County Wicklow
Biodiversity Action Plan

2026–2031

Comhairle Contae Chill Mhantáin
Wicklow County Council

Ceangal
Clár den Chomhairle Oidhreachta
A Heritage Council programme

It is 2030, and the tide is turning.

Across Wicklow, people can see signs of nature recovering, a barn owl overhead, a meadow buzzing with pollinators, a woodland with young native trees regenerating.

The Wicklow Biodiversity Action Plan has become a living document, guiding practical action, informing land-use decisions, and connecting people with nature around them...

Read on to share our vision, from the skies above down to the shores of County Wicklow

Foreword from Wicklow County Council

Chief Executive, Wicklow County Council

I am pleased to present the Wicklow Biodiversity Action Plan 2026–2031. Wicklow's natural heritage, from the mountains and uplands to our rivers, coastlines, woodlands and farmland, is fundamental to our wellbeing, our economy, and our resilience to climate change. It is what makes the Garden of Ireland such a special place to live, work and visit.

This Plan aligns with the national and EU ambition to halt nature loss and restore biodiversity, and reflects the all-of-government approach set out in the National Biodiversity Action Plan. Delivering on this requires strong internal leadership, enhanced collaboration across Council services, and effective partnership with national agencies and local communities.

Wicklow County Council is committed to playing its part. As additional national responsibilities and resourcing frameworks emerge, we will continue to build the internal capacity and cross-sectoral structures needed to implement this Plan and support long-term nature recovery in the county.

I would like to thank the Biodiversity Working Group and the many individuals, community groups, landowners, agencies and organisations who contributed to this Plan, and to acknowledge the support of the Heritage Council and the Local Authority Biodiversity Officer Programme in enabling this work.

Emer O'Gorman
Chief Executive
Wicklow County Council

Cathaoirleach, Wicklow County Council

Wicklow's landscapes, our rivers, hills, coastline, forests, farmland and towns, are rich in nature and deeply valued by our communities. Biodiversity is central to our identity and quality of life. It supports our health, sustains livelihoods, and underpins our resilience in a changing climate.

This Biodiversity Action Plan recognises both the urgency and the opportunity before us. It sets out a practical roadmap for restoring nature across the county, in public spaces, on private land, across woodlands, waterways, parklands, uplands and lowlands, as well as in our towns and villages. It reflects the voices and expertise of communities, landowners, farmers, foresters, volunteers, environmental organisations, and state partners who engaged so constructively in its development.

Protecting and restoring biodiversity cannot be achieved by any one group alone. This Plan calls on all of us to work together, across sectors, across landscapes, and across generations, to safeguard Wicklow's natural heritage for the future.

Cllr Melanie Corrigan
Cathaoirleach
Wicklow County Council

Introduction from the Heritage Council

We are delighted to introduce the County Wicklow Biodiversity Action Plan 2026-2031. This landmark plan brings national biodiversity policy to life at the local level, rooted in the unique landscapes, rich natural heritage and community spirit of County Wicklow.

The Local Authority Biodiversity Officer Programme, established by the Heritage Council in 2022 in partnership with the County and City Management Association, has been pivotal in embedding biodiversity at the heart of local decision-making. Through funding, training and the development of networks, this programme equips local authorities with the tools to address the challenges and opportunities in biodiversity conservation. In County Wicklow, this work builds on a solid foundation laid by Wicklow County Council's Heritage Officer, whose vision and commitment paved the way for the appointment of a County Biodiversity Officer in 2023.

The inclusive approach to biodiversity by Wicklow County Council — recognising the interdependence of natural, built and cultural assets — is inspiring. The collaboration between the Heritage and Biodiversity Forums reflects a deep understanding of how people connect with their surroundings, valuing them as vibrant expressions of identity, memory and place.

The development and delivery of a County Biodiversity Action Plan not only protects habitats and species but also fosters local engagement, pride and climate resilience. The County Wicklow Biodiversity Action Plan embodies this ethos, drawing on community input, expert knowledge and policy guidance to chart a course for sustainable, impactful conservation. As we face increasing environmental pressures, the implementation of this plan will be a testament to the strength of partnerships and the commitment of all involved.

The Heritage Council is proud to support Wicklow County Council, the Biodiversity Officer Dr. Hannah O'Kelly, and local communities in the delivery of this ambitious and essential plan over the next six years.

Virginia Teehan,
Chief Executive, The Heritage Council

Dr Martina Moloney,
Chairperson, The Heritage Council

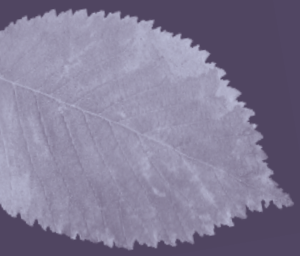
Acknowledgements

This plan was co-funded by Wicklow County Council and The Heritage Council, and the process was supported by the Local Authority Biodiversity Officer Programme.

Wicklow County Council would like to gratefully acknowledge the invaluable input of the Biodiversity Working Group and the County Wicklow Heritage Forum, whose guidance and support have been central to the development of this plan. We were also fortunate to have assistance in editing the document from a number of external experts, to whom we are grateful.

The Biodiversity Officer and Biodiversity Working Group would also like to sincerely thank all the individuals, community groups, and organisations who contributed to the consultation process, whether by sharing their views, responding to the public survey, attending library meetings, or making written submissions. Your input has been instrumental in shaping the direction and content of this plan.

1 Introduction



WHAT IS BIODIVERSITY IN WICKLOW?

Biodiversity refers to the variety of life on Earth, from microscopic soil life and wildflowers to ancient woodlands, upland bogs, river systems, and all the wildlife these habitats support. County Wicklow's remarkable landscape diversity is at the core of our identity and wellbeing, underpins sustainable livelihoods, and is key to building a resilient future in a rapidly changing world.

Long known as the Garden County, Wicklow is renowned for its rich natural heritage. It stretches from the uplands of the Wicklow Mountains, source of flashy rivers and glacial lakes, through ancient woodlands and semi-natural grasslands to rich wetlands, all flanked by a dramatic and dynamic coastline. This mosaic of landscapes sustains a wide variety of wildlife, including breeding seabirds, rare orchids and upland plants, many species of bats and butterflies, otters and the fish they depend on, as well as recovering populations of red squirrel, pine marten, and birds of prey. Many of these habitats and species are protected under EU and national legislation, while others, though undesignated, are no less valuable.

In 2019, Wicklow County Council became the first local authority in Ireland to declare a biodiversity and climate emergency, recognising the urgent need to protect nature and restore ecosystem health in the face of accelerating global declines. That sense of urgency is well founded. Like the rest of Ireland, Wicklow is experiencing profound and ongoing biodiversity loss. Driving this loss is unsustainable land-use and development, invasive or problematic species, multiple forms of pollution, inadequate coastal management, recreation impacts, and the accelerating effects of climate change. These threats are not acting in isolation, rather they interact and compound one another, undermining the resilience of the ecosystems we rely on. Furthermore, a lack of resources devoted to managing our human-modified landscapes impedes efforts to address these pressures.

Wicklow's natural heritage assets lie both outside and inside protected areas, and there are inconsistencies and gaps in how these features are documented or monitored. Many of the County's landscapes are degraded but potentially recoverable. Protecting and restoring our biodiversity will require stronger local action, more collaboration, and a recognition that nature is not just a "nice to have" luxury, it is a necessity.

Why Does Biodiversity Matter?

Biodiversity is essential for our survival.

It provides the natural systems that supply us with food, clean water and air, protection from floods, medicines, livelihoods, and cultural wellbeing. These life-supporting benefits, known as ecosystem services, are the foundation of a healthy, resilient society.

For example:

- **Food & Agriculture:** Healthy soils, diverse grasslands and thriving pollinators support Ireland's food systems from pasture for livestock to apples and berries. Biodiverse farms are more resilient to disease and weather extremes, and offer greater capacity for adaptation as our environment changes.
- **Clean Water & Flood Prevention:** Wetlands, woodlands, and healthy river systems naturally filter water, reduce pollution, slow runoff and help prevent flooding. This protects communities and safeguards our drinking water.
- **Clean Air & Climate Regulation:** Woodlands, peatlands, grasslands and oceans absorb and store carbon, cool our landscape, clean the air and help buffer us from the impacts of climate change.
- **Healthy Soils & Nutrient Cycling:** Soil organisms, from fungi to earthworms, recycle nutrients, build soil fertility, and support plant growth, making productive agriculture and forestry possible.
- **Health & Wellbeing:** Access to nature improves mental health, reduces stress, and encourages physical activity. People living near green and blue spaces experience better health outcomes.
- **Medicines & Innovation:** Many modern medicines originate in plants, fungi and other organisms and the natural world continues to inspire medical and technological innovation.

Considering these services, it is clear that the loss of biodiversity is not only a threat to nature but also has serious implications for all of the systems on which humans depend.

Beyond any practical benefits, biodiversity has intrinsic value. Most people will agree that every species has a right to exist. It is our moral responsibility to protect and restore biodiversity, not only for our own sake, but for future generations and the health of the planet.

What is a Local Authority Biodiversity Action Plan?

A Local Authority (LA) Biodiversity Action Plan (BAP) is a framework for coordinated biodiversity action at county level. It sets out priorities and practical steps that a local authority can take, either directly or in partnership with others, to halt biodiversity loss, restore nature, and build ecological and community resilience.

Each local authority is now supported by a dedicated Biodiversity Officer, thanks to the establishment of the National Biodiversity Officer Network. This initiative was led by the Heritage Council in collaboration with local authorities, and a key objective is the development of a BAP for every county.

The primary purpose of a local BAP is to translate the goals of Ireland's 4th National Biodiversity Action Plan (NBAP) into impactful local policies and actions. In doing so, it also supports compliance with wider national and EU obligations, including the EU Nature Restoration Law, and contributes to relevant climate, heritage, and spatial planning strategies.

What is the Role of the Wicklow Local Authority Biodiversity Action Plan?

This Plan builds on the previous Wicklow BAP (2010–2015), and it focuses on actions that Wicklow County Council can lead, support, or influence. This includes:

- Embedding biodiversity into decision-making across Council departments.
- Protecting and managing biodiversity on Council-owned land.
- Supporting communities, landowners, and schools to take action for nature.
- Restoring degraded habitats and improving ecological connectivity.
- Addressing cross-cutting pressures such as invasive species, and unsustainable recreation.
- Improving the evidence base through data collection, monitoring, and collaboration.

This document is not a comprehensive inventory of all biodiversity work planned or required in County Wicklow. Rather, it is a targeted plan that provides a framework for practical delivery of actions using Wicklow County Council's existing functions, partnerships, and influence.

It is a dynamic plan, and is designed to be reviewed and updated regularly, and to work in tandem with the Wicklow Heritage Plan, Wicklow Climate Action Plan, and County Development Plan.

2 Policy Context

Biodiversity protection and restoration are driven by international agreements, EU directives, national legislation, and local policy. This Biodiversity Action Plan aligns Wicklow County Council's actions with these wider frameworks and ensures local delivery contributes to national and global objectives.

International Commitments and the Convention on Biological Diversity

This Plan reflects Ireland's obligations under the UN Convention on Biological Diversity (CBD), first adopted at the 1992 Earth Summit. The most recent Kunming–Montreal Global Biodiversity Framework (2022–2030) commits signatories to halt and reverse biodiversity loss by 2030 through whole-of-government action, ecosystem restoration, improved spatial planning, and equitable benefit sharing.

Additionally, the Plan supports the UN Decade on Ecosystem Restoration (2021–2030), which calls for accelerated action to restore ecosystems as a foundation for climate resilience, food and water security, sustainable livelihoods, and wellbeing.

EU Policy and Legislative Frameworks

The Wicklow BAP helps deliver on several key EU environmental strategies and legal obligations:

- The EU Biodiversity Strategy for 2030, which sets overarching targets for biodiversity protection and recovery, including the expansion and effective management of protected areas, ecosystem restoration, species recovery, pollution reduction, and urban greening.
- The EU Nature Restoration Regulation (NNR, commonly referred to as "The Nature Restoration Law"), which introduces legally binding, time-bound restoration targets across a wide range of ecosystems, including peatlands, rivers, grasslands, woodlands, marine habitats, and urban green infrastructure.
- The EU Habitats and Birds Directives, which provide the legal basis for the Natura 2000 network and require Member States to maintain or restore protected habitats and species to favourable conservation status.
- The Water Framework Directive (WFD) and Marine Strategy Framework Directive (MSFD), which establish environmental objectives for freshwater, transitional, coastal, and marine waters, with direct relevance to biodiversity protection and restoration.
- EU land-use and food-system policies, including the Farm to Fork Strategy, which promotes reductions in pesticide use, encourages organic and nature-friendly farming practices, and aims to improve soil and ecosystem health, thereby supporting biodiversity across agricultural landscapes.

Theme	EU Commitment	Source
National planning & delivery	Ireland to submit National Nature Restoration Plan by mid 2026; implementation underway	Nature Restoration Regulation
Habitats & species	Restore degraded ecosystems; no deterioration; 30% habitats improving by 2030	Nature Restoration Regulation / EU Biodiversity Strategy
Pollinators	Reverse pollinator decline by 2030	Nature Restoration Regulation
Agribiodiversity	10% high diversity features; 25% organic farming; reduce nutrient losses by 50%	EU Biodiversity Strategy / Farm to Fork
Tree planting	Plant 3 billion ecologically appropriate trees across EU	EU Biodiversity Strategy
River restoration	Restore 25,000 km of freeflowing rivers	EU Biodiversity Strategy / Nature Restoration Regulation
Invasive species	50% reduction in Redlist species threatened by invasive species	EU Biodiversity Strategy / Invasive Alien Species Regulation
Pesticides	Reduce chemical pesticides by 50%; eliminate in urban green spaces	EU Farm to Fork Strategy
Urban nature	Urban greening plans in towns >20,000 people; enhance tree cover & Nature Based Solutions (NBS)	EU Biodiversity Strategy / Nature Restoration Regulation
Soils	Improve soil health and remediate contaminated sites	EU Soil Strategy
Marine & coastal	Reduce pressures on marine/coastal habitats; restore blue carbon ecosystems	EU Marine Strategy / NRR

Table 1 Key EU Nature and Climate Restoration Commitments Relevant to County Wicklow.

National Biodiversity and Climate Policy

The Wicklow BAP serves as a local delivery mechanism for Ireland's 4th National Biodiversity Action Plan (2023–2030), which emphasises the role of local authorities and community-based action. It also complements:

- The Climate Action and Low Carbon Development (Amendment) Act 2021, which embeds biodiversity and nature-based solutions into national climate objectives.
- The Climate Action Plan 2024, which identifies ecosystem restoration as a central strategy for both mitigation and adaptation.
- The Biodiversity Sectoral Climate Change Adaptation Plan, which sets out actions for landscape connectivity, invasive species control, ecosystem services, and co-designed urban refuges.
- The River Basin Management Plan (2022–2027), which integrates water quality, hydromorphology, and ecosystem restoration.

Ireland is also preparing its National Nature Restoration Plan[i], which will set out how the State will meet legally-binding targets under the EU Nature Restoration Regulation. Local authorities will play a central role in identifying restoration opportunities, managing public lands, and supporting delivery with communities and stakeholders.

In addition, Ireland is developing a national framework for Biodiversity Net Gain (BNG)[ii]. While statutory BNG has not yet been adopted, Wicklow County Council will work toward a no-net-loss approach as a first step and build capacity to implement BNG once national guidance and metrics are finalised.

Recognising the long-term value of biodiversity for society and the economy, this Plan also acknowledges the growing role of Natural Capital Accounting[iii] in shaping public policy and informing land-use decisions.

Public Sector Biodiversity Duty

Under Section 59B of the Wildlife (Amendment) Act 2023, all public bodies, including local authorities, have a statutory duty to promote the conservation of biodiversity in the exercise of their functions. This legal duty strengthens the case for integrating biodiversity into policies, projects, and operations across the public sector.

Wicklow's BAP provides a clear framework to support this integration at the local level.

Regional and Local Alignment

This Plan is designed to work alongside Wicklow's other strategies and planning instruments, including:

- The Wicklow County Development Plan 2022–2028, which contains multiple objectives related to green infrastructure, ecological corridors, and biodiversity.
- The Wicklow Climate Action Plan, which includes actions on biodiversity and promotes nature-based solutions for climate resilience and emissions reduction.
- The Wicklow Heritage Plan 2021–2025, which includes actions on biodiversity education, citizen science, and data gathering.
- The Eastern and Midlands Regional Spatial and Economic Strategy (RSES) (2019–2031), which outlines regional priorities for biodiversity, connectivity, and ecosystem services.
- Town and Village Biodiversity Action Plans, which identify locally driven biodiversity actions for towns and villages and support community-led implementation at settlement level.

This BAP is also intended to be a living document - one that can be reviewed, updated, and refined as new evidence emerges, partnerships evolve, and policy continues to shift.

i EU Member States must submit National Nature Restoration Plans to the European Commission by September 2026, setting out how national restoration targets will be achieved

ii No-net-loss means ensuring biodiversity is maintained and not diminished as a result of development. Biodiversity Net Gain (BNG) goes further, requiring measurable improvements for nature after development.

iii Natural Capital Accounting involves measuring the economic and social value of nature, helping decision-makers understand the contribution of ecosystems to wellbeing and the economy.

Level	Policy / Legislation	Relevance to Wicklow BAP
International	UN Convention on Biological Diversity (CBD)	National Biodiversity Action Plan developed under CBD commitments
	Kunming-Montreal Global Biodiversity Framework (2022–2030)	Sets targets to halt and reverse biodiversity loss by 2030
	UN Decade on Ecosystem Restoration (2021–2030)	Promotes ecosystem restoration as climate and biodiversity action
EU	EU Biodiversity Strategy for 2030	Sets restoration and protection targets; promotes urban greening and sustainable farming
	EU Nature Restoration Regulation (2024)	Introduces binding restoration targets across multiple ecosystems
	Habitats and Birds Directives	Legal foundation for Natura 2000; requires protection/restoration of listed habitats & species
	Water Framework Directive / Marine Strategy Framework Directive	Environmental objectives for aquatic and marine biodiversity
	Farm to Fork Strategy	Reduces pesticide and fertiliser use; promotes organic and diverse farmland habitats
National	4th National Biodiversity Action Plan (2023–2030)	Framework for coordinated national action; calls for local authority BAPs
	Wildlife (Amendment) Act 2023, Section 59B (Biodiversity Duty)	Legal duty for all public bodies to promote biodiversity conservation
	Climate Action Plan 2024	Integrates biodiversity into climate adaptation and mitigation efforts
	Biodiversity Sectoral Climate Change Adaptation Plan	Outlines biodiversity resilience actions, including connectivity and invasive species
	River Basin Management Plan 2022–2027	Supports aquatic ecosystem restoration and improved water quality
Regional / Local	Eastern & Midlands Regional Spatial and Economic Strategy (RSES)	Sets regional goals for biodiversity, connectivity, and green infrastructure
	Wicklow County Development Plan 2022–2028	Integrates biodiversity through zoning, green infrastructure, and policy objectives
	Wicklow Climate Action Plan	Promotes nature-based solutions for resilience and emissions reduction
	Wicklow Heritage Plan 2021–2025	Supports community engagement, education, and local biodiversity action

Table 2 Summary of Policy Context

3 The State of Nature in County Wicklow

Wicklow Biodiversity – an overview

County Wicklow is made up of a mosaic of habitats and is deservedly known as the Garden of Ireland. The county stretches from the summit of Lugnaquilla monuntain through river valleys, farmland, and native woodlands, to over 60 kilometres of coastline along its eastern flank. Farming and forestry are the dominant land uses, but the landscape also contains a high proportion of semi-natural habitats, many of which are ecologically important, both within and beyond protected sites.

Wicklow's semi-natural habitats include blanket bogs, native and mixed woodlands, upland heaths, lakes, shingle beaches, wetlands, sea cliffs, dunes, and species-rich grasslands and hedgerows. Small features of natural value include wet flushes in the uplands, petrifying springs, wet dune slacks, and underwater reefs. Many of these habitats contain species protected by law under the EU Habitats and Birds Directives, as well as Ireland's Wildlife Acts and Flora Protection Order. Some of Wicklow's most valuable sites for biodiversity are legally protected as part of the Natura 2000 network, including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), or as proposed Natural Heritage Areas (pNHAs) under national law (see Table 3 below). However, important biodiversity also exists outside protected areas, particularly in the form of hedgerow networks, wetlands, species-rich road verges, traditional field boundaries, and farmland habitats.

The county's extensive upland habitats, including blanket bog, heath and mountain grassland, have been damaged in places by uncontrolled burning, inappropriate grazing pressure, and erosion. Nevertheless, upland areas continue to support species of conservation concern such as merlin and red grouse, as well as rare upland plants. Rivers such as the Avoca and Vartry provide habitat for numerous bird species and could be restored to support the abundant populations of salmon and trout they once held. Wicklow's rich coastal habitats support breeding seabirds, waders, and rare dune flora. Wicklow also harbours protected bat species, otters, and amphibians such as the smooth newt.

Woodlands, particularly ancient and semi-natural fragments dominated by native species such as holly, hazel, oak, ash, alder, willow, and birch, are especially valuable. Such native woodlands support specialist bird, mammal, invertebrate and ground flora communities and are increasingly vulnerable to fragmentation, deer browsing pressure, and invasive species. Non-native conifer plantations also make up a large proportion of Wicklow's land cover but, due to their monoculture structure, these forests support significantly less biodiversity than native woodland.

"Rivers such as the Avoca and Vartry provide habitat for numerous bird species and could be restored to support the abundant populations of salmon and trout they once held."

Wicklow's farmland and rural landscapes contain important biodiversity features such as traditional hedgerows, species-rich grasslands, and wet grassland mosaics. These often arose from traditional land management practises and changes in such practises can impact biodiversity. In some areas, intensification has reduced habitat diversity, for example through hedgerow removal, soil compaction or nutrient runoff, which can affect wildlife and water quality. Conversely, in more marginal or upland areas, land abandonment and reduced management can also lead to the decline of species-rich grasslands and traditional field features.

Many Wicklow farmers are already adopting nature-friendly practices, and there is growing interest in approaches that support productive farming while enhancing biodiversity. Continued collaboration, guidance, and incentives will be imperative to accelerate this positive shift.

Further information on biodiversity is available in a range of publications (e.g., Nairn & Crowley, 1998; Nairn 2001) available through the County Library Service.

Designated areas

Designated areas are scattered throughout the county and are protected by law. The National Park covers most of the unenclosed mountain areas and upland reaches of the rivers. Together with Nature Reserves, these areas are generally owned by the State and managed by the National Parks and Wildlife Service. Special Protection Areas (SPAs) provide added protection for listed bird species such as merlin and little tern, while Special Areas of Conservation (SACs) confer legal protection on habitats and species listed in the EU Habitats Directive. Both SPAs and SACs form part of the EU-wide Natura 2000 network, to which Conservation Objectives apply. Other designated areas such as proposed Natural Heritage Areas (pNHAs), Tree Preservation Orders (TPOs) and Special Amenity Area Orders (SAAOs) are afforded protection by Wicklow County Council under the Planning and Development Acts.

Designation Type	Number	Example Site
National Park	1	Wicklow Mountains National Park
Nature Reserve	6	Vale of Clara Nature Reserve
Special Protection Area (SPA)	4	Wicklow Head SPA
Special Area of Conservation (SAC)	15	Brittas Bay SAC
Proposed Natural Heritage Area (pNHA)	35	Arklow Marsh pNHA
Tree Preservation Orders (TPOs)	112	Sessile Oak on Quarry Road, Killincarrig
Special Amenity Area Order (SAAO)	1	Bray Head SAAO

Table 3 Table of Protected Area Designations and sites in Wicklow, with the number of each type of designation, and an example of each type of designation.

Uplands

The Wicklow Mountains are the largest continuous range of uplands in Ireland, stretching for approximately 60 kilometres from South Dublin into County Carlow. Although not high by international standards, the highest peak, Lugnaquilla, at 925 metres, is Leinster's tallest mountain. Much of the mountain range is underlain by granite with an envelope of mica schist, resulting in generally acidic soils, a factor which strongly influences the vegetation of the uplands.

The dominant habitats are blanket bog, heath and acid grassland, with cliffs, scree slopes and wet flushes occurring in places. Erosion is a serious concern in parts of the uplands and, combined with high rainfall, has led to the formation of peat hags and increased losses of peat into streams and rivers. Repeated, poorly controlled burning has damaged upland habitats. Overgrazing by herds of feral goats, mountain sheep and deer have caused degradation but changing grazing patterns have also allowed bracken, tall heather and gorse to become over dominant in some areas. Historically cultivated forest plantations, dominated by non-native trees, are widespread in the uplands but are no longer consider appropriate on mountain peatlands.

Despite these pressures, a variety of rare plants persist in the uplands. Some species survive only in steep, rocky locations where animals find browsing difficult. Native trees such as rowan, birch and holly cling to the rocky slopes of gullies and cliffs, which also provide breeding sites for characteristic mountain birds, notably raven and peregrine.

Open blanket bogs and heathland support small populations of merlin, red grouse, meadow pipit and mountain hare. Common lizard and frog are also found on bog habitats. Scree slopes are used for nesting by wrens and wheatears, although the ring ouzel has disappeared from the county.

Sphagnum moss is the most important plant group in wetter bogs, as it holds large amounts of water and plays a critical role in the health and functioning of peatlands. Other typical bog plants include sundew, tormentil and bog asphodel, while bog cotton is characteristic of areas where peat has been removed in the past. Drier mountain slopes are dominated by heathers and purple moor grass, the latter often forming large tussocks.

Rivers and lakes

The typical glacial valleys on the east side of the Wicklow Mountains are occupied by a number of large rivers, most of which are tributaries of the Avonmore River, the longest watercourse in County Wicklow. On the west side, the headwaters of the Liffey, Kings and Slaney rivers flow off into neighbouring counties. Other shorter rivers rising in the in the mountains include the Dargle, Vartry and the Derry. Ireland's second highest waterfall at Powerscourt is a spectacular feature, and smaller waterfalls are found in Glenmalure, Glenmacnass and the Devil's Glen. The mountain areas also encompass a number of small but deep glacial lakes including Upper and Lower Lough Bray, Lough Ouler, Lough Nahanagan, Art's Lough and Kelly's Lough. The glacial valleys such as Luggala, Cloghogue and Glendalough hold large lakes including Lough Tay, Lough Dan and Glendalough Upper and Lower Lakes. There are few lowland lakes in County Wicklow, with the main ones having been modified to form reservoirs at Poulaphuca (Blessington) and Vartry (Roundwood).

The water in Wicklow's lakes and rivers tends to be acidic, hence fish life is limited, with small brown trout, sea trout and salmon, as well as lamprey. Other non-native fish species are present in the lowland reservoirs. The rare arctic char was present in Lough Dan in the mid-20th century but has not been recorded in recent years. Typical river birds such as dipper and grey wagtail are present on all the rivers with kingfisher on the

lowland stretches of some of the larger watercourses. Otters are also widespread on rivers and lakes although they are rarely seen. Invasive American mink are also present in a number of waterways. On the lowland reservoirs some wintering ducks occur, and at Poulaphuca flocks of greylag geese and whooper swans are occasionally present.

Woodlands and forestry

While Wicklow has a high percentage of forest cover compared to many other counties, most of this is comprised of non-native tree species such as sitka spruce, lodgepole pine and larch. Planted areas are often fringed with native trees such as downy birch and sessile oak but these rarely form a sizeable area of woodland. Native woodlands are scattered and relatively small covering around 6,000 hectares (or about 3% of the county, Perrin et al. 2008). The dominant native trees vary according to soil type, with sessile oak, downy birch, rowan and Scots pine being common in the uplands and valleys, while pedunculate oak, ash, alder, willow and hazel are more common in the lowlands. Alluvial woodlands are relatively rare and very fragmented.

Some of the largest areas of native woodland are protected as nature reserves, such as those at Clara Vale, Glen of the Downs, Glendalough and Tomnafinnogue. Some large estates, such as Powerscourt, Altidore, Ballinacor, Clora (Devil's Glen) contain sizeable areas of native or mixed broadleaved woodland, although some of these are badly affected by invasive species such as rhododendron and cherry laurel. Typical plants of native woodland include wood anemone, lesser celandine, wood sorrel and bluebell. Broadleaved woodlands are also rich in bryophytes (mosses and liverworts), lichens and fungi.

Typical woodland mammals include badger, pine marten and deer (both sika and fallow are common). Recent colonists include the bank vole and greater white-toothed shrew. Characteristic birds are blackcap, chiffchaff, blackbird and wren. A recent colonist is the great spotted woodpecker, which is now widespread in the county. Common buzzards have also spread in recent years and frequently nest on the edge of woodlands, while long-eared owls are relatively common in woodlands and forestry. Red kites were reintroduced to Wicklow in 2007 and have dispersed widely since then, often nesting in mature woodlands. Typical invertebrates include the silver-washed fritillary butterfly and a wide variety of moths, beetles and molluscs. Insects of decaying wood are also a critical feature of these habitats.

Farmland

Lowland farmland in Wicklow is largely confined to the fringes of the county between the mountains and the sea, on the western flanks of the hills, and in the areas south and east of Rathdrum. Land use in these areas has changed radically over the centuries but livestock farming is the predominant activity on most farmland today, with a lesser area of tillage. Most lowland areas have a network of hedgerows which are dominated by hawthorn, gorse and blackthorn interspersed with native trees such as ash, oak and Scots pine. These hedges form important corridors providing shelter for animals, like bats and barn owls, that prefer to feed along margins. Many insects, such as bumblebees, moths and hoverflies feed on the more varied wild flowers that grow along the base of hedges. A recent colonist is the ivy bee which is found on hedges mainly in coastal areas. Typical birds of the hedgerows include blackbird, chaffinch and a range of woodland edge species. In the wider farmland landscapes, buzzards and red kites are now widespread, while tillage attracts flocks of crows and gulls.

Lowland wetlands

Wetland sites in the lowlands are generally few and scattered. Some marshes and small areas of fen occur on the margins of the larger reservoirs at Roundwood and north of Blessington. At Kilmacanogue a small marsh and wet woodland dominated by willow and alder is fed by a series of springs and a stream. The vegetation here is predominantly rushes and sedges with meadowsweet, horsetail, purple loosestrife and ragged robin. Pools and ponds are important refuges for aquatic species of still water, such as dragonflies and damselflies. At Arklow, a large marshland area, dominated by common reed, survives and is occasionally flooded by the Avoca River. In the west of the county there are a few small wetland areas on the border with County Kildare. Wintering snipe are found in these areas.

Coastal areas

The coastline of Wicklow is varied, with some rocky headlands at Bray Head, Wicklow Head, Mizen Head and Arklow. In between these outcrops there are important sand dune systems at Buckroney and Brittas Bay, while the long shingle ridge of the Murrough, between Wicklow and Greystones, acts as a barrier between the sea and neighbouring coastal marshes, and hosts a range of unusual species.

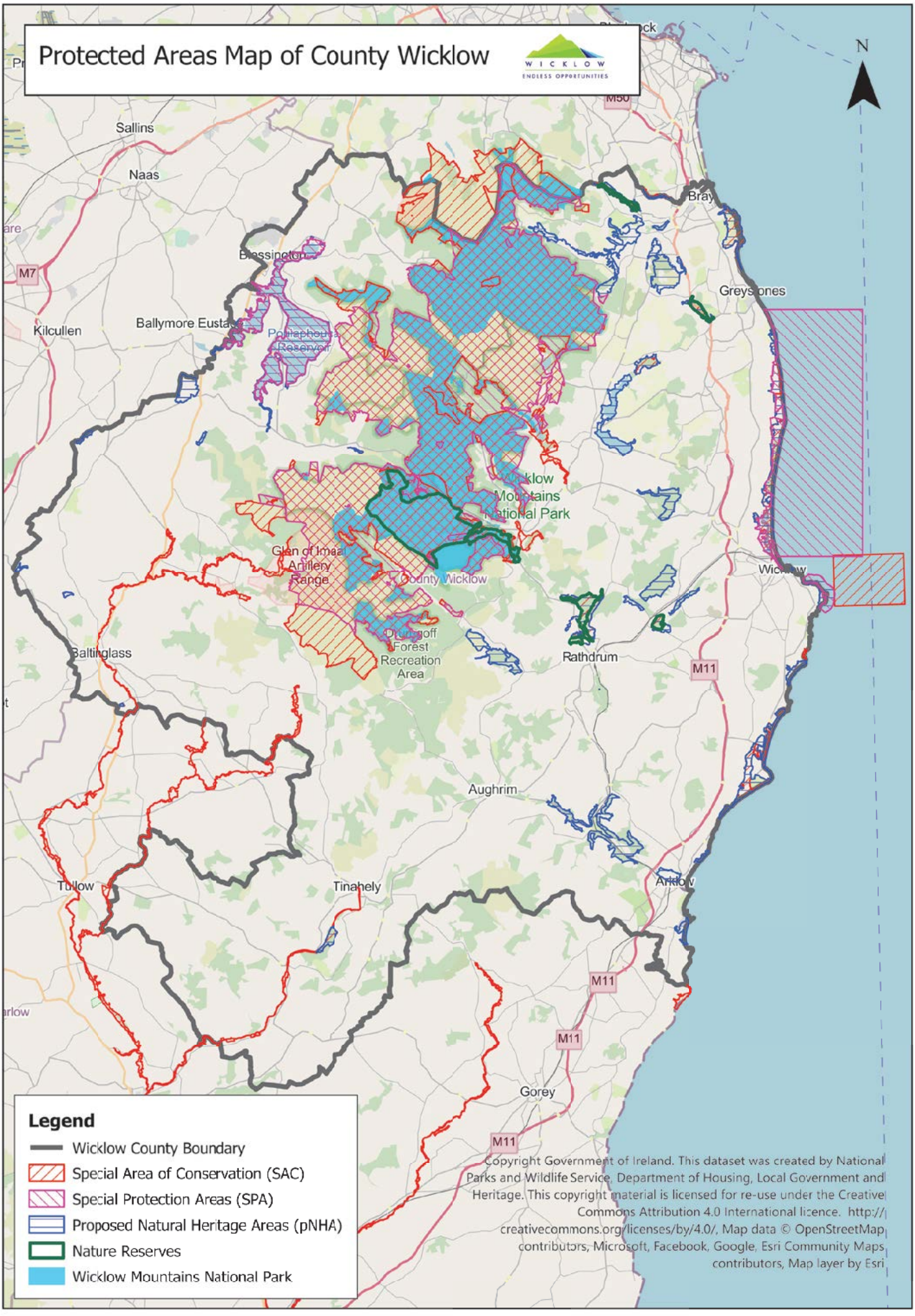
A significant gathering of grey seals occurs at Wicklow Head in the winter months and pupping is regular in the caves and sheltered coves here. The little tern breeding colony at Kilcoole is the largest in Ireland and has been the focus of ongoing protection efforts by Birdwatch Ireland over the last four decades. Other typical breeding birds of the coast include ringed plover and seabirds such as kittiwake, common guillemot and shag. Estuarine habitat is not extensive in the County, but small areas of mudflat and saltmarsh occur in Kilcoole Marshes and at Broadlough between Greystones and Wicklow. Together with the East Coast Nature Reserve at Newcastle, these areas attract flocks of wintering waterbirds such as brent geese, wigeon, shoveler, dunlin and black-tailed godwit.

Marine areas

The inshore areas off County Wicklow are relatively shallow, with depths of around 20 metres being common. A range of typical fish species such as mackerel and pollack live here, and there are occasional sightings of common porpoise, bottlenose dolphin and whales. The offshore banks that parallel the coastline offer alternative habitats and fish nursery areas, as well as protecting the coastline from the increasing frequency of onshore storm surges. Off Wicklow Head, where there are fast tidal streams, an unusual reef has been created by a single species of honeycomb worm which forms piles of hard tubes rising from the seabed. The reefs are colonised by a whole range of other animal species including sponges, bryozoans, mussels, starfish and crabs. Up to 53 marine species have been recorded from these seabed habitats.

Rare species

Despite a gradual disappearance of rare plants and animals in the last century, some species that were considered extinct in the County have been refound in the last twenty years. These include *Saxifraga granulate*, *Lycopodium inundatum* and *Salvia verbenaca*. Rare birds that have disappeared from County Wicklow over the last century include ring ouzel, hen harrier, golden plover and corncrake, but great spotted woodpecker and buzzard have returned to breed here. The spread of development, more intensive land use for farming, more extensive forestry, increased drainage, and higher recreation pressure are among the causes of the decline of rare species. Conversely, some rare bird species that have benefited from protection and habitat management in Wicklow include breeding lapwing and little tern along the coast.


Protected Areas Map of County Wicklow
WICKLOW
ENDLESS OPPORTUNITIES
N
Sallins
Naas
Bray
M7
Kilcullen
Ballymore Eustace
Greystones
Glen of Imaal Artillery Range
Rathdrum
M11
Baltinglass
Aughrim
Tullow
Tinahely
Arklow
Gorey
Legend
Wicklow County Boundary
Special Area of Conservation (SAC)
Special Protection Areas (SPA)
Proposed Natural Heritage Areas (pNHA)
Nature Reserves
Wicklow Mountains National Park
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Threats in Wicklow

"Biodiversity is central to human well-being, but we are destroying it and, therefore, undermining our own future." Sir Robert Watson, Former Chair of the Intergovernmental Panel on Biodiversity and Ecosystem Services speaking to the Citizens Assembly on Biodiversity Loss, 2022

The most recent comprehensive global assessment of biodiversity and ecosystem services is the IPBES Global Assessment Report on Biodiversity and Ecosystem Services[iv], published in May 2019. This report concluded that human actions, including habitat destruction, overexploitation, pollution, and climate change are causing widespread declines in species populations, threatening numerous ecosystems and the services they provide. It further warned that the loss of biodiversity and ecosystem services has significant consequences for human well-being, including food security, water availability, and human health. The report highlighted the urgent need for transformative changes in policies and societal behaviour to address the biodiversity crisis and achieve sustainable development goals.

Ireland has recognised that we are in the midst of a biodiversity emergency but notwithstanding this awareness, the country continues to suffer unprecedented and alarming declines in biodiversity.

- Greater than 50% of native Irish plant species have declined in range and/or abundance since the 1950s (Walker et al., 2023).
- Around 30% of Ireland's wild bee species are threatened with extinction, with over half showing long-term declines (Fitzpatrick et al., 2007).
- 90% of Ireland's EU-protected habitats are in unfavourable conservation status, and over half of protected species are also in unfavourable condition (2019–2024 reporting cycle), (NPWS, 2025).
- Only 52% of Ireland's surface waters are in good or high ecological status (2019–2024), continuing a national decline (EPA, 2025).
- 63% of Ireland's regularly occurring bird species are now of conservation concern, with 26% on the Red List (BoCCI 4, 2021).

iv Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

The global and national threats listed above are all apparent in Wicklow. But the County faces a particular suite of threats which have informed the development of this plan.

The pressures below are not listed in order of severity; and it is noted that many interact and compound one another.

Invasive species
Invasive species remain one of the most severe challenges for Wicklow's ecosystems. In particular, non-native deer, rhododendron (*R. ponticum*), cherry laurel and other non-native flora are now widespread throughout the County. Deer browsing prevents natural regeneration of native woodland and peatlands, while invasive plants displace native flora in Wicklow's forests and uplands. Invasive species in rivers and wetlands, including aquatic plants and animals, also present a significant and growing threat to native biodiversity. Landscape-scale, coordinated management is essential to allow natural habitats to recover.

Unsustainable or inappropriate land management
Habitat loss and degradation occur where land management is overly intensive, and also where ecologically sensitive land receives insufficient, or inappropriate, management. Loss of species-rich grasslands and hedgerows, nutrient and sediment run-off, drainage of wetlands and peat soils, and the prevalence of monoculture conifer plantations, particularly on sensitive ground, all reduce habitat diversity and ecosystem function. Supporting land managers to maintain and restore semi-natural systems, while sustaining viable rural livelihoods, is a key challenge and opportunity.

Water quality decline, altered hydrology, and barriers
Freshwater habitats in Wicklow are affected by nutrient and sediment run-off, peat erosion, forestry operations, and wastewater pressures. Changing temperatures and rainfall patterns compound these impacts. Many waterways also contain barriers such as weirs and culverts, restricting fish passage for salmon, trout, lamprey and other species. Invasive plants and animals also affect riparian and aquatic systems. Restoring natural hydrology and fish passage, and supporting catchment sensitive land management are essential to protect these ecosystems.

Unsustainable recreation and disturbance
Wicklow's natural areas host rapidly increasing visitor numbers, amplified by social media, proximity to Dublin, and new recreation demands. High footfall in sensitive areas can cause erosion, vegetation loss, trampling of ground-nesting birds and other wildlife. Disturbance from the noise and movement of people and equipment, and from off-lead dogs, is increasingly recognised as having a negative impact on wildlife. Unauthorised camping, fires, and littering particularly affect upland and peri-urban nature sites. Without proactive visitor management, recreational pressure risks undermining nature recovery.

⁂ Development pressure and loss of ecological connectivity

Population growth and infrastructure expansion continue to place pressure on Wicklow's natural areas. Development, dispersed rural housing, and road upgrades can fragment habitats and weaken ecological corridors if not sensitively planned. Hard coastal protection works can also affect dune systems and natural coastal processes, reducing resilience where nature-based solutions may be more effective. Integrated land-use planning and early ecological input are key to maintaining ecological connectivity.

⁂ Climate change (a multiplier of existing pressures)

Changing rainfall patterns, more frequent heavy downpours, periods of drought, rising sea levels, and coastal erosion increase stress on ecosystems already under pressure. Upland peatlands and coastal dunes are particularly sensitive. Climate change interacts with other drivers, such as deer pressure, water stress, and habitat fragmentation, and can accelerate biodiversity loss if not addressed through nature-based resilience measures.

⁂ Data gaps, coordination challenges, and limited capacity

Effective biodiversity action depends on good evidence. In many areas of Wicklow, baseline ecological data is incomplete, out-of-date, or inconsistent which limits the ability to prioritise actions and track outcomes. A lack of long-term monitoring data makes it difficult to detect change, evaluate the impact of management actions, or respond adaptively as conditions evolve. A lack of specialist ecological capacity and resourcing across organisations further constrains the pace and scale of evidence-based delivery. Strengthening data collection, improving information-sharing, and ensuring that our approach evolves from lessons learned is essential to ensure interventions are responsive, effective, and accountable.

A cross-cutting challenge is the need to rebuild our connection with nature. Many people remain unaware of the value of biodiversity or of the natural "messiness" that characterises healthy ecosystems. Deepening public understanding and appreciation of nature — and recognising our place within it — is essential to driving behaviour change and long-term support for restoration in Wicklow.

"A cross-cutting challenge is the need to rebuild our connection with nature. Many people remain unaware of the value of biodiversity or of the natural "messiness" that characterises healthy ecosystems. "

What have we done so far in Wicklow

Wicklow County Council has been undertaking work on biodiversity through the Heritage Office for many years, through Projects such as the Swift Project, the Barn Owl Project and the coastal restoration initiatives. These efforts have been augmented since 2019, with the formation of the Climate Action Team, which includes the Biodiversity Officer. The delivery of projects continues alongside ongoing support for community actions, which have been steadily increasing as interest in biodiversity grows. Tidy Towns groups, local biodiversity groups and local environmental organisations are playing a key role in nature protection and enhancement efforts, and they are supported through awareness raising activities, advice, workshops, training, and the creation and dissemination of pollinator and biodiversity resources.

Some examples are outlined below.

1. Clermont Campus Restoration – Nature in a Shared Landscape
Enhancing biodiversity within a historic and working setting.

Clermont Campus sits adjacent to both a Special Area of Conservation and a Special Protection Area on the Murrough and provides an ideal opportunity to demonstrate biodiversity restoration within an accessible site. Habitat enhancement works are focused on strengthening ecological value while respecting the estate's heritage and wider uses.

In 2024, nearly one hectare of invasive cherry laurel was removed, opening space for native woodland regeneration. New woodland is also being created, utilising the NeighbourWood Scheme, which is part of the national forestry programme. This work is complemented by additional biodiversity enhancements such as meadow creation and the installation of bat and bird boxes.

Clermont also hosts biodiversity workshops and field events linked to Wicklow's developing citizen science programme. Working with local libraries and community networks, the programme trains budding naturalists to recognise and record species and contribute to local biodiversity knowledge. Clermont provides a visible example of how restoration, learning and stewardship can align within a shared landscape.

2. Coastal Restoration – Adaptive Management of Protected Landscapes
Balancing ecological restoration with access and recreation.

Wicklow County Council manages lands adjoining, and in some cases overlapping with a number of coastal European sites including the Buckroney–Brittas Dunes and Fen Special Area of Conservation (000729), Bray Head Special Area of Conservation (000714), Wicklow Head Special Protection Area (004127) and Magherabeg Dunes Special Area of Conservation (001766).

At Brittas Bay, extensive restoration has focused on the phased removal of non-native sea buckthorn and other invasive scrub, to allow for recovery of dune heath. This is augmented by trialled phases of mowing and conservation grazing using Droimeann cattle, our native speckled breed. Volunteer engagement and the annual "Behind the Beach" programme have strengthened awareness of biodiversity value, dune ecology and responsible recreation in this highly visited landscape.

Surveys on Council-owned lands at Wicklow Head recorded a peak count of 205 curlew in 2025, representing approximately 0.5% of the national wintering population, highlighting the importance of maintaining coastal grasslands for roosting and foraging. Habitat management at Bray Head is ongoing, with a focus on restoring the site's woodland, grassland and heathland areas. Planning for Magheramore is informed by similar principles, which prioritise restoring ecological function while balancing public access in sensitive coastal environments.

3. Wicklow Barn Owl Project – Monitoring a Species Recovery
Tracking the return of an iconic farmland species.

The recovery of the barn owl in County Wicklow represents one of the county's most positive recent conservation stories. The 2025 county report confirms 22 breeding pairs, with confirmed breeding in ten 10 km squares and probable breeding in three others, which is the highest level recorded in over half a century.

Nesting has been recorded in natural tree cavities as well as purpose-built nest boxes installed across suitable farmland landscapes. In 2025, a total of 36 chicks fledged, reflecting the availability of safe nesting sites and suitable hunting habitat.

Initiated in 2024, in partnership with the National Parks and Wildlife Service, the Wicklow Barn Owl Project combines monitoring, nest-box provision and community engagement. Public talks and pellet workshops in libraries and schools have helped build awareness of farmland biodiversity and the ecological relationships that underpin species recovery.

4. Landscape-Scale Action – Nature-Based Solutions in Practice
Partnering with communities to build ecological resilience.

Restoring biodiversity at landscape scale requires collaboration across catchments and communities. Wicklow County Council leads the SpongeWorks initiative, part of an EU Horizon programme focused on slowing the flow of water through nature-based solutions. The project centres on the Aughrim River system, a landscape that reflects the range of Wicklow's upland, forestry and agricultural habitats, stewarded by rural communities.

Working with the Wicklow Uplands Council, East Wicklow Rivers Trust, and the Local Authority Waters Programme (LAWPRO), the initiative supports wetland assessment, riparian restoration and water management measures that improve water quality, increase resilience to flood and drought, and strengthen ecological connectivity.

Continuing the focus on water, the Ballinglen project involved the removal of a barrier on the Derry Water through the construction of a rock ramp, allowing fish passage and restoring connectivity within the river network. This intervention now forms part of a developing county-wide programme to address barriers to fish movement across multiple catchments, opening up riverine habitat and supporting migratory species.

Complementing this community centred approach, the ReFarm Wicklow pilot supported farmers in creating wildlife ponds and other habitat features on private land. This project incorporates a public–private partnership model and is part of a national initiative to incentivise farm-based nature-positive actions and outcomes. The project demonstrates how productive farmland can also contribute meaningfully to biodiversity and water resilience.

4 Our Plan for Nature

2031 Vision: A County Restoring Nature

It is 2031, and the tide is turning. Across Wicklow, people can see signs of nature recovering, a barn owl overhead, a meadow buzzing with pollinators, a woodland with young native trees regenerating.

The Wicklow Biodiversity Action Plan has become a living document, guiding practical action, informing land-use decisions, and connecting people with the nature around them. Through new partnerships and better supports, community groups, farmers, and local schools are managing land for biodiversity, creating ponds, restoring hedgerows, and monitoring local wildlife.

More of Wicklow's most sensitive sites now have management plans in place, and actions are being implemented. Wetlands are being restored, invasive species controlled, and deer impacts reduced through cooperative strategies. The Council has increased its internal capacity and works more closely with national agencies and local stakeholders.

People's expectations have changed. Not everything is neat and tidy anymore, and almost everybody agrees that it looks fine. Road verges, housing estates, and public lands are being managed with nature in mind, and a shared understanding has taken root: that we share this space with nature and we must behave accordingly.

Aim

The aim of this Plan is to halt biodiversity loss in County Wicklow by 2030, in line with EU and national policy. We will achieve this by protecting, restoring, and strengthening the resilience of our ecological network through evidence-based, collaborative, and impactful action.

Objectives

"To protect ourselves, we must protect nature"

Dr Aoibhinn Ní Shúilleabháin
Chair of the Citizens' Assembly on Biodiversity Loss in Ireland

The Objectives which have informed the development of this plan and the actions therein are as follows:

Objective 1
Embed Biodiversity in Local Authority Planning, Management and Practice

Integrate biodiversity into Wicklow County Council's policies, planning, operations and service delivery by building internal capacity, preparing for future obligations, and leading by example in the implementation of best practice.

Objective 2
Protect and Enhance Biodiversity through Science-based, Community-led Local Action

Support communities and local initiatives to protect and enhance biodiversity by enabling learning, collaboration, and practical conservation efforts across towns, villages, and the wider countryside.

Objective 3
Restore and Connect Biodiversity across Wicklow's Landscapes

Implement and support habitat restoration, creation, and management measures that improve ecosystem resilience and connectivity, particularly in urban, upland, and freshwater environments.

Objective 4
Collaborate at Scale to Address Shared Biodiversity Challenges

Work in partnership across sectors and landscapes to tackle shared challenges – including deer management, other invasive species, upland restoration, outdoor recreation impacts, and river connectivity – through joined-up and coordinated approaches.

Objective 5
Strengthen the Evidence Base to Guide Action and Track Progress

Improve biodiversity data collection, monitoring, and evaluation systems to support evidence-based decision-making, identify priorities, and adaptively implement the Biodiversity Action Plan.

Actions 2026–2031

Mainstreaming biodiversity into decision making, and leading by example through implementation of best practice	Measurement Indicators	Lead and partners	Time Short(S)/ Medium(M)/ Long(L)
Establish a Biodiversity Working Group (BWG) with representatives from key sectors and community groups. To evolve into a Biodiversity Steering Group on adoption of the plan.	BWG group established No. meetings held	Biodiversity Officer	Completed
Advance county-wide mapping of Wicklow's ecological networks and biodiversity features of particular concern or interest, for internal and external use and to support existing and future County Development Plan policies and objectives.	County Biodiversity Areas (CBA) map layer Other maps as appropriate	Biodiversity Officer + WCC GIS Heritage Council NPWS External experts	S/M
Use maps to showcase work undertaken by WCC and partners, and to highlight areas where ecological connectivity could be further enhanced.	Map of WCC-owned land MD pollinator friendly sites and tree maps	Biodiversity Officer + WCC GIS Municipals Districts (MDs) External consultants	M
Ensure that any relevant actions with this plan, or results of these actions, receive commensurate policy provision in future iterations of the County Development Plan (CDP) for Wicklow.	Next iteration of CDP	Biodiversity Officer + WCC Forward Planning WCC GIS	M
Review existing policies, including the WCC Glyphosate Policy and Tree Policy, and update where necessary.	Reviewed Tree and Glyphosate policy	Environment section + Municipals Districts (MDs) External Consultants	S
Support relevant WCC sections by providing advice and guidance on minimising negative impacts on biodiversity, and identifying opportunities for biodiversity enhancement in Council works.	List/library of guidance materials shared	Biodiversity Officer + Municipals Districts (MDs)Roads section Active travel section Housing section Planning section Wicklow Partnership (sports, recreation)	M
Provide biodiversity training for all WCC staff, and for external contractors through the tender process where feasible, to ensure compliance with statutory obligations and the application of best practices.	LGMA/CARO staff training complete	Heritage Council Biodiversity Officer + External experts All WCC staff External contractors	M

+ denotes internal ecology team, not yet in place in Wicklow County Council but required for the full implementation of this Biodiversity Action Plan

Mainstreaming biodiversity into decision making, and leading by example through implementation of best practice	Measurement Indicators	Lead and partners	Time Short(S)/ Medium(M)/ Long(L)
Plan for future national and EU biodiversity policy obligations by identifying suitable areas for restoration and biodiversity enhancement on WCC lands, and by ensuring readiness for the implementation of National Nature Restoration Plan (NNRP).	Pending NNRP Policy/plan for restoration on WCC lands developed	Biodiversity Officer + Environment section WCC Senior Management team (SMT) NPWS External experts & consultants	M/L
WCC to become a partner to the All-Ireland Pollinator Plan 2026 and support the implementation of actions across all sectors.	Signed up to the 2026 AIPP WCC pollinator areas mapped	Biodiversity Officer + WCC Chief Executive (CE) Elected Members MDs	M
Monitor and respond to the development of national policies with implications for biodiversity, including those relating to commercial forestry, renewable energy, and other land-use sectors.	Dissemination of national policy developments internally	Biodiversity Officer + WCC Climate Action Team (CAT) Environment Section External agencies	S/M/L
Support the integration of ecological expertise and best practice into statutory planning and development processes by providing accessible guidance, capacity building, and specialist input to assist relevant departments in making biodiversity-informed decisions.	No. guidance notes/internal reports Planning ecologist in place Ecology team in place	CE/SMT Elected Members Biodiversity Officer + All relevant internal WCC sections	M/L
Ensure adequate resources for ecological input into planning and policy processes, including internal ecological reporting, independent review of statutory assessments (EIA, SEA, AA), and promote the use of stand-alone Ecological Impact Assessments (EcIAs), where appropriate.	No. of EcAIs produced for internal use Planning ecologist in place Ecology team in place	CE/SMT Elected Members Biodiversity Officer + All relevant internal WCC sections	M/L
Ensure WCC has adequate in-house ecological expertise to implement this and future biodiversity plans by establishing an ecology team and a dedicated parks department, in line with evolving national legislation and policy obligations.	Number of ecologists employed Parks department established	CE/SMT Elected Members	M/L
Ensure sufficient resources are available within WCC to meet biodiversity needs by securing public funding, developing new funding models, and leveraging grants and private sector partnerships, including for large-scale and community-led restoration projects.	n/a	CE/SMT Elected Members Central Govt Private sector NPWS Biodiversity Officer +	L

Citizen Science, Community Conservation and Capacity Building	Measurement Indicators	Lead and partners	Time S/M/L
Develop a Biodiversity Ambassadors programme to raise public awareness of the ecological value and sensitivity of amenity areas.	Programme rolled out at least one site	Biodiversity Officer External experts MDs	S
Roll out a county-wide biodiversity citizen science monitoring and training programme.	Number of training workshops held	Biodiversity Officer External experts NBDC LAWPRO County Wicklow Partnership	S/M
Provide training, guidance, and capacity-building support to community groups to enhance biodiversity at the local level, and facilitate the formation of new biodiversity groups in response to interest.	Number of training and awareness raising events	Biodiversity Officer CAT External experts NBDC LAWPRO Library Services Youth Sector Workers	S/M/L (ongoing)
Support interested community groups in tree and hedgerow seed collection initiatives, and in the development of a network of tree and hedgerow nurseries.	Initiatives supported	Biodiversity Officer EAO Community Groups	M
Deliver public engagement campaigns, events, and workshops that inspire people to reconnect with nature, take positive action for biodiversity, and act as responsible stewards of Wicklow's natural heritage.	No of campaigns, events, workshops	Biodiversity Officer EAO Heritage Officer External experts LAWPRO	S/M/L (ongoing)
Deliver biodiversity communications, including updates, public guidance, and accessible information, and explore new formats to raise awareness and deepen public engagement.	No communications delivered	Biodiversity Officer (plus internal ecology team) CAT Comms team WCC GIS External experts Town Teams PPN Library service	S/M/L
Support creative projects that explore the relationship between people and nature, such as nature-inspired murals, performances, or other artistic expressions.	No projects supported	Biodiversity Officer EAO Arts Officer External experts	S

Citizen Science, Community Conservation and Capacity Building	Measurement Indicators	Lead and partners	Time S/M/L
Develop practical ways to support information sharing, networking and collaboration among individuals and community groups involved in biodiversity projects and activities in Wicklow.	Proposed mechanism documented	Biodiversity Officer Environmental Awareness Officer (EAO) Heritage Officer External experts LAWPRO	S/M
Support schools in promoting biodiversity awareness and action through participation in existing programmes and by supporting practical learning and locally relevant projects.	No. of schools engaged	EAO CAT Green School Heritage in Schools	S/M/L (ongoing)
Support farmers and landowners in implementing biodiversity enhancement and habitat restoration measures on private land through technical guidance and training, and by facilitating access to funding opportunities.	No. of farm visits, training events No. of farms on which measures implemented	Biodiversity Officer WCC Agricultural Inspector Teagasc NPWS LAWPRO ACRES/ASAP advisers WWEN Small business/Chambers Ireland Dept. Agriculture Food and Marine (DAFM) External experts	S/M
Investigate the potential to establish a training programme in applied ecology and land management, based in Wicklow and accredited through collaboration with a third-level institution.	Number of meetings held with stakeholders	Biodiversity Officer External experts Academics	M/L

Protect, Restore and Build Resilience	Measurement Indicators	Lead and partners	Time S/M/L
Continue implementing targeted biodiversity restoration and management measures at WCC sites with established ecological management plans, such as key coastal locations under active restoration.	As per within plan monitoring	Biodiversity Officer MDs NPWS Community groups External consultants	S/M
Identify WCC-owned lands countywide with known or potential biodiversity value that require further ecological assessment, and develop site-specific strategies to guide future restoration and conservation actions.	List/map of sites No. strategies developed	Biodiversity Officer WCC GIS team Fire Service MDs NPWS An Taisce Community groups External consultants	M/L
Promote urban biodiversity and ecological connectivity through demonstration projects and green infrastructure measures, including wildlife-friendly lighting, nature-based SuDS, green corridors, and climate-resilient habitats.	No. of demonstration projects complete	Biodiversity Officer MDs CAT All relevant WCC sections External consultants Chambers Ireland	S/M
Identify WCC-owned lands in urban and semi-urban areas with potential for habitat creation — particularly woodland and wetland — and support the implementation of biodiversity enhancement measures on these sites.	No. of projects complete Ha of habitat created	Biodiversity Officer MDs CAT External consultants	S/M
Support LAWPRO, Inland Fisheries, and other stakeholders in activities aimed at improving water quality and implementing the 3rd (and 4th) cycle of the River Basin Management Plan.	Support as needed	Biodiversity Officer WCC Agricultural inspector LAWPRO Office of Public Works (OPW) EWRT	S/M/L
Pilot conservation grazing on selected WCC lands to enhance habitat quality and support traditional land management, with a view to establishing a wider programme incorporating biodiversity and social farming objectives.	Pilot projects rolled out Wider project feasibility assessed	Biodiversity Officer MDs External experts Old Irish Goat Society DRL CoCo Fingal CoCo Social Farming Ireland	S/M

Protect, Restore and Build Resilience	Measurement Indicators	Lead and partners	Time S/M/L
Explore innovative nature-based solutions to address biodiversity loss and build county-wide resilience.	Projects investigated	Biodiversity Officer CAT MDs NPWS EWRT External experts LAWPRO OPW	M/L
Support projects that enhance marine ecosystems through the restoration of oyster reefs and other marine habitats in suitable areas.	Projects supported/ partnered on	External project partners Biodiversity Officer CAT NPWS LAWPRO OPW External experts	M/L
Support existing and future EIP, LIFE, and other EU-funded projects focused on ecosystem restoration as a delivery mechanism for WCC objectives.	Projects partnered on	External project partners Biodiversity Officer CAT NPWS DAFM External experts	S/M

Collaborate at Landscape Scale for Impact	Measurement Indicators	Lead and partners	Time S/M/L
Support projects focused on the restoration of river corridors and natural water retention features to enhance biodiversity, reduce flood risk, and strengthen upland–coastal connectivity.	Projects supported	External project partners Biodiversity Officer CAT Wicklow Uplands Council (WUC) EWRT LAWPRO	S/M
Support East Wicklow Rivers Trust, Inland Fisheries, LAWPRO, and other project partners in delivering a barrier removal programme to improve fish passage in Wicklow rivers.	Barriers removed Km habitat opened up	External project partners Biodiversity Officer CAT Inland Fisheries Ireland (IFI) EWRT LAWPRO	S/M
Support collaborative efforts to identify and advance upland restoration opportunities, recognising the unique biodiversity value of these areas and their potential co-benefits for water quality, climate resilience, and sustainable local economies.	Project proposals developed Funding applications submitted	WUC NPWS Biodiversity Officer CAT	M/L

Collaborate at Landscape Scale for Impact	Measurement Indicators	Lead and partners	Time S/M/L
Work with Wicklow Naturally and other partners to promote venison as a sustainable food source, and raise public awareness of the need to manage deer populations in Wicklow.	Campaigns or events delivered	CAT Deer Management Groups WUCl Biodiversity Officer	S/M
Review, strengthen, and further develop evidence-based measures to address the impacts of outdoor recreation on biodiversity, ensuring that access and amenity use are balanced with the protection of nature.	Participation in no events Strategies reviewed Strategies developed	Biodiversity Officer Wicklow Outdoor Recreation Committee (WROC) Environment Section Wicklow Tourism Leave No Trace External experts NTA	S/M/L
In partnership with NPWS, WUC, and others, establish a Dark Sky Reserve in Wicklow Mountains National Park (WMNP) and use it as a platform to raise awareness of the need for dark spaces and to implement light pollution reduction initiatives in selected communities.	Workshops held Reserve or community certified	CAT Biodiversity Officer NPWS WMNP WUC Dark Skies Ireland Chambers Ireland	M/L
Support and participate in invasive species control initiatives, in collaboration with relevant agencies, targeting invasive plants, mammals, aquatic species, and invertebrates.	Programmes participated in	CAT MDs NPWS NBDC IFI Rivers Trusts Coillte LAWPRO OPW Adjacent Local Authorities	S/M/L
Develop mechanisms to improve communication, cooperation, and resource-sharing with national agencies and other state bodies on key issues impacting biodiversity, including forestry, water quality, recreation, and agriculture.	n/a	NPWS, Teagasc, Coillte, Forest Service, IFI, LAWPRO, OPW, Dept of Housing, Local Government and Heritage, Dept of Agriculture, Food and the Marine, Dept. of Climate Energy and the Environment	S/M/L

Build Evidence Base through Research and Monitoring	Measurement Indicators	Lead and partners	Time S/M/L
Continue to support existing species- and habitat-specific conservation projects, and work with partners to develop and implement new initiatives that align with identified priorities.	As per project	NPWS Coillte Bat Conservation Ireland Bird Watch Ireland External Researchers WUC EWRT Biodiversity Officer Other external partners	S/M/L
Encourage and facilitate the collection of baseline and ongoing monitoring data on priority species and habitats in the county, particularly those specified in Annexes II & IV of the Habitats Directive.	N/A (captured in actions 45-47)	NPWS Coillte Bat Conservation Ireland Bird Watch Ireland External Researchers WUC EWRT Biodiversity Officer Other external partners	S/M/L
Undertake an audit of existing biodiversity monitoring and research activity in County Wicklow, including species and habitat coverage, methodologies, partnerships, and data availability, to identify gaps and priorities for future work.	Audit report	NPWS Coillte Bat Conservation Ireland Bird Watch Ireland External Researchers WUC EWRT Biodiversity Officer Other external partners	M
Review and improve systems for biodiversity data management within WCC, and develop protocols to support the sharing of ecological data with key external partners, including the NBDC and NPWS.	System in place with SOPs	Biodiversity Officer WCC GIS NPWS NBDC Heritage Council	M
Investigate options for assessing the impact of conservation actions in Wicklow, and for monitoring BAP implementation.	Review of options conducted	Biodiversity Officer WCC GIS NPWS NBDC Heritage Council	m M

Build Evidence Base through Research and Monitoring	Measurement Indicators	Lead and partners	Time S/M/L
Pilot ecosystem accounting approaches on WCC Lands and assess feasibility of undertaking a comprehensive Natural Capital Assessment for County Wicklow.	Pilot undertaken	Natural Capital Ireland Trinity College Dublin (TCD) University College Dublin (UCD) Biodiversity Officer	M
Compile and promote information on the biodiversity value of historic demesnes and graveyards.	Sites surveyed and documented	Biodiversity Officer Heritage Officer Community archaeologist Community groups Wildlife Estates Label	M
Support feasibility studies for circular economy projects which may have biodiversity benefits (e.g. wild graveyards, uses of sheep wool, use of habitat management by-products.)	No. feasibility studies	WUC Other external partners NPWS	M

5 Delivering the Plan

DEVELOPING THE BIODIVERSITY PLAN – THE PROCESS

The plan reflects local knowledge, on-the-ground experience, and the diversity of perspectives needed to deliver effective outcomes for biodiversity.

To support the development of this Biodiversity Action Plan, Wicklow County Council established the Wicklow Biodiversity Working Group, as a sub-group under the umbrella of the Wicklow Heritage Forum. This non-statutory advisory group was convened to guide the planning process in collaboration with the Council's Biodiversity Officer.

Membership was drawn from a broad cross-section of organisations and sectors with a role in nature conservation and land management. These included; BirdWatch Ireland, Coillte, the East Wicklow Rivers Trust, Inland Fisheries Ireland, the Irish Farmers' Association, Mountaineering Ireland, the National Parks and Wildlife Service, the Public Participation Network (environmental and community pillars), Teagasc, the West Wicklow Environmental Network, and the Wicklow Uplands Council. A full list of members is provided in the online Appendix found on the Biodiversity Wicklow webpage **wicklow.ie/Living/Your-Council/Climate-Action-and-Biodiversity/Biodiversity**

The group contributed to identifying priorities, shaping objectives, and advising on practical and policy-based actions. It also helped to ensure that the plan reflects local knowledge, on-the-ground experience, and the diversity of perspectives needed to deliver effective outcomes for biodiversity.

Consultation

A pre-draft public consultation process was undertaken from 23rd September to 4th November 2024 to inform the development of the Plan. This early engagement phase invited contributions from residents, community groups, landowners, environmental organisations, and other stakeholders to help shape the priorities and direction of the plan.

As part of this process, a series of in-person drop-in clinics were held at public libraries across the county throughout October of 2024, providing opportunities for face-to-face dialogue and idea-sharing. These clinics were supplemented by an online consultation survey, accessible through the Council's website, and promoted through press, email networks, and social media. Respondents were invited to share their views on local biodiversity priorities, key pressures, and the kinds of actions they would like to see Wicklow County Council take, in collaboration with communities and partners.

Feedback from this pre-draft stage played a key role in identifying themes and shaping the plan's vision, objectives, and actions. In addition to public engagement, internal consultation was carried out with all relevant sections of Wicklow County Council, ensuring that the plan reflects cross-departmental insights and can be embedded effectively across Council operations. A full summary of consultation feedback is available as a separate Chief Executive's report.

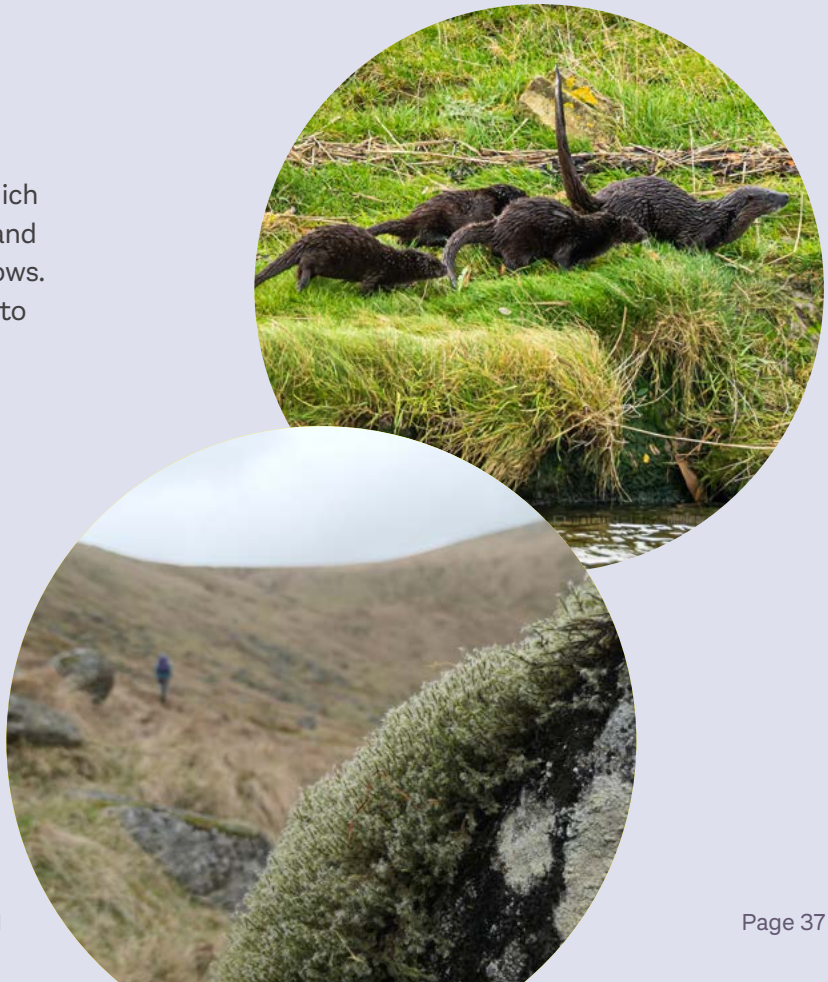
Putting the Biodiversity Plan into Action

Following adoption of this plan, the current Biodiversity Working Group will transition to a Biodiversity Steering Group to guide and support implementation. The Biodiversity Officer will coordinate delivery, working in close collaboration with relevant sections across Wicklow County Council, including but not limited to the Climate Action Team, the Heritage Team, and the Environment, Planning, Community, and Infrastructure sections.

Implementation will be supported through the development of an annual work programme which will prioritise actions, identify responsibilities, and outline resourcing requirements as funding allows. Working groups may be convened, as required, to progress specific themes or technical areas.

Progress on the implementation of the plan will be monitored and reported annually, including updates on key actions, emerging priorities and lessons learned. A summary report will be presented to the Strategic Policy Committees and the full Council, and shared with partners and stakeholders where appropriate. This process will also help identify emerging opportunities and resource needs, and ensure the plan remains adaptive and responsive.

Delivery of the plan will require a whole-Council approach and strong partnerships. Wicklow County Council will continue to collaborate with national agencies, community organisations, land managers, and local groups, and will seek continued support through the Heritage Council, the Local Biodiversity Action Fund, and other relevant funding streams.



Looking Forward, a Vision for 2050

By 2050, biodiversity in County Wicklow is thriving once more. Nature is no longer in retreat but visibly recovering across the county's uplands, lowlands, rivers, and coast. Woodland, wetland, and grassland habitats are being actively restored. Healthy ecosystems support a rich variety of species, including some that had long been absent or in steep decline. Nature is better connected across the landscape, and land use decisions take biodiversity fully into account.

Biodiversity is embedded in how we plan, build, farm, and live. Local communities, farmers, and landowners are trusted and well-supported partners in protecting the natural heritage of Wicklow. Deer populations and other invasive species are under control, and adaptive management is the norm rather than the exception. Schools, businesses, and public bodies see biodiversity as part of their remit and take visible action to care for the land around them.

Wicklow County Council is a leader in local biodiversity delivery, with sustained funding, capacity, and collaboration driving progress year-on-year. The county's nature is not only more resilient to climate change; it is part of the solution.

References

Environmental Protection Agency (EPA) (2025) *Water Quality in Ireland 2019–2024*. Wexford: Environmental Protection Agency.

European Commission (2020) *EU Biodiversity Strategy for 2030: Bringing Nature Back into Our Lives*. Brussels: European Commission.

European Commission (2021) *EU Soil Strategy for 2030: Reaping the Benefits of Healthy Soils for People, Food, Nature and Climate*. Brussels: European Commission.

European Commission (2023) *A Sustainable and Competitive Agri-Food Sector: Farm to Fork Strategy*. Brussels: European Commission.

European Parliament and Council (2024) Regulation (EU) 2024/1991 on nature restoration. Official Journal of the European Union.

Fitzpatrick, Ú., Murray, T.E., Byrne, A., Paxton, R.J. and Brown, M.J.F. (2007) R*egional Red List of Irish Bees*. Dublin: National Parks and Wildlife Service.

Gilbert, G., Stanbury, A., Lewis, L., et al. (2021) *Birds of Conservation Concern in Ireland 2020–2026*. Irish Birds, 9, pp. 523–544.

Government of Ireland (2022) *River Basin Management Plan for Ireland 2022–2027*. Dublin: Department of Housing, Local Government and Heritage.

Government of Ireland (2023) I*reland's Fourth National Biodiversity Action Plan 2023–2030*. Dublin: Department of Housing, Local Government and Heritage.

Government of Ireland (2024) *Climate Action Plan 2024.* Dublin: Department of the Environment, Climate and Communications.

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) (2019) *Global Assessment Report on Biodiversity and Ecosystem Services*. Brondizio, E.S., Settele, J., Díaz, S. and Ngo, H.T. (eds.). Bonn: IPBES Secretariat.

National Parks and Wildlife Service (NPWS) (2025) *The Status of EU Protected Habitats and Species in Ireland: Summary Report* (Article 17 Reporting Period 2019–2024). Dublin: Department of Housing, Local Government and Heritage.

Nairn, R. (2001) *Discovering Wild Wicklow*. Dublin: Town House and Country House.

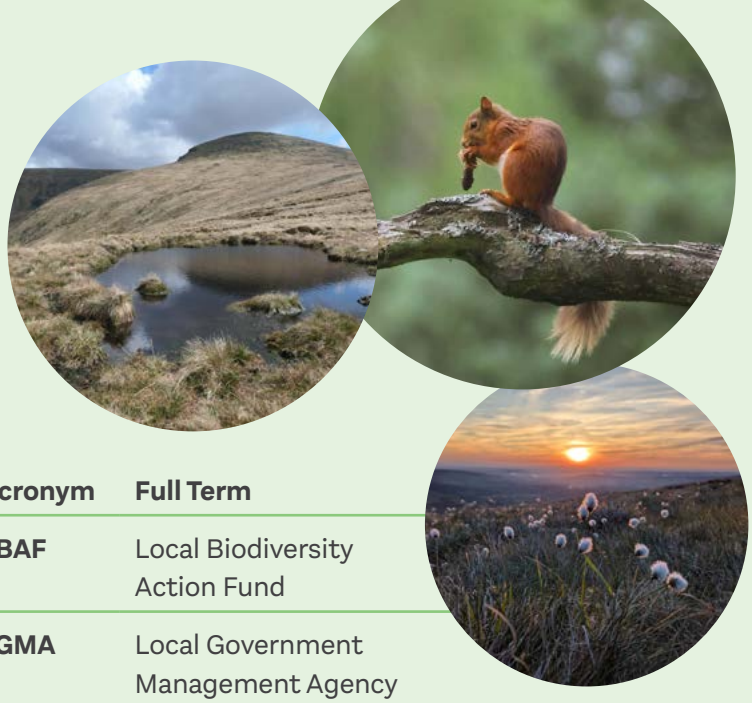
Nairn, R. and Crowley, M. (1998) *Wild Wicklow: Nature in the Garden of Ireland*. Dublin: Town House and Country House.

Perrin, P.M., Martin, J.R., Barron, S.J., O'Neill, F.H., McNutt, K.E. and Delaney, A. (2008) *National Survey of Native Woodlands 2003–2008*. Irish Wildlife Manuals No. 33. Dublin: National Parks and Wildlife Service.

Walker, K.J., Preston, C.D., Duke, S. and Vincent, P. (2023) *Plant Atlas 2020: Mapping Changes in the Distribution of the British and Irish Flora*. Botanical Society of Britain and Ireland.

Wildlife (Amendment) Act 2023. Dublin: Government of Ireland.

Appendices



Appendix A
Table of Acronyms

Acronym	Full Term
AA	Appropriate Assessment
AIPP	All-Ireland Pollinator Plan
ASAP	Agricultural Sustainability Support and Advisory Programme
BAP	Biodiversity Action Plan
BWI	BirdWatch Ireland
BWG	Biodiversity Working Group
CARO	Climate Action Regional Office
CAT	Climate Action Team
CBA	County Biodiversity Areas
CDP	County Development Plan
CE	Chief Executive
DAFM	Department of Agriculture, Food and the Marine
DHLGH	Department of Housing, Local Government and Heritage
EAO	Environmental Awareness Officer
EcIA	Ecological Impact Assessment
EIA	Environmental Impact Assessment
EIP	European Innovation Partnership
EPA	Environmental Protection Agency
EWRT	East Wicklow Rivers Trust
IFI	Inland Fisheries Ireland
IFA	Irish Farmers' Association
LA	Local Authority
LABAP	Local Authority Biodiversity Action Plan
LAWPRO	Local Authority Waters Programme
LBAF	Local Biodiversity Action Fund
LGMA	Local Government Management Agency
LIFE	EU LIFE Programme
MD	Municipal District
MI	Mountaineering Ireland
NBDC	National Biodiversity Data Centre
NNRP	National Nature Restoration Plan
NPWS	National Parks and Wildlife Service
NRL	Nature Restoration Law
OPW	Office of Public Works
PPN	Public Participation Network
pNHA	Proposed Natural Heritage Area
SAAO	Special Amenity Area Order
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SMT	Senior Management Team
SPA	Special Protection Area
TCD	Trinity College Dublin
TPO	Tree Preservation Order
UCD	University College Dublin
WCC	Wicklow County Council
WMNP	Wicklow Mountains National Park
WWEN	West Wicklow Environmental Network
WUC	Wicklow Uplands Council

Appendix B
Protected Areas of Wicklow

Site name	pNHA	SAC	SPA
Ballyman Glen	*	*	
Bray Head	*	*	
Buckroney-Brittas Dunes & Fen	*	*	
Carriggower Bog	*	*	
Deputy's Pass Nature Reserve	*		
Glen of the Downs	*	*	
Carriggower Bog	*	*	
Holdenstown Bog	*	*	
Knocksink Wood	*	*	
Magherabeg Dunes	*	*	
The Murrough Wetlands	*	*	*
Slaney River Valley	*		
Vale of Clara (Rathdrum Woo	*	*	
Wicklow Mountains	*	*	*
Wicklow Reef	*		
Poulaphouca Reservoir	*	*	*
Wicklow Head	*	*	*
Wicklow Town Sites	*		
Great Sugar Loaf	*		
Hollywood Glen	*		
Dunlavin Marshes	*		
Powerscourt Woodland	*		

Site name	pNHA	SAC	SPA
Lowtown Fen	*		
Newtown Marshes	*		
Glenealy Woods	*		
Glencree Valley	*		
Dargle River Valley	*		
Powerscourt Waterfall	*		
Vartry Reservoir	*		
Arklow Town Marsh	*		
Ballycore Rath •	*		
Ballinagee Wood	*		
Ballinacor Wood	*		
Avoca River Valley	*		
Arklow Sand Dunes	*		
Arklow Rock - Askintinney	*		
Kilmacanoge Marsh	*		
Devil's Glen	*		
Avondale	*		
Tomnafinnoge Wood	*		

Appendix C
List Biodiversity Working Group Members

Please visit **wicklow.ie/Living/Your-Council/Climate-Action-and-Biodiversity/Biodiversity** for the full list

"Biodiversity is central to human well-being, but we are destroying it and, therefore, undermining **our own future**."

Sir Robert Watson, Former Chair of the Intergovernmental Panel on Biodiversity and Ecosystem Services speaking to the Citizens Assembly on Biodiversity Loss, 2022

Comhairle Contae Chill Mhantáin
Wicklow County Council

Ceangal
Clár den Chomhairle Oidhreachta
A Heritage Council programme

County Wicklow
Biodiversity Action Plan
2026–2031

Photography

Cover Red Grouse *Lagopus lagopus* Wicklow J.D. Murphy

Page 2 Artist's impression

Page 5 Heartsease *Viola tricolor* Brittas Bay H. O'Kelly

Page 7 Small Tortoiseshell *Aglais urticae* J.D. Murphy

Page 8 Pine Marten *Martes Martes* J. Haughton

Page 10 Spring Squill *Scilla verna* Wicklow Head H. O'Kelly

Page 10 Common Carder Bee *Bombus pascuorum* Clermont Campus M. Kelly

Page 10 Leaky dam at Granamore, Wicklow Mountains H. Lawless

Page 14 Cloghoge Brook, Tonduff H. O'Kelly

Page 14 Wicklow Head H. O'Kelly

Page 14 Common Lizard *Zootoca vivipara* Wicklow J. Sexton

Page 15 Broad Lough O. O'Sullivan

Page 17 Meadow Brown *Maniola jurtina* and White-tailed Bumblebee complex *Bombus lucorum* agg. on red clover *Trifolium pratens* O. O'Sullivan

Page 18 Great Cormorant *Phalacrocorax carbo* J.D. Murphy

Page 20 Golden Eagle *Aquila chrysaetos* M. Pearson

Page 21 Brown Long-eared Bat *Plecotus auritus* F. Wilson

Page 21 Grey Seal *Halichoerus grypus* J.D. Murphy

Page 22 Common Frog *Rana temporaria* J. D. Murphy

Page 22 Common Darter *Sympetrum striolatum* J.D. Murphy

Page 22 Common Hawthorn *Crataegus monogyna* Wicklow J. Casey

Page 22 Pygmy Shrew *Sorex minutus* O. O'Sullivan

Page 23 Brittas Bay H. O'Kelly

Page 23 Eurasian Jay *Garrulus glandarius* J. Haughton

Page 23 Barn owl pellet workshop M. Kelly

Page 24 Rock ramp at Ballinglen Bridge F. Wilson

Page 24 Barn Owl juvenile *Tyto alba* O. O'Sullivan

Page 25 Kingfisher *Alcedo atthis* Avonmore river J. Haughton

Page 25 Tree-planting in Glendalough valley, Wicklow Mountains National Park H. Lawless

Page 26 Beautiful Demoiselle *Calopteryx virgo* M. Pearson

Page 26 Sea snail J.D. Murphy

Page 26 Volunteers installing coir dams at Barnacullian, Wicklow Mountains National Park H. Lawless

Page 30 Whooper Swans *Cygnus cygnus* Kilcoole O. O'Sullivan

Page 35 Goosander *Mergus merganser* R. Avonmore M. Pearson

Page 37 Otter *Lutra lutra* J.D. Murphy

Page 37 Woolly fringe-moss *Racomitrium lanuginosum*, Ow Valley, Wicklow Mountains H. Lawless

Page 38 Curlew *Numenius Arquata* M. Pearson

Page 40 Bog pool below Lugnaquilla, Wicklow Mountains H. Lawless

Page 40 Red squirrel *Sciurus vulgaris* J. Haughton

Page 40 Hare's-tail Cottongrass *Eriophorum vaginatum* on Ballineddan, Wicklow Mountains H. Lawless

Page 43 Barn owl pellet workshop M. Kelly