalis	Common Valerian	Inagh	R2018	19/05/2023
Corylus avellana	Hazel	Inagh	R2081	19/05/2023
Dyropteris Filix-mas	Male Fern	Inagh	R2081	19/05/2023
Calystegia sepium	Hedge Bindweed	Inagh	R2018	19/05/2023
Angelica sylvestris	Wild Angelica	Inagh	R2081	19/05/2023
Dactylis glomerata	Cock's-foot	Inagh	R2081	19/05/2023
Ficaria verna	Leser Celandine	Inagh	R2081	19/05/2023
Crataegus monogyna	Hawthorne	Inagh	R2018	19/05/2023
Cardamine pratensis	Cuckoo flower	Inagh	R2081	19/05/2023
Mentha aquatica	Water Mint	Inagh	R2081	19/05/2023
Cardamine hirsuta	Hairy Bittercress	Inagh	R2081	19/05/2023
Cerastium fontanum	Mouse ear	Inagh	R2018	19/05/2023
Plantago major	Greater Plantain	Inagh	R2081	19/05/2023
Lamium purpureum	Red-Deadnettle	Inagh	R2081	19/05/2023
Aesculus hippocastanum	Horse Chesnut	Inagh	R2081	19/05/2023
Tilia sp.	Lime	Inagh	R2018	19/05/2023
Aegopodium podagraria	Ground Elder	Inagh	R2081	19/05/2023
Anthoxanthum odoratum	Sweet Vernal Grass	Inagh	R2081	19/05/2023
Trifolium pratense	Red Clover	Inagh	R2018	19/05/2023
Senecio vulgaris	Groundsel	Inagh	R2081	19/05/2023
Sonchus oleraceus	Smooth Sowthistle	Inagh	R2081	19/05/2023
Sonchus asper	Prickly Sowthistle	Inagh	R2081	19/05/2023
Lactuca muralis	Wall Lettuce	Inagh	R2018	19/05/2023
Asplenium trichomanes	Maidenhair Spleenwort	Inagh	R2081	19/05/2023
Asplenium ceterach	Rustyback Fern	Inagh	R2081	19/05/2023
Ranunculus acris	Meadow Buttercup	Inagh	R2081	19/05/2023
Alopecurus pratensis	Meadow Foxtail	Inagh	R2018	19/05/2023
Fallopia japonica	Japanese Knotweed	Inagh	R2081	19/05/2023
Crocosmia x crocosmiiflora	Montbretia	Inagh	R2081	19/05/2023
Oenanthe crocata	Hemlock Water Dropwort	Inagh	R2081	19/05/2023
Myosotis arvensis	Forget me not	Inagh	R2018	19/05/2023
Veronica persica	Common Field-speedwell	Inagh	R2081	19/05/2023
Chamaenerion angustifolium	Rosebay Willowherb	Inagh	R2081	19/05/2023
Alnus glutinosa	Alder	Inagh	R2081	19/05/2023
Urtica diocia	Nettle	Inagh	R2018	19/05/2023
Plantago lanceolata	Ribwort Plantain	Inagh	R2081	19/05/2023
Vicia cracca	Tufted Vetch	Inagh	R2081	19/05/2023
Taraxacum agg.	Dandelion	Inagh	R2081	19/05/2023
Potentilla erecta	Tormentill	Inagh	R2018	19/05/2023
Potentilla anserina	Silverweed	Inagh	R2081	19/05/2023
Cirsium vulgare	Spear Thistle	Inagh	R2081	19/05/2023
Lotus corniculatus	Bird's-foot trefoil	Inagh	R2081	19/05/2023
Cardamine pratensis	Cuckoo flower	Inagh	R2018	19/05/2023
Rumex crispus	Curled dock	Inagh	R2081	19/05/2023
Lolium perenne	Perennial Ryegrass	Inagh	R2081	19/05/2023
Veronica serpyllifolia	Thyme-leaved Speedwell	Inagh	R2018	19/05/2023
Cerastium glomeratum	Sticky Mouse Ear	Inagh	R2081	19/05/2023
Juncus effusus	Soft Rush	Inagh	R2081	19/05/2023
Filipendula ulmaria	Meadowsweet	Inagh	R2081	19/05/2023
Cirsium arvense	Creeping Thistle	Inagh	R2018	19/05/2023
Betula pendula	Silver Birch	Inagh	R2081	19/05/2023
Rumex acetosa	Common Sorrel	Inagh	R2081	19/05/2023
Carpinus betulus	Hornbeam	Inagh	R2081	19/05/2023
Rumex obtusifolius	Broad-leaved Dock	Inagh	R2018	19/05/2023
Galium aparine	Cleavers	Inagh	R2081	19/05/2023
Rhododendron ponticum	Rhododendron	Inagh	R2081	19/05/2023
Taxus baccata	Yew	Inagh	R2081	19/05/2023
Sambucus nigra	Elder	Inagh	R2018	19/05/2023
Heracleum sphondylium	Hogweed	Inagh	R2081	19/05/2023

6. Appendix

Table Species List from Inagh and Cloonmackan Lough

Species Name	Common name	Location name	Grid reference	Date
Lamium purpureum	Red Deadnettle	Inagh	R2081	19/05/2023
Ligustrum vulgare	Privet	Inagh	R2081	19/05/2023
Cotoneaster	Cotoneaster	Inagh	R2018	19/05/2023
Pilosella officinarum	Mouse Ear Hawkweed	Inagh	R2081	19/05/2023
Geranium lucidum	Shining Cranesbill	Inagh	R2081	19/05/2023
Silene flos-cuculi	Ragged Robin	Inagh	R2081	19/05/2023
Medicago lupulina	Black Medick	Inagh	R2018	19/05/2023
Trifolium dubium	Lesser Trefoil	Inagh	R2081	19/05/2023
Poa pratensis	Smooth Meadowgrass	Inagh	R2081	19/05/2023
Dactylorhiza kerryensis	Marsh-orchid	Inagh	R2081	19/05/2023
Ajuga reptans	Bugle	Inagh	R2018	19/05/2023
Arrhenathrum elatius	False Oat-grass	Inagh	R2081	19/05/2023
Equisetum palustre	Marsh Horsetail	Inagh	R2081	19/05/2023
Equisetum telmateia	Great Horsetail	Inagh	R2081	19/05/2023
Carex flacca	Blue Sedge	Inagh	R2018	19/05/2023
Matricaria discoidea	Pineappleweed	Inagh	R2081	19/05/2023
Anagallis arvensis	Scarlet pimpernel	Inagh	R2081	19/05/2023
Populus tremula	Aspen	Inagh	R2018	19/05/2023
Cirsium palustre	Marsh Thistle	Inagh	R2081	19/05/2023
Anthocharis cardamines	Orange-tip Butterfly	Inagh	R2081	19/05/2023
Pieris napi	Green-Veined white	Inagh	R2081	19/05/2023
Scathophaga stercoraria	Yellow Dung Fly	Inagh	R2018	19/05/2023
Corvus monedula	Jackdaw	Inagh	R2081	19/05/2023
Turdus merula	Blackbird	Inagh	R2081	19/05/2023
Sturnus vulgaris	Starling	Inagh	R2081	19/05/2023
Puccinia lagenophorae	Groundsel rust	Inagh	R2018	19/05/2023
Bombus pascuorum	Common Carder Bee	Inagh	R2081	19/05/2023
Oryctolagus cuniculus	Rabbit	Inagh	R2081	19/05/2023
Corvus cornix	Grey Crow	Inagh	R2081	19/05/2023
Rumex obtusifolius	Broad-leaved Dock	Cloonmackan Lough	R1980	20/05/2023
Ranunculus repens	Creeping Buttercup	Cloonmackan Lough	R1980	20/05/2023
Taraxacum agg.	Dandelion	Cloonmackan Lough	R1980	20/05/2023
Cirsium dissectum	Meadow Thistle	Cloonmackan Lough	R1980	20/05/2023
Cirsium arvense	Creeping Thistle	Cloonmackan Lough	R1980	20/05/2023
Bellis perennis	Daisy	Cloonmackan Lough	R1980	20/05/2023
Plantago lanceolata	Ribwort Plantain	Cloonmackan Lough	R1980	20/05/2023
Rubus fructicosus.	Bramble	Cloonmackan Lough	R1980	20/05/2023
Trifolium pratense	Red Clover	Cloonmackan Lough	R1980	20/05/2023
Cardamine pratensis	Cuckoo flower	Cloonmackan Lough	R1980	20/05/2023
Ulex europaeus	Gorse	Cloonmackan Lough	R1980	20/05/2023
Alopecurus pratensis	Meadow Foxtail	Cloonmackan Lough	R1980	20/05/2023
Holcus lanatus	Yorkshire Fog	Cloonmackan Lough	R1980	20/05/2023
Rumex acetosa	Common Sorrel	Cloonmackan Lough	R1980	20/05/2023
Potentilla anserina	Silverweed	Cloonmackan Lough	R1980	20/05/2023
Poa annua	Annual Meadow grass	Cloonmackan Lough	R1980	20/05/2023
Trifolium dubium	Lesser Trefoil	Cloonmackan Lough	R1980	20/05/2023
Bromus hordeaceus	Soft Brome	Cloonmackan Lough	R1980	20/05/2023
Arrhenathrum elatius	False Oat-grass	Cloonmackan Lough	R1980	20/05/2023
Iris pseudacorus	Yellow Flag Iris	Cloonmackan Lough	R1980	20/05/2023
Senecio jacobea	Ragwort	Cloonmackan Lough	R1980	20/05/2023
Equisetum palustre	Marsh Horsetail	Cloonmackan Lough	R1980	20/05/2023
Cerastium glomeratum	Sticky Mouse Ear	Cloonmackan Lough	R1980	20/05/2023
Juncus effusus	Soft Rush	Cloonmackan Lough	R1980	20/05/2023
Bellis perennis	Daisy	Cloonmackan Lough	R1980	20/05/2023
Phragmites australis	Common Reed	Cloonmackan Lough	R1980	20/05/2023
Silene flos-cuculi	Ragged Robin	Cloonmackan Lough	R1980	20/05/2023
Festuca rubra	Red Fescue	Cloonmackan Lough	R1980	20/05/2023
Salix sp.	Willow	Cloonmackan Lough	R1980	20/05/2023
Filipendula ulmaria	Meadowsweet	Cloonmackan Lough	R1980	20/05/2023
Sonchus asper	Prickly Sowthistle	Cloonmackan Lough	R1980	20/05/2023
Alnus glutinosa	Alder	Cloonmackan Lough	R1980	20/05/2023
Lotus corniculatus	Bird's-foot trefoil	Cloonmackan Lough	R1980	20/05/2023
Potentilla erecta	Tormentill	Cloonmackan Lough	R1980	20/05/2023
Carex panicea	Carnation Sedge	Cloonmackan Lough	R1980	20/05/2023
Carex flacca	Blue Sedge	Cloonmackan Lough	R1980	20/05/2023
Hypericum pulchrum	Slender St. John's Wort	Cloonmackan Lough	R1980	20/05/2023
Luzula campestris	Field Wood-rush	Cloonmackan Lough	R1980	20/05/2023
Cynosurus cristatus	Crested Dog's-tail	Cloonmackan Lough	R1980	20/05/2023
Carex nigra	Smooth Black Sedge	Cloonmackan Lough	R1980	20/05/2023
Dactylorhiza kerryensis	Marsh-orchid	Cloonmackan Lough	R1980	20/05/2023
Senecio vulgaris	Groundsel	Cloonmackan Lough	R1980	20/05/2023
Ranunculus repens	Meadow Buttercup	Cloonmackan Lough	R1980	20/05/2023
Geranium robertianum	Herb Robert	Cloonmackan Lough	R1980	20/05/2023
Hirundo rustica	Swallow	Cloonmackan Lough	R1980	20/05/2023
Bombus pascuorum	Common Carder Bee	Cloonmackan Lough	R1980	20/05/2023
Cygnus olor	Mute Swan	Cloonmackan Lough	R1980	20/05/2023

6. Appendix

Sensory Garden ideas

Considering the desired outcomes of stimulating the five senses of the garden visitor, you may wish to consider the following:

1.Plants and structures of varied heights.
2. A comfortable seating area. Maybe the existing rocky area parallel to the river could be covered with a deck. This deck may have some climbing plants and some chimes for sound. Install an easy to maintain fence/barrier above the sloped area down to the river. This sloped area will need a mix of low growing, ground covering shrubs to smother out horsetail and any re-emerging japanese knotweed. You may consider the following plants: Hebe – Sweet dreams and/or True love; Viburnum davidii; Berberis, (Darwinii and Thunbergii 'Rose Glow'), Tutsan – (Hypericum androsaemum), Rosemary, Catmint, Thyme.
3. Food plants – berry bushes such as Blackcurrant, Raspberry, Gooseberry and Blueberries. Dwarf apple trees.
4. Consider creating a herbal wheel in the Sensory Garden. Consider planting Alliums; Anise Hyssop, Basil, Calundela, Catnip, Chives, Cilantro, Dill, Echinachae, Fennel, Lavender, Lemonbalm, Lemon Verbena, Mint, Monarda 'bee balm', Oregano, Rosemary, Sage and Thyme.
5. Wall mural of aspects of Nature on the Graveyard boundary wall.
6. Varied textures on the paths: woodchip, stone chippings (sound), coloured paving.
7. Consider water feature using harvested rainwater from the roof of the digital hub and a solar pump could enhance the area or act as a bathing spot for birds.
8. Install bird feeders in a safe spot for them.
9. Construct a wooden frame to carry a Bamboo Xylophone.
10. Use recycled materials, such as, maybe an old wooden Ladder to carry attractive flowering plants at each level.
11. Plant some soft textured plants such as, Angel Wings and Lamb's Ears.
12. Plant some Lemon Grasses, some Honeysuckle and some Ferns.
13. Add a Trellis for some climbers/ sweet peas etc.
14. Consider a paved area for the construction of a Pizza Oven (taste and smell).
15. Consider using the existing walls as an anchor for a canopy area for relaxing in wet weather.
16. Consider a raised bed for growing a mix of vegetables. Consider letting a few plants go to flower and seed for attractive viewing and for pollinators.
17. Design a visibly appealing and pollinator friendly border area.
18. Ensure accessible for all. Consider a wheelchair ramp to the riverside walk.
19. Consider some Leprechaun and Fairy features for children.
20. Use some locally handcrafted materials.

Resources: https://www.kew.org/read-and-watch/how-to-create-a-sensory-garden

Lavender.

6. Appendix

River Inagh Survey

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The most recent assessment of the health of the Inagh river can be found at https://epawebapp.epa.ie/qvalue/webusers/PDFS/HA28.pdf?Submit=Get+Results

Page 26 of the report states the following:

“There was a general improvement in biological water quality in the Inagh River in 2021, with a return of some pollution sensitive macroinvertebrates. There was an improvement from poor to good ecological conditions at the upper station (0100) and at station 0210, 750 m downstream of Inagh Bridge. Station 0200 also improved from moderate to good ecological conditions, while Moananagh Bridge (0300) remained at moderate ecological quality. The station at Ennistymon (0450) also improved from moderate ecological conditions to good, despite noted silt and nutrient issues. In general siltation and enrichment continue to be a cause for concern along the entirety of this river. “

7. References

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Councils: actions to help pollinators. All-Ireland Pollinator Plan, Guidelines 4. National Biodiversity Data Centre Series No.12, Waterford. November, 2016.

Collecting and using pollinator friendly wildflower seed. All-Ireland Pollinator Plan, How-to-guide 2. National Biodiversity Data Centre Series No. 6, Waterford. May, 2016.

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https://epawebapp.epa.ie/qvalue/webusers/PDFS/HA28.pdf?Submit=Get+Results [accessed May 2023]

8. Useful Links

www.biodiversityireland.ie
https://maps.biodiversityireland.ie/
https://maps.archaeology.ie/HistoricEnvironment/
www.wildflowersofireland.net
www.birdwatchireland.ie
www.batconservationireland.org
www.irishwildflowers.ie
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Notes