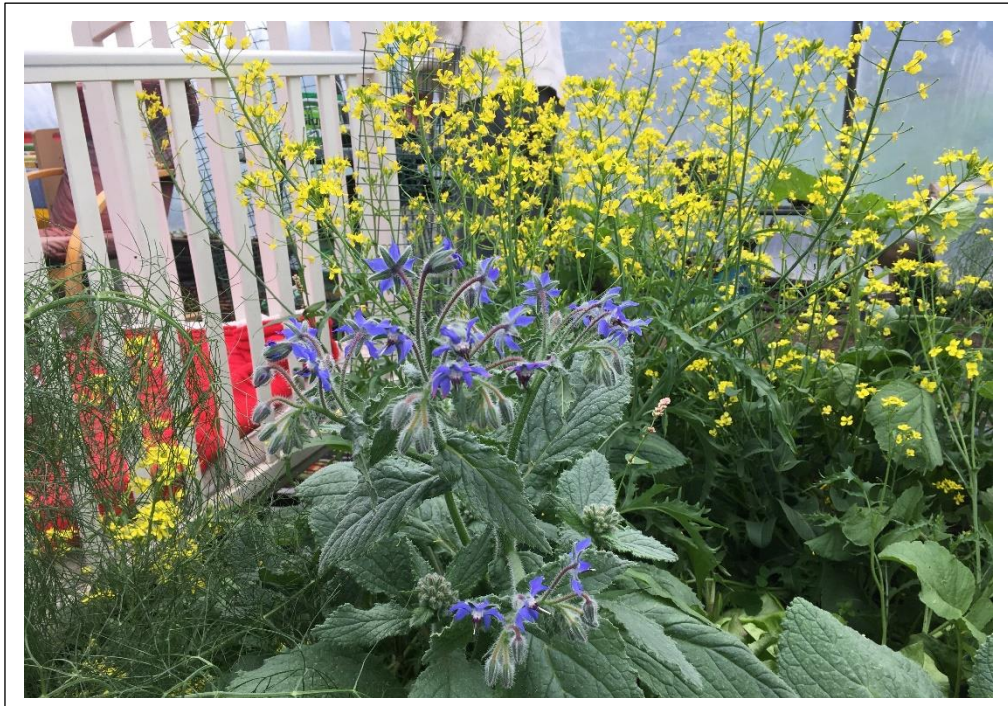


Sligo Children's Community Garden Biodiversity Action Plan, County Sligo



Spring 2022

Collated in consultation with Sligo Children's Community Garden
volunteers,

by

Woodrow Sustainable Solutions Ltd.



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Front page photo: Flower bed at Sligo Children's Community Garden

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The funding for this work was provided by Sligo LEADER Partnership. The development of this plan was part of a wider biodiversity programme that included delivery of workshops, training and different biodiversity plans for communities across Co Sligo. This biodiversity programme was delivered by Woodrow who were appointed to deliver this work following their success in public tender process.

The workshops, and training materials and recordings of sessions are available to the public at <http://woodrow.ie/resources>

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Introduction

'Biodiversity' means all of the living things in an area: plants, trees, birds, mammals, insects, spiders, the fish in our waters, even things we can't see, such as the bacteria in the soil.

In late 2021, and early 2022, community volunteers enhanced their knowledge of biodiversity in their area by participating in a programme funded by Sligo LEADER Partnership. They attended workshops, training courses, explored their area and were supported by ecologists from Woodrow. Their ideas and actions are collated into this Local Biodiversity Action Plan. This plan aims to guide the work of the members of the Sligo Children's Community Garden to raise awareness, and enhance appropriately, the wildlife and habitats of the garden.

Sligo Children's Community Garden is located off of Cleveragh Drive within Sligo town. The site is a generally open site which gently slopes upwards to the edge of an area of deciduous woodland to the south of the garden. The garden is also located approximately 600m away from the edge of the Lough Gill Special Protected Area/ proposed Natural Heritage Area which protects the species and habitats found along the Garavogue River and on the lake upstream. The garden's location and proximity to an established woodland means there is likely to be a variety of species which could use the area, including birds, bats and mammals.

The aim of this plan is to outline actions which can be taken to promote biodiversity within the garden through the protection of existing biodiverse areas and creation of additional suitable food, shelter and habitats for species to thrive in the garden.

This plan does not intent to detail every possibly action but focuses on the main hopes of the community for biodiversity. Further detailed resources and information sheets have been provided separately and are also available at www.woodrow.ie/resources.

Summary of Proposed Actions

Table 1: All Biodiversity Actions included in this plan.

Community Biodiversity Action Plan				
Project No.	Project	Where	Time of Year to implement	Notes
1	Meadow Management	Grassy areas	Sow yellow rattle seeds in Autumn	<ul style="list-style-type: none"> - Trial sowing Yellow rattle into the area to manage grass growth. - Selective mowing of paths through longer meadow areas in fun designs to encourage children to enjoy and play in the area. The longer grass can be used to for a mini maze for the children to navigate. - Areas of shorter grass mowed on a 6-week rotation starting in April after dandelions have bloomed. - Reduce mowing and remove cuttings to reduce soil fertility and see what wildflowers naturally recolonise the area or are in the seedbank already. - When looking for wildflower seeds, gather from local, native populations. This could be combined with a seed saving workshop
2	Creating Bee Habitats: Mining Bees	Sunny bare earth banks	Spring/ Summer	

3	Creating Bee Habitats: Cavity Nesting Bees	Hang up securely 1.5m – 2m, facing east or south- east to catch the morning sun	Spring/ Summer	Possibly organise this event as a fun family workshop.
4	Invasive Species Removal	Wherever invasives area found within the site Himalayan balsam and Three-cornered leek were noted on site	Balsam removal should occur before June (prior to seed pod formation). Three-cornered leek bulb removal is easiest in spring.	Mechanical treatment can be used for both Himalayan Balsam and Three-cornered leek to avoid pesticide use. A ‘Balsam Bash’ event could be a fun, family friendly activity to pick plants and collect seed heads.
5	Native pollinator- friendly planting	Throughout the garden	Spring - Autumn	Perennials and bulbs are the most cost-efficient option for purchasing pollinator friendly plants. Cuttings of existing native plants can also be used if done appropriately.
6	Creating a wildlife pond and rockery	Wet patch in the garden	Summer – excavations may be easiest in summer while filling the pond may be fastest in times with higher rainfall	
7	Creating a night- flowering garden for nocturnal pollinators	Throughout the garden	Spring - Autumn	

8	<p>Child-friendly biodiversity activities:</p> <ul style="list-style-type: none"> • Wildlife Detective trail • Scavenger Hunt for different tree leaves and flowers • Growing sunflowers and other good seed-producing plants to provide food for birds. • Doing a hedgehog survey using a footprint tunnel method 			
9	Wildlife Kids Book Club	Anywhere	Once per month	Reading a wildlife story to children once a month to get the children excited about nature.

Projects in the Children's Community Garden

The best way to encourage biodiversity is to provide suitable habitats for native species. In towns and built-up areas, the natural habitats or vegetation will often have been removed. Maybe trees have been cut down, hedgerows cleared, or a pond drained. Beginning to restore pieces of these natural habitats, even on a small scale, is a great way to improve biodiversity in the area.

Making the most of what you have

When thinking about how to improve these areas, start by thinking about what you have. Enhancing or improving habitats that might already be present can often be more successful or cost-effective than trying to introduce something totally new.

This plan outlines how those actions can be carried out, both by protecting existing valuable areas for biodiversity and by enhancing other areas that are currently not very biodiverse. Enhancing or improving habitats that might already be present can often be more successful or cost-effective than trying to introduce something totally new. In order to do this effectively, it is useful to set out a management plan outlining how these actions will be achieved.

To promote more species and biodiversity in our villages and gardens, we need to ensure there is food, shelter, and security for other species to thrive alongside us.

Food

Providing a variety of pollinator friendly plants that bloom from Spring through to Autumn is important for providing food for our pollinators and colourful flowers throughout the seasons!

Many pollinator-friendly trees and shrubs like blackthorn, hawthorn, bird cherry, crab apple, elder, honeysuckle and rowan along with fruit trees and fruit bushes are also provide great nesting and resting spaces as well as food sources for animals in the Autumn.

Allowing a few areas to grow naturally and see what emerges is the easiest and cheapest way to provide food, shelter and colour in an area. Plants that emerge could include dandelions or primroses in spring, perhaps followed by red and white clover, oxeye daisies and buttercups. If the soil is damp, meadowsweet or ragged robin may grow in the area. These are all beautiful native flowers and may be waiting to grow if they are just given the chance! They will also attract pollinating insects which will help support insect-eating bird populations in the area.

Shelter

Everyone wants a safe place to call home, including other species!

Providing nesting and resting spaces for other species is a great way to promote biodiversity in the garden.

Invertebrates:

Leaving areas of dead wood, leaf piles, hollow-stemmed plants, bare earth banks, dry stone walls or unmown areas provide shelter for a variety of invertebrates such as ladybirds and bees in the garden. These log and leaf piles can also be used by hedgehogs.

Birds

Existing habitats such as trees and hedges are important nesting spots for birds, particularly native, flowering hedgerows that provide shelter for nests and berries/ nuts for food, as well as attracting insects to snack on.

Providing nest boxes in the garden can provide homes for different birds. Depending on the size of the entrance hole, the nest boxes will attract different species. Locate your nest boxes as high as possible (2.5m from the ground) on a tall tree where possible. Place the boxes in a sheltered spot, facing north-east to offer shelter from wind, rain and direct sunlight. If there are no suitable trees in the garden, permission could be sought by the owner of the adjacent woodland to install some boxes there.

Providing cover with creeping plants like ivy and honeysuckle can also promote birds, which will nest behind the cover of the plants. This can be useful in areas when trees would not be suitable, for instance, along a bare boundary wall.

There is no need to remove moss from trees or grassy areas. Moss doesn't cause harm and is useful to birds as a nest-building material. Mosses are also beautiful little plants when you look closely.

Bats

Bats are natural controls for spiders and night-flying insects such as midges. A single Common Pipistrelle Bat eats about 3,000 midges and other small flies in a single night!

Food:

Planting night-flowering plants will attract nocturnal pollinators which will in turn support bats. Examples of night-flowering plants are provided in the 'Pollinator Friendly Planting' section below. Hedgerows also host many insects that provide food for bats as they fly along them.

Lighting:

Avoiding lighting in areas where bats are commuting will encourage bats and allow them to move across the landscape more easily.

Commuting:

Bats need connected habitats, particularly linear hedgerows to navigate across the landscape. In the garden, this could mean planting a row of hedging along the garden boundary or including trees (such as an orchard) in an open green area.

Housing:

Bats can roost in cracks and crevices in trees. Protecting old trees around the garden not only adds character to the area but also provides habitats for many species including birds and bats!

If there is a suitable spot within the garden, erecting bat boxes in the garden can also promote bat species in the area. Locate your boxes as high up as possible on trees (4m + ideally). Ideally, place multiple boxes in the area, in sheltered areas facing in south, south-east or south-west to provide warmth. ¹ If there are no suitable sites within the garden, permission could be sought by the owner of the adjacent woodland to install some boxes there.

Security

Avoid pesticide use

Use of pesticides negatively impact on the species diversity of your area. This can be directly by harming the pollinators and other important species we rely on. Indirectly, this can also harm the species diversity of an area by killing off food sources which other species rely on such as slugs and snails (food for birds) and nettles (important food plant for many caterpillars). Pesticides can also impact on human health. Several weedkillers which used to be widely used are now no longer available for safety reasons, and glyphosate, the most widely used weedkiller at present, is considered a likely carcinogen.

Areas targeted as south facing solitary bee nesting habitat should be protected from spraying. These areas can be created and managed as described in the 'Bee Habitat Creation' section below.

When pesticide use is deemed unavoidable, use best practice to avoid damaging surrounding habitats. Avoid spraying the base of hedgerows which can support various plant species and also be the site of bumblebee nests.

Use spot treatment of problem areas. Spray in dry, low wind conditions to avoid spray drift. Spraying after sunset avoids direct contact of the spray with pollinating insects. However, please bear in mind that there are nocturnal pollinators, and to avoid spraying plants at all, where possible.

Where this type of maintenance work is managed by a third-party, starting a conversation with that individual/ company on the benefits of biodiversity-friendly alternatives for wildlife and human health is a great first step.

¹ <https://www.bats.org.uk/our-work/buildings-planning-and-development/bat-boxes/putting-up-your-box>

Meadow Management²

Allow grass to grow into a meadow is a simple and cost-effective way of enhancing the biodiversity of the Garden. There are three main options in how this can be done:

1. Patches/ Strips of Long Grass
2. A Long Grass Meadow
3. A Short 6-Week Grass Meadow

In all three options, leave the first grass cut of the year **until April** to allow dandelions to bloom, as these are important food for pollinators like queen bees emerging from hibernation.

Figure 1: Examples of different mowing regimes (Source: pollinators.ie)



² Wildflower Meadow Guidance Document: <https://pollinators.ie/wordpress/wp-content/uploads/2018/04/How-to-guide-Wildflower-Meadows-2018-WEB.pdf>

Figure 2: Important Plants that bloom in lawns that are allowed to flower. (Source: pollinators.ie)



Option 1 & Option 2: Meadow Patches/ Strips or Long flowering Meadow:

1. Delay first cut of the grass until April
2. Leave areas of grass grow long during the summer
3. Cut again in September
4. Remove the cuttings from the area to reduce the soil fertility
5. If the grass growth is strong and plants start to fall over under their own weight, add another cut earlier in the summer e.g., July.

Option 3: Short 6-Week Grass Meadow

1. Delay first cut of the grass until April
2. Cut the grass every 6-week during the summer
3. Remove the cuttings every time and compost as green waste

Managing Green Waste/ Grass Cuttings:

Where reduced mowing is being implemented, create a schedule of when mowing will take place, e.g. No Mow May areas, mown every six weeks, mown once a year in late August/ early September. Paths can also be mown through meadow areas to make these areas accessible for people to walk through.

Ensure that there is somewhere you can take the cuttings to, as removing the mown grass from the area is important for promoting wildflower species. If there is space, grass cuttings can be composted on site.

However, where this is not a feasible option, cuttings can be moved off site. For instance, where you don't have the mowing equipment available to carry out the work within the community, reach out to local farmers/ organisations to check their willingness to cut and take the grass away to a green waste facility or as animal feed.

Fruiting trees and shrubs

Plant trees and shrubs that provide flowers in spring for pollinators and fruit later in the year for other animals and humans. For instance, planting a row of soft fruit bushes such as raspberry, gooseberry, loganberry can provide screening for an unattractive wall, divide a space or provide visual interest. Fruit and nut trees such as apple, plum, pear, cherry and hazel could be added as focal points in open spaces in the garden. Hazel also works as a hedging plant. These fruiting plants can be integrated across the landscape of the garden to provide ‘edible landscaping’ which provides food and interest for people and other species!

Wildlife Detective Activities:

Child friendly wildlife activities in the garden could include:

1. Scavenger hunts for different types of tree leaves, flowers or seeds.
2. A bug hunt: A great, simple way to learn about the mini beasts in the garden is to do a white sheet and a stick and give a tree or shrub a bit of a shake or light whack to knock some bug onto the sheet for you to identify. This can be very basic such as asking questions like does it crawl or fly, what colour is it, does it have wings.
3. A hedgehog tunnel: To investigate the bigger animals in the garden, you can set up a simple DIY Footprint Tunnel using a sheet corrugated plastic or cardboard - minimum dimensions 100cm X 80cm, Black or dark colour non-toxic poster paint and a few other easy to find materials. A full how to guide for building a footprint tunnel can be found on pages 4-7 of the Hedgehog Footprint Tunnel Survey Guidance located in the resource section.

Bee Habitat Creation³

Bumblebees

Leave areas of long grass in undisturbed areas for bumblebees to nest in.

Figure 3: Bumblebees of Ireland Poster (Source: pollinators.ie)



³ <https://pollinators.ie/wordpress/wp-content/uploads/2018/04/How-to-guide-Nesting-2018-WEB.pdf>

Mining Bee Habitat

Important Note:

80% of solitary bees nest in bare ground, so creating areas of bare soil is an easy and effective way to promote pollinators!

1. Create earth banks/expose bare ground

Pick an open, well drained, sunny location, preferably facing south. The soil should be gently packed. Choose a variety of locations for your bare soil-from vertical banks to flat ground- in order to attract different types of solitary bees.

Carefully remove the vegetation from the chosen area with a spade. Aim for a minimum area of bare soil of 10x10cm. Remove all debris that could block a bee from reaching the soil.

Clear back the vegetation from your chosen site annually in late autumn to avoid disturbing the bees.

Cavity Nesting Bees

These bees will nest in dead stems, holes in tree trunks, stone walls and other sites.

1. Leave some plants with suitable dead stems in place
Leave patches of plants like bramble in place for some species of cavity nesting bees.
2. Leave upright logs and tree trunks in sunny, well-drained locations for bees that nest in the tunnels created in these structures by beetles
3. Drill holes for cavity nesting solitary bees in pieces of untreated timber.
Using a drill, create holes in the wooden structure; they should be at minimum 10cm in depth and 4-8mm in diameter. The holes should be as high up as possible, ideally 1.5-2m high. The entrance holes should ideally face east or southeast, so they get the morning sun.

Note:

Create holes of different diameters to attract different types of bees. Make sure not to drill through the structure. Try to drill with the grain to avoid cracks.

Holes should be as smooth inside as possible to attract nesting solitary bees. Use a countersinking drill bit or sandpaper to ensure the holes are splinter-free.

With regards to bee boxes the All-Ireland Pollinator Plan guidance is:

'Bee boxes can be useful but are only targeting a very small proportion of our solitary bees. If you put up a bee box it should be the size of a Blue Tit bird box – any bigger and it will attract predators and be more likely to harbour disease. These should be placed about 1.5-2m off the ground in a sheltered south or south-east facing location. They should also be near flowers since solitary bees can't fly far for food.'

Invasive Species:

Invasive Species awareness and reporting training could be introduced to the community in the garden so people know where and how to report an invasive species that require specialist treatment (e.g., Japanese knotweed, giant hogweed).

- Himalayan balsam (which is present in the garden) can cause erosion issues along river banks where they outcompete native species. However, Himalayan balsam is very shallow rooted and could be easily targeted by community members provided there is safe access to where the plant is growing. This species can be mow, trimmed or hand-picked in **late April or early May** before the seed pods develop. These ‘balsam bash’ events can be a great way to focus community attention on the importance of invasive species control, at home and in our communities. It is important to target this species earlier in the spring as the seed pods explode open when mature, scattering seeds which will grow the following year.
- Three-cornered leek is present on site and reproduces by seed and also vegetatively by its long-lived bulbs. Control of this plant in other countries has been shown to require a combination of manual cultivation, removal and herbicide spraying of the exposed bulbs (IFI and NBDC, 2014). It can be controlled physically in small areas by digging up the bulbs in spring and cutting back any growth over a number of years to exhaust the seed bank. Be careful when removing the plants from the ground not to spread the plant further around the area by accident. Leaving the pulled-up bulbs on a plastic tarp or in a plastic bag in the sun can be used to exhaust the bulbs, however, such areas need to be monitored carefully to avoid the plants escaping. Further guidance on the removal and risks posed by this species are found in the Resource section.
- New Zealand flatworm is also potentially present in the garden. This species preys on earthworms, can't burrow and can be found coiled up under stones, pots, logs or piles of plastic/leaf litter. Laying out sheets of weighed-down black plastic can be used as a trap to attract the flatworks for disposal, *provided* the trap is checked and any eggs or worms are removed frequently. Otherwise, this action may attract flatworms instead! The species can be removed by dropping into hot water or sprinkling with salt.
 - **Note:** This species is covered in mucus that can cause skin irritation and allergic reactions. Be careful and wear gloves when interacting with this species.



Plate 1: Himalayan balsam



Plate 2: Three-cornered leek.
Source: Wikimedia commons



Plate 3: New Zealand Flatworm
Source: Wikimedia commons

Be Plant Wise⁴

Non-native plants and animals can escape from our gardens and ponds to spread into the natural environment. These species can cause lots of harm to our native species through competition and carrying diseases which native species are not adapted to deal with.

There are 3 simple steps which can tackle the spread of plant species in particular:

1. **Know what you grow**

Make sure that you check some information on the species you want to add to your area. For instance, some species like rhododendron, cherry laurel and Himalayan balsam can spread very easily and overwhelm areas. invasives.ie has a list of identification guides for invasive species which can be consulted when putting in new plants.

2. **Stop the spread**

Some plants spread easily from fragments, cuttings or seeds. It's important to prevent such plants from spreading beyond the area they are meant to be in.

3. **Compost with care**

Dispose of your unwanted plants, roots, weeds and seeds responsibly making sure nothing gets into the wild. This is important as your garden waste may contain seeds and fragments that regrow outside of where they were intended, potentially damaging nearby natural habitats.



⁴ <https://invasives.ie/what-can-i-do/management/>

Pond/ Wetland Creation⁵

Wetlands are very important habitats and support a variety of birds, mammals, invertebrates and bats. Follow the following steps taken from 'Gardening for Biodiversity' by Juanita Browne.

Creating a Pond:

1. Decide on a suitable location for the pond. Mark out the outline of the pond with string or sand. Calculate the volume of soil you will be removing (Width x Height x Depth) and think of where you would like that soil to go in the garden. It could be useful in filling in vegetable beds or in creating a bank of bare earth for mining bees.
2. Dig out the outlined area, ensuring there is a gradual slope and shallow areas in your new pond for easy access in and out for different animals. Remove large roots and stones to protect the pond liner from rips. Line the base of the hole with sand. You could also add old pieces of carpet under your liner for added protection.
3. Line the hole with thick butyl pond liner. If you plan to create a 'bog garden' on the edge of your pond, extend the liner so that it will line this other habitat.
4. Place large rocks around the edge of the liner to prevent it slipping while you work.
5. Add another layer of heavy sand on top of liner.
6. Either fill the pond with water from a water butt/ hose or wait for it to fill with rain
7. Include oxygenating plants such as hornwort, a plant to cover the surface such as Water Lily and emerging plants such as Marsh Marigold. If you get the plants right, you won't need a pump.
8. Planting marginal plants will also make it easier for animals to reach the pond under cover. A small wooden ramp will prevent any small mammals from drowning if they fall in and can't climb out.

Safety Note:

If there are any potential safety issues regarding installing a pond near children, the pond can be kept shallow or kept as a bog garden without any deep areas of standing water.

Bog garden:

1. In order to create a bog garden, first follow steps 1-3 from the pond creation above.
2. Pierce the liner at 1m intervals to allow slow drainage of water.
3. Put a leaky hose or porous pipe which extends to a water source like a water butt on the base of the liner to allow more water to be added in future if the area becomes too dry.
4. Add approximately 5cm of coarse gravel to the base of the liner to allow some water to drain out. This will prevent soil from clogging the drainage holes and prevent pooling of open water.
5. Refill the hole with the excavated soil, making sure to remove any large stones that could pierce the liner. Bog plants like nutrient-rich environments so if the soil is very low in nutrients, leaf mould, compost or well-rotted manure could be added to increase the nutrient level. This is a great place to put fallen leaves from around the garden. While the soil level will likely be higher than the surrounding area initially, don't compact the soil as it will settle back gradually over time.

⁵ Detailed Pond Design instructions can be found here: <https://www.fingal.ie/sites/default/files/2020-04/gardening-for-biodiversity-booklet.pdf>

Good native plants for pond margins or bog gardens include Marsh Marigold, Purple Loosestrife; Yellow Flag/Iris; Hemp agrimony, Water Avens, Lady's Smock, Water Forget-Me-Not, Marsh Woundwort, Water Mint, Meadowsweet. Some good non-native varieties for your bog garden include *Primula japonica* 'Miller's Crimson'; *Iris ensata*, Japanese water iris; *Matteuccia struthiopteris* AGM; *Rodgersia pinnata* 'Superba'; *Ligularia* 'Greygynog Gold'. (Gardening For Biodiversity, 2020).

A bucket pond could be another alternative to having areas of deep open water.



Plate 4: Purple loosestrife.
Source: Geograph Ireland © Albert Bridge



Plate 5: Yellow flag iris. Source: Wikimedia commons



Plate 6: Marsh marigold. Source: Wikimedia commons



Plate 7: Meadowsweet. Source: Flickr

Pollinator Friendly Planting

Examples of pollinator friendly plants are listed in the 'Pollinator Friendly Planting' table below. Perennial planting and bulbs are most cost-effective and generally lower maintenance than beds of annuals. However, annuals can also add splashes of colour and promote biodiversity in the garden, particularly in areas which are likely to change in a short time, e.g., a temporary flower bed. For instance, annuals such as single-headed sunflowers, cosmos, annual poppy, scabious and cornflowers will provide food for pollinators and seed eating birds during the year.

Pots/ Baskets

Pollinator plants for hanging baskets or pots include Ageratum, Alyssum 'Sweet White', Heliotrope 'Dwarf Marine', Verbena 'Blue Lagoon' & 'Desert Jewels Mixed'. These plants could be placed at the entrance to the polytunnels to encourage pollinators into the area to pollinate the fruits and vegetables growing there!

Green Manures

Green manures can be used to improve the soil in areas that struggle to support plant growth. These plants provide colour and food for pollinators. They can then be dug back into the soil to act as enrichment for the soil. Buckwheat and Phacelia are an excellent green manure.

Fruiting trees and shrubs

Plant trees and shrubs that provide flowers in spring for pollinators and fruit later in the year for other animals and humans. For instance, planting a row of soft fruit bushes such as raspberry, gooseberry, loganberry can provide screening for an unattractive wall, divide a space or provide visual interest. Fruit and nut trees such as apple, plum, pear, cherry and hazel could be added as focal points in open spaces. Hazel also works as a hedging plant. These fruiting plants can be integrated across the garden to provide 'edible landscaping' which provides food and interest for people and other species!

Dwarfing rootstock trees can be used to speed fruiting time and save space, or a mix of sizes as suits the needs of the garden users. This could be further expanded over time.

Planting of fruiting shrubs and perennials (Raspberry, gooseberry, rhubarb) could add to edible landscaping.

Planting pollinator friendly spring bulbs underneath orchards and reduced mowing (No Mow May/ 6 Week Mowing) or mowing paths can further enhance the biodiversity.

Pollinator Friendly Planting

Other pollinator friendly plants are listed in the 'Pollinator Friendly Planting' table below. Many of these species are perennial such as bulbs and herbs. These plants are beautiful and cost-effective additions to the local areas.

Pollinator Friendly Planting Table ⁶

Plant Type	Spring (March- May)	Summer (June- August)	Autumn (Sept-Oct)
Shrubs and Trees	Hazel (Feb-Apr) Willow (Mar-May) Blackthorn (Mar-May) Hawthorn (Apr-Jun) Broom (Apr-Jun) Wild Cherry (Apr-May)	Bramble (May-Sept) Wild Privet (May-Jul) Crab apple (May-Jun) Elder (May-Jun) Whitebeam (May-Jun) Rowan (May-Jun) Wild Rose (Jun-Jul) Honeysuckle (Jun-Oct) Guelder Rose (Jun-Jul)	Raspberry (Jun-Aug) Ivy (Sept-Nov) Gorse (Jan-Dec)
Fruits, Vegetables and Herbs	Apples Blueberries Cherry plum Currants Rosemary Borage	Blackberries Courgettes Field/runner beans Pumpkins Raspberries Strawberries Tomatoes	Letting a small portion of Brassica plants (e.g., Cabbage, Kale, Brussel sprouts) flower can help provide food for pollinators in your garden
Bulbs	Common snowdrop (<i>Galanthus nivalis</i>), Armenian grape hyacinth (<i>Muscari armeniacum</i>), Common star of Bethlehem (<i>Ornithogalum umbellatum</i>), Crocus species (Crocus, spring-flowering)	Allium species ornamental and edibles (when allowed to flower) (Allium)	Colchicum species (Autumn crocus), Crocus species (Crocus, autumn-flowering),
Night-flowering plants^{7,8} (F: Foodplant for moth caterpillars)	Night Scented Stock Oak ^f Hazel ^f Holly ^f	Hebe, Honeysuckle, Sweet rocket, Jasmine, Globe artichoke, Purpletop vervain (Verbena)	Ivy ^f Stinging Nettle ^f

⁶ <https://pollinators.ie/wordpress/wp-content/uploads/2018/04/Planting-Code-2018-WEB.pdf>
https://pollinators.ie/wordpress/wp-content/uploads/2018/04/Gardens_actions-to-help-pollinators-2018-WEB.pdf

⁷ <https://butterfly-conservation.org/sites/default/files/moth-foodplant.pdf>

⁸ <https://www.wildlifetrusts.org/actions/how-attract-moths-and-bats-your-garden>

List of useful resources

There are useful resources collated during the delivery of this training programme.

www.woodrow.ie/resources

Several useful guides are available as part of the All-Ireland Pollinator Plan



Further details of the plan, along with several useful downloadable guides, are available at <https://pollinators.ie/>.

Other relevant resources include:

- [Gardening For Biodiversity Booklet by Juanita Browne \(fingal.ie\)](http://fingal.ie)
- [How to attract moths and bats to your garden \(WildlifeTrusts.org\).org](http://WildlifeTrusts.org)
- [Moth caterpillar foodplants.pdf \(butterfly-conservation.org\)](http://butterfly-conservation.org)
- Invasive Species Ireland website: <https://invasivespeciesireland.com/>
- Bat Conservation Ireland website: <https://www.batconservationireland.org/>
- [Making a Wildlife Garden \(fingalbiodiversity.ie\)](http://fingalbiodiversity.ie)
- [Wildlife Detective Booklet for Children: https://www.kilkennycoco.ie/eng/services/heritage/wildlife-detectives-guide.pdf](https://www.kilkennycoco.ie/eng/services/heritage/wildlife-detectives-guide.pdf)
- [Pollinator-friendly grass cutting A5 Flyer \(pollinators.ie\)](http://pollinators.ie)

- Wildflower collection guide: <https://pollinators.ie/wordpress/wp-content/uploads/2018/04/How-to-guide-Seeds-2018-WEB.pdf>
- Introduction to Solitary Bees and their nesting Sites: <https://pollinators.ie/the-secret-life-of-solitary-bees/>
- Creating nesting habitat for pollinators: <https://pollinators.ie/wordpress/wp-content/uploads/2018/04/How-to-guide-Nesting-2018-WEB.pdf>
- Local Community Actions to Help Pollinators: https://pollinators.ie/wp-content/uploads/2021/08/Local-Communities_actions-to-help-pollinators-July-2021-WEB-JB.pdf
- Pollinator Friendly Plant List: <https://pollinators.ie/wordpress/wp-content/uploads/2018/04/Planting-Code-2018-WEB.pdf>
This link has some excellent lists of plants that are pollinator friendly and are nicely divided up into trees, scrubs etc. so that you can pick the types of plants that suit your site.

Bumblebee ID guides:

- [Bumblebees of UK and Ireland Leaflet \(birdguides-cdn.com\)](#)
- [NBDC Crash Course in Bumblebee Identification \(pollinators.ie\)](#)
- [NBDC Bumblebee Poster \(pollinators.ie\)](#)

Invasive Species ID Guides:

- Giant Hogweed ID guide (to help you distinguish between the invasive species and the important native Hogweed): <https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Giant-Hogweed.pdf>
- Himalayan balsam ID guide: https://www.biodiversityireland.ie/wordpress/wp-content/uploads/Himalayan-Balsam_PRINT.pdf
- NBDC Invasive Species ID guides: <https://www.biodiversityireland.ie/projects/invasive-species/id-guides/>
- Three-cornered leek removal advice <https://invasiveweedsolutions.co.uk/invasive-weeds/non-native/three-cornered-garlic/>
- New Zealand Flatworm Guidelines, Invasive Species Ireland: <http://invasivespeciesireland.com/biosecurity/horticulture/flatworms/>
- New Zealand Flatworm Identification Guide, Biodiversity Ireland: <https://www.biodiversityireland.ie/wordpress/wp-content/uploads/New-Zealand-Flatworm.pdf>
- New Zealand Flatworm Management Tips, Invasive Species Ireland: <http://invasivespeciesireland.com/wp-content/uploads/2020/05/New-Zealand-Flatworm-Management-Tips.pdf>
- New Zealand Flatworm Identification Guide, Northern Ireland Environmental Agency: <http://invasivespeciesireland.com/wp-content/uploads/2020/07/NIEA-ID-Guide-ISNI-website-Arthurdendyus-triangulatus-New-Zealand-FlatwormV2-1.pdf>
- Irish Risk Assessment of Three-cornered Leek (*Allium triquetrum*) (2014), Inland Fisheries Ireland (IFI) and the National Biodiversity Data Centre (NBDC): <http://nonnativespecies.ie/wp-content/uploads/2014/03/Allium-triquetrum-Three-cornered-Leek1.pdf>

Books and Printed Resources:

- *The Wildflowers of Ireland – a field guide* by Zoe Devlin (Gill Books)

- *Tree Dogs and Banshee Fingers and Other Irish Words for Nature* by Manchan Magan
- *Our Trees - A Guide to Growing Ireland's Native Trees* (Tree Council of Ireland)

Examples of Kid Friendly Interactive Nature Resources:

- Kilkenny Wildlife Detective Guide:
<https://www.kilkennycoco.ie/eng/services/heritage/wildlife-detectives-guide.pdf>
- Wildlife of Kilkenny Poster: <https://kilkennyheritage.ie/wp-content/uploads/2015/04/KilkennywildlifePoster-Ale-Mercado.jpg>
- Hedgehog Footprint Tunnel Survey
https://www.irishhedgehogsurvey.com/files/ugd/d2e5cd_5a3659f4198d4099ab3f1eb7bf15e118.pdf

Example Signage for Meadow Areas:

Arna bhainistiú ar son an fhiadhúlra Managed for Wildlife

Plean Uile-Éireann um Pailneoirí
All-Ireland Pollinator Plan



 National Biodiversity Data Centre
Faisnéis na hÉireann de bhíochtóirí
Documenting Ireland's Wildlife



www.pollinators.ie