

The Biodiversity Handbook

for business

**Case studies, practical tips,
the business case, key contacts
and resources for biodiversity action**

**BUSINESS
IN THE
COMMUNITY
IRELAND**

Acknowledgments

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Chocolate mining bee (c) Laura Russo, 2018

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Dates for your Diary - 2019

Date	Description
20th/21st February	National Biodiversity Conference at Dublin Castle
March	BITCI Biodiversity Workshop
3rd March	World Wildlife Day
early March	Tree Week (Ireland)
21st March	International Day of Forests
22nd April	International Mother Earth Day
2nd May	World Tuna Day
11th May	World Migratory Bird Day
20th May	World Bee Day
22nd May	International Day for Biological Diversity
3rd wk in May	National Biodiversity Week
5th June	World Environment Day
8th June	World Oceans Day
17th June	World Day to Combat Desertification and Drought
October	BITCI Biodiversity Workshop
early October	Tree Day (Ireland)
7th October	World Habitat Day
13th October	World Migratory Bird Day
5th December	World Soils Day



BIODIVERSITY AND THE BUSINESS CASE



What is biodiversity?

Biodiversity is the variety of life on earth. It is often referred to as the ‘web of life’ and has three main components:

- Species diversity, meaning all the different types of living things, e.g. barn owls, bumblebees, foxes, oak trees
- Genetic diversity, meaning the great variety of genes within a species, e.g. the many varieties of tomatoes, one oak tree being resilient to a disease and another not, people having different eye colours, etc.
- Ecosystem diversity, meaning variety of the habitats around the world, e.g. forests, bogs and oceans

Biodiversity has intrinsic value, which means that it matters in and of itself, that species have a right to exist as much as we do, and that it has an inherent worth that is independent of its value to anything or anyone else.

It also has what is known as instrumental value, which relates to its value in terms of what it does for people. As part of our natural capital along with water, soils, minerals and air, a healthy biodiversity is a crucial and vulnerable asset that delivers a range of benefits that societies and economies depend on. These include everything from food, fuel, medicine and fibre to clean air, pure water and a stable climate, as well as the recreation, inspiration and wonder that enrich our lives.

Biodiversity is rapidly rising up the corporate agenda as more and more companies understand both the moral imperative and the business case

for protecting the web of life. Research shows that this web is breaking apart all around the world, and some scientists say that we are facing a mass extinction event on a scale not seen since the dinosaurs. The 2018 Living Planet Report from WWF found an average decline of 60% of global populations of birds, fish, mammals and amphibians since 1970.

We are losing biodiversity in Ireland, too. Eurobarometer surveys show that 97% of Irish people agree that we have a responsibility to look after nature, but despite this, 90% of our EU-protected habitats - the jewels in the crown of our countryside - are classified as being in ‘poor’ or ‘bad’ condition. According to the National Biodiversity Data Centre, a fifth of assessed species are threatened with extinction. These include many of our most charismatic species, such as the curlew, Atlantic salmon, great yellow bumblebee, freshwater pearl mussel and the yellowhammer bird.

It’s unlikely, according to recent studies, that the international Aichi Targets for biodiversity will be met by the 2020 deadline. The Sustainable Development Goals, which have a 2030 deadline, include targets for biodiversity (Goals 14 and 15) and, looking further ahead, the UN Convention on Biological Diversity has articulated a 2050 vision of a world in which “biodiversity is valued, conserved, restored and wisely used”.

Achieving this demands ambitious action. As the WWF report states, “everyone – governments, business, finance, research, civil society and individuals – has a part to play”. We believe that by listening to our scientists, engaging our colleagues, working with our communities, collaborating with our peers and lending our voices to the call for better biodiversity conservation, Irish businesses can support this critically important agenda.

Our Biodiversity Framework

Contact your Account Manager for a free biodiversity consultation

Business in the Community Ireland's Biodiversity Framework for Business puts a biodiversity lens on the five pillars of corporate responsibility.

It was developed with the support of experts in Trinity College Dublin's Botany Department and the National Biodiversity Data Centre.

The Framework is a thinking tool that helps companies get started with biodiversity. It's applicable to any company, in any sector, at any location, and it's aligned to existing CSR objectives.

It's also mapped to the *Business Working Responsibly Mark* and can be integrated with in-house Environmental Management Systems like ISO 14001.

It isn't a standard or certification, and it isn't a unit either: companies can pick and choose the elements that work best for them in the context of existing objectives.

For more information, contact your BITCI Account Manager for a free 1:1 consultation.



The business case

Businesses all over the world are taking action for biodiversity. From creating simple habitats to financing restoration projects, from supporting community conservation to accounting for natural capital impacts and dependencies, the private sector is realising the value of nature.

Why? There is a strong moral case for biodiversity conservation that is endorsed by Irish people: 97% of us agree we have a responsibility to look after nature. But there is a business case too that shouldn't be ignored.

Risk

Businesses have a vested interest in biodiversity and ecosystem services: biodiversity decline is linked to risk across major business areas such as operations, regulatory compliance, reputation, market, supply chain, product, insurance and finance. Half of corporate earnings could be at risk from environmental externalities, while financial estimates for loss of biodiversity and ecosystem services have been estimated at \$6.6tr - that's 11% of global GDP.

The World Business Council for Sustainable Development has outlined a roadmap to a sustainable 2050 that describes a vision for the future in which nine billion people enjoy both a high ranking on the Human Development Index and a low Ecological Footprint. Central to this vision is well-managed biodiversity that "flourishes".

Opportunity

Businesses have enormous potential to help reverse biodiversity loss and create positive impact in our landscapes. Aside from raising awareness with employees and encouraging them to take action at home and in their communities, businesses can affect real change through their value chains by choosing suppliers and materials that are managing biodiversity effectively. What's more, businesses often own or rent large landholdings that can be managed for wildlife. Doing so can benefit the business by enhancing community relationships and also by providing wild spaces that staff can enjoy, helping to reduce stress, improve cognition, concentration, workplace attitude and productivity. There is evidence to suggest that these psychological and physical benefits may increase with species richness and habitat diversity.

Action & Impact

Businesses can take action for biodiversity in a variety of ways. Understanding the potential benefits can inform the design of your biodiversity actions, and help to ensure you add maximum value to your efforts. Biodiversity initiatives have the potential to:

- Enhance a business's reputation
- Engage employees
- Strengthen community relationships
- Benefit health and wellbeing
- Help to achieve Corporate Social Responsibility targets

CASE STUDIES

A field of blue Anemone blanda flowers. The foreground shows several flowers in sharp focus, while the background is a soft, out-of-focus expanse of more flowers and green foliage. The lighting is natural, highlighting the delicate texture of the petals and the bright yellow centers.

Biodiversity Action Planning at the Central Bank

The Central Bank of Ireland began exploring biodiversity in 2017, when it held two nature walks for staff. The first brought employees from our Headquarters on North Wall Quay out to Irishtown Nature Reserve, where they learned about the ecology of the site, and the associated folklore and foraging potential of the species of flora and fauna that were present.

The second nature walk was held at Currency Centre in Dundrum, which benefits from extensive grounds. It was during this nature walk that we recognised for the first time the value of the grounds, including a number of mature stands of trees and what appeared to be an especially biodiverse hedgerow.

In 2018, we set out to develop a Biodiversity Action Plan that would integrate employee and community engagement with environmental actions to enhance the habitats we have on site, in order to support biodiversity conservation and contribute to our achievement of the Business Working Responsibly Mark.

To date, we have completed Phase 1 of the project. This involved undertaking an ecological survey of both the North Wall Quay and Currency Centre sites to record the species present. The survey was primarily botanical, focussing on herbs, trees and shrubs, but it also recorded incidental observations of birds and mammals.

While most of the species at our city centre Headquarters at North Wall Quay were ornamental and non-native, some such as harts-tongue fern and bush vetch did have biodiversity value. A plan is currently being prepared to enhance the biodiversity value of the planting schemes there.

Currency Centre, however, revealed some interesting findings, most notably in an old, long, double-ditch hedgerow that features on some of Ireland's oldest maps. It features mature native trees, including ash, scots pine, bird cherry, crack willow, holly, elder, blackthorn and whitethorn, as well as a rich understorey containing bramble, dog rose, meadowsweet, willowherb and water mint. These species support a biodiverse community of flora and fauna, which is especially important in such an urban location. The hedgerow also features wych elm trees, a species that has largely disappeared from the Irish landscape due to disease, as well as a watercourse nearby and a wide base, both of which add to its biodiversity value.

We are excited to begin Phase 2 of our Biodiversity Action Plan in 2019 and look forward to learning how to manage and enhance our lands to support biodiversity, and engage our colleagues and communities in the process.



A biodiverse hedgerow at Currency Centre

Creating impact in the community at Deloitte



Staff taking part in a beach clean on Bull Island

At Deloitte, our purpose is to make an impact that matters. Deloitte is committed to protecting and enhancing the environment, and that includes promoting initiatives to improve biodiversity. Our Green Agenda programme dates back to 2008 and we integrated our commitment to biodiversity into our objectives in 2013. When we started to think about how we could make an impact in this area, we faced what seemed like a challenge. Because our offices in Ireland are all located in urban areas with limited external landscapes, our opportunity to make a positive impact on biodiversity was somewhat restricted. We soon realised that we could make the biggest impact by engaging with stakeholders to deliver improvements. We are proud to contribute in a positive way to improving biodiversity for the benefit of society.

- **Stakeholder Engagement**

To show our commitment to biodiversity, our first step was to offer a biodiversity related project to our people. We did this on IMPACT Day, an

annual event which sees people at all levels across the firm get involved in volunteering projects on a day in September. For the last number of years, we have partnered with An Taisce to carry out a beach and sand dune clean up on Bull Island on IMPACT Day. Volunteers on this project take practical steps to protect the habitat on the island and also learn about the flora and fauna on the island. To date, 119 people have participated in this project.

In 2017, we introduced lunchtime Grow-It-Yourself workshops. These popular workshops promote the many benefits of growing your own food, for health, wellbeing and biodiversity. We explored the importance of pollinators for growing food and how to create a pollinator-friendly garden, enhancing employee understanding of how biodiversity contributes to our daily lives. We have also provided a space for employees to grow their own food on our top floor balcony and enhanced this area with pollinator-friendly plants.

- **Employee Awareness**

We have a dedicated Green Agenda intranet site which explains the role biodiversity plays in our everyday lives. Our bi-monthly Green Agenda newsletter also promotes awareness of key environmental topics, including biodiversity. The newsletter highlights internal and external biodiversity related events such as our GIY workshops, awareness days and community events.

Everyone who joins Deloitte is required to complete our environmental e-learning course. This course introduces Deloitte's significant environmental impacts, the measures we take to mitigate these and advice for people on how to reduce their own environmental impact. To find out more about our efforts to protect and enhance the environment and biodiversity, take a look at our annual Impact Report.

Conserving wildlife on-site at Intel



Poppies and cornflowers in Intel's wildflower meadow

Intel Ireland has a long history of leading on voluntary on-site biodiversity action in Ireland. Since its arrival in Kildare, the company has enhanced, restored and created biodiverse habitats in and around its campus and amplified impact beyond the limits of its site by supporting local partnerships for nature and engaging employees in its efforts to support local wildlife. It has also shared its activities with other companies in Ireland through the Business in the Community Ireland Biodiversity Learning Network.

In recent years, Intel Ireland identified additional biodiversity measures arising from its achievement of the Business Working Responsibly Mark and from the innovative BITCI Biodiversity Framework for Business, which Intel was the first company in Ireland to use. A site visit by BITCI's Biodiversity Specialist assisted in identifying opportunities for biodiversity enhancement and these were further developed by the External Relations Manager and an Environmental Engineer to form a Biodiversity Plan. Actions included:

- Biodiversity was incorporated into Intel Ireland's Environmental Management System (ISO 14001) and is now an integral part of the company's Environmental Management Plan, with objectives and goals for the year. It will be reviewed as per ISO requirements.
- Bird, bat and insect boxes were erected throughout the site and these were promoted internally through nature walks.
- A Biodiversity Map was developed and shared with all employees to raise awareness of on-site biodiversity.
- To mark Earth Day (22nd April), a woodland area outside one of our buildings was planted with native varieties of bluebells and red campion.
- To mark Biodiversity Week there was a nature walk.
- 18 members of the Environmental Health and Safety Department volunteered to weed the IR6 woodland area.
- University College Dublin (UCD) in conjunction with Inland Fisheries Ireland (IFI) and Friends of the River Rye group completed a Fossitts Habitat study on the Rye River, which has established a baseline for future studies.
- The company began working with a local school on a garden to encourage the pupils to learn how to plant, maintain and harvest their own food, while also exploring biodiversity within the school garden environs.
- Intel Ireland planted a wildflower meadow on approximately two acres in an effort to support pollinators such as bees and hoverflies on site.
- A booklet, *Embracing Biodiversity At Intel*, was published to showcase the company's biodiversity actions and impacts. The booklet features a biodiversity map of the site.

Understanding ecology at Cook Medical

Cook Medical is located on the banks of the Shannon on the outskirts of Limerick city and we are lucky to be surrounded by a number beautiful natural habitats that our staff and members of the public enjoy on a regular basis. In 2018, we decided to create a walking path around the grounds. We wanted to incorporate biodiversity into the planning of the route and understand what we could do to enhance the habitats we already have. Following a visit from Business in the Community's Biodiversity Specialist, we decided to start with an ecological baseline.

A botanical survey of the various plant species on and around our site was undertaken and provided some fascinating results: it supports at least 110



Staff during a foraging walk along the hedgerow

species of plant (94 of which are native), as well as an array of birds, mammals, pollinators and other invertebrates: badgers, foxes, hares, rabbits, a barn owl, starlings, swallows, pied wagtails, robins, various species of butterfly and hoverfly, and brown hawker dragonflies.

The site also features seven different habitat types, including three of particular ecological note:

- **Hedgerows and Treelines**

The hedgerow and treeline flanking the south-western edge of the site is shown as a treeline in old maps from the start of the 20th century, and has a number of impressive old trees. There is an impressive diversity of tree and shrub species within the hedgerow, which is greatly enhanced by the presence of a small stream at the south-western side and by its generous width at the base. Old, wide hedgerows provide habitat for many species of plants and animals, and so are of great biodiversity value.

- **Riverside Woods**

While the riverside woods are severely compromised by non-native and highly invasive species such as Himalayan balsam and giant hogweed, it is still an area of high importance at this site due to its setting, beauty, and ecological value. This site runs directly adjacent to (and may have small portions within) the Lower River Shannon Special Area of Conservation.

- **Fields**

The large fields of calcareous grassland are not particularly diverse in terms of species, but those present point to the fact that the area is not intensively managed and has not been re-seeded, making it likely to be valuable for wildlife. There are many herbaceous plants, and grasses form a smaller proportion than in an intensively managed field.

Our next steps will be to develop a Biodiversity Action Plan that gives guidance to interested employees who have volunteered to focus on biodiversity as part of Cook's Corporate Citizenship Programme and help to inform future actions to enhance the habitats we have, create new ones where appropriate, engage our staff with biodiversity on their doorstep and support our local communities.

Integrating biodiversity at SSE Airtricity

Incorporating biodiversity into all aspects of a business is not without its challenges. SSE implements a Biodiversity Policy that aims to permeate all stages of its work through three key objectives:

Objective 1: Empowering People to Engage with the Natural World. The Galway Wind Way in Cloosh Valley, Connemara was designed in consultation with local community groups to provide access to a wild and remote place that is rich in biodiversity. The Wind Way forms part of Galway Wind Park and incorporates six routes along 48 km providing walks for the local community and visitors alike. Access to nature is increasingly linked to our physical and mental wellbeing. Interpretation panels along the Wind Way help visitors connect with previous generations and the wildlife that still thrives today in the surrounding habitats. Over 150 hectares of low-productivity forestry will be felled and restored to peatland habitat as part of the restoration plan for the wind farm, linking two protected designated sites.

Objective 2: Working with Stakeholders to Protect, Restore and Enhance Biodiversity. SSE operates a Community Fund that supports a range of community-led green initiatives, including four beekeeper associations across the island of Ireland. One initiative, led by Cumann Beachairí Chonamara (Connemara Beekeepers Association), runs an education programme to increase awareness among members and the wider community. Another initiative saw Dunneill Wind Farm, Co. Sligo establish its own apiary with six native Irish honey bee hives. The wind farm site supervisor facilitates visits from local pupils where a local beekeeper discusses pollination and wider biodiversity topics, providing the students with a deeper understanding of ecosystem services. The Dunneill Apiary links in with the SSE Pollinator Plan, which was developed to support the All-Ireland Pollinator Plan in protecting



our 98 native bee species, half of which are in decline. There is a strong connection between pollinators and farming so this action is relevant to many agricultural communities in which we operate. Our Pollinator Plan aims to create new tree and wildflower planting that will provide habitat and food supply for pollinators. We are raising awareness among staff and we are also trialling pollinator-friendly weed control methods as part of this initiative.

Objective 3: Realise the Economic Benefits of a Diverse Natural Environment. Climate change is a key threat to biodiversity. The production of renewable energy is a core part of SSE's business and we are the largest supplier of sustainable energy on the island of Ireland. SSE operates in rural environments, providing an alternative land use that can help reduce of agricultural intensification and maintain more species-rich grasslands and uplands. As a company, we are constantly looking at integrating biodiversity protection into the supply chain. It is an ongoing challenge to reduce our ecological footprint, change long-standing work practices, raise awareness and increase support for new initiatives but it's one that we are happy to accept.

Supporting pollinators at Gas Networks Ireland

Gas Networks Ireland is conscious of its responsibilities to the natural environment, and it is striving to have a positive impact by engaging with staff, landowners, industry partners and communities. We have taken a number of actions to support biodiversity.

Business supporter of the All-Ireland Pollinator Plan

Towards the end of last year, Gas Networks Ireland met with the National Biodiversity Data Centre to discuss the decline of Irish pollinators - a serious problem that requires immediate attention to ensure the sustainability of our food production, avoid additional economic impact on the agricultural sector and to protect the health of our environment. To date, we have run staff workshops to help improve biodiversity awareness across the company, and we're supporting a post-doctoral researcher from Trinity College Dublin. Her project seeks to understand how herbicides and fertilisers affect the health of bees by planting flowers on some of our land and treating each plot with different levels of herbicide and fertiliser to observe plant-pollinator interactions, and measure pollen and nectar quality.

Creating habitats at our installation sites and in pipeline upgrades

We also conducted a pilot Biodiversity Project at the Brownsbarn Above Ground Gas Installation at Citywest in Dublin last year. Following on from the success of that project, we have identified a number of sites where we are rolling out similar biodiversity initiatives. Some of the measures include erecting signage, reducing grass cuttings, installing bird boxes, planting flower bulbs for pollinators amongst other plans.

During recent gas upgrades at the River Bride in East Cork, we installed a bank along the river's edge to support nesting sandmartins. This

is essentially a collection of 20 nest boxes for the sandmartin bird, incorporated into the design at both the Bride (south bank) and Blackwater sites.

Taking action at the office

Gas Networks Ireland's Dublin office in Finglas features a green roof, which helps to provide habitat and food sources for a range of birds, pollinators and other insects. We also plan to carry out site tours of our facilities to engage staff with the biodiversity on their own doorstep.

Promoting biodiversity across our networks

Our pipeline network is over 14,000 kilometres long and we work with 7,000 landowners to ensure the safety of the network. Each year we send a calendar with a different theme to all landowners. This year we focused on biodiversity, highlighting some of the flora and fauna we protect in our daily business.

As part of Biodiversity Week 2018, we ran a biodiversity competition for staff and their children: staff submitted photographs, and their children sent in artwork. We also sponsored a "Butterflies of Ireland" poster in collaboration with the National Biodiversity Data Centre and the Irish Examiner. The poster was provided to 300 schools in Munster, schools in Dublin and our staff.

Planning for next year

We are collaborating on two biodiversity projects: one with Cork City Council at Shalom Park near our Cork headquarters, and another with South Dublin County Council at Corkagh Park in West Dublin. We are also looking into installing insect hotels at a number of sites with the help of our colleagues.

Using nature-based solutions at Roadstone

The Integrated Constructed Wetland (ICW) at Roadstone's Belgard Quarry was built to handle the quarry's drainage waters before their discharge to an adjacent stream.

This ecologically engineered approach to water treatment is not only cost effective, but provides habitat for local wildlife within the conurbation of Dublin, demonstrating how effective treatment with optimum outcomes for the wider environment can be achieved in an economical manner.

Designed to yield optimum outcomes intercepting and treating water through the reanimation of a wetland ecosystem, its social, economic and environmental impacts deliver new perspectives for the comprehensive management of water and sustainable environmental commitments.

The quality and quantity of the quarry's drainage, as well as its location, landscape, geology, soils and hydrology, along with necessary economic, social and biodiversity considerations were essential to the ICW's design and construction. A land survey and desk study showed an area to the southwest of the quarry to be most suitable for the ICW, affording natural protection of ground water and soils suitable for its construction and operation.

Over an 11-week construction period, the site was transformed into a highly aesthetic and diverse natural habitat. The design uses native plants in order to enhance biodiversity. Species of known performance for treating through-flowing water were selected, including sweet water grass, common bullrush, narrow leaved bullrush, common iris and common river sedge.

Additional native plant species were planted along the margins of each



The Integrated Constructed Wetland at Belgard Quarry

cell and small quantities of aquatic vegetation were planted. The southern boundary of the site was planted with native tree and shrub species to further increase the biodiversity and aesthetic value.

Restoring bogs at Roadbridge

As part of a biodiversity enhancement plan, Roadbridge and the site developer identified three separate areas (spanning 16 hectares) of degraded, upland blanket bog for habitat restoration within the Galway Wind Park site, Ireland's largest wind farm located 20km north-west of Galway. This area of focus had been significantly de-vegetated and eroded by years of overgrazing and turf cutting practices.

The primary objectives of this biodiversity enhancement plan were to:

- Promote the natural restoration of blanket bog habitat through the establishment of protected blocks where sustainable sheep grazing is put in place for a defined period of time (5 to 6 years)
- Cease all turf cutting and extraction practices
- Increase the population of key indicator flora species such as Sphagnum and Ericaceous that are associated with active bogs
- Eliminate invasive plant species from within the study areas so as to allow natural recolonisation by native vegetation

A baseline botanical survey using quadrats was undertaken in early 2015. Reference quadrats were also established outside the fenced areas. Grazing access is not permitted from November to March and only low-intensity grazing is permitted within the study areas from April to October.

By the completion of the autumn 2017 assessment, an overall increase of 17-22% in vegetation cover was noted, compared to the beginning of the study in January 2015. Up to nine new species of flora had also been recorded. There had been an increase of up to 18% in grasses and sedges between year one and year three. The cut and dab stem treatment of non-native invasive rhododendron plants in year one has proved successful with

no new stands of non-native plants establishing in years two or three. By autumn 2017, the study area was noted to be free of invasive plant species.

By working closely with local landowners, a workable yet sustainable grazing regime has been established that has allowed for a small but significant increase in the re-colonisation of native vegetation across the study areas.

This project is contributing to the enhancement of the ecosystem by:

- Minimising soil loss via adequate vegetation cover and root biomass
- Providing shade and shelter for small mammals, ground nesting birds and birds of prey;
- Plant species diversity and richness is enhancing pollination rates.

By continuing to curtail turf cutting practices, reducing stock densities and grazing periods, it is anticipated that the habitat within the study area will continue to recover over the coming years. The increase in native vegetation has also increased the foraging potential for mammals and birds of prey. This biodiversity project has also helped to foster a working partnership with local landowners and given them an appreciation of the benefits of sustainable farming practices.



Restoring a degraded bog in Co. Galway

Supporting supplier biodiversity at Dawn Meats

We are increasingly aware of the challenges faced by and of the importance of biodiversity. Biodiversity is monitored ever more closely with indicator species getting more attention, and protecting these species can indirectly protect many other species that share the same habitats.

The Hen Harrier is one such species, and unfortunately is now a rare bird of prey in Ireland. The number of confirmed breeding pairs has declined by 15% in the last five years, with a 52% population decline over the last 40 years. This is largely due to the loss of 300,000 hectares of peatland habitat, on which the Hen Harrier depends, to planting of non-native monoculture coniferous forests.

In 2017, the Hen Harrier Project was launched. Over the course of five years, it aims to support up to 1,200 farmers to enhance the value of the ecosystem services that their land provides. It will do this by rewarding them for the quality of the habitats they have on their farm, while also co-investing to improve and manage these habitats, thereby increasing farmers' capacity to improve their land's habitat value.

Dawn Meats are delighted to be part of the Hen Harrier Project because we believe that it is important to recognise and highlight the benefits and role of livestock farming in such High Nature Value farmland. Failure to graze can increase fire risk which in turn negatively impacts biodiversity, soil carbon storage and farmers' eligibility for agri-payments. At Dawn Meats we recognise the range of ecosystem benefits of many farming systems. Both high and low stocking rates have a part to play in producing food and maintaining the ecosystem services that farms and farm families provide at no direct cost to the public.



Hen Harrier in flight (Photo: Mario MacRory)

We are supporting this important project in a number of ways:

- Assistance with suitable livestock selection at purchase
- Assistance with performance recording for future baseline generation and target setting for this upland farming challenge
- Guaranteed processing outlet for finished livestock
- Providing a production premium for trial animals

The first year's trial results across twelve herds showed an average weight gain per animal of over 10%. This is an important indicator to show that the animals thrived, and also important to support the economic viability of the project for farmers. On average the weight gain equated to an economic gain of approximately €160/animal. This financial gain, coupled with the support payments and the freeing up of productive low land for silage, is key to supporting the project's goals: demonstrating economic opportunity from the land while protecting biodiversity and the Hen Harrier breeding grounds.

TOP TIPS



Top Tips to Get started with a biodiversity project

Tip #1 - Think about biodiversity impacts and dependencies

Understanding your company's key biodiversity impacts and dependencies is an important first step in your biodiversity project, and can help you to design an effective programme that addresses key issues. These connections will be more obvious for some sectors than for others, but whether you're a consulting firm or a mining company, biodiversity is material to your company to some degree.

Tip #2 - Think about your organisational priorities

What's your big focus for the year ahead? Are you taking action on employee health and wellbeing? Community engagement? Supply chain sustainability? Aligning your biodiversity project to support existing goals can ensure you add maximum value.

Tip #3 - Figure out what you have on-site

Does your company have grounds on its site/s? Are there lawns that are kept mown? Are there any mature trees? What about hedgerows, small streams or messy areas? Do you have formal planting beds that are managed by a landscaper? Do you know how old the site is, and how it was developed? Take photos (ideally in spring or summer) and use aerial images to help you identify key areas. Also, think about which areas you're most likely to be able to change. For instance, some companies prefer to keep their entrances under a formal planting scheme, but a new initiative at the back of the site is ok.

Tip #4 - Try to identify different species and habitats

While there are many fantastic resources available to help you determine the species you have on site (see Page 26), not all of us are confident in taxonomic identification! It's likely, though, that there's somebody on your staff who is. Send out an email and put up posters asking for help with your biodiversity project, and speak to your landscaper if you have one. Your aim is to find out if you have anything of biodiversity value: diverse native hedgerows, mature trees, waterways, wild grassy areas etc.

Tip #5 - Don't have any land? Get creative

If your company doesn't have any grounds, if you're in rented urban offices or situated in a business park, there is still plenty you can do. Engaging employees to take action in their own gardens, working with community groups and NGOs to support local action, encouraging staff and families to engage with citizen science projects and raising money to help conservation initiatives can all have major biodiversity benefits.

Tip #6 - Contact us!

BITCI offers all its members a free 1:1 consultation with our Biodiversity Specialist. This can take place on-site or via teleconference. Speak to your account manager to arrange a meeting and let us walk you through the first steps to taking action for biodiversity and help you identify projects that align with your objectives, your timelines and your budget.

Top Tips to Engage employees

Tip #1 - Seek out biodiversity allies at your company

You might be surprised to discover who in your company harbours a secret passion for butterflies, or who is involved with the local chapter of a birding charity, or who spends their weekends botanising in wetlands. These individuals are your biodiversity allies! Seek them out by circulating a staff survey that asks questions about employees' interest in the natural world, their connections to local groups, and invite them to join your company's biodiversity committee. Getting staff involved will add energy and relevance to your project, and can also support better internal communication by connecting people whose paths might not otherwise cross in day-to-day work.

Tip #2 - Run biodiversity-themed lunch and learn sessions

A lunch and learn session is a great way to engage employees with biodiversity and it can also help you build relationships with experts and community leaders. Pick a wide selection of topics that staff are interested in by setting up a suggestion box in the canteen, or including a question in your survey (above), and use the Environmental Directory on Page 27 to help you identify the best speakers and organisations. You can also use lunch and learn sessions strategically to train staff to support aspects of the project you're undertaking, for instance on species identification, pollinator-friendly planting, or biodiversity monitoring.

Tip #3 - Give away seeds and plants for staff to take home

A popular option for city centre companies with limited outdoor space is to encourage staff to 'biodiversify' their gardens and balconies at home by

giving away packets of native wildflower seeds sourced from Irish genetic stock and pollinator-friendly garden plants. Coupled with a lunch and learn session to raise awareness and improve understanding, this is a great way to help staff engage with the wildlife on their own doorsteps through simple actions and spread the message to friends and family.

Tip #4 - Design projects that take staff outdoors

Spending time in nature has positive effects on our mental and physical wellbeing, and both are increasingly important considerations for companies. Designing biodiversity projects that encourage staff to spend time outdoors can support your ongoing health and wellbeing initiatives like mindfulness and step challenges. If you have land on-site, or are near a park or greenway, develop lunch break-length nature walks that point out habitats or species of interest or create a wildlife area where staff can sit on nice days and plant it with species that attract birds and insects. If you don't have land, you can run a biodiversity photography competition that focuses on native species living in important habitats in your local area.

Tip #5 - Contribute to a citizen science initiative

Ireland is a relatively data-poor country when it comes to biodiversity, and the general public can play a huge part in helping to address this. It does require some species identification skills, but with support, employees could be engaged to take part in annual national initiatives like the Garden Bird Survey or to help out with biodiversity monitoring programmes on-site and in the community, and submit the data they collect to national databases.

Top Tips to Take action for pollinators

Tip #1 - Check out the All-Ireland Pollinator Plan

The All-Ireland Pollinator Plan sets out an ambitious vision for an Ireland in which pollinators can not only survive, but thrive. It has developed business-specific guidelines (co-written by BITCI) that you can download (see Page 26). These guidelines spell out a range of simple actions that you can take on-site, with staff, in the community and across supply chains. You can also sign up to the Plan as a 'Business Supporter' and log your pollinator-friendly actions on the national impact map.

Tip #2 - Beehives are not (necessarily) the answer

Everyone loves bees, and bees mean honey and hives, right? Well, sort of. There are 99 species of wild bee in Ireland and only one of them is a honeybee that lives in a hive. The rest are either bumblebees (21 species), who live in colonies in vacated mouse holes and other gaps in the ground, or solitary bees (77 species), who live alone in tiny burrows and crevices. Wild bees are not aggressive, have no interest in interacting with humans and pose little risk to employees or the public. Taking action for pollinators means supporting all our bees - besides, it's the bumblebees and solitary bees who do most of the actual pollinating work! Beehives can also be difficult to maintain properly, and managing healthy hives is likely to require the support of an expert.

Tip #3 - Think about year-round food sources

Bees are in hibernation through the winter, but they're active from February to October. A queen bumblebee emerging from her nest in early spring

needs around 2,000 flowers to feed on each day! There aren't many in bloom across the landscape at that time of year, likewise at the end of the season in late autumn, so if you're thinking of planting flowerbeds for pollinators or changing the way you manage hedgerows or lawns, bear in mind the importance of ensuring you include a range of plants that will be in flower throughout the year. The All-Ireland Pollinator Plan has some excellent resources to help you identify which species are best, when they'll flower, and where to plant them.

Tip #4 - Remember, bees need homes too!

Hunger is a major issue for pollinators (see Tip #3 above), but they face other threats too, and homelessness is one of the biggest. Create nesting habitat for bees and encourage employees to do the same in their gardens - it's easy, safe and unobtrusive, as the majority of bees nest in the ground. Long grasses at the base of a hedgerow are perfect for bumblebees, while solitary mining bees prefer bare, south-facing earthen banks to burrow holes into. Leaving piles of dead wood undisturbed year-round is another option, while bee hotels or holes drilled into wood can help a small number of cavity-nesting species.

Tip #5 - Maximise impact off-site

You don't need extensive grounds to support pollinators. Creating and maintaining pollinator-friendly habitats to provide food and nesting sites is something that most people can do at home. Raising awareness of these kinds of actions with staff, suppliers and visitors can help to maximise your project's impact beyond your own company.

Top Tips to Support biodiversity in the community

Tip #1 - Find your allies in your community

Wherever you're based, there are almost certainly local groups that would welcome your support. Think Tidy Towns groups to the local chapters of wildlife NGOs to ground-up environmental initiatives in villages and towns. Social media can help you find them. You can also call on local experts like your county's National Parks and Wildlife Service Ranger and Local Authority Heritage or Biodiversity officers. Engage with these groups and individuals to learn more about their work, identify the ways in which you might be able to collaborate, and be kept in the loop regarding opportunities to volunteer on local projects and get involved in events.

Tip #2 - Identify your nearest protected area

Places of high biodiversity value in Ireland are protected by law in a few different ways. The main ones are Special Areas of Conservation (SACs) that are designated as protected habitats under the EU Habitats Directive, Special Protection Areas (SPAs) that are designated under the EU Birds Directive, and Natural Heritage Areas that are designated at national level under the Wildlife Act. You can use the maps listed on Page 26 to help you identify the protected areas closest to you and get information on their status and management.

Tip #3 - Seek out your local biodiversity plan

There are also plenty of un-designated areas that are valuable for biodiversity - engaging with the local experts in Tip #1 will help you identify

them, but you can also look to local and county plans for references to biodiversity. Some counties also have a heritage or biodiversity plan, which will provide specific information on the important habitats in your area.

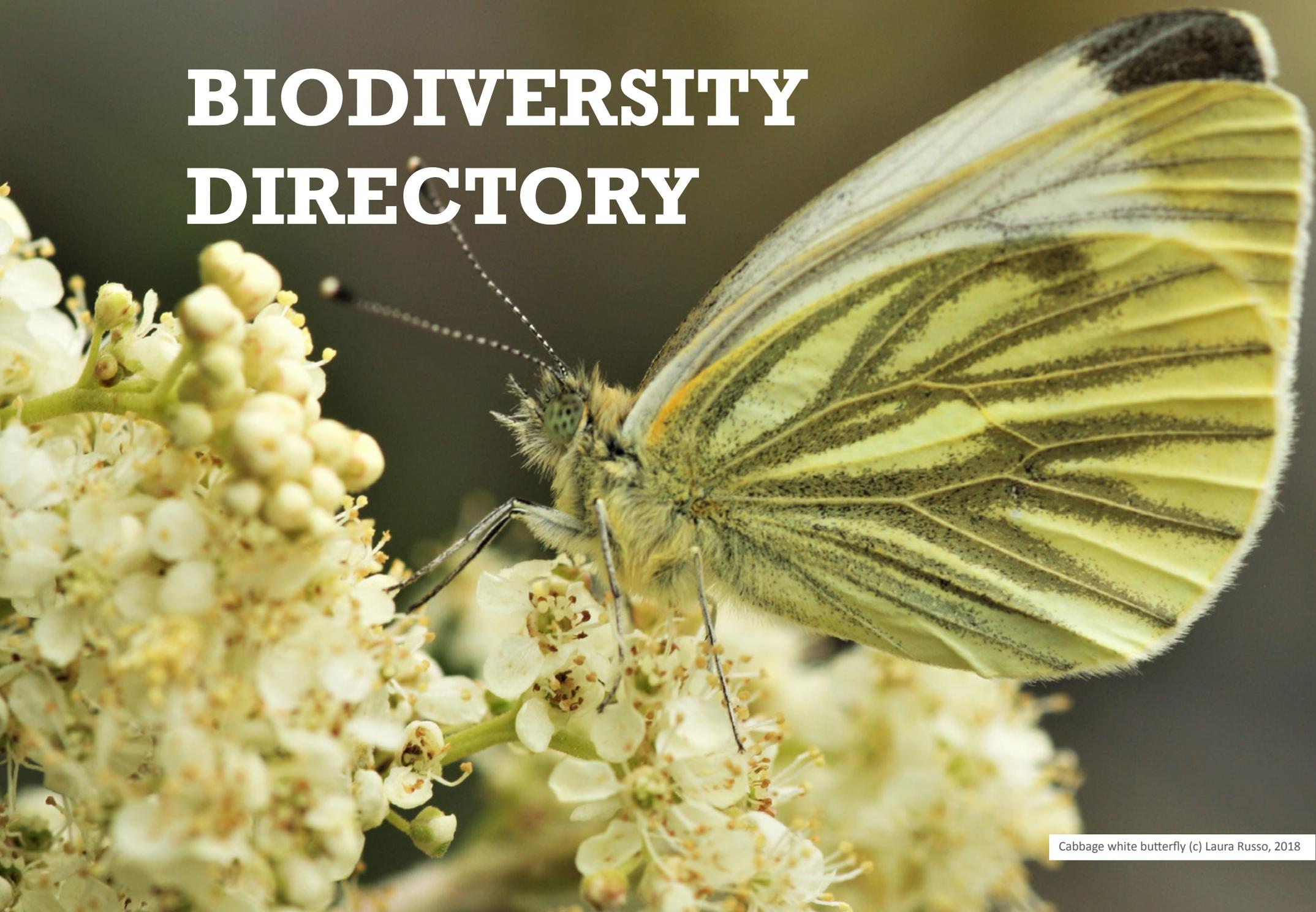
Tip #3 - Build local partnerships

Who can you collaborate with to create, enhance or restore biodiverse habitats in your community? Is there a way to formalise your engagement with others to support an existing goal? Can you help local groups achieve their ambitions in practical ways, such as fundraising, professional skills volunteering, Board membership or provision of meeting room spaces? Are there local schools doing a biodiversity Green Flag that you can support and engage with? Can you help to encourage neighbours and peers in the business community to work with you? Joining forces with others and building local partnerships to promote biodiversity and take action is a powerful way to raise the agenda and amplify impact.

Tip #5 - Promote your biodiversity activities

Communicating your company's biodiversity work to the wider community is a great opportunity to enhance relationships and build trust. Whether this manifests as a simple action like putting up posters in public spaces or raising awareness through social media, or something more involved like an open day or a presence at a local event, using your voice to let people know your company cares can have reputational benefits for your company while boosting biodiversity's profile as well!

BIODIVERSITY DIRECTORY



Cabbage white butterfly (c) Laura Russo, 2018

Key Biodiversity Resources and Supports

Resources

- **National Biodiversity Action Plan 2017-2021**

The NBAP sets out seven objectives for biodiversity conservation in Ireland. It refers to the private sector under *Objective 3 - Increased awareness of biodiversity and ecosystem services*, where it outlines the importance of engaging the private sector in biodiversity conservation, and calls for the establishment of a national business and biodiversity platform to raise awareness and share best practice. [Read the NBAP here.](#)

- **All-Ireland Pollinator Plan**

The [AIPP](#) promotes a vision for Ireland in which pollinators can not only survive, but thrive, and identifies a range of actions that can be taken by all sectors of society. A number of guidelines have been published that will be useful for businesses, as follows: [Guidelines for Business](#), [Business Technical Appendix](#), [Fliers on pollinator-friendly garden planting](#), [How To Guides - on wildflower meadows, nesting habitat, etc.](#), [Pollinator-Friendly Planting Code](#), and [posters](#). Businesses are encouraged to sign up as 'Business Supporters' of the Plan and log their pollinator-friendly actions on the national impact map. Contact pollinators@biodiversityireland.ie for more information.

- **Our Trees - A Guide to Growing Ireland's Native Trees**

Published by the People's Millennium Forests back in 2000, [Our Trees](#) remains one of the most useful introductions to Ireland's native trees available today. It's available for purchase from the Tree Council website, but much of the content is available for free on the Tree Council website. PDFs of the original guide can also be found online.

- **Maps of biodiverse areas**

The [NPWS map viewer](#) website can help you find your nearest protected area, and learn more about its conservation status.

- **Global Reports**

The World Wide Fund for Nature (WWF)'s publishes the [Living Planet Report](#) biannually. The [Intergovernmental Science-policy Panel on Ecosystems and Biodiversity](#) (IPBES) assesses the state of biodiversity for decision makers.

Supports

- **éirewild**

[éirewild](#) is a consultancy that helps Irish businesses make space for nature by aligning biodiversity initiatives to CSR. It is run by BITCI's biodiversity specialist.

- **County Heritage and Biodiversity Officers**

Your Local Authority's [County Heritage and Biodiversity Officer](#) will play a key role in promoting heritage awareness, developing policy and providing advice and information on local as well as national heritage issues.

- **NPWS Conservation Rangers**

[National Parks and Wildlife Service's Conservation Rangers](#) work all over Ireland. They enforce wildlife legislation, patrol the protected area network, contribute to wildlife surveys and are also involved in community outreach.

A-Z of Environmental Groups and NGOs

Birdwatch Ireland

BirdWatch Ireland is the largest independent conservation organisation in Ireland. We have over 15,000 members and a growing network of 30 local branches. We manage nature reserves, raise biodiversity awareness and carry out education, survey and research work. Opportunities include:

- Nature reserve rejuvenation - painting, vegetation clearance, pathway/boardwalk maintenance, nestbox installation and refurbishment, signage installation.
- Participation in wildlife surveys.
- Office-based work - administrative, sales and operational work.
- Wardening - work alongside professional wardens on conservation projects.
- Assistance at public shows and events and volunteering at local branches.

Contact: Niall Hatch | nhatch@birdwatchireland.ie | 01 2819878 | birdwatchireland.ie

Clean Coasts

The Clean Coasts Corporate Volunteering programme is a great opportunity for companies to make a tangible and immediate improvement to the coastal environment. It is also a fantastic team building and personal development opportunity for employees outside of the normal working environment and makes a practical and positive impact on the coastal environment. Opportunities include:

- CSR action days are organised by Clean Coasts. We liaise on location, timing and rubbish collection points, provision of a briefing document, equipment and leading the group on the day.
- Action days can be organised throughout the coastline of Ireland and we can facilitate both half day (3 hours) and full day sessions (5 hours).
- We ask for a charity donation to facilitate grants for our Clean Coasts groups.

Contact: Sinead McCoy | cleancoasts@eeu.antaisce.org | 01 4002210 | cleancoasts.org

Botanical Society of Britain and Ireland (BSBI)

The Botanical Society of Britain and Ireland (BSBI) is for everyone who cares about wild plants. Since 1836, we've been promoting the study, understanding and enjoyment of British and Irish botany. We support all botanists - beginner or expert, amateur or professional - as they identify, record and map what grows where: our data and knowledge underpin the conservation of the British and Irish flora. We run regular field outings and training events, and give talks to members of the public. Opportunities include:

- Have the Irish Officer visit to speak with staff about the work of BSBI.
- Outdoor experience by joining/organising a BSBI field meeting.
- Volunteering to assist in BSBI surveys.
- Help out at events, or in the BSBI office at the National Botanic Gardens, Dublin.

Contact: Maria Long | maria.long@bsbi.org | 087 2578763 | bsbi.org/ireland

Dodder Action

Dodder Action is a group of volunteers who work to clean, protect and promote the amazing River Dodder wildlife corridor and improve amenities along its length for the well-being and daily enjoyment of all community stakeholders. Dodder Action has built a vigilant community along the river to safe-guard this wonderful resource for the enjoyment of all. Opportunities include:

- Corporate volunteer days or half-days carrying out river-bank clean-ups.
- Citizen science biodiversity reporting, including invasive species reporting and removal.
- Education and awareness workshops for schools and businesses.
- Ongoing supervision of a #2minuteRiverClean station at an organisations' own location.
- Local Champion for one of our Pollution-Prevention and Waste-reduction initiatives.
- Pro bono support in communications, app development, fundraising, etc.

Contact: Keith Scanlon | dodderaction@gmail.com | dodderaction.org

A-Z of Environmental Groups and NGOs

Dublin City Farm and Ecological Centre

Dublin City Farm aims to provide a community space where people can learn first-hand about environmentally friendly farming practices, growing food, sustainable living and reconnecting with nature within an urban area. It plans to address health issues and be accessible and inclusive to all. Opportunities include:

- Compost making-creating and improving the microbiology in the soil and therefore enriching the surrounding environment.
- Willow hedge maintenance, clearing and creating growing areas, planting vegetables.
- Wildflower planting workshop. This creates an area of native flowers where all the native invertebrates can come to complete and begin their life cycles and this in turn aids the local bird communities.

Contact: Marion Kelly | dublincityfarm@gmail.com | 0868649678 | facebook.com/dubcityfarm

GIY (Grow It Yourself)

GIY is a social enterprise with a mission to encourage and support people to grow as much food as they can wherever they can, at home, at work, at school and in their community, as a lever to a healthy, happy and sustainable lifestyle. Opportunities include:

- GIY@Work: Reconnect employees to their food by getting them growing some food at their desk in a fun and accessible 4-week workplace growing programme.
- Working with community groups and food growing projects from Montessoris to Direct Provision Centres, rehabilitation centres to Tidy Town committees, in both urban and rural locations. Volunteering activities include clearing, weeding, planting, etc.
- Talks and workshops on a range of food growing and food empathy topics.
- Bespoke programmes and talks for clients.

Contact: Karen O'Donohoe | karen@giy.ie | 0862312899 | giy.ie

Global Action Plan Ireland

Global Action Plan Ireland is a charity at the forefront of Education for Sustainable Development in Ireland. Our mission is to inspire and support people throughout Ireland to take practical steps towards a greener lifestyle. Our unique approach focusses on delivering behaviour change programmes, which empowers individuals to make simple changes to reduce their environmental footprint. We work with communities of place and communities of interest. Opportunities include:

- Creating and enhancing habitats for wildlife and supporting wildlife and pollinators by planting trees and bulbs in local public parks and open spaces in Ballymun.
- Creating outdoor classrooms for local schools to help local students connect with nature.
- Building and installing habitat boxes in schools, public grounds, open spaces and community gardens in Ballymun.

Contact: Vanessa Moore | vanessa@globalactionplan.ie | 01 8832185 | globalactionplan.ie

Bat Conservation Ireland

Bat Conservation Ireland is an NGO dedicated to the conservation of bats. BCIreland manages the Irish Bat Monitoring Programme with funding and assistance of NPWS and NIEA and through this there is a wide array of opportunities for volunteers to learn and put into action their bat detector skills. Opportunities include:

- We provide information on the conservation of bats and assist the general public in their needs in relation to bats. The group is also involved in providing training in the use of bat detectors, management of bat box schemes, biometrics and bat handling.
- We also collate bat data for the island and welcome the submission of such from surveyors and consultancies.

Contact: Tina Augney | info@batconservationireland.org | 049 8993502 | batconservationireland.org

A-Z of Environmental Groups and NGOs

Irish Wildlife Trust

The Irish Wildlife Trust (IWT) aims to conserve wildlife and the habitats they depend on throughout Ireland while encouraging a greater understanding and appreciation of the natural world and the need to protect it. Opportunities include:

- Practical conservation volunteering opportunities, such as laying or repairing board walks or building paths at our reserves.
- Removing invasive species.
- Volunteering to assist us with surveys.
- Help out at events, or in the IWT office with our campaigns.

Contact: Kieran Flood | kieran.flood@iwt.ie | 01 8602839 | iwt.ie

Irish Seed Savers Association

The Irish Seed Savers Association saves a rare heirloom varieties of vegetable seeds and heritage Irish apple trees. It has expanded into the preservation of heritage varieties of vegetables from all over the world that are best suited to cultivation in Ireland's temperate maritime climate, making food security an agenda and inspiring other movements in organic farming and sustainable gardening practice. Opportunities include:

- Practical volunteering projects at Seeds Savers Association Centre in Clare such as maintaining nurseries, orchards, vegetable beds, polytunnels and heritage trails.
- Helping in the production of finished seed packets.
- Self-sufficiency workshops including on topics such as; growing your own food, Bee Keeping, Seed Saving, Cider Making, Basket Making.

Contact: Barry Foley or Tansy Watson | barry@irishseedsavers.ie | 061 921866 | irishseedsavers.ie

Leave No Trace Ireland

Leave No Trace promotes and inspires responsible outdoor recreation through education, research and partnerships throughout the island of Ireland. Opportunities include:

- IMPRINT+ River clean ups, woodland clean ups, urban area clean ups with volunteers.
- Sculptures of Irish biodiversity made from recyclables in partnership with youth groups.
- 'Take Only Photos, Leave Only Ripples' workshops with water users on invasive species and paddle sports.
- 'Leave No Trace in Every Park' initiatives from public education initiatives, interpretive materials, staff and volunteer training, on-site education, junior ranger programs and much more.
- The Corporate Sponsor/Leave No Trace Travelling Trainers live and travel offering free Leave No Trace training and outreach in communities across the country with volunteers

Contact: Maura Lyons | info@leavenotraceireland.org | 01 9059009 | leavenotraceireland.org

National Biodiversity Data Centre (NBDC)

The NBDC is a national organisation for the collection, collation, management, analysis and dissemination of data on Ireland's biological diversity. Biodiversity data help us understand our surroundings, track environmental change and gain greater insight on how we benefit from, and impact on, the ecosystem services provided by biodiversity; a national asset that contributes at least €2.6bn to the Irish economy each year. Opportunities include:

- Variety of workshops that enable participants to better understand biodiversity in their locality and upskilling them to participate in citizen science programmes.
- Formal programme of about 20 workshops run each year with our partner organisations, and in-the-field training to promote field identification skills.
- Bespoke thematic workshops for upskilling employees to be better equipped to deal with biodiversity management issues as part of their CPD programmes.

Contact: Liam Lysaght | llysaght@biodiversityireland.ie | 051 306240 | biodiversityireland.ie

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