

RAHENY

BIODIVERSITY

ACTION

PLAN

Raheny Tidy Village Group and
Community Foundation Ireland,
Environment and Nature Fund 2019



Dr Mary Tubridy for
Mary Tubridy & Associates

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CONTENTS

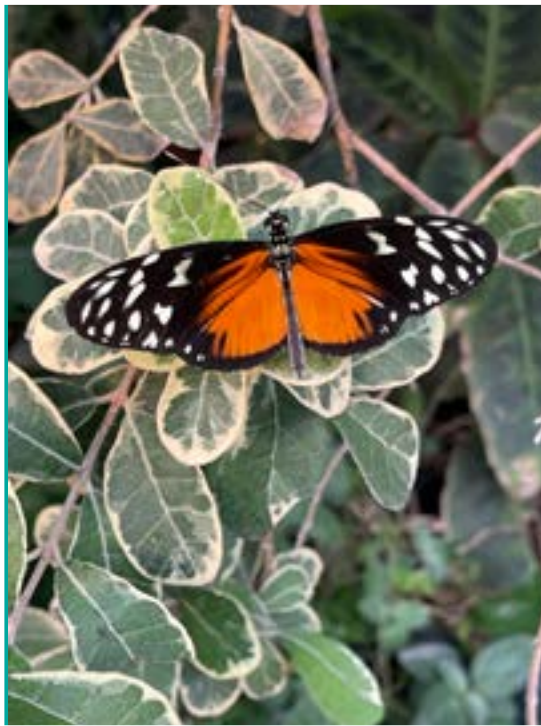
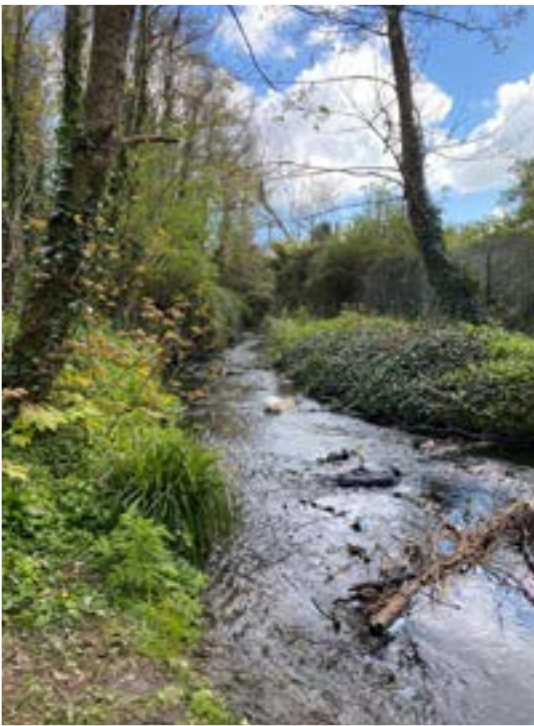
Acknowledgements	Page
Summary	6
	7
PART ONE: INTRODUCTION	
1.1	Introduction to the study area and Raheny Tidy Village Group
1.2	Approach to the study
1.3	Methodology
	10
	13
	14
PART TWO: BASELINE ACCOUNT OF BIODIVERSITY AND GEODIVERSITY	
2.1	Geodiversity and landscape history
2.2	Water quality
2.3	Habitats
2.4	Plant diversity
2.5	Animal Diversity
2.6	Areas of biodiversity interest in Raheny
	18
	20
	22
	24
	26
	28
PART 3: BIODIVERSITY ACTION PLAN	
3.1	Introduction
3.2	Biodiversity SWOT
3.3	Biodiversity Plan Actions
	32
	34
	36
OBJECTIVE 1	Use launch of the BAP to improve awareness of biodiversity and recruit volunteers to assist with implementation
OBJECTIVE 2	Develop and implement awareness campaign about biodiversity
OBJECTIVE 3	Network with relevant organisations and individuals
OBJECTIVE 4	Improve landscaping for biodiversity and pollinators in streets and private gardens
OBJECTIVE 5	Improve landscaping in public spaces
OBJECTIVE 6	Improve local spatial planning
OBJECTIVE 7	Monitor status of biodiversity
	36
	37
	38
	39
	39
	40
	41
REFERENCES	43
APPENDICES	
Appendix 1	Guidelines for community based groups to support biodiversity awareness and management
Appendix 2	Checklist of plants in Raheny
Appendix 3	Checklist of plants at the church and graveyard in Raheny village
Appendix 4	List of trees, shrubs and herbs good for biodiversity
Appendix 5	List of books and equioment to support field studies
	46
	56
	58
	60
	64

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SUMMARY

In response to global and local biodiversity loss, Dr. Mary Tubridy, in collaboration with the Raheny Tidy Village Group and Community Foundation Ireland, has developed this Biodiversity Action Plan. The plan serves as a guide to preserve and enhance biodiversity in Raheny.

Research for this plan was conducted between February 2022 and September 2022 on behalf of the Raheny Tidy Village Group. The study area was bounded by Howth Road, James Larkin Road, and Watermill Road, chosen because it includes the centre of Raheny village and borders St. Anne's Park and Bull Island. St. Anne's Park is one of Dublin's most significant historic park landscapes, covering 220 acres, while Bull Island is a UNESCO World Biosphere Reserve.

Research highlighted the following features of particular biodiversity interest **within the study area:**

- **Bull Island Special Area of Conservation. (SAC) / North Dublin Bay Special Protected Area (SPA).**
- **Santry River.**
- **Steep grassy bank beside James Larkin Road which has rare (for Dublin) plants and wet seepage areas.**

Other features of biodiversity interest were seen **adjacent to the study area** including:

- **St. Anne's Park.**
- **Grassland at the site of the ancient church in the centre of the village.**
- **The Capuchin Friary at the Hilltop on Raheny Road.**
- **Semi natural vegetation at Edenmore Park.**

In the study area, small public green spaces and the front and back gardens of private houses have scope for contributing to future biodiversity improvement.

Significant threats to biodiversity were identified during the time when the research was undertaken. Poor water quality in the Santry River and invasive plant species threaten the biodiversity of both flora and fauna. Additionally, the urban nature of Raheny has resulted in elevated levels of disturbance to wildlife. The primary goal of the Biodiversity Action Plan (BAP) is to raise awareness about areas of biodiversity importance, enhance existing landscaping in public spaces, including roadsides, and encourage households to plant species beneficial to wildlife. A community-driven education and awareness initiative will inform residents about the significance of local action and equip them with the necessary tools and knowledge to preserve and enhance the area's biodiversity. Key indicators will monitor the plan's effectiveness, with results communicated through social media and published reports.



PART ONE:
INTRODUCTION

1.1 INTRODUCTION TO STUDY AREA

Fig. 1 Study area for Biodiversity Action Plan (BAP)



The BAP study area (Fig.1) was defined by Raheny Tidy Village Group and features low density housing, roads and green spaces bounded by Watermill Road, James Larkin Road and Howth Road. It is principally covered in low-density housing dating from mid-20th century with front and back gardens and associated roads. In recent years apartment complexes have been built as residences. Nearby is a designated area of biodiversity importance (details of which are in Fig. 2). This is Bull Island, an SAC and SPA which is important for migratory birds and coastal habitats.

Fig. 2 Area of international biodiversity importance (hatched and coloured) adjacent to Raheny BAP study area.



The Santry River flows through the study area and there are several small public green spaces. As the Santry River discharges into the sea, it is linked to the sites of international biodiversity importance. Upstream it is linked to an area of national biodiversity importance (see Fig.3) where it flows north of Santry Stadium through Northwood, an area of importance for rare plants and woodland.

Fig. 3 Area of proposed national biodiversity importance (pNHA) associated with the Santry River upstream of Raheny.



1.1 RAHENY TIDY VILLAGE GROUP

Raheny Tidy Village Group (RTVG), which was set up in 1992, collaborates with Dublin City Council (DCC), local schools and businesses on projects to enhance the natural and built environment in Raheny Village. They are committed to protecting and enhancing biodiversity in their area.

In advocating for Raheny the RTVG seeks to maximise inputs from local and central government and supplement the work of the local authority in maintenance of the public realm, by litter picking, graffiti removal and leaf clearance. They are committed to protecting the heritage of Raheny, working to develop Raheny as a tourist destination and protecting and enhancing biodiversity in their area.

The RTVG has undertaken several projects which focus on sustainable development and biodiversity include a rainwater-harvesting project, rainwater planters and a leaf composting project that now includes making compost for use around the village.

A new community garden has been set up and community seed and plant swaps are organised regularly. The group strives for sustainable planting by harvesting seeds and division of mature plants. The RTVG was involved in developing the Raheny Way (three looped walks from Raheny Village), the Heritage trail (in partnership with the Raheny Heritage Society).

A no pesticide policy has played an important role in protecting biodiversity in Raheny. Other measures include no - mow areas organised in partnership with DCC and the preservation of habitats for wild bees. This year the number of orchids in the no - mow areas increased, including a new record of *Dactylorhiza incarnata* in the grounds of Our Mother of Divine Grace church. The group are also actively involved in planting flowerbeds, hanging baskets and planters in the village centre with sustainable, pollinator friendly planting.



1.1 RAHENY TIDY VILLAGE GROUP (CONT'D)

In 2023 they won First Prize in the Tidy Town's Pollinator Award 2023. This was a huge achievement for an urban environment and reflects the commitment of the RTVG to maintaining and improving biodiversity in their area.

The RTVG has been actively involved in monitoring water quality in the Santry River and removing litter and rubbish from the river. They use the Citizen Science Streams Index for macroinvertebrates to assess the water quality on a regular basis. Their water testing now links in with DCU Urban Citizen 6.3.2. programme which aims to analyse the data on a wider scale.

The RTVG regularly participate in national events such as Biodiversity Week, National Heritage Week, National Allotments and Community Gardens week and this year, for the first time, participated in the New Year Plant Hunt organised by the Botanical Society of Britain and Ireland. In 2023 they joined Dublin Urban Biodiversity group set up by Dr Mary Tubridy. This new group brings together like-minded people interested in promoting biodiversity.



1.2 APPROACH TO THE STUDY

The approach to the study was based on the principal consultant's specialist expertise in urban biodiversity, requirements of the principal funder, Community Foundation Ireland, and the objectives of the RTVG which is also contributing funding to the study.

Community Foundation Ireland, the principal funder, emphasises the need for a baseline of biodiversity, which can be communicated to the authorities and inform recommendations for actions to protect and enhance it. If the biodiversity baseline contains information on habitats this will assist in providing information on the status of pollinators. The action plan should prioritise work on areas of high biodiversity value, which may or may not be designated by the authorities.

Discussions with the group clarified their objectives which were to enable the community to carry out actions which would improve the status of pollinators, understand the role of pollinators as indicators of the health of local biodiversity and, provide guidelines on how to improve biodiversity particularly in areas managed by the community and local authority. It was

considered that this initiative should satisfy several categories in the Tidy Towns competition and improve sustainability and biodiversity in the village and surrounding areas.



1.3 METHODOLOGY

Preparation of the BAP involved desk research, consultations, and fieldwork.

Desk top research focussed on an examination of the 1st edition Ordnance Survey map, and data sets developed by the Geological Survey describing bedrock and soils, Bing aerial photography, an interrogation of the National Biodiversity Ireland data bases to provide information on invasive and rare species. The Bull Island Management Plan (Mc Corry and Ryle, 2008) was examined for an account of the area close to Raheny.

Fieldwork took place in 2021 and 2022 and involved Dr Mary Tubridy (habitats / flora / hedgerows) and Dr Julian Reynolds (freshwater ecology). While this focussed on the study area, a detailed plant check list was also compiled for the site of the church in the centre of Raheny, Our Lady Mother of Divine Grace. On the recommendation of local naturalists, a visit was made to a park west of Raheny and institutional grounds off the Raheny Road (the Capuchin Friary) to examine their floristic interest.

Dr Mary Tubridy compiled plant species lists in all habitats and prepared a habitat map based on Fossitt (2000) and Smith et al (2010). A digital habitat map was produced for the BAP by Donal Storey, a GIS specialist.

Julian Reynolds carried out an assessment of the Santry River on two occasions in 2022 in an area adjacent to Super Valu Raheny and the railway bridge. The stream here is 4 to 5 m wide with riffles about 10cm deep. The riffles had a silty algal layer with *Cladophora*, and were rich in aquatic life, principally small mayfly nymphs. Some deeper pools undercutting the clay banks contained minnows (not caught) and the aquatic macrophytes curled pondweed *Potamogeton crispus* and Canadian waterweed *Elodea canadensis*. Three 30-second kick samples were taken on each occasion using a 1mm mesh square net and the organisms (identity and number) were assessed using two systems, the Small Streams Characterisation System and the Citizen Science Index.

Mary Tubridy drafted the BAP based on the results of all desk research and fieldwork.



PART TWO:
**BASELINE ACCOUNT
OF BIODIVERSITY
AND GEODIVERSITY**

2.1 GEODIVERSITY AND LANDSCAPE HISTORY

Based on desk research background information on biodiversity and geodiversity was produced for the group (see Appendix 1).

Geological Survey of Ireland maps show that dark limestone and shale principally underlie the area but there is more calcareous shale, limestone conglomerate near the Howth Road. As no quarries were shown in the 1st Edition map it can be assumed that bedrock is covered by a deep layer of till.

Town land names usually give an indication of past land cover or historical events. There are two schools of thought as to the origin of the name Raheny. Some sources claim that it derives from the Irish Rath Eanna – The fort of Eanna, who was possibly a chieftain of importance. Others claim it comes from Rath Eanaigh – the fort of the swamp or marsh. Raheny was situated on a rath overlooking the Santry River which was originally surrounded by a marsh. The remains of the rath, now occupied by a ruined church is an important historical feature in the centre of Raheny.

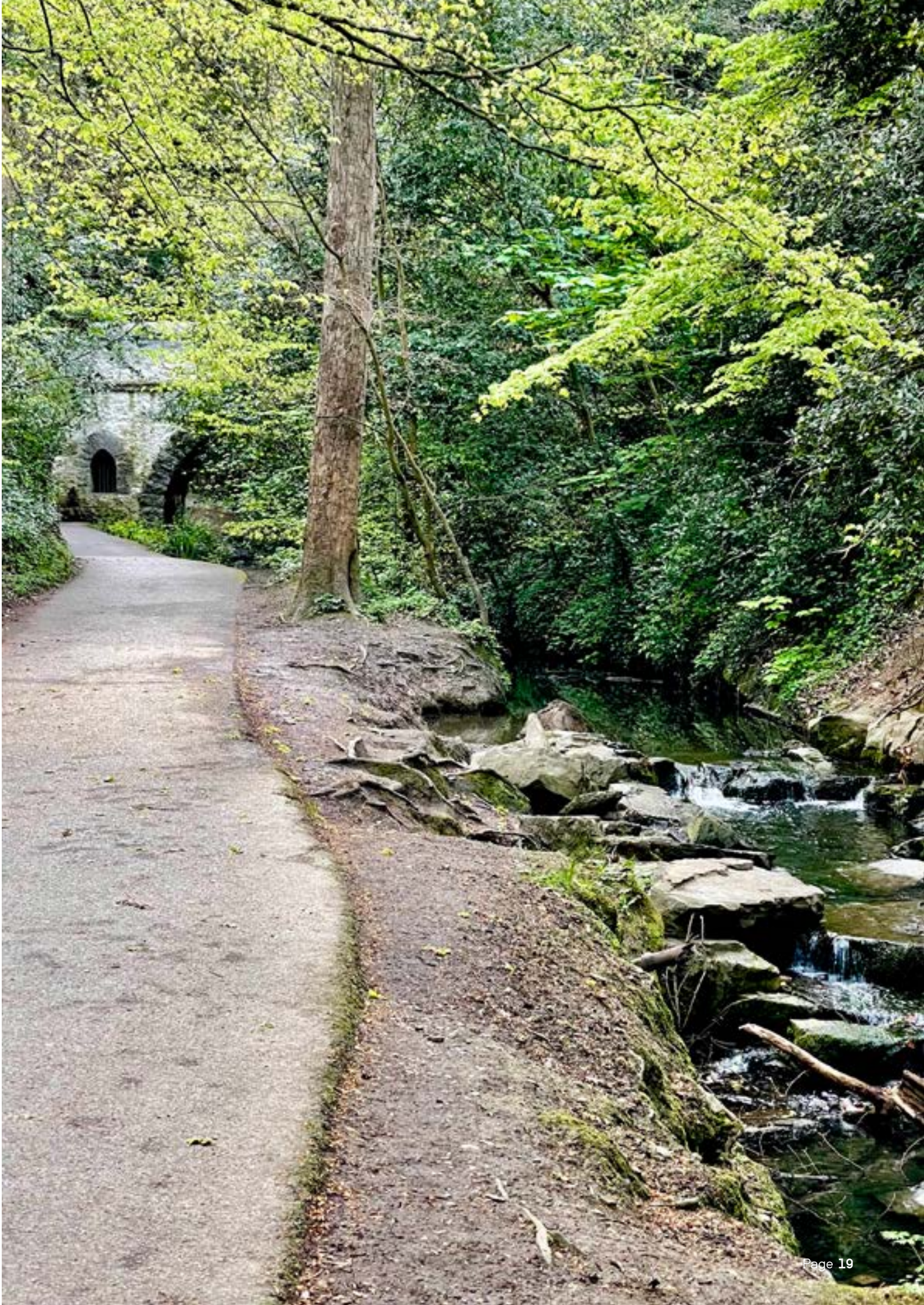


During the Ice Age the area was covered with ice, which came from the Irish Sea. When the ice melted gravels were laid down, particularly beside the Santry as the river acted as a melt water channel carrying water from melting glaciers. Elsewhere land was covered in till left behind by the ice. At a stage when sea level was higher the steep embankment beside the James Larkin Road formed the boundary of the sea.

The original vegetation on dry land was a woodland containing ash and hazel with a colourful spring flora consisting of bluebell, anemone (*Anemone nemorosa*), primrose (*Primula vulgaris*), violet, celandine (*Ranunculus ficaria*) and orchids, e.g. early purple orchid (*Orchis mascula*). Ash was the dominant tree but pedunculate oak may have been present as well, as birch, rowan, and elm (*Ulmus glabra*).

Little trace remains of the marsh, as the river course was deepened and straightened to limit flooding.

Other town land names which have been anglicised provide less information on local history. Edenmore may have derived its name from its landscape as Eden is interpreted as a lowbrow i.e. hill in Joyce (1922). Historic maps show the meandering course of the Santry River and a demesne landscape which had many small woodlands, hedgerows and large fields in front of Raheny Park (Fig 4), the big house at the centre of the Demesne. The woodland beside the original gate lodge is the only large survivor of this demesne. The town land name Foxlands may indicate the presence of numerous foxes, which would not be surprising given the high woodland cover.



2.2 WATER QUALITY

Environmental Protection Agency (EPA) records show that the Santry River is poor at Clonsaugh Bridge (Q2-3), bad at Harmonstown (Q1) and improving but still considered poor at Bettyglen near the James Larkin Road (Q3).

The results of fieldwork on the Santry River near Raheny recorded that on the first occasion (23/4/2022) there was a lot of life in the river, including shoals of small fish. The scoring came out as 8 for the SSCS and -2 for the CSI. However, it was also concluded that there was some kind of enrichment of the water resulting in this low score. There were numerous Baetis and brown caddis which were not included in the CSI.

When the survey was repeated on 28th of May under similar conditions and in the same location the scores this time were 2 on the SSCS and -2 on the CSI. There was very little sign of anything living in the water. The caddis that was recorded were slow moving and curled up. There were only a couple of Baetis recorded and

the fish were absent. The sampling was repeated on the other side of the bridge beside the Scout's Den and the results were very similar. There was a smell of kerosene from the water and evidence of oil floating on the surface of the water. An oil spill had been reported by Raheny Tidy Village Group to DCC over two weekends on the 8th and 13th of May 2022.

This is not an unusual state for an urban Irish river and confirms the EPA quality assessment. The fact that a pollution incident occurred some weeks before (Raheny group pers. comm.), removing the mayfly nymphs, naked caddis and most operculate snails, indicates a rapid recovery, with plenty of colonists in the area. It seems that the river experiences fluctuations in quality from very low to medium with which its freshwater flora and fauna seem to be able to tolerate.



2.3 HABITATS

Nine habitats have been mapped. The commonest habitat is BL3 so called Buildings and artificial surface, which describes all building and roads. Semi natural habitats include various types of grasslands, woodlands and wetlands. The number of habitats may be greater as mapping guidelines specify a minimum size area of 50mX 50m for mapping.

While none of the habitats are rare types listed in the EU Habitats Directive or similar to those found in the nearby SAC, some are locally rare including the Santry River and mixed woodland (WD2) at Glenside House.

The area of international biodiversity adjacent to the BAP study area (shown on Fig. 2) supports mainly habitats of international importance, all of which are associated with the coast and marine environment, and which were described in the Management Plan for Bull Island (McCorry and Ryle, 2008).

However, not all habitats within the internationally designated site are of international importance. Adjacent to the study area at the junction of Watermill Road and James Larkin Road on the coast side is some GS2 grassland, also seen in the study area, developed through reseedling and maintained by lax management between Watermill Road and the coast.



Fig.4 1st Ed OS map of Raheny and surrounds c.1830

Table 1 Habitats and their general biodiversity interest

Habitat Name	Code following Fossitt, 2000	Rarity (in the context of Dublin) (on a scale from 1-5) 1= common, 5=rare	Biodiversity Interest
Depositing lowland rivers (Santry River)	FW4	5	While water quality is poor, typical of an urban stream wetland species are occasionally found and it has potential for improvement.
Flower beds and borders (various locations) Not mapped	BC4	1	Small flower beds are in parks, under trees in streets and private gardens of varying value for biodiversity. Best examples have perennials of value to pollinators.
Buildings and artificial surfaces (i.e. roads) Mapped	BL3	1	The principal habitat in Raheny. Of low biodiversity value unless buildings used as roosting or nesting areas.
Amenity grassland improved (in lawns parks where grass mown regularly) Mostly unmapped	GA2	1	Generally poor plant and animal biodiversity. Occasionally good if original grassland is more species rich and management allows for flowering and seeding.
Dry Meadows and grassy verges Unmown grasslands in the steep bank beside James Larkin Road and edges of parks where management is lax	GS2	4	Good for pollinators as most vegetation is native and plants are allowed flower and set seed. However GS2 near James Larkin road has been invaded by Japanese knotweed.
(Mixed) Broadleaved/conifer woodland In the woodland in Glenside House at the end of Watermill Road	WD2	1	Excellent diversity of native broad leaves include Willows and Elder. Planted conifers present. Site suffers from presence of the invasive Giant Hogweed.
Scattered Trees and Woodland Bordering roads in Bettyglen	WD5	3	Mature trees good for invertebrates
Scrub On part of the grassy bank above James Larkin Road	WS1	4	Dominated by native scrub i.e. hawthorn and blackthorn. Good for bird pollinators.
Ornamental /nonnative scrub On part of the grassy bank above James Larkin Road	WS3	2	Dominated by non-native garden shrubs. If suitable plants present could be good for pollinators.
Treelines Lines of trees usually non-native in parks	WL2	3	If non-native of low value for biodiversity. Could provide commuting routes for birds as perching sites.

2.4 PLANT DIVERSITY

The checklist of plants for the study area is in Appendix 2, annotated to distinguish native species. There is a separate list for the church site in the centre of Raheny (Appendix 3). It is interesting to note the high plant species diversity in the church site, 35 species of which 26 are native and includes yew.

Features of the flora of particular interest are:

- The presence of one veteran apple and one veteran ash tree in the locality. Veteran trees are particularly important for biodiversity.
- Previous record of *Festuca gigantea* (rare for Dublin) on the embankment beside the James Larkin Road (Phil Grant, pers.comm.)
- Several populations of pyramidal orchids (rare for Dublin City) on east side of Watermill Road and the green space beside Santry River
- West of Howth Road just outside the study area.

Table 2 shows the result of interrogating the National Biodiversity Data Centre for invasive species.

Table 2 Records of invasive species in the vicinity of the study area (Biodiversityireland.ie/maps)

Species Common name	Species Latin name	Distance from site (km)	Comment on risk
Japanese knotweed	<i>Fallopia japonica</i>	Associated with Watermill Road	High
Bohemian knotweed	<i>Fallopia japonica Xsachalinensis</i>	7.8km	Medium
Giant knotweed	<i>Fallopia sachalinensis</i>	13.5km	Medium
Himalayan knotweed	<i>Persicaria wallichii</i>	16.5km	Low
Giant hogweed	<i>Heracleum mantegazzanum</i>	Associated with Santry River at Jameson Court, Manor House School and Watermill Road	High
Giant rhubarbs	<i>Gunnera tinctoria</i>	4.8km	Medium
Giant rhubarbs	<i>Gunnera manicata</i>	5.1km	Medium
Himalayan balsam	<i>Impatiens glandulifera</i>	5.9km	High
Hottentot fig	<i>Carpobrotus edulis</i>	6.9km	Low
Rhododendron	<i>Rhododendron ponticum</i>	5.1km	Low

As expected, fieldwork confirmed the presence of Japanese knotweed and Giant Hogweed in the study area. Knotweed is common on the embankment near the James Larkin Road. Giant Hogweed is common in the woodland beside Glenside House.



2.5 ANIMAL BIODIVERSITY IN RAHENY

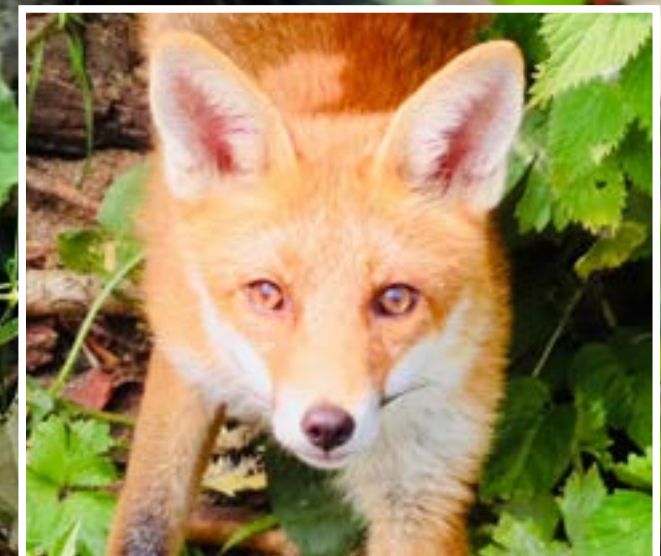
Due to the variety of habitats in Raheny which include grassland, semi natural woodland and the Santry river there is opportunity for a wide variety of animal species to thrive. Larger mammals such as badgers and foxes have been observed in the green open spaces and wooded areas of Raheny. Badger are generally found in areas of deciduous or mixed woodland near open grassland (*Badger – A Guide to Ireland's Protected Habitats & Species* 2018).

They have adapted to life in parks and large gardens and have been spotted in some back gardens adjacent to the study area. Foxes are a common sight in the village and as both badgers and foxes are primarily nocturnal they are best observed at dusk or in the early morning.

Due to the large number of trees in Raheny and the proximity of the study area to Bull Island and St Anne's Park there are diverse range of bird species in the area. Brent geese feed in areas adjacent to the study area on the football pitches in St Anne's Park and are regularly sighted on Springdale Road. Native garden birds such as robins, blackbirds, wrens and finches are common visitors to back gardens.

The Santry River provides a habitat and wildlife corridor for a wide range of mammals and birds. Herons and mallards use it as a source of food and bats hunt for food at night along the course of the river. They also use it as a wildlife corridor bringing them as far as St Anne's Park and the coast.

The natural habitat of hedgehogs is deciduous woodland, scrub or open grassland. Due to urbanisation, they can now be found in open, unfenced gardens and parkland. (*Hedgehog (2018) A guide to Ireland's Protected Habitats & Species*). A recent survey carried out by the RGTV found hedgehogs to be rarely seen in the study area. Actions for biodiversity in back gardens should help to improve their population locally.



2.6 AREAS OF BIODIVERSITY INTEREST IN RAHENY

Areas of biodiversity interest within the BAP study area are shown on **Fig. 5**

Areas of higher biodiversity value are: the Santry River, particularly where it is surrounded by woodland near the James Larkin Road; the steep grassy bank along the James Larkin Road (good for invertebrates and native plants) and remnants of parkland woodland in Bettyglen at the bottom of Watermill Road.

Small features of interest include two veteran trees and a thatched house. Adjacent to the study area are important areas with semi-natural grassland at the Capuchin Friary and Edenmore Park. The most important biodiversity hot spot in the locality is St Anne's Park, at 107 ha, the largest park managed

by Dublin City Council for which Mary Tubridy prepared a Biodiversity Action Plan in the early 2000's (Tubridy and Associates, 2004).

In general, all areas of biodiversity interest are important for pollinators as almost all vegetation will be of native plants. As explained in the background briefing notes provided to the Raheny Tidy Village Group (see Appendix 1) native plants are more valuable for all species, including pollinators. Therefore, the expansion of pollinator activity will involve planting particular native or biodiversity friendly species in private and public spaces which will encourage the movement of pollinators from these biodiversity hot spots to other sites in Raheny.



Fig. 5
Areas of biodiversity interest within the study area.





PART THREE:
**BIODIVERSITY
ACTION PLAN**

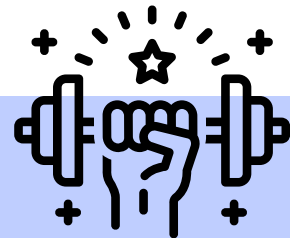
3.1 INTRODUCTION

This section of the document contains detailed suggestions for initiatives to protect and enhance biodiversity. It starts with a SWOT analysis which is a convenient way to summarise facts and issues.



3.2 BIODIVERSITY SWOT

STRENGTHS



Particular strengths of this area and environs in terms of biodiversity are:

- Santry River from the Dart to the end of Watermill Road.
- Old planted woodland at the end of Watermill Road through which the Santry flows.
- Presence of thatched house demonstrating previous traditional use of biodiversity.
- Flora which demonstrates the influence of the marine environment at the sea wall along James Larkin Road.
- Grassland in the graveyard beside the Main Street.
- Semi-natural species rich grassland in the grounds of Capuchin Friary.
- St. Annes Park, its biodiversity and management.
- Edenmore Park and its semi-natural areas.

Particular strengths of this area in terms of management for biodiversity are:

- Long tradition of activism to improve the local environment.
- Well qualified residents who are willing to assist the community learn about biodiversity.
- Interest of Raheny Tidy Village Group and Manor House school in monitoring Santry River water quality as part of school studies.
- Presence of a public library with potential to educate the public about local biodiversity and house resources offered by the Heritage Council to public libraries.
- Local Historical Society.



WEAKNESSES



Particular weaknesses of this area and environs in terms of biodiversity are:

- Poor quality of Santry River, typical of urban rivers.
- Limited habitat diversity in most green spaces to mainly GA2 (partly due to lack of resources and concern with anti-social activity in parks).
- Density of Smyrnum (Alexanders) in the GS2 grassland in the SAC adjacent to the study area.

Particular weaknesses of this area and environs in terms of community are:

- Lack of indoor meeting space for large groups.
- Lack of easy access to resource (technical advice and materials) to guide their efforts.

Threats

Particular threats to biodiversity in this area are:

- Invasive Japanese Knotweed and Giant Hogweed.
- Pollution in the Santry River which could also affect sites of international biodiversity importance.

3.3 BIODIVERSITY PLAN ACTIONS

The objectives of the BAP are:

- Carry out landscaping works to improve biodiversity and the status of pollinators in parks and on roads (in private gardens).
- Improve local awareness of biodiversity and pollinators.
- Network with similarly minded groups in Dublin.
- Improve local spatial planning to protect and enhance biodiversity.
- Monitor the status of biodiversity.

Actions to implement these objectives are listed in the following tables. For each action information is provided on the role and responsibilities of various groups, its cost, the relative priority for the action and indicators of success.

OBJECTIVE 1: Use launch of the BAP to improve awareness of biodiversity and recruit volunteers to assist with implementation

Action	Budget	Who should be involved/ responsible organisation or person	Timeline	Indicator of Success
Launch plan, establish Raheny Biodiversity Focus Group and invite interested residents and members of NGO's such as BirdWatch Ireland, Dublin Naturalists Field Club, Dublin Bat Group and Irish Wildlife Trust.	Launch hospitality c. €500.	RTVG	2025	Publicity in local newspapers. Information about the launch in relevant social media accounts. Recruitment of extra volunteers
Publish Biodiversity Action Plan online and hard copy.	€1,000	Una Healy Design Baldoyle Print	2025	Publicity in local newspapers. Interactions on website and social media.

OBJECTIVE 2: Develop and implement awareness campaign about biodiversity

Action	Budget	Who should be involved/ responsible organisation or person	Timeline	Indicator of Success
Install biodiversity information signage in Watermill Woodland	c. €700 for printing and installation of signage.	RTVG volunteers and sign printing company	2025	Installation of sign by mid 2025.
Biodiversity corridor directional signage.	c. €1000 for construction and installation of signs. Development of QR code and information leaflet.	RTVG volunteers to design and manage project. Raheny Men's sheds or sign printing company.	2025	Installation of signs along biodiversity corridor from Capucin friary to Bull Island.
Use social media to promote bumblebee transects and Flower - Insect Timed Counts counts organised by the National Biodiversity Data Centre.	Time of volunteers	RTVG volunteer to promote citizen science project. Residents.	2024	Number of individuals participating each year.
Build up a supply of surveying equipment. List in Appendix 1	Volunteer time Budget €500	Volunteer in RTVG.	2025 - 2028	Spring event outdoors, Autumn indoors.
Organise two biodiversity awareness events each year.	€700 (hire of room hospitality and speaker).	Volunteers in RTVG	2024	Summer/ Autumn event
Hold a garden competition to reward biodiversity enhancements in gardens.	€500 (prize fund).	Volunteers in RTVG to promote and judge the competition	2025	Number of residents participating
Develop simple brochure outlining measures which could be taken by developers to support biodiversity	€200 for printing of leaflets.	Volunteers in RTVG	2025	Production of brochure available to the public events and online through website and social media.
Commission a sculpture reflecting the biodiversity of Raheny.	c. €10,000 for artist and design and production of the sculpture. Publicity and unveiling of the sculpture	Employ artist. Volunteers to coordinate the project. DCC to liaise on the location of the sculpture.	2026	Installation of the sculpture in a public place in Raheny village

3.3 BIODIVERSITY PLAN ACTIONS (CONT'D)

OBJECTIVE 3: Network with relevant organisations and individual

Action	Budget	Who should be involved/ responsible organisation or person	Timeline	Indicator of Success
Make direct contact with the Biodiversity Officer, DCC, local ranger for the National Parks and Wildlife Service. Ask for assistance to implement the BAP.	Time of volunteers	RTVG possibly members who are familiar with these individuals.	2024 -2025	Report on contacts to the wider group. Agreement to assist.
Invite Dublin Naturalists Field Club to hold a field meeting in Raheny to examine the woodland beside Glenside Lodge.	Time of volunteers	Landowner providing permission. RTVG. Resident linked to the DNFC (i.e. Con Breen).	Springtime 2025	Landowner agreement. Public participation in the field trip.
Make contact with other community-based groups in the city now implementing their BAPs.	Time of volunteers	Communication Officer, RTVG.	2025	Number of meetings conversations and evidence of learning.

OBJECTIVE 4: Improve landscaping for biodiversity and pollinators in streets and private gardens

Action	Budget	Who should be involved/ responsible organisation or person	Timeline	Indicator of Success
Working on a street-by-street basis near biodiversity hot spots, encourage residents to plant biodiversity friendly species in their front gardens including walls.	c. €1,000	Volunteer from RTVG who obtains plants and organises planting and maintenance.	2025 -2028	Length of corridor planted with pollinator/biodiversity friendly plants.
Develop the Community Garden as a demonstration area for good practise in gardening for biodiversity and pollinators and install a pond	c. €500	Member of RTVG group with expertise in gardening and an interest in biodiversity.	2025	Hold workshops and use the expertise within the Raheny Tidy Village Group and experts to develop the garden.

OBJECTIVE 5: Improve landscaping in public spaces

Action	Budget	Who should be involved/ responsible organisation or person	Timeline	Indicator of Success
Biodiversity training workshops	Purchase of plants c €500/ year Provide information/ or training gardening skills.	RTVG plants person.	2025 -2028	Start small and plan to extend corridor year by year.



3.3 BIODIVERSITY PLAN ACTIONS (CONT'D)

OBJECTIVE 6: Improve local spatial planning

Action	Budget	Who should be involved/ responsible organisation or person	Timeline	Indicator of Success
Where possible, engage in planning to request that development incorporates landscaping for biodiversity.	Time of volunteer	Volunteer or other local resident with an interest in planning and river Management.	Whenever local or city plan is being drafted.	At least one objective included in plans.



OBJECTIVE 7: Monitor status of biodiversity

Action	Budget	Who should be involved/ responsible organisation or person	Timeline	Indicator of Success
Bat, bird, insect surveys of Raheny.	c. €500 for equipment.	Support from Dublin bat group, Birdwatch Ireland and All Ireland Pollinator Plan..	2025	Length of corridor planted with pollinator/biodiversity friendly plants.
Tree survey of Raheny.	Time of volunteer. c. €200 for publication of a local tree trail booklet.	Complete survey and liaise with Bloomin' Crumlin for additional expertise.	2025	Hold workshops and use the expertise within the Raheny Tidy Village Group and experts to develop the garden.
Request DCC to survey the area for invasives and develop a plan to manage them.	DCC budget c. €2000	DCC Biodiversity Officer.	2024 -2028	Length of corridor planted with pollinator/biodiversity friendly plants.
Fund training course for volunteers to identify, record and remove (where appropriate) invasive species.	c. € 500 for workshop.	Ecologist with expertise in invasive species.	2025	Survey and record of invasive species. Evidence of removal by annual census.
Through social media publicise all citizen science projects involving the monitoring of plants, frogs, butterflies and birds organised by an env. NGO or the National Biodiversity Data Centre.	Volunteer time to identify suitable projects and promote involvement through local promotion.	Tidy Village volunteer with an interest in recording biodiversity.	2025 -2028	Involvement of residents in citizen science projects which is reported in social media. Start small (one citizen science project in year one, the bumble bee transects) and expand.
Monitor status of Santry River annually.	Time of volunteers.	Volunteers and local schools.	2024	Results of monitoring publicised through social media and urban 6.3.2. project (Dublin City University).

REFERENCES

A Guide to Irelands protected habitats & species (Badger). Available at: <https://www.conserveireland.com/mammals/badger.php> (Accessed: 02 February 2024).

A guide to Irelands protected habitats & species (Hedgehog). Available at: <https://www.conserveireland.com/mammals/hedgehog.php> (Accessed: 02 February 2024).

Fossitt, J. (2000) *A guide to Habitats in Ireland*, Heritage Council, Kilkenny.

Joyce, P.W. (1922) *The origin and history of Irish names of places*, Vol. 2, The Educational Company of Ireland.

Smith, G.F., O'Donoghue, P. O'Hara, K., and Delaney, E (2011), *Best practice guidance for habitat survey and mapping*, Heritage Council, Kilkenny.

McCorry, M and Ryle, T (2008), *A (Draft) Management Plan for North Bull Island*, unpublished report produced for Dublin City Council.





APPENDIX 1

Guidelines on biodiversity management for community groups

Where is a good place for biodiversity?	Page 46
Legal protection of areas and species	Page 47
How to develop good habitats (woodlands, grasslands, shrubberies and wetlands)	Page 48
Gardening for biodiversity	Page 50
Artificial habitats for birds, bats and insects	Page 50
Support for community based initiatives	Page 51
Partnerships for biodiversity with schools (and local companies)	Page 51
Resources to support local learning about biodiversity	Page 52

WHERE IS A GOOD PLACE FOR BIODIVERSITY?

1 Where is a good place for biodiversity?

As biodiversity is much reduced due to development the best places will be where little has occurred. Therefore a good place for biodiversity will not be covered in houses, roads or subject to drainage. It will not be covered by plants established by people but by vegetation which has been there for hundreds or thousands of years. This vegetation will principally consist of native plant species.

Native is broadly speaking a species which arrived naturally into the country in comparison to a species which has been introduced deliberately by people. Native plant and animal species are more valuable for biodiversity as they are more likely to be important as a source of food or shelter for other species. Native species are more likely to be living in their optimum location so their presence reveals information about the local environment which helps to characterise other aspects of local biodiversity.

There is a place for non-natives too as many have been naturalised, firmly established and can also be important for other species. There is particular concern with non-natives which have become invasive affecting natural habitats and other native species. The government has published lists of these which include Rhododendron in woodlands, Japanese Knotweed in waste land and Himalayan Balsam usually in rivers. People who have these species on their land must take care not to allow it spread, or they will be prosecuted.

A good place for native biodiversity will be a non-intensively managed field, a thick hedgerow, a drainage ditch, any type of wetland; areas covered in scrub or woodland or even rough grassland near a road. In these areas you will find the last remaining reservoirs of your good local biodiversity. In general the age of these habitats will be a good guide to their value. The older the habitat the more likely that it will support native species. The following is the list of native trees and shrubs. It would be useful to learn these plants as they are important indicators of naturalness.

Common Name	Latin Name
Alder	<i>Alnus glutinosa</i>
Ash	<i>Fraxinus excelsior</i>
Aspen	<i>Populus tremula</i>
Bay Willow	<i>Salix pentandra</i>
Bird Cherry	<i>Prunus padus</i> <i>Populus nigra</i>
Black Poplar	<i>Populus nigra</i>
Blackthorn	<i>Prunus spinosa</i>
Buckthorn	<i>Rhamnus cathartica</i>
Crab Apple	<i>Malus sylvestris</i>
Downy Birch	<i>Betula pubescens</i>
Eared Willow	<i>Salix aurita</i>
Elder	<i>Sambucus nigra</i>
French Hales	<i>Sorbus devoniensis</i>
Goat Willow	<i>Salix caprea</i>
Gorse	<i>Ulex europaeus</i>
Autumn Gorse	<i>Ulex gallii</i>
Grey Willow	<i>Salix cinerea</i>
Gelder-Rose	<i>Viburnum opulus</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Holly	<i>Ilex aquifolium</i>
Hybrid Oak	<i>Quercus petraea</i> X <i>Q. robur</i>
Irish Whitebeam	<i>Sorbus hibernica</i>
Pendunculate Oak	<i>Quercus robur</i>
Purple Osier	<i>Salix purpurea</i>
Rowan	<i>Sorbus aucuparia</i>
Scots Pine	<i>Pinus sylvestris</i> ?
Sessile Oak	<i>Quercus petraea</i>
Silver Birch	<i>Betula pendula</i>
Spindle Tree	<i>Euonymus europæus</i>
Willow Hybrid	<i>Salix aurita</i> X <i>S. cinerea</i>
Wych-Elm	<i>Ulmus glabra</i>

If you want to find out if you have any ancient habitats in your locality check the first edition of the Ordnance Survey maps on the Ordnance Survey website (<https://osi.ie>). Click on map viewer on the home page. It will show woodlands and wetlands and even scrubby areas.

If you want to get information about species in your locality, go into the website for the National Biodiversity Data Centre <https://maps.biodiversityireland.ie>. Locate the area you are

interested on the map. Then click on reports, select the area as you will have lots of options to get records from areas of varying size from 100m to 10km in its vicinity. Finish by asking to generate a report. The final result will be an excel file listing all species (mainly Latin names only) recorded from your locality and the date of this record.

Legal protection of areas and species?

The status of a plant and animal affects the protection given to it by legislation. Irish wildlife legislation provides protection for specific large rare native plants, all large native animals and all native breeding birds which are rare and vulnerable to disturbance. Rabbit is not given any protection under the Wildlife Acts as it probably arrived with the Normans. Because these species listed in the Wildlife Act are protected it is necessary to get a license from the NPWS to disturb them. However derogations have also been agreed. All teachers are allowed take tadpoles from the wild bring them into schools. Of particular relevance to farmers and gardeners is the prohibition on hedge cutting between 1st March and 1st September to protect nesting birds. Tree cutting is not regulated by legislation concerned with biodiversity but with forestry. According to these regulations there is no need to get a license to fell trees in an urban area.

To find out about areas which have been officially recognized as being of biodiversity value in your locality go into the website for the National Biodiversity Data Centre (<https://maps.biodiversityireland.ie>). Click on maps on the home page to move to the map of Ireland. As this principally shows physical features, topography and rivers so you might need some help from other maps to check your location. Once you have zoomed into your location of interest there are lots of options. If you want to know about internationally important areas of biodiversity interest value then click on Protected Areas. SAC's (Special areas of Conservation) and SPA's (Special Protected Areas).

The other category NHA's (Natural Heritage Areas) are sites of national **biodiversity** importance protected under the Irish Wildlife Acts. The boundaries of all these areas will be shown on your map. Click anywhere on this shading to find its official name and code number. Take particular note of the number. The Geological Survey has carried out surveys in many counties to identify features of geodiversity interest which could be designated as geological Natural Heritage Areas. These sites will only be found by searching for the results of these studies.

APPENDIX 1 (CONT'D)

Guidelines on biodiversity management for community groups

To get information about the protected area (if an internationally important site or designated Natural Heritage Area) go into the NPWS website (<https://www.npws.ie/maps-and-data>). Click for details in box titled Protected Sites Data. Go to search page in section of page titled Search for Site Documents. In box beside code enter number (obtained from the map) and click. This will bring up a set of documents prepared by the NPWS about each Natura site (SAC and SPA) and designated NHA's (not all NHA's, not pNHA's, (p=Proposed) only designated ones). The most useful document for Natural sites is the category titled Site Synopsis. It provides very specific (and sometimes technical) information about the types of important areas (habitats) and species found throughout the site and in areas of particular importance. As a result of the Habitats and Birds Directives all statutory agencies are obliged to protect these habitats and species and thus any work affecting the areas designated as SAC's and their surrounds must be informed by an ecological assessment called Appropriate Assessment.

Very few of these sites have Management Plans and thus there is little or no information about the biodiversity value of all the land within an SAC. NPWS have not had the resources to prepare these plans and fieldwork is needed to determine their value. Occasionally they have been prompted to prepare them due to local interest or pressure from environmental organisations. If an area has not been designated by the authorities its biodiversity value can be inferred if it contains rare habitats or species. Rarity can be assessed at various scales and a system developed by the National Roads Authority is widely used. Various reports can be examined to give an indication of the rarity and importance of species. BirdWatch Ireland regularly produces list of birds of conservation concern. National floras usually provide an indication of the rarity of plant species. County floras provide similar valuable information at a county scale. Red lists (following convention drawn up by an international conservation organisation) have been produced for plants, bryophytes, mammals, amphibians, reptiles and freshwater fish, and various groups of invertebrates including bees, stoneflies, damselflies and dragonflies, butterflies, macro moths, cartilaginous fish, water beetles, mayflies and non-marine molluscs. Red lists have been drawn up by national experts and highlight species of particular importance. The presence of certain birds and other listed species is important in identifying areas of biodiversity value.

Local naturalists may also have such information. Anglers groups are particularly valuable sources of information on water quality and fish.

HOW TO DEVELOP GOOD HABITATS (WOODLANDS, SHRUBBERIES AND WETLANDS)

Homes for biodiversity are called habitats. Your BAP will contain numerous references to habitats. To obtain more information about habitats examine the publication produced by the Heritage Council. This can be accessed here (<https://www.npws.ie/sites/default/files/publications/pdf/A%20Guide%20to%20Habitats%20in%20Ireland%20-%20Fossitt.pdf>). You need technical knowledge to fully comprehend the distinctions at level 3 but not at levels 1 and 2 as their definition can be easily understood.

WOODLANDS AND HEDGEROWS

The most useful terrestrial habitat for biodiversity is a native (WN type) woodland with native trees and shrubs. Information in your biodiversity action plan should suggest the original type of woodland present and provide details of where traces may be present in your locality. Biodiversity management should focus on improving the quality of existing woodlands, which are more likely to be WD woodlands planted with either one species of non native tree or a mixture of natives and non natives. A native woodland can be established through planting natives or modifying the species mix in a planted woodland. Guidance provided by the governments Native Woodland Scheme indicates the relevant species for your soil type (<https://www.teagasc.ie/crops/forestry/grants/establishment-grants/native-woodland-establishment/>). Generous grants are available for this work for sites as small as 0.1ha. Soil type can be discovered in the soil map produced by Teagasc. A native woodland would support a variety of native trees and shrubs typical of the chosen woodland type. The larger the size of woodland the better but even mini- woodlands so called pocket forests (size between a car parking space and tennis court) can produce great benefits for biodiversity (see pocketforests.ie for details of this initiative). Ideally a new woodland should be within hopping distance of an existing hedgerow or shrubby area. The shape should allow for maximum edges as birds and insects will use the margins for feeding or sheltering. Sunny edges will be particularly valuable for insects and pollinators.

SHRUBBERIES

Shrubberies can be very valuable for nesting birds if they produce food for pollinators and safe nesting places for birds at chest height. They can be any shape or size. A hedgerow is essentially a specialised linear shrubbery with an A shaped structure involving trees, shrubs, possibly a bank and ditch. Original hedgerows were stock proof therefore they were very good for nesting birds. As hedgerow management is no longer practiced it is rare to find a tall A shaped hedgerow. As a replacement for a hedgerow a shrubbery should be managed to retain their compact shape and bushiness. Ideally a new hedgerow should be within hopping distance of an existing hedgerow or shrubby area.

GRASSLANDS AND HOW TO IMPROVE THEIR BIODIVERSITY VALUE

The potential of grasslands will be described in your BAP. Grasslands identified as the habitat GS type will have good potential. Grasslands of type GA have less potential. It is possible to improve all grasslands (even GA type) to make them more like a wildflower meadow following a long-term management regime (10-20 years). This involves cutting twice/year (March/April and September) and removing all cuttings. This will eventually reduce the fertility of the soil to encourage growth of wildflowers i.e. forbs as opposed to grasses. This is the most environmentally friendly way to create a wildflower meadow, manage a GS grassland and to convert a grassland of low potential GA type to a GS type.

Ideally in all grassland areas the policy should be to restrict mowing until the end of the flowering season to benefit pollinators. Putting up the All Ireland Pollinator sign will let the public know why the grass is not being cut.

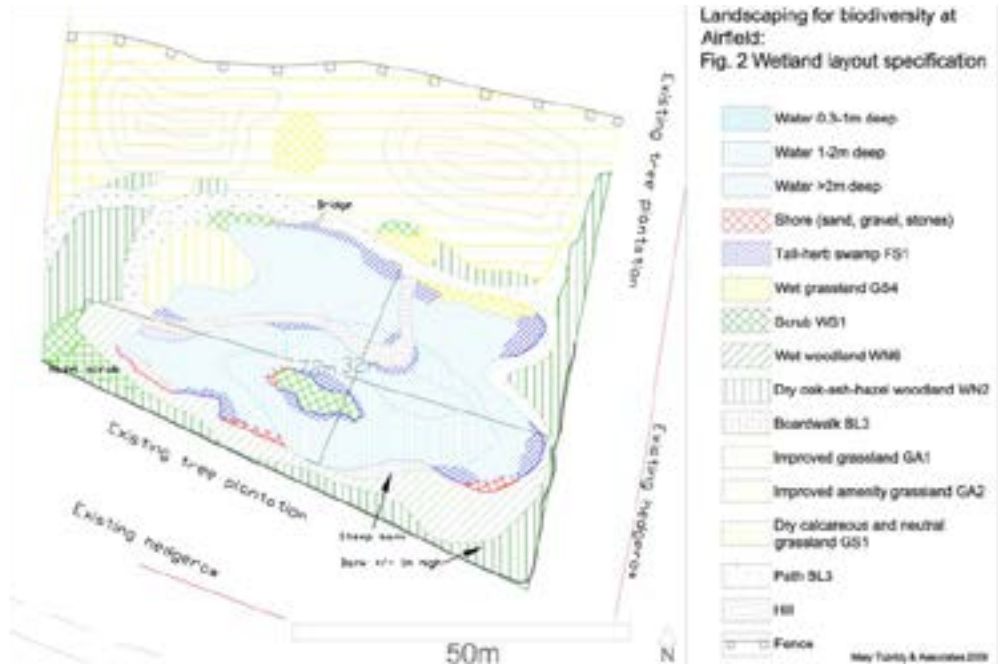
There are lots of issues about the current practice of establishing so called "wildflower meadows". Packets of wildflower seed sold in Ireland may contain seeds of plants which are extinct or /and are

from outside the country Therefore there is a risk of damaging the genetic integrity of Irish wildflowers.

If you want an instant wildflower meadow spread seeds from a reputable Irish source such as Sandro Caffolla but the resulting grassland should be called a "pictorial meadow". These should only be established in gardens not in areas with semi-natural vegetation. Pictorial meadows will be good for pollinators and butterflies but will require major management each year to maintain its interest. If you use wildflower seed from a packet there is also a strong risk of introducing non-natives or plants which became extinct in Ireland. Best to collect seed locally for use in establishing these types of habitats.

WETLANDS

A wetland is also a very valuable habitat to establish as these have almost always been removed and they can support a wide range of flora and fauna. While ideally it should be a pond (and a large one) it could even be a birdbath which has shallow edges to allow birds drink from it. Any pond or wetland should be fed by good quality water. The hydrological regime should allow for constant/ intermittent water flow (never stagnant water). Its construction should provide for a mixture of open water 70% and surrounding vegetation 30%, an undulating profile (to maximise edge effects), and some steep and some shallow margins. A plan for a new wetland developed by Mary Tubridy and Betsy Hickey which incorporates these characteristics is shown below.



APPENDIX 1 (CONT'D)

Guidelines on biodiversity management for community groups

In developing wetlands particular care is needed to prevent invasive plants or animals colonizing the pond. Resources should be available for management as wetlands are dynamic systems and artificial wetlands may silt up or suffer from changes to local hydrology.

GARDENING FOR BIODIVERSITY

The activity of gardening for food or amenity offers great opportunities to learn about biodiversity as it demonstrates the linkages between soil, plants, animals and people. This potential is greatest following organic growing principles and establishing native species. Composting and seed saving will demonstrate the circular economy and food production will demonstrate the importance of the plant world to the survival of humanity. If you want to benefit biodiversity then the obvious thing to do is to plant native trees, shrubs or herbs or a plant listed in the All-Ireland Pollinator plan (pollinators.ie). If you do not find a native species to your taste plant a variety of a native species or a species that belongs to the same genus. The genus is the surname of the species. If the common wild Daisy is called *Bellis perennis* (Latin names are always in italics) *Bellis* is the genus and *Bellis perennis* is the species within that genus. So if you do not want to plant *Bellis perennis*, look for other plants whose name starts with *Bellis*. Because they belong to the same genus it is likely that pollinators etc. will utilize them.

Varieties are cultivated types of wild species (similar to breeds of dogs). Many wild plants are now available as varieties which are showier than the original. They are worth planting too. The species name will be provided followed by the var name.

Therefore, if you plant a native tree typical of the local environment it will flower (good for pollinators), produce seeds (food for birds), branches (good for roosting birds) and eventually once it matures, has cracks in its trunk and is covered in ivy it will be a home for roosting bats and nesting birds. Remember few songbirds nest in trees.

While planting natives is the best strategy, non-natives can also be used if they can perform one of these functions. All clematis are good for birds, cultivars of *Clematis tangutica*, also provide nectar and pollen for bees, followed by wispy seedheads in autumn, birds will take the material to use in their nests in spring; climbing hydrangea, single, open flowered climbing and rambling roses, provide nectar and pollen for pollinators, followed by hips for birds.

The worst species is *Leylandii*. Under no circumstance should this be planted.

Documents produced by Heritage Officers such as Gardening for Biodiversity and collecting wildflower seed are available online and provide short lists of suitable plants.

Here are suggestions for perennials in flowerbeds, hanging baskets and containers. Hanging baskets should always be near buildings.

Pin cushion scabious *Knautia arvensis* and cultivars
Oregano - *Origanum vulgare* 'Aureum'
Thyme – lemon scented thyme *Thymus citriodorus aureus*
Aubrieta cascade
Trailing bellflower *Campanula poscharskyana*
Aurinia saxatilis
Alpine rock cress *Arabis alpina* subsp. *Caucasica*
Tussock bellflower *Campanula carpatica*

Suggestions for annuals in flower beds and containers.

Bidens
Bacopa
Diascia
Heliotrope
Lobelia 'pendula'
Million bells *Calibrachoa*s
Floss flower *Ageratum houstonianum*
Snapdragon *Antirrhinum majus*
China aster *Callistephus chinensis*
Baby blue eyes *Nemophila menziesii*

ARTIFICIAL HABITATS FOR BIRDS, BATS AND INSECTS

Artificial habitats are particularly appropriate when the natural habitat of a species is absent or still maturing. In general, all interventions should be regarded as temporary and removed when the natural habitat is more appropriate, thus removing the need for monitoring and cleaning. The use of artificial habitats bird and bat nesting boxes etc. should be checked each year. They may need cleaning and if unused they should be moved to another location.

It is important to minimize night-time lighting near semi-natural habitats. Light should only come on when needed and only pointed at features, which ensure people's safety.

SUPPORT FOR COMMUNITY BASED INITIATIVES

Check if a Biodiversity Action Plan has been produced for your county. As plan are being developed, there will be opportunities for communities to communicate concerns, suggest actions or identify barriers, which limit biodiversity action locally. Particular sources of support within the Council are the Biodiversity, Heritage Officers, Environmental Awareness Officer and Community Climate Action Officer.

In recent years Local Authority Water Protection Officers have been appointed as a partnership between the EPA and local authorities to mobilise local support for good catchment management. They have potential to support community scale initiatives in relation to training and monitoring. Contact these officials through <https://lawaters.ie/>

There are several national NGO's organisations which have good links to communities:

- BirdWatch Ireland is the largest biodiversity NGO in Ireland. It runs several citizen science programmes and organises outings to look at birds all year round. See <https://www.birdwatchireland.ie>
- Bat Conservation Ireland (env NGO) will put you in touch with local bat groups who (for a small fee) can organize an educational event in your area. See <https://www.batconservationireland.org/irish-bats>
- Irish Peatland CC The Irish Peatland Conservation Council has excellent educational materials, and runs programmes from their base in Kildare and also runs an annual frog survey. See <http://www.ipcc.ie/>

Membership of these NGO's is very reasonable and there are concessions for students etc. Both may allow non-members to attend events as a taster of membership.

As well as providing information and support some NGO's' may have political influence. They may be represented in your local public participation network (PPN). This is a local authority structure which feeds community concerns to all local authority departments.

In the context of the National Parks and Wildlife Service NPWS the local ranger may respond to queries. However they are also very busy people and their priorities are the protection of designated sites. They may be able identify local enthusiasts or relevant networks.

The following organisations could be approached for financial support:

- Leader companies which fund Management Plans for community owned sites which have biodiversity value.
- Heritage Council Community Grants Scheme (for surveys and publications). Contact Biodiversity Officer for advice.
- Community Foundations for plans and works i.e. follow up grant scheme
- NPWS (but distributed through local authorities) and principally for designated sites)

COMPANY SPONSORSHIP

Partnerships for biodiversity with schools (and local companies)

There is particular potential to work with primary schools to enhance biodiversity as the curriculum of primary school is nature friendly and there may be potential to do some landscaping in the school grounds. It is well known that the influence of a teacher in primary school combined with access to a site of some biodiversity interest can be of great significance to a young person in encouraging them to have a lifetime interest in biodiversity. All community based initiatives should develop a good relationship with schools, particularly primary schools in their neighbourhood. The guidelines below provide a step by step guide to working with primary schools. They same principles can be used to encourage co-operation between other organisations or institutions. Large organisations and commercial companies could be interested in promoting what is now called Corporate Social Responsibility. Working in partnership with local communities on projects concerned with biodiversity will allow them to fulfil this obligation.

In relation to schools a community based initiative could involve the Tidy Towns committee working with a representative of the school community which includes children, teachers, all other staff (caretaker and Special Needs Assistants SNA's), parents and grandparents. The ideal partnership would be facilitated by someone in the school who is also active in the Tidy Towns Committee, ideally running the Green Schools initiative; where the school has some grounds to carry out a biodiversity enhancement project and there is someone around in July and August to look after plants. In relation to organisations or companies the contact will be with the CSR (Corporate Social Responsibility) officer.

APPENDIX 1 (CONT'D)

Guidelines on Biodiversity Management for Community Groups

There is a good opportunity for valuable local greening training if the contact person teacher/officer is interested in wildlife and gardening, if it is a Green School which is already doing related curricular activities and there is a sympathetic principal/manager (sympathetic to the area, community, ideally from the area). Potential is greater if the school or business grounds have potential for biodiversity friendly works (landscaping or erection of bird boxes etc.) or/and is adjacent to a site of biodiversity interest. The following programme of actions is suggested.

STEP ONE

Research the expertise in your locality. You might have someone who knows birds or plants or is a keen gardener. You might have an artist in the locality who could go into a school/business, shows people how to draw nature or bring in some of their work which is related to nature. Research the kinds of freebees offered to schools/businesses from trees to posters and present this information to the school/business. Encourage any interested teacher to get upskilled by doing summer courses on biodiversity or schools gardens (for which they get extra days off during the year). Courses registered with the Department of Education which fulfil all the criteria for EPV days at 1) Gort breac Tralee and 2) Burren Beo on place-based learning are highly recommended.

Encourage the teacher/ school/business to join an environmental NGO such as Biodiversity in Schools, Bird Watch Ireland or the Irish Peatland Conservation Council which produces regular magazines or newsletters.

Provide resources to the school and business. Encourage schools to buy books produced by Paddy Madden (on school gardens and trails) and start to assemble a collection of picture books and novels concerned with biodiversity.

Discover the name of local Heritage in School expert on biodiversity, ideally who will bring pupils out of the classroom. These visits are subsidized by the Heritage Council.

STEP TWO

Encourage school to arrange outings to places which provide information about biodiversity (such as facilities run by environmental NGO or the NPWS). If the Heritage in School person visits the school

encourage them to develop a relationship with them and pay for follow up visits (if successful).

Establish a school garden which is wildlife friendly.

FOLLOW UP PROVIDED BY THE LOCAL TIDY TOWNS GROUP

Provide information so that school can bring children out (possibly with parents for insurance purposes). A trail could be set up from the school, which highlights features of biodiversity interest along it and incorporates activities, which will be carried out by pupils (questionnaire, drawings, collecting objects). As a fun event a picnic day could take place in the outdoors each year incorporating an activity which requires observation of nature. If interested and school/business wants to promote itself an exhibition could be prepared about that space and launched with much publicity.

If school/business gets interested in biodiversity in years three or four it could sign up for surveys organized by organisations which promote citizen science (BirdWatch for garden bird survey the Irish Peatland Conservation Council (IPCC) for frog survey and the National Biodiversity Data Centre for spring flowering plant species.

A garden could be set up which includes features (wetland and log piles) of value to biodiversity and species which benefit pollinators and humans (edibles!). A school garden would encourage year-round work and observation. If space allows a native tree could be planted each year in that area. That tree could be a focus of study for whole school that year (language, folklore, science, songs and usage).

RESOURCES TO SUPPORT LOCAL LEARNING ABOUT BIODIVERSITY

To support fieldwork for biodiversity you may be able to access the ESKER box from the local library service. Piloted in Kilkenny by the Heritage Council in 2023, it provides a range of equipment for undertaking citizen science monitoring in terrestrial, freshwater and marine habitats. The following is a list of equipment and books in this box. There are plans to role out this resource to all counties (Dr Lorcan Scott, Heritage Council, pers.comm.2023). NBDC is the National Biodiversity Data Centre.

#	Item	Quantity	Supplier
	General		
1	Storage Boxes heavy duty (wheels)	1	Heavenly Hardware
2	Draw-String Swim Bag	1	The Heritage Council
3	Bathyscope (small)	1	NBHS
4	Clinometer Invicta	1	NBHS
5	PH Meter	1	NBHS
6	Compass <i>Silva Ranger 3</i>	1	The Scout Shop
7	Thermometer (<i>Digital</i>)	1	NBHS
	FLORA		
8	Triplet Hand Lens (<i>23mm x 15mm</i>)	1	NBHS
	MAMMALS		
9	Bat Dectector <i>Magenta Bat5 (& Waterproof)</i>	1	NBHS
	BIRDS		
10	Binoculars (<i>8 x 42</i>) <i>Hawke Nature Trek</i>	1	Birdwatch Ireland
11	Tally Counter	1	NBHS
	INSECTS (Terrestrial)		
12	Sweep Net & Bag	1	NHBS
13	Magnifier Glass - Handheld	1	NHBS
	INSECTS (Aquatic)		
14	Pond Dipping Net (<i>2mm</i>)	1	NHBS
15	Microscope portable Field (<i>50x Triple LED</i>)	1	NHBS
16	Sampling Tray - <i>White Plastic</i>	1	NHBS
17	Sample Tray - <i>9 Pocket</i>	1	NHBS
18	Collecting Pots & Jars	10	NHBS
19	Bug View - <i>World's Best</i>	1	Birdwatch Ireland
20	Tweezers <i>Metal</i>	1	NHBS

APPENDIX 1 (CONT'D)

Guidelines on Biodiversity Management for Community Groups

Publications x 1	Supplier
A Guide to Habitats in Ireland	The Heritage Council
Irish Wetland Types	Irish RAMSAR Wetlands Committee
NBDC Guides and Swatches	
Trees and Shrubs	NBDC & The Heritage Council
Crann agus Toir	NBDC & The Heritage Council
Grass Identification	NBDC & The Heritage Council
Terrestrial Mammals	NBDC & The Heritage Council
Shieldbugs	NBDC & The Heritage Council
Ladybirds	NBDC & The Heritage Council
Dragonflies & Damselflies	NBDC & The Heritage Council
Butterflies	NBDC & The Heritage Council
Bumblebees	NBDC & The Heritage Council
Ireland's Bats	NBDC & The Heritage Council
Ireland's Sedges and Rushes	NBDC & The Heritage Council
Commonly Encountered Moths	NBDC & The Heritage Council
Marine Bivalve (Marine Counties Only)	NBDC & The Heritage Council
Intertidal Seaweed (Marine Counties only)	NBDC & The Heritage Council
Intertidal Fish & Invertebrates (Marine Counties only)	NBDC & The Heritage Council
Wild Atlantic Plants (WAN Counties only)	The Heritage Council

Further information on the status of this resource in your county can be obtained from: Dr Lorcán Scott, Wildlife Officer, The Heritage Council. 0567770777 or lscott@heritagecouncil.ie

If the ESKER box is unavailable (on loan from your local library) it is advised to obtain the following essential aids, books and equipment. Books and equipment are best ordered from an environmental organisation i.e. BirdWatch Ireland , Irish Peatland Conservation Council or specialist suppliers such as nhbs.com.

BOOKS TO AID WITH IDENTIFICATION

Irish Grass Identification Guide produced by National Biodiversity Data Centre (NBDC) and the Heritage Council
Tree and Shrubs Swatch
Bumblebee Swatch
Butterfly Swatch
Ladybird Swatch

The Birds of Ireland by Jim Wilson– A Field Guide
Britain's Dragonflies by Swash and Smallshire
Guide to Freshwater Invertebrates by Dobson and Pawley Freshwater Biological Association
Guide to Commoner Water Plants
<https://www.field-studies-council.org/shop/publications/water-plants-guide/>
A Naturalist Guide to the Trees of Britain and Northern Europe by Andrew Cleave
The Wildflower Key by Frances Rose
The Wildflowers of Ireland by Zoe Devlin (also website)
Books by Niall McCoitir on Irish trees and wild plants

Teach yourself Irish Garden Bird Songs CD
Field Guide to Moths of Great Britain and Ireland by Townsend et al
Irish Butterflies. A fold out guide from the Dublin Naturalists Field Club
British Bats from the Field Studies Centre
County floras. Check if your county has a flora. That book will contain a list and account of all the native plants growing in the county and might also include information on geology and soils and distribution /rarity etc.

ESSENTIAL AND USEFUL EQUIPMENT

Binoculars Opticron Oregon 4 PC 8x32
Straight Tip Tweezers to examine small specimens
Heavy Duty Sampling Trays for freshwater surveys
Student Hand Net for freshwater surveys
Echo Meter Touch 2 Bat Detector
Botanical Drying Paper to preserve plant specimens
Botanical Press to preserve plant specimens
Bug Viewer Boxes – small x2 / x4 mag
Bug Viewer Boxes – square x3 mag
Field Lenses X10 and X20 to allow for close examination of plant or animal features

APPENDIX 2

Checklist of plants recorded during fieldwork in 2022

Latin Name	Common Name	Irish Name	Status N=Native NN = Non-Native
<i>Acer pseudoplatanus</i>	Sycamore	Seiceamoir	NN
<i>Allium triquetrum</i>	Ramsons	Glaschreamh	NN
<i>Anthriscus sylvestris</i>	Cow parsley	Peirsil bhó	N
<i>Anthoxanthum odoratum</i>	Sweet vernal grass	Fear cumhra	N
<i>Arrhenatherum elatius</i>	False oat grass	Coirce clumhach	N
<i>Bellis perennis</i>	Daisy	Noinin	N
<i>Brassica rapa</i>	Wild Turnip	Turnapa fiain	NN
<i>Buddleja davidii</i>	Butterfly Bush	Tor an fheileacain	NN
<i>Calystegium sepium</i>	Hedge bindweed	Lalus fail	N
<i>Capsella bursa pastoris</i>	Shepherds purse	Lus an sparain	N
<i>Cardamine pratensis</i>	Lady's Smock	Biolar greagain	NN
<i>Centaurea scabiosa</i>	Shepherds purse	Lus an sparain	N
<i>Cirsium arvense</i>	Creeping Thistle	Feochadan Reatha	N
<i>Clematis vitalba</i>	Travellers Joy	Gabhran	NN
<i>Cordyline sp</i>	Cordyline	Cordyline	NN
<i>Convolvulus arvensis</i>	Field bindweed	Ainleog	N
<i>Dactylis glomerata</i>	Cocksfoot Grass	Garbhfhear	N
<i>Epilobium sp</i>	Willowherb sp	Lus na tine	?
<i>Endymnion hispanicus</i>	Spanish bluebell	Coinnle Corra	NN
<i>Equisetum arvense</i>	Horsetail	Scuab eich ghoirt	N
<i>Euphorbia helioscopa</i>	Sun Spurge	Lus na bhfaithni	NN
<i>Ficaria verna</i>	Lesser Celandine	Gran arcain	N
<i>Fraxinus excelsior</i>	Ash	Fuinseog	N
<i>Galium aparine</i>	Rob run the hedge, goose grass	Garbhlus	N
<i>Geum urbanum</i>	Wood avens	Machall coille	N
<i>Hedera helix</i>	Ivy	Eidhnean	N
<i>Heracleum sphondylium</i>	Hog Weed	Feabhran	N
<i>Lamium purpureum</i>	Dead Nettle	Caomhneantog dhearg	NN
<i>Lolium perene</i>	Rye Grass	Seagalach buan	N
<i>Malva sylvestris</i>	Common Mallow	Lus na meal Muire	N
<i>Mercurialis annua</i>	Herb Mercury	Lus glinne beag	NN
<i>Oxalis</i>	Pink Sorrel	Seamsog bándearg	NN
<i>Petasites hybridus</i>	Butterbur	Gallan ban	N
<i>Pinus sylvestris</i>	Scots Pine	Peine albanach	NN
<i>Plantago lanceolata</i>	Ribwort Plantain	Slánlus	N
<i>Prunus spinosa</i>	Blackthorn	Draighean	N
<i>Potentilla reptans</i>	Creeping cinquefoil	Cuig mhear Mhuire	N
<i>Ranunculus repens</i>	Creeping buttercup	Fearban (reatha)	N
<i>Rubus frut agg</i>	Bramble	Dris	N
<i>Rumex sp</i>	Dock sp	Copog	
<i>Sambucus nigra</i>	Elder	Trom	N
<i>Senecio jacobea</i>	Ragwort	Buachalan Bui	N

Latin Name	Common Name	Irish Name	Status N=Native NN = Non-Native
<i>Taraxacum officiale</i>	Dandelion	Caisearbhan	N
<i>Trifolium pratense</i>	Red Clover	Seamair dearg	N
<i>Urtica dioica</i>	Nettle	Neantog	N
<i>Veronica chamaedrys</i>	Germander speedwell	Anuallach	N
<i>Vicia sepium</i>	Vetch	Peasair	N
<i>Vinca minor</i>	Periwinkle	Blath na faochan	NN

APPENDIX 3

Checklist of plants in church site in Main Street Raheny

Common Name	Latin Name	Native	Non Native	Notes
Forked Spleenwort	<i>Asplenium ruta muraria</i>	X		Walls
Yew (Florencecourt Yew)	<i>Taxus Baccata</i>	X		Classic graveyard tree
Cherry Laurel			X	Recently cut
Poplar	<i>Populus sp</i>		X	Recently cut
Elder	<i>Sambucus nigra</i>	X		
Butterfly Bush	<i>Buddleja</i>		X	
Cordyline	<i>Corylines</i>		X	Self seeded around the margin
Bramble	<i>Rubus fruticosus agg</i>	X		
Escallonia	<i>Eacallonia sp</i>		X	Garden escape
Maiden Hair Spleenwort	<i>Asplenium trichomanes</i>	X		Walls
Ivy	<i>Hedera helix</i>	X		Walls
Hedge Bindwood	<i>Calystegia sepium</i>	X		Near grave
Smooth Sow Thistle	<i>Sonchus oleraceus</i>	X		Grassland and walls
Dandelion	<i>Taraxacum officinale</i>	X		Grassland and walls
Long Headed Poppy	<i>Papaver dubium</i>		X	Grassland and walls
Beaked Hawks-Beard	<i>Crepis vesicaria</i>		X	Grassland and walls
Daisy	<i>Bellis perennis</i>	X		Grassland
Welsh Poppy	<i>Meconopsis</i>		X	Near walls, unusual
Ragwort	<i>Senecio jacobea</i>	X		Grassland and walls
Dandelion	<i>Taraxacum officinale</i>	X		Grassland and walls
Broad Leaved Willow Herb	<i>Epilopium montanum +</i>	X		Grassland and near walls
Narrow Leaved Plantain	<i>Plantago lanceolata</i>	X		Grassland and near walls
Red Fescue	<i>Fesuca rubra</i>	X		Grassland
Wood Avens	<i>Geum urbanum</i>	X		Grassland
White Clover	<i>Trifolium repens</i>	X		Grassland
Lesser Trefoil	<i>Trifolium dubium</i>	X		Grassland
Cuckoo Flower	<i>Cardamine pratensis</i>	X		Grassland unusual
Annual Meadow Grass	<i>Poa annua</i>	X		Grassland
Creeping Buttercup	<i>Ranunculus repens</i>	X		Grassland
Early Forget Me Not	<i>Myosotis ramosissima</i>	X		Grassland, unusual
Creeping Cinquefoil	<i>Potentilla reptans</i>	X		Grassland
Groundsel	<i>Senecio vulgaris</i>	X		Grassland (and bare soil)
Hedge Mustard	<i>Sisymbrium officinale</i>	X		Recently cleared area
Robin Run the Hedge	<i>Galium aparine</i>	X		Recently cleared area
Oat	<i>Avena sativa</i>		X	Recently cleared area
Hedge Bindweed	<i>Calystegia sepium</i>	X		Recently cleared area
Hoary Willow Herb	<i>Epilopium parviflorum</i>	X		Recently cleared area
Slender Speedwell	<i>Veronica filiformis</i>		X	Grassland
Conyza	<i>Conyza sp</i>		X	Garden escape
Cock's foot grass	<i>Dactylis glomerata</i>	X		Grassland

APPENDIX 4

Trees, shrubs and herbs good for biodiversity

SHRUBS AND SMALL TREES

Barberry (Berberis) - thrushes and blackbirds:
B. stenophylla
Berberis thunbergia 'Rose Glow'
B. darwinii
B. thunbergia atropurpurea
B. thunbergia atropurpurea 'Nana'

Flowering dog woods – not the red or yellow stemmed varieties:
Cornus mas – cornelian cherry - Finches and thrushes
Cornus 'Porlock' blackbirds and crows

Viburnums such as guelder rose -thrushes and bullfinches:
Viburnum opulus, *V. opulus* 'Compactum'

Rowan berries - blackcaps, finches, song thrushes and waxwings:
Sorbus aucuparia and *S. vilmorinii* and cultivars such as *S.* 'Joseph Rock' or *S.* 'Pink Pagoda'

Hollies - greenfinches and waxwings:
Native holly *Ilex aquifolium* or *Ilex* C.V. van Tol Ɔ good as it has male and female flowers on the same plant.

Roses - waxwings and blackbirds:
Choose species such as *Rosa pimpinellifolia*, *Rosa* *Glauca*, dog rose *R. canina*, burnet rose - *Rosa spinosissima* and *Rosa rugosa*

Spindles - robins but also blackbirds, and occasionally song thrushes and tits:
Native *Euonymous europaeus* or *E. alatus* or *Euonymus europaeus* 'Red Cascade', or *Euonymus phellomanus*

Cherries - birds, badgers and small mammals. Additionally, some moth caterpillars eat the leaves
Prunus avium and *P. padus*

Hawthorns - waxwings and blackbirds
The native hawthorn *Crataegus monogyna*, or ornamental *Crataegus laevigata* 'Paul's Scarlet'

Ivy redwings, bullfinches and blackbirds.
Honeysuckle Robins, song thrushes and blackbirds
Parthenocissus berries are low in antioxidants, they're long lasting and will attract blackcaps and mistle thrushes

Crab apples - blackbirds and starlings
Malus 'Red Sentinel', *M.* 'John Downie', *M.* 'Royalty' and *M. x purpurea* 'Lemoinei'

Cotoneaster – waxwings, thrushes and blackbirds most are invasive including *Cotoneaster horizontalis*, *C. bullatus*, *C. integrifolius*, *C. microphyllus* and *C. simonsii*

Juneberry tree - Amelanchier -- starlings, whitethroats, finches and robins

Firethorns sparrows, starlings and finches:
Pyracantha 'Orange Glow'

Ornamental quince - *Chaenomeles* species
Daphne - blackbirds, flycatchers, finches, whitethroats
Red and black currants - blackbirds

APPENDIX 4 (CONT'D)

Trees, shrubs and herbs good for biodiversity

PLANT FLOWERING X SEASON

Spring:	Currant, Barberry, Forsythia, Guelder rose
Summer:	Hebe, English lavender, Honeysuckle, Elder
Autumn:	Heather, St John's Wort
Winter:	Ivy, witch hazel, sweet box

PLANTS FOR NECTAR – X SEASON

EARLY IN THE YEAR

English Bluebell	<i>Hyacinthoides non-scripta</i> good for shade or dappled shade Currant – <i>Ribes</i> sp. <i>Aubrieta</i>
Lungwort	<i>Pulmonaria officinalis</i>
Barberry	<i>Berberis</i> sp. <i>Forsythia</i>
Guelder Rose	<i>Viburnum opulus</i>
Alyssum	<i>Alyssum montanum</i> good for shade or dappled shade
Primrose	<i>Primula vulgaris</i> good for shade or dappled shade
Sweet Violet	<i>Viola odorata</i> good for shade or dappled shade
Winter Aconite	<i>Eranthis hyemalis</i> good for shade or dappled shade
Wood Anemone	<i>Anemone nemorosa</i> good for shade or dappled shade <i>Abelia x grandiflora</i>
Bugle	<i>Ajuga reptans</i>
Creeping Jenny	<i>Lysimachia nummularia</i> good for shade or dappled shade
Alyssum	<i>Alyssum montanum</i>
Rusty Foxglove	<i>Digitalis ferruginea</i>
White Deadnettle	<i>Lamium album</i> good for shade or dappled shade
Snakeshead Fritillary	<i>Frittilaria meleargris</i>
Snowdrop	<i>Galanthus nivalis</i> , good for shade or dappled shade Arabis
Wild Daffodil	<i>Narcissus obvallaris</i> , good for shade or dappled shade
Wild Garlic	<i>Allium ursinum</i> , good for shade or dappled shade
Wood Anemone	<i>Anemone nemorosa</i> , good for shade or dappled shade <i>Genista</i> , <i>Cytistus</i> – requires sun

MID-SEASON

Heather	<i>Erica cinerea</i> - requires sun
Lady's Bedstraw	<i>Galium verum</i> - requires sun
Lavender	<i>Lavandula angustifolia</i> - requires sun
Common Mallow	<i>Malva sylvestris</i> - requires sun
Rock Cress	<i>Arabis</i> sp. - requires sun
Sea Holly	<i>Eryngium maritimum</i> - requires sun
Verbena	<i>Verbena bonariensis</i> - requires sun
Wallflower	<i>Erysimum cheiri</i> - requires sun
Lavender	<i>Lavendula angustifolia</i> 'Hidcote' and other cultivars
Catmint	
Hebes	<i>Hebe</i> 'Paula' – full sun dappled shade <i>Hebe</i> 'Midsummer Beauty'
<i>Digitalis ferruginea</i>	
<i>Digitalis purpurea</i>	
Elder	<i>Sambucus niger</i> and <i>S. racemosa</i> 'Black Lace' and other garden varieties
Bellflower	<i>Campanula latifolia</i>

Globe Thistle	<i>Echinops sphaerocephalus</i>
Ox-Eye Daisy	<i>Chrysanthemum leucanthemum</i>
Purple Loosestrife	<i>Lythrum salicaria</i>
Rockrose	<i>Helianthemum chamaecistus</i>
Yarrow	<i>Achillea</i> sp. requires sun/dappled shade Meadowsweet - <i>Filipendula</i> sp.
Salad Burnet	<i>Sanguisorba</i> sp.
Russian Sage	<i>Perowskia atriplicifolia</i>
Fleabane – Erigeron	<i>E. glaucus</i> 'Four winds'

LATE SEASON

Heather	<i>Erica carnea</i> and other winter flowering heathers Ling Heather – <i>Calluna</i> sp.
Rose of Sharon	<i>Hypericum hidcote</i>
Coneflower	<i>Echinacea</i> spp. - requires sun
French Marigold	<i>Tagetes patula</i> - requires sun
Golden Rod	<i>Solidago</i> spp. - requires sun
Honeysuckle	<i>Lonicera periclymenum</i>
Ice Plant	<i>Sedum spectabile</i> - requires sun
Michaelmas Daisy	<i>Aster pyrenaeus</i> - requires sun
Common Sunflower	<i>Helianthus annuus</i> - requires sun
Ivy	<i>Hedera helix</i> and other ivies
Witch Hazel	<i>Hammellis mollis</i>
Sweet Box	<i>Sarcococca confusa</i>
Honeysuckle (Lonicera periclymenum)	N
Ivy (Hedera)	N
Old Mans Beard (Wild clematis)	N
Virginia Creeper (Parthenocissus tricuspidata)	
Wisteria (Westeria sinensis)	

APPENDIX 4 (CONT'D)

Trees, shrubs and herbs good for biodiversity

MOTHS TO ATTRACT BATS

Scented night-time flowers such as evening primrose and the tobacco plant attract moths on which bats may feed.

LIST OF BIRD SPECIES FROM BULL ISLAND

Common name	Scientific name
Kestrel	<i>Falco tinnunculus</i>
Sparrowhawk	<i>Accipiter nisus</i>
Little Grebe	<i>Tachybaptus ruficollis</i>
Pintail	<i>Anas acuta</i>
Raven	<i>Corvus corax</i>
Moorhen	<i>Gallinula chloropus</i>
Golden Plover	<i>Pluvialis apricaria</i>
Meadow Pipit	<i>Anthus pratensis</i>
Common Buzzard	<i>Buteo buteo</i>
Ring Billed Gull	<i>Larus delawarensis</i>
Shag	<i>Phalacrocorax aristotelis</i>
Knot	<i>Calidris canutus</i>
Coot	<i>Fulica atra</i>
Cormorant	<i>Phalacrocorax carbo</i>
Curlew	<i>Numenius Arquata</i>
Stonechat	<i>Saxicola rubicola</i>
Little egret	<i>Egretta garzetta</i>
Redshanks	<i>Tringa tetanus</i>
Lesser black backed Gull	<i>Larus fuscus</i>
Peregrine	<i>Falco peregrinus</i>
Oyster Catcher	<i>Haematopus ostralegus</i>
Starling	<i>Sturnus vulgaris</i>
Goldfinch	<i>Carduelis carduelis</i>
Reed bunting	<i>Emberiza schoeniclus</i>
Herring Gull	<i>Larus argentatus</i>
Grey Plover	<i>Pluvialis squatarola</i>
Brent Goose	<i>Branta berniclahrota</i>

LIST OF GARDEN BIRDS

Common name	Scientific name
Robin	<i>Erithacus rubecula</i>
Starling	<i>Sturnus vulgaris</i>
Wren	<i>Troglodytes troglodytes</i>
Blackbird	<i>Turdus merula</i>
Blue tit	<i>Cyanistes caerules</i>
Goldfinch	<i>Carduelis carduelis</i>
Bull finch	<i>Pyrrhula pyrrhula</i>
Great tit	<i>Parus major</i>
Wood pigeon	<i>Columba palumbus</i>
Collared dove	<i>Streptopelia decaocto</i>
Waxwing	<i>Bombycilla garrulus</i>
Swift	<i>Apus apus</i>
Woodcock	<i>Scolopax rusticola</i>
Dark bellied brent goose	<i>Branta b. bernicla</i>
Buzzard	<i>Buteo buteo</i>
Heron	<i>Ardea cinerea</i>
Magpie	<i>Pica pica</i>
House sparrow	<i>Passer domesticus</i>
Common gull	<i>Larus canus</i>
Hooded crow	<i>Corvus cornix</i>

LIST OF MAMMALS

Common name	Scientific name
Fox	<i>Vulpes vulpes</i>
Badger	<i>Meles meles</i>
Common pipistrelle	<i>Pipistrellus pipistrellus</i>
Leisler's bat	<i>Nyctalus leisleri</i>
Brown long eared bat	<i>Plecotus auritus</i>
Daubentons bat	<i>Myotis daubentonii</i>
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>
Hedgehog	<i>Erinaceus europaes</i>

APPENDIX 5

List of books and equipment to support field studies

The following is a list of essential aids for anyone interested in learning about Irish biodiversity. It includes books and equipment. Books to aid identification are best ordered from environmental organisations or the Heritage Council.

RECOMMENDED BOOKS

Irish Grass Identification Guide: Heritage Council

Tree and Shrubs Swatch

Bumblebee Swatch

Butterfly Swatch (NBDC)

Ladybird Swatch (NBDC)

The Birds of Ireland – A Field Guide

Britain's Dragonflies

Guide to Freshwater Invertebrates

Guide to Commoner Water Plants

A Naturalist Guide to the Trees of Britain and Northern Europe?

The Wildflower Key

Zoe Devlin Wildflowers of Ireland

Teach yourself Irish Garden Bird Songs CD

Field Guide to Moths of Great Britain and Ireland

A Field Studies Council Guide to British Bats

County Floras

Check if your county has a flora. This book contains a list and account of all the native plants growing in the county and might also include information on geology and soils and distribution /rarity etc.

RECOMMENDED EQUIPMENT

Equipment is best ordered from NGO i.e. BirdWatch Ireland , Irish Peatland Conservation Council or specialist supplier such as nhbs.com.

Binoculars Opticron Oregon 4 PC 8x32

Straight Tip Tweezers to examine small specimens

Heavy Duty Sampling Trays for freshwater surveys

Student Hand Net for freshwater surveys

Echo Meter Touch 2 Bat Detector

Botanical Drying Paper to preserve plant specimens

Botanical Press to preserve plant specimens

Bug Viewer Boxes – small x2 / x4 mag

Bug Viewer Boxes – square x3 mag

Field Lenses to allow for close examination of plant animal features





Raheny Tidy Village Group
and
Community Foundation Ireland,
Environment and Nature Fund 2019

Dr Mary Tubridy for
Mary Tubridy & Associates
January 2025

Email: rahenytidyvillage@gmail.com
Web: rahenytidyvillage.ie

Instagram:
[rahenytidyvillage](https://www.instagram.com/rahenytidyvillage)

Facebook:
Raheny Tidy Village Group