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County Longford Biodiversity Action Plan 2025-2030

Working in partnership

An Chomhairle Oidhreachta
The Heritage Council

Forewords

Chief Executive Longford County Council

The Longford Biodiversity Action Plan represents a fundamental pillar of our corporate planning framework, directly supporting our statutory obligations under climate action legislation whilst advancing our commitment to sustainable development across the county. This plan aligns seamlessly with Longford County Council's Corporate Plan 2024-2029, particularly our strategic themes of environmental stewardship and community resilience. It provides the operational framework through which we will discharge our responsibilities under the Climate Action and Low Carbon Development Act 2015 (as amended) and contribute meaningfully to Ireland's National Biodiversity Strategy.

Biodiversity loss and climate change operate as twin crises, each accelerating the other in a destructive feedback loop. Our response must be equally interconnected. The ecosystems we protect today will serve as carbon sinks tomorrow. The green corridors we establish will provide climate adaptation benefits whilst supporting species migration. The sustainable drainage systems we implement will manage flood risk whilst creating habitat networks.

From an operational perspective, this plan establishes clear performance indicators and reporting mechanisms that integrate with our existing environmental management systems. Our biodiversity officer programme, supported by the Heritage Council, provides the technical expertise necessary to deliver evidence-based interventions across our functional areas—from roads maintenance to planning decisions.

This plan also addresses our obligations under the EU Biodiversity Strategy for 2030 and associated legislation, including the Nature Restoration Law. Compliance requires measurable improvements in habitat quality and species abundance across defined timeframes. Our monitoring protocols will generate the data necessary to demonstrate progress and adapt strategies based on outcomes.

The integration of biodiversity considerations into all council functions represents a maturation of environmental governance at local level.

Success depends upon partnership. Our collaboration with state agencies, environmental organisations, farming communities, and business networks creates the conditions for landscape-scale conservation that transcends administrative boundaries. By engaging communities and other stakeholders, we will seek to maximise interest in Longford's biodiversity, helping to ensure long term and sustained gains for our ecosystems and our species.

Longford County Council commits to implementing this plan with the rigour and determination that the biodiversity crisis demands, whilst recognising that our actions today will define the environmental legacy we leave for future generations.

Chief Executive of Longford County Council

Paddy Mahon

Cathaoirleach Longford County Council

The natural heritage of County Longford is a source of wellbeing and pride for the people of the county whilst also being an attraction for visitors to the area. A variety of habitats exist in Longford, including peatlands, river, lakes, farmlands, and woodlands and these are home to a diverse collection of plants, animals, fungi, and lichens.

The Dáil's declaration of a climate and biodiversity emergency in 2019 acknowledged what many already knew: our natural world is contracting at an alarming pace. The fourth National Biodiversity Action Plan, launched in January 2024, has placed clear expectations upon local authorities to respond with Biodiversity Action Plans for their areas. The Heritage Council developed and funded the Biodiversity Officer Programme and produced guidelines for the development of Local Biodiversity Action Plans.

The threats are manifold and relentless—habitat fragmentation through changing land use, climate disruption, overexploitation, pollution, and the steady march of invasive species.

We have witnessed the phenomenon of shifting baselines, where each generation accepts a diminished version of what came before as normal. This inherited amnesia must end. Our children deserve rivers that teem with life, not merely flow with water. They deserve skies filled with the cacophony of birdsong, not the hollow silence of absence.

Protecting biodiversity creates resilience—ecosystems with diverse species networks can absorb shocks that would devastate simplified landscapes.

The Longford Biodiversity Action Plan represents our collective commitment to reversing decline and nurturing abundance. It requires the active participation of landowners, community groups, businesses, and residents. Every garden managed with wildlife in mind, every hedgerow left uncut during nesting season, every invasive species removed contributes to the larger effort.

I warmly welcome the development of the Longford Biodiversity Action Plan and our commitment to our natural heritage. I would like to thank the Heritage Council for their support, as well as extending gratitude to all the organisations represented on the biodiversity working group. I look forward to working hard and connecting with the landowners, community groups, and all interested organisations to ensure an improved future. While it can be said that biodiversity worldwide has faced a “death by a thousand cuts”, we must now orchestrate life by a thousand actions—each deliberate, each meaningful, each adding to the symphony of recovery we wish to conduct.

Cathaoirleach of Longford County Council

Cllr Garry Murtagh

The Heritage Council

We are pleased to introduce the County Longford Biodiversity Action Plan 2025 – 2030. This landmark plan represents a vital step in translating national biodiversity policy into local actions, reflecting Longford's distinctive landscapes, rich natural heritage, and engaged communities.

The Local Authority Biodiversity Officer Programme, established by the Heritage Council in partnership with the City and County 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 Longford, this work builds on a solid foundation laid by the Heritage Office and the Heritage Forum, whose vision and commitment paved the way for the appointment of Adam Mulvihill, the County's first Biodiversity Officer in 2023.

The integrated, holistic approach to heritage by Longford County Council — recognising the interdependence of natural, built, and cultural assets — is inspiring. The collaboration between the Heritage Forum and the Biodiversity Working Group 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-level biodiversity action plan serves not only to protect habitats and species but also to foster local engagement, pride, and climate resilience. The County Longford 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 challenges, the implementation of this plan will be a testament to the strength of partnerships and the commitment of all involved.

The Heritage Council looks forward to supporting Longford County Council, the Biodiversity Officer Adam Mulvihill, and local communities as they deliver this ambitious and essential plan.

Dr. Martina Moloney

Chairperson, The Heritage Council

Virginia Teehan

Chief Executive, The Heritage Council

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List of Acronyms

ACRES	Agri-Climate Rural Environment Scheme
AA	Appropriate Assessment
BnaM	Bord na Mona
BSBI	Botanical Society of Britain and Ireland
BWG	Biodiversity Working Group
DAFM	Department of Agriculture, Food, and the Marine
DECC	Department of Environment, Climate, and Communications
DHLGH	Department of Housing, Local Government and Heritage
EGFSN	Expert Group on Future Skills Needs
EIP	European Innovation Partnership
EPA	Environmental Protection Area
ETB	Education and Training Board
EU	European Union
GBUE	Green and Blue Urban Environments
IAS	Invasive Alien Species
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
IWT	Irish Wildlife Trust
LCC	Longford County Council
LAWPRO	Local Authority Waters Programme
LBAP	Local Biodiversity Action Plan
NBAP	National Biodiversity Action Plan
NBDC	National Biodiversity Data Centre
NBS-CM	Nature-based Solutions for Catchment Management
NHA	Natural Heritage Area
pNHA	Proposed Natural Heritage Area
NI	Northern Ireland
NPWS	National Parks and Wildlife Service
OPW	Office of Public Works
RBMP	River Basin Management Plan
RAMSAR	Convention on Wetlands of International Importance (Ramsar Convention)
SAC	Special Area of Conservation
SDG	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SPA	Special Protection Area
UN	United Nations
WWF	World Wildlife Fund

Introduction

Throughout the world there has been a steady decline in biodiversity. In April 2019 the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) released the global assessment report on biodiversity and ecosystem services. Amongst many messages it states that human actions threaten more species with global extinction now than ever before. In May 2019, shortly after the publication of the IPBES report, a national climate and biodiversity emergency was declared in the Dáil.

The County Longford Biodiversity Action Plan 2025-2030 is the first stand-alone biodiversity action plan for the county, with the previous Biodiversity Action Plan 2014-2019 being a part of the larger County Longford Heritage Plan 2019 - 2024. The County Longford Biodiversity Action Plan 2025-2030 sets out aims for a five-year period for Longford County Council (LCC) to promote, conserve, protect, and improve the biodiversity in the county. LCC will partner with a variety of stakeholders to achieve the aims set out in the plan. A list of actions has also been developed that will help to achieve the overall aims of the plan.
The fourth National Biodiversity Action Plan (NBAP) was published in January 2024. The NBAP contains 194 actions to help improve the status of biodiversity in Ireland and beyond. One of the actions within it is the development of a Local Biodiversity Action Plan by each local authority for their jurisdiction by the end of 2026. There are numerous other actions relevant to the local authorities under the fourth NBAP. These actions cover a variety of areas such as halting and reversing of the decline in pollinators, continued support for native tree planting, reducing the use and risk from pesticides by 50% by 2030, trends in the status of protected species and habitats improving, and controlling and managing Invasive Alien Species (IAS).

Longford contains within its boundaries eight Special Areas of Conservation (SAC), four Special Protection Areas (SPAs), six Natural Heritage Areas (NHAs), one RAMSAR site (designated wetland of international importance), and a further 17 proposed Natural Heritage Areas. Of the eight SACs five are bogs, two are lakes and one is a turlough, while of the four SPAs, three are lakes and one is a bog. This shows the importance of wetland habitats, in particular lakes and peatlands, within the county. However, these are not the only important habitat types within the county and other important habitats include woodlands, hedgerows, grasslands, and farmlands.

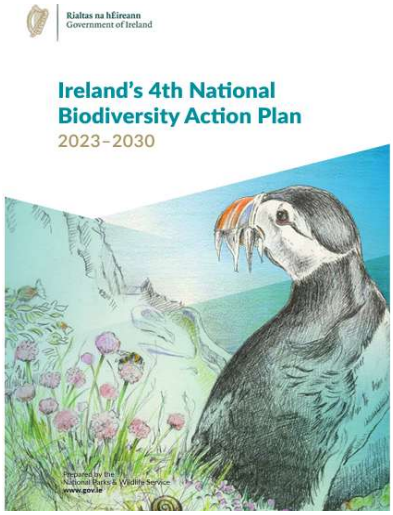


Fig. 1. Ireland's 4th National Biodiversity Action Plan

1. What is Biodiversity?

Biodiversity is a term used to describe the variety of species found in a particular area or habitat. It applies to all forms of life, including, plants, animals, fungi, and microorganisms. Biodiversity includes species present, the genetic diversity within species, the habitats, and ecosystems in which the species live. Habitats themselves are often living, such as in the case of trees housing insects, birds, and mammals and so it is important to be careful not to regard habitats as just vehicles for biodiversity but to see them as a part of the wider ecosystem and an element of biodiversity.
Because of the interactions of species with other species, and their habitats, it is important that any conservation efforts consider a whole of ecosystem approach to best improve biodiversity and create a more stable environment.
Biodiverse ecosystems are more resilient in the face of threats to the ecosystem, just as genetically diverse species stand a better chance of surviving changes to an ecosystem.
The term biodiversity can be applied to a global scale, a national scale, or a more local scale.

Fig2. Photo: Large bracken fern in Newcastle woods

2. Why is Biodiversity Important?

Biodiversity is important for a range of reason and provides us with an array of services that we depend on. Ecosystem services such as pollination of crops, and nutrient cycling are important not only to support our food growth, but also to support a range of flora, fauna, and

microbial life. From a human perspective, healthy biodiverse ecosystems provide oxygen and clean the air we breathe, provide food, clean our water sources, provide shelter, regulate climate, and provide flood attenuation amongst other services.

The earth's plants and phytoplankton supply our atmosphere with the oxygen required for animal life on the planet. Vascular plants and mosses also filter out pollutants from the air and so improve air quality while air quality can also be monitored by using mosses and lichens that are sensitive to a variety of pollutants. In addition to providing oxygen and cleaning the air biodiversity also plays a major role in cleaning the water we use. In Longford the sphagnum mosses of the peatlands help to purify water, as well as providing flood attenuation services and creating habitats for many species.

Our peatlands provide carbon sequestration services that are so important in our current climate emergency. The woodlands and hedgerows of the county also absorb carbon dioxide from our atmosphere and store it. Healthy soils with biodiverse communities of animals, plants, fungi, and bacteria also store more carbon within them.

Biodiversity is vitally important for the food that we eat. We rely upon a variety of crops, many of which in turn rely upon a variety of pollinators to allow them to produce their fruit or vegetable that we in turn eat. As well as our crops we fish and farm the oceans, hunt and farm terrestrial animals for meat, and forage for fruits and fungi. All our food sources are reliant on biodiversity and indeed in cases where we are overly reliant on single food sources or monocultural crops, we are just one rampant disease or turbulent weather event away from hunger. Healthy ecosystems can help to protect crops from pest species. An example of this is the campaign against sparrows in China in the 1950s and 1960s, which led to the killing of millions of sparrows, in turn this led to a huge increase in locust numbers and destruction of vast areas of crops.

We need healthy and diverse ecosystems for our health and wellbeing too. In healthy ecosystems top predators will kill the sicker individuals of different species and so help to reduce the spread of illness. Equally scavengers will clean up the bodies of deceased animals and again provide a service of reducing the spread of illness throughout the rest of the ecosystem.
Many of our medicines have been first found in nature and are then produced on a mass scale if they prove useful. Plants especially have proven to be a great source of medicines, from traditional medicines to modern day pharmaceuticals. Morphine and related opioid drugs were developed from the seeds of the poppy flower, anti-malarial drug Quinine came originally from the cinchona tree, and cancer drug Taxol was first derived from the pacific yew tree. Other than plants fungi and bacteria have given us compounds that have led to the development of antibiotics. Antibiotic drugs such as Penicillin, Streptomycin, and Vancomycin have been discovered in fungi and bacteria and are used worldwide in the treatment of infections.
The drugs mentioned offer only a small sample of the number of important medicinal discoveries for which we must thank living organisms. From this it is also clear to see that we do not know what potential future medicines we might be missing out on with biodiversity loss.

Protecting and enhancing biodiversity creates healthier ecosystems with more dynamic food

webs, and so it is a better idea to adopt a whole of ecosystem approach in conservation efforts. This approach is likely to have a greater positive impact on ecosystems and so have a greater positive effect on the species that is being protected or conserved.

Biodiversity benefits the world in numerous ways. Examples of this are improved food production, disease resistance, carbon sequestration, climate mitigation, air purification, water purification, pollination, nutrient cycling, soil health, pest control and mental health benefits from being in nature.

3. Threats to Biodiversity

In the past the earth has undergone many extinct events with five great extinction events identified. These extinctions were the Ordovician mass extinction (445 million years ago), Devonian mass extinction (372 mya), Permian mass extinction (252 mya), Triassic mass extinction (201 mya), and the Cretaceous mass extinction (66 mya). These extinction events variously saw between 70% and 90% of all life go extinct. The current speed of extinctions, along with the number of species threatened with extinction has led many people to declare that we are currently facing the sixth great extinction.
The IPBES report highlighted the startling decline in biodiversity throughout the globe.
Some estimates put the current global extinction rate at between 100 and 1000 faster than the normal background rate of extinctions. There are some significant pressures creating the trend towards more species becoming extinct or at risk of extinction.

Fig 3. Photo: Shield Bug on a nettle in Granard.

Threats to Biodiversity Globally

There are five main threats identified to biodiversity on a global scale. These direct drivers of biodiversity loss have been identified by the IPBES and widely accepted by organisations such as the World Wildlife Fund (WWF), and the International Union for Conservation of Nature (IUCN).

Habitat loss:
The loss, or deterioration of, habitats have an obvious impact on the biodiversity of an area with plant and animal species unable to exist or survive where they lack appropriate habitat in which to live, shelter, feed, and reproduce. Some of the main reasons for habitat loss are land use change, fragmentation, and pollution. Land use change and fragmentation can have several causes such as deforestation, intensification of agriculture, monoculture crop cultivation, urbanisation, mineral extraction, and general development of spaces for use by people. According to the UN Environment Programme 420 million hectares of forest habitat have been lost since 1990 due to conversion of the land to other uses. In Ireland we face loss of habitat through the land use change for agriculture, urbanisation, and infrastructure development. The harvesting of peat from our bogs has also led to massive habitat change and loss throughout Ireland in the past but there is now a move away from peat extraction on an industrial scale and a focus on rehabilitation of bogs where possible.

Over-exploitation:
Another serious threat to biodiversity on a global scale is the over-exploitation of flora and fauna. Over exploitation is not a new phenomenon. Plants and animals across the world have been exploited for many reasons including for food, medicines, materials (such as timber, oil, and ivory), and the pet and horticulture trades. Some examples of overexploitation in our history include the extinction of the Dodo and the Moa, and more recently the collapse of the great whale populations almost to extinction due to whaling. In the Pacific Northwest area of the USA pacific yew trees were endangered as their bark provided cancer treatment drugs. It was estimated that over 300,000 trees would be required per annum to keep up with demand, but the chemical is now synthesized in laboratories instead.
Medical needs also saw horseshoe crabs harvested for their blood, which will coagulate when in contact with contaminants such as bacteria. Their blood can be used to test medical equipment quickly and accurately for contamination. Even though they are put back alive after being harvested for their blood many still die. Two of the four species of horseshoe crab worldwide are threatened largely due to over exploitation for medical, culinary, and bait reasons and they serve as an example of the risks of over exploitation to wild species.
Currently biodiversity is threatened globally through over-fishing, logging, hunting for sport and food, illegal trade of plants and animals (for reasons such as ivory, traditional medicine, pet trade, horticultural trade, and research).

Climate Change:
Climate change does not affect each ecosystem in the same way and so the threats to biodiversity from climate change are complex and diverse. Changes to weather patterns can have devastating impacts on species life cycles that rely on certain conditions for parts of their life cycle, or events within their lives such as migrations. As an example, milder winters can

lead to some insects emerging earlier from hibernation while the plants they feed on might not flower until the day length reaches a certain point, thus the insects emerge and face starvation.
As well as scenarios where climate change is altering life cycle timings, it is also altering habitats on which species rely. Changes to ocean temperatures are resulting in acidification and affecting the biodiverse rich coral reefs in the world's oceans. With more acidic oceans there are fewer carbonate ions available for animals that build shells and so populations become limited and shells weakened.
Terrestrial habitats may also be changed by areas become wetter, or drier, and this affects the viability of local flora and fauna populations. With changes to conditions and habitats there is also an increased risk of alien invasive species spreading and potentially outcompeting the local plants and animals in an area, leading to local level extinctions, and potentially to the risk of global level extinction of species.

Pollution:
Pollution of soil, water, and air can cause huge issues for populations of plants and animals, as well as for people. Due to their sensitivity to pollution living organisms can sometimes be used to indicate where pollution occurs. Invertebrate populations in streams can indicate the quality of the water, certain lichen species on trees can be used as an indication of air quality, and in the past canaries warned of dangerous gas build-up in mines. Nutrients used on land can affect competition between plants, as well as soil microbe and invertebrate populations and in turn decomposition and nutrient cycling, while also posing a threat to waters in the form of run off leading to eutrophication and fish kills.
Pesticide use for rodents, insects, and weeds, can have further effects than the target species and threaten biodiversity on a large scale. For example, Barn Owls, who themselves are effective rodent number controllers, will suffer ill effects and often die from eating poisoned animals.
The burning of fossil fuels, as well as industrial activities cause reduced air quality which affects human and animal populations alike. The banning of smoky coal in Dublin in 1990 is linked with improved air quality and reduced premature deaths.
In recent times the most famous global pollution issue is that of plastics and in particular micro plastics. Microplastics have been found everywhere they have been searched for and accumulate in food chains, with larger amounts found in animals further up the food chain in a process known as bioaccumulation. Microplastics can adversely affect nutrition, reproduction, and health. As well as micro plastics, macro plastics have been found in the stomachs of marine species washed up on shores and are often implicated in their deaths.
Efforts to limit pollution do reduce the threat to flora and fauna caused by pollution, but there still many global and local level issues that can be improved upon.

Biological Invasives:
While it may be tempting to view new introductions into an area as a good thing for biodiversity, the reality is often quite different. Where a new species is introduced to an area, they may face little or no control on their populations from predation or grazing, and they may simply outcompete the local flora and fauna for space and resources. Globally cats and rats, arriving with human settlers, have been responsible for several extinctions by predating on animals, often ground nesting birds, that previously had not faced any similar predators and so were easy hunting. There are examples the world over of invasive species causing havoc for

the local species, such as cane toads in Australia which are poisonous to native predators and brown tree snakes in Guam which led to the extinction of six local bird species.
In 2014 the European Union adopted the "Regulation on the prevention and management of the introduction and spread of IAS (1143/2014)". This Regulation sets out a list of IAS of union concern. To date there are 88 species on this list.
In July 2024 the Irish government adopted the European Union (IAS) Regulations 2024 to address shortcomings in the implementation of the European regulations of 2014. Further to addressing the list of IAS of Union concern the 2024 Regulations also introduced a list of national concern. The legislation is aimed at reducing the threat caused to biodiversity by IAS by making it an offence to keep, breed, grow, import, export, transport, sell, exchange, or release into the environment an IAS of national concern. There are 77 invasive species of national concern listed. Currently LCC has a programme for recording and treating Japanese Knotweed, an invasive plant that spreads quickly, shades out native plants, and can threaten building foundations.

Fig 4. Photo: Male fallow deer in Newcastle Woods. Photo by VEON environmental.

Threats to biodiversity locally

Question five of the pre-draft public consultation survey asked, "*What do you think are the greatest threats to biodiversity in Longford?*".
The responses to the survey give an indication of what the people of Longford perceive as the biggest threats to the biodiversity within the county.
The most common threats to biodiversity in Longford that were identified were agricultural practices, pesticide use, tree and hedgerow removal, climate change, development of housing estates and urbanisation, and poor water quality. Other threats identified were wind farm development in boglands, pollution in general, litter, afforestation, and turf cutting.
The surveys illustrate that there are numerous stresses which adversely affect biodiversity in County Longford. It is however encouraging that the public are aware of the threats to

biodiversity within the county.
Many of the threats identified are the same or fit under the five main threats recognised threats to biodiversity by IPBES.
Habitat loss is identified as a threat with building, removal of hedgerows, cutting of trees, development of housing estates, and turf cutting all included as observations on the threats facing biodiversity in County Longford.
Over-exploitation on a local level is identified by the public through the cutting of turf. This occurred on an industrial scale, as well as on a private scale, in Longford. In recent years Bord na Mona has shifted focus away from peat extraction and is now involved in rewetting and rehabilitation schemes on peatlands throughout Longford.

Climate Change threatens biodiversity on a local level by altering conditions and affecting timings such as hibernation, migration, and plant growth. Plant growth can be driven by day length, temperatures, or both, while hibernation is more affected by temperatures. Changes in growth patterns can affect the food sources of hibernators and migratory species.

Fig. 5 Photo: Cuckoo flower, dandelions, and daisies during "No Mow May"

Invasives Species in Longford:
Owing to the threat caused by IAS, LCC has put in place a treatment regime for the Japanese Knotweed identified within the county. However, other invasive species also pose threats to our native flora and fauna by out competing them or introducing disease or other threats. There are currently nine invasive alien 'plant' species and nine invasive alien 'animal' species listed in the First Schedule of European Union (Invasive Alien Species) Regulations 2024 (S.I. No. 374 of 2024) recorded in County Longford. There are four invasive alien plant species and three invasive alien animal species listed of Union concern currently identified in County

Longford.

Invasive Alien Animal Species identified in Longford	First Schedule European Union (IAS) regulations 2024 **National Concern**	European Union (IAS) Regulations 2024 **Union Concern**
American mink	Yes	
Asian river clam	Yes	
Canada Goose	Yes	
Chub	Yes	
Grey Squirrel	Yes	Yes
Greylag Goose	Yes	
New Zealand Flatworm		Yes
Roach	Yes	
Ruddy Duck	Yes	Yes
Zebra Mussel	Yes	

Fig. 6. Table 1: Invasive alien animal species of national concern and Union concern identified in County Longford.

Invasive Alien Plant Species identified in Longford	First Schedule European Union (IAS) regulations 2024 **National Concern**	European Union (IAS) Regulations 2024 **Union Concern**
American skunk cabbage	Yes	Yes
Brazilian giant rhubarb	Yes	
Himalayan balsam	Yes	Yes
Himalayan knotweed	Yes	Yes
Japanese Knotweed	Yes	
Nuttall's Waterweed		Yes
Rhododendron ponticum	Yes	
Spanish bluebell	Yes	
Three-cornered leek	Yes	
Elodea water weed	Yes	

Fig. 7. Table 2: Invasive alien plant species of national concern and of Union concern identified in Co. Longford

4. Local Context

County Longford is second only to County Leitrim in terms of the smallest population in Ireland and is smaller in area than all other counties with the exceptions of Dublin, Carlow, and Louth. Regardless of its small size Longford is home to an array of habitat types, species, and protected areas.
Longford is a mostly low-lying county with the highest point being Cairn Hill at 278meters above sea level. Significant habitat types in the county include peatlands, grasslands, forestry, hedgerows, rivers, and lakes.

Peatlands:
Longford contains untouched raised bog, man modified raised bog, man modified fens, and machine harvested raised bog. Bord na Mona are rewetting many of the bogs in their ownership.
Peatlands are an important habitat for a variety of plants and animals. Raised bogs continually cycle water making them wet and nutrient poor substrates for plant growth. Due to these conditions many of the plants and bryophytes found in bogs and fens are specialist species.
Two of Ireland's three amphibian species, the common frog, and the smooth newt, have been recorded in peatlands in County Longford. Ireland's only reptile species, the viviparous lizard has also been recorded on the bogs of Longford.
According to Ireland's Peatland Conservation Action Plan 2030, County Longford currently has 698 hectares (ha) of Fen and 3919ha of raised bog left in a condition that is considered to be in a conservation worthy condition.

Freshwater:
Longford is bordered to the west by the River Shannon, Lough Ree and Lough Forbes. Lough Gowna in the northeast of the county forms a part of the border with County Cavan. The River Camlin, the River Inny, and the Royal Canal also form significant freshwater habitats within the county.
The rivers and lakes of Longford are important habitats for invertebrates and fish and further support adjacent habitats for birds, insects, plants, and mammals. Lough Ree is an important habitat for otters, lapwing, little grebe, whooper swan, coot, golden plover, teal, shoveler, and several other species.
The Camlin River is an important fishery for the recruitment of trout into Lough Ree. The Camlin flows into the Lough Forbes Complex SAC (the same area is also the Ballykenny-Fishertown Bog SPA). This SAC contains active raised bog and alluvial forests that form important habitats for a variety of flora and fauna including black alder, ash, sphagnum mosses, and whooper swan.

Fig. 8. Photo: Lough Ree taken from the Limestone shore at Lanesborough.

The river Inny flows into three SPAs in Longford, one at Lough Kinale and Lough Derragh another at Glen Lough, and finally into Lough Ree (which is also an SAC). These sites are important sites for pochard, tufted duck, whooper swan, little grebe, lapwing, teal, and several other bird species as well as otters in Lough Ree.
Glen Lough, on the border of Longford and Westmeath is an important freshwater habitat for wintering whooper swan, with an estimated 1% of the total global population visiting the site. Other important species that use this freshwater SPA include mute swan, teal, and shoveler.

Woodlands:
There are a variety of woodlands in Longford, consisting of both semi-natural woodlands and commercial woodlands. Hedgerows form another important part of the woodlands of the county and as well as being habitats themselves, they often offer corridors for wildlife between two or more habitats.
Woodlands in the county are home to a variety of native bird species from Europe's smallest bird, the goldcrest, to our largest songbird species, the common raven. Birds of prey such as sparrowhawks and kestrels can be spotted in Longford's woodlands and buzzards can be seen soaring above woodlands and adjacent open territory.
Other woodland fauna such as red squirrel, pine marten, badger, red fox, red deer, and a variety of bat species have all been recorded in forests in county Longford, highlighting the importance of woodland habitats to local wildlife populations.
Woodlands are also home to an array of fungal species from the microscopic mycorrhiza that encourage nutrient sharing among trees, to fungi that act as decomposers. Fungi are an important part of woodland habitats that help in decomposition, nutrient cycling, carbon sequestration, and are a food source to animals such as fox, mice, slugs, and insects.
Woodlands are species rich habitats that can assist in storing carbon, controlling climate, protection from weather events such as flooding from heavy rains, and protection of soils from erosion.

Recent storms have shown that our trees can be particularly hard hit by extreme weather events that may become more common due to climate change. To have mature trees in the future trees need to be continually planted and so LCC will promote and support the planting of native trees throughout the county.

Fig. 9. Photo: Scarlet Elf Cup fungus in Newcastle Wood, Ballymahon

Farmlands:

Agricultural lands form a significant portion of the land use in Co. Longford. Agricultural lands hold huge potential for biodiversity gains, with corridors between habitats existing through hedgerows on farms, potential for dung beetles, invertebrate populations in soils, and associated food sources for bird and mammal populations.

National programmes such as ACRES (Agri-Climate Rural Environment Scheme) encourage taking measures to improve biodiversity. Some actions include installing barn owl nest boxes, coppicing hedgerows, laying of hedgerows, planting traditional orchards, ryegrass seed for winter bird food, tree planting, and winter bird food plots. These measures, along with others in the scheme, provide a great opportunity for the improvement of biodiversity in the area, as well as nationally.

Longford also contains organic farmers. Organic farming does not use synthetically produced pesticides, herbicides, or fertilisers and so it is better for pollinators, soil invertebrates, and animals that feed on these. Through working with Teagasc, IFA (Irish Farmers' Association), and farming communities LCC will seek to encourage biodiversity actions and provide training or knowledge sharing where it may have a positive benefit.

5. LCC - Work So Far

LCC is not new to protecting and developing biodiversity in the county. Planning applications are assessed for their impact on habitats, species, and the environment generally, in particular in Natura 2000 sites.

Walkways have been developed in County Longford that allow the public to get out into nature and to appreciate the wildlife around us all. Many of these walkways are in woodland and bog areas and a list of these is available online at www.longford.ie/en/visit/trails/.

LCC also has an annual programme of invasive species control in place, with a particular emphasis on Japanese knotweed. Japanese knotweed sites are reported to the council and treatment for each site is undertaken for several years to ensure the eradication of the Japanese Knotweed as this invasive plant can come back even after a single round of treatment.

LCC has drawn down funding from the Local Biodiversity Action Fund in recent years and completed projects such as woodland bat surveys, barn owl surveys, hedgerow training events, quagga mussel surveys, and promotion of No Mow May for pollinators.

A hedgerow survey of the county in 2006 gave a baseline of the health of the hedgerows at that time and a future survey will provide a useful comparison and provide recommendations for the improvement of this important habitat type.

LCC engages with the Tree Council of Ireland for the distribution of trees to community groups annually for National Tree Week. There is a history of tree planting events with community groups within the county and further planting has taken place in Longford as a part of the Our Shared Plate pilot project that the Climate Action Section has undertaken in conjunction with Neighbourhood Networks.

LCC is a signatory to the All-Ireland Pollinator Plan and has promoted initiatives such as No Mow May to the wider public. LCC has also taken part in No Mow May, to increase the food available for pollinators in an early part of the season. As a part of our commitment to the all-Ireland Pollinator Plan, LCC has undertaken planting at the N4 and N5 roundabouts near Longford Town. These have been planted with species such as downy birch and guelder rose.

LCC continues to engage with a variety of stakeholders and remains committed to the protection and enhancement of biodiversity in the county.

Fig. 10 Photo: Badger outside sett in Derrycassin woods. Photo by VEON environmental

6. Legislation

The principal legislation governing biodiversity in Ireland consists of the EU Habitats Directive, the EU Birds Directive, the EU Water Framework Directive, the Wildlife Act 1976 (As Amended), Planning and Development Acts (As Amended), and the EU Nature Restoration Law 2024.

EU Habitats Directive:
The Habitats Directive set up the Natura 2000 network of protected sites. Special Areas of Conservation (SACs) were designated by each member state under the Habitats Directive. Longford has 8 SACs designated within the county.

EU Birds Directive:
Under the Birds Directive member states had to designate Special Protection Areas (SPAs) for the protection of threatened and migratory birds. Longford has four SPAs within the county. The Birds Directive also protects bird species by making it an offense to deliberately capture wild birds, disturb nests, take eggs, keep, or trade live or dead birds which are banned for hunting.

Planning and Development Acts:
The planning and development acts lay out the requirements and conditions for planning permission in Ireland. These include the requirements set out for Appropriate Assessments and Environmental Impact Assessments.

Nature Restoration Law
The Nature Restoration Law was passed in the EU in 2024. It obliges member states to restore at least 20% of the land and sea areas. By 2050 all areas in need of restoration should be restored. Each nation must also produce a national restoration plan by 2026.

EU Water Framework Directive:
The Water Framework Directive seeks to improve the quality of water and to achieve a good ecological status in the waterways of Europe. Water is an important ecosystem and good the quality water is important for a large array of species.

Wildlife Act 1976 (As Amended):
The Wildlife Act 1976 and subsequent amendments are national legislation for the protection of our flora and fauna species. Natural Heritage Areas (NHAs) are designated under this legislation. All bird species, 23 other animal species or groups of species (such as bat, deer, whale, dolphin, and seal species) and 157 species of plants have protected status under the Act.

7. Designated Sites

Sites designated for protection of natural heritage in county Longford include eight Special Areas of Conservation (SACs), four Special Protection Areas (SPAs), six Natural Heritage Areas (NHAs) and 16 proposed Natural Heritage Areas (pNHAs).

See appendix 1 for maps of the SACs, SPA, NHAs, and pNHAs in County Longford.
For site synopsis on the SACs, SPAs, and NHAs visit https://www.npws.ie/protected-sites and search by site type, site code, site county or qualifying interest.

Special Areas of Conservation

Site	Site Code	Qualifying interests
Ardagullion Bog	002341	Active raised bog; Degraded raised bogs still capable of natural regeneration; Depressions on peat substrates of the Rhynchosporion
Brown Bog	002346	Active raised bog; Degraded raised bogs still capable of natural regeneration; Depressions on peat substrates of the Rhynchosporion
Clooneen Bog	002348	Active raised bog; Degraded raised bogs still capable of natural regeneration; Depressions on peat substrates of the Rhynchosporion; Bog Woodland
Derragh Bog	002201	Active raised bog; Degraded raised bogs still capable of natural regeneration.
Fortwilliam Turlough	000448	Turloughs
Lough Forbes Complex	001818	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation; Active raised bogs; Degraded raised bogs still capable of natural regeneration; Depressions on peat substrates of the Rhynchosporion; Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)
Lough Ree	000440	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation; Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites); Active raised bogs; Degraded raised bogs still capable of natural regeneration; Alkaline fens; Limestone pavements; Bog woodland; Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae); Lutra lutra (Otter) [1355]
Mount Jessop	002202	Degraded raised bogs still capable of natural regeneration; Bog woodland

Fig. 11. Table 3: List of SACs in County Longford and their qualifying interests

Ardagullion bog SAC is located northeast of Edgeworthstown. It contains areas of active raised bog that continue to be peat forming. Sphagnum moss lawns, hummock, pools, and wet flats all feature on this bog. This was once a larger bog with areas now being cutover and afforested. Vegetation present includes, but is not limited to, heathers, bog asphodel, cranberry, hare's-tail cotton grass, sundew, and a variety of sphagnum mosses.

Brown Bog SAC is located 5km to the Northwest of Longford Town. It contains active peat forming areas of bog with a high percentage of sphagnum moss cover. Hummocks, pools, wet flats, and sphagnum lawns all feature here. Vegetation present includes, but is not limited to, a variety of sphagnum mosses, heather, cranberry, sundew, bog-bean, and bog rosemary.

Clooneen Bog SAC is located 3km southeast of Rooskey. Areas of this bog are actively peat forming with a high percentage of sphagnum moss cover. This site contains a large area of bog woodland. Vegetation present includes, but is not limited to, downy birch, sundew, bog bean, heather, bilberry, hare's-tail cotton grass, and several species of sphagnum moss.

Derragh Bog SAC is located to the east of Abbeylara and between Loughs Kinale and Derragh. Areas of this bog are actively peat forming with a high percentage cover of sphagnum mosses. This site consists of 9ha of birch woodland, 8.33ha of high bog, and 20.29ha of open cutaway bog. Vegetation present includes, but is not limited to, bilberry, sundew, hare's tail cotton grass, heathers, a variety of sphagnum mosses, and bog asphodel.

Fortwilliam Turlough SAC is located 6km south of Lanesboro and close to the east shore of Lough Ree. This turlough has escaped excessive nutrient input and during the summer months is grazed by sheep and cattle. The turlough is home to a number of pondweed species, sedges, rushes, blackthorn, hawthorn, ash and elder. Snipe and mallard also nest in this area. The lack of nutrient input makes Fortwilliam Turlough a rarity due to modern agriculture and so this site is of even greater ecologlical importance.

Lough Forbes Complex SAC is located near the town of Newtownforbes. This site consists of several important habitat types, including raised bogs, callow grasslands, Lough Forbes (a naturally eutrophic lake), and wet and dry types of woodlands.
The raised bogs are relatively intact and are rare examples of River Shannon edge bogs. The vegetation present on the bogs consists of heathers, common and hare's tail cottongrass, bog bean, sedges, and Sphagnum mosses.
Lough Forbes itself is a lake on the River Shannon, it is shallow in many parts, and it is naturally eutrophic. Areas of Common Reed provide cover for waterfowl on the lake but there may be a degree of disturbance created by traffic from cruisers travelling through the Shannon.
Lough Forbes as well as the grassland callows of the Camlin River to the south of the Lough provide important habitat to waterbirds in the area, including whopper swan, teal, wigeon, tufted duck, golden eye, and cormorants.
Merlin, an Annex I of the Birds Directive species, and red grouse, a red listed species, are two other important species that have been recorded within the SAC.

Lough Ree SAC spans much of the borders between counties of Longford, Roscommon, and Westmeath. Although the lake itself comprises the bulk of the SAC there are several important habitats present. These include calcareous grasslands, limestone pavement, active raised bogs,

fen, degraded raised bog, alluvial forest, and bog woodlands.
The lake and its islands are important for many bird species, including common tern, common scoter teal, wigeon, little grebe, cormorant, shoveler, pochard, curlew, and Ireland's national bird, the lapwing. The lake also is home to a population of otters, which are an Annex II listed species under the habitat's directive.
St. Johns Wood falls within the SAC on the Roscommon side and is a rare example of a remaining ancient woodland in Ireland.

Mount Jessop Bog SAC is situated about 5km southwest of Longford town. The site consists of high bog, cutover bog, and bog woodland. The bog woodland is growing on peaty soils which are permanently wet and is dominated by wet tolerant species such as downy birch and Scots pine. Heather, hare's tail cottongrass, bog asphodel, white beak sedge, and a variety of sphagnum mosses are all found on the high bog area of the site.
Blocking of drains and felling of conifer plantations have led to the high bog area rewetting itself and raised bog vegetation has returned. Red grouse and Irish hare have been recorded at this site.

Special Protection Areas

Site	Site code	Qualifying interest
Ballykenny Fishertown Bog SPA	004101	Greenland White-fronted Goose
Glen Lough SPA	004045	Whooper Swan
Lough Kinale and Derragh Lough SPA	004061	Pochard; Tufted Duck; Wetland and Waterbirds
Lough Ree SPA	004064	Little Grebe; Whooper Swan; Wigeon; Teal; Mallard; Shoveler; Tufted Duck; Common Scoter; Goldeneye; Coot; Golden Plover; Lapwing; Common Tern; Wetland and Waterbirds

Fig. 12. Table 4: List of SPAs in County Longford, and their qualifying interests

Ballykenny Fishertown Bog SPA was originally designated an SPA due to its population of Greenland White fronted geese. However, these geese have since abandoned the site and they were last recorded in in the 1990/91 wintering season.
Merlin and grouse have been recorded on the site and the callows provide habitat for waterbirds such as wigeon, teal, cormorant, and whooper swan.

Glen Lough SPA is situated on the Longford Westmeath border about 5.5km southeast of Edgeworthstown. This site was designated as it is an important habitat for whooper swan, but it also has populations of other bird species including teal, mallard, and lapwing.

Lough Kinale and Derragh Lough SPA is located at the borders of counties Longford, Cavan, and Westmeath and is designated due to its importance as a habitat for pochard, and tufted duck as well as for its importance for wetlands and waterbirds more generally. Among the species found at this site are coot, mute swan, golden crested grebe, mallard, and goldeneye.

Lough Ree SPA sits to the west and southwest of the county along the borders of Roscommon and Westmeath. The site is listed as an SPA due to its importance for several bird species such

as whooper swan, wigeon, teal, mallard, shoveler, tufted duck, common scoter, goldeneye, little grebe, coot, golden plover, lapwing, and common tern and for its importance for wetlands and waterbirds in general. Other than these Lough Ree and its islands are also home to populations of mute swan, great crested grebe, black backed gulls, curlew, and cormorants.

Natural Heritage Areas

Natural Heritage Areas (NHAs) were designated under the Wildlife Amendment Act (2000), and they are protected from being damaged due to their importance to particular species and or habitat types upon which certain species may rely. Longford has six NHAs and a further 17 proposed Natural Heritage Areas (pNHAs) that have not yet been designated NHAs on a statutory basis.

Site	Site code	Qualifying interest
Aghnamona Bog NHA	000422	Peatlands
Cloonageeher Bog NHA	001423	Peatlands
Forthill Bog NHA	001448	Peatlands
Lough Kinale and Derragh Lough NHA	000985	Peatlands; Birds
Mount Jessop Bog NHA	001450	Peatlands
Rinn River NHA	000691	Peatlands

Fig. 13. Table 5: List of NHAs in County Longford and their qualifying interests.

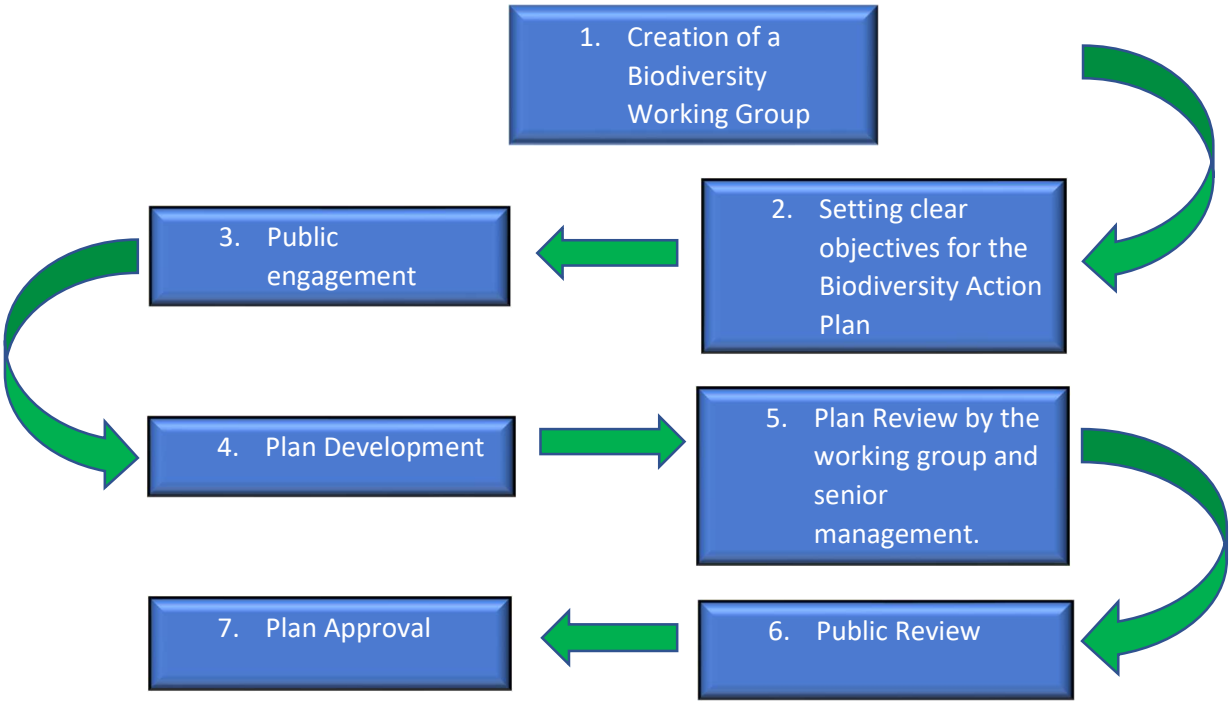
Site	Site Code
Ardagullion Bog pNHA	002069
Brown Bog pNHA	000442
Carrickglass Demesne pNHA	001822
Cordara Turlough pNHA	001821
Clooneen Bog pNHA	000445
Derry Lough pNHA	001444
Derrymore Bog pNHA	000447
Fortwilliam Turlough pNHA	000448
Glen Lough pNHA	001687
Lough Bannow pNHA	000449
Lough Bawn pNHA	001819
Lough Forbes Complex pNHA	001818
Lough Gowna pNHA	000992
Lough Naback pNHA	001449
Lough Ree pNHA	000440
Lough Slawn pNHA	001443
Royal Canal pNHA	002103

Fig. 14. Table 6: List of pNHAs in County Longford. Note that these sites have no site code or qualifying interests as they are proposed but not adopted.

8. Development of the plan

The Fourth NBAP contains an action for each Local Authority to develop their own Biodiversity Action Plans by the end of 2026. The development of the County Longford Biodiversity Action Plan sets the actions for LCC to achieve on a local level, while also fulfilling this task towards the NBAP.

The following steps were followed for the creation of the Biodiversity Action Plan:



Biodiversity Working Group

The Biodiversity Working Group was created to assist in the creation of the Biodiversity Action Plan, with the implementation of the plan, and for planning for the improvement of biodiversity generally in County Longford. For the development of the biodiversity working group, invitations were sent out to organisations that are biodiversity relevant stakeholders within county Longford. Some of these organisations were in a position that they could supply a representative to the Biodiversity Working Group. The Biodiversity Working Group consists of 14 members, including three elected members of LCC, the Biodiversity Officer, the Climate Action Officer, the Heritage Officer, the County Librarian, Bord na Mona, Coillte, Hedgerows Ireland, LAWPRO, NPWS, Swift Conservation Ireland, and Teagasc.

- Cllr Uruemu Adejinmi
- Cllr Martin Skelly
- Cllr Pauric Brady
- Adam Mulvihill - Biodiversity Officer
- Gary Brady - Climate Action Officer
- Mairead Ni Chonghaile - Heritage Officer
- Martina Needham - County Librarian

- Mark McCorry - Bord na Mona
- Barry Roche - Coillte
- Shane Downer - Hedgerows Ireland
- Luke Kenny - LAWPRO
- Sue Moles - NPWS
- Larry Mitchell - Swift Conservation Ireland
- Enda Harte - Teagasc

Organisations represented on the biodiversity working group:

1. *Bord na Mona*

In the past, Bord na Mona have been focused on peat extraction, largely for energy generation, and commercial production of compost and briquettes. Bord na Mona completely halted peat extraction in 2020 and is now committed to the rehabilitation of large areas of peatlands. Bord na Mona are currently focusing on the promotion of biodiversity on their lands, along with biodiversity monitoring, public engagement on biodiversity, and objectives which support the re-growth of vegetation on former industrially cultivated peatlands.

2. *Coillte*

Coillte aim to create new forests, manage our existing forests for greater carbon capture and provide more habitats to enhance biodiversity. Coillte will increase the number of forest recreation spaces for public amenity. Coillte aim to capture of 28 million tonnes of CO2 from the environment by 2050. Coillte are increasing the area of their estate managed primarily for nature to 30% by 2025 and 50% in the future.

3. *Hedgerows Ireland*

Hedgerows Ireland CLG is a non-profit working towards a network of native hedgerows managed for carbon, biodiversity, water quality, and farm benefits. The organisation shares knowledge through social media and educational talks, organises training days, and collaborates with other groups to create policy and legislative change. Learn more on www.hedgerows.ie. Hedgerows Ireland have been involved in training days and hedge walks in County Longford, helping to increase public awareness of the biodiversity value of this important habitat.

4. *LAWPRO*

LAWPRO works to ensure good quality water in the waterways of Ireland through a scientific and community engagement approach. LAWPRO coordinates the efforts of local authorities and other public bodies in the implementation of the River Basin Management plans for Ireland to comply with the Water Framework Directive. LAWPRO also engage with communities and issue community grants for the improvement of water quality and enhancement of biodiversity related to waterways. Since 2018 LAWPRO has given out €2.7million in grants.

5. *NPWS*

National Parks and Wildlife Service are the primary body with responsibility for managing the conservation of ecosystems and species in Ireland. The NPWS are tasked with the designation

of SACs, and SPAs to meet Ireland's regulatory obligations under the EU Habitats Directive and the EU Birds Directive. The NPWS Rangers throughout Ireland enforce legislation around wildlife and habitats as well as advise and work with the public on wildlife issues, monitor wildlife populations, and deal with wildlife licensing issues.

6. Swift Conservation Ireland

Swift Conservation Ireland have been very active in County Longford for a number of years. The swift population in Ireland has declined in recent decades due to a reduction in available nesting sites with the demolition of older buildings. The Longford branch of Swift Conservation Ireland has overseen the introduction of several nest boxes at appropriate sites in recent year, with these boxes being well used and an increase of roughly 5% in the breeding population between 2018 and present has been seen.

7. Teagasc

Teagasc the Agriculture and Food Development Authority is the national body providing integrated research, advisory and training services to the agriculture and food industry and rural communities. Through its three main divisions Teagasc strive to promote sustainable farming systems to all stakeholders in the Agri Food sector.
One of the key programmes in Teagasc is the Signpost programme which is a free programme available to all farmers. It builds on the network of Signpost demonstration farms by providing enhanced advisory and training support to farmers to help them to select and implement climate and sustainability actions that are appropriate and impactful on their farms. Part of this programme is also to promote biodiversity enhancement on all farms. Considerable efforts within Teagasc are focused on helping farmers improve the biodiversity on their farms through DAFM (Department of Agriculture, Food, and the Marine) schemes such as ACRES, locally led EIP (European Innovation Partnership) projects, webinars, and other training courses.

9. Sustainable development Goals

All 193 member states of the UN are signed up to the 2030 Agenda for sustainable development. This agenda created 17 Sustainable development goals with a total of 169 actions under these goals. These goals aim to "*end poverty, protect the planet and improve the lives and prospects of everyone, everywhere*". Ireland published a Sustainable Development Goals National Implementation Plan for 2022 to 2024 that promoted a whole-of-government approach to implementing the sustainable development goals.
The County Longford Biodiversity Action Plan will contribute to the achievement of the sustainable development goals as laid out in the tables in Appendix 1.

10. Aims

The Longford Biodiversity working group agreed upon five overarching aims for the County Longford Biodiversity Action Plan 2025-2030. The Biodiversity Working Group, working with the public through the pre-draft public consultation phase identified 57 actions which fit under the five aims of the Longford biodiversity action plan.
The aims of the Longford Biodiversity Action Plan 2025-2030 are:

1. **Conserve, protect, and enhance biodiversity and habitats in Co. Longford.**

The County Longford Biodiversity Action Plan will aim to protect and improve the biodiversity in the county. LCC will seek to identify sources of damaging pollution and to appropriately remedy them to protect habitats and the species within them. Biodiversity will be considered at the development stages of new walkway developments to allow a riparian zone along waterways and not to be of detriment to the species present. Actions under this aim also see LCC seek to work with community groups, such as tidy towns groups, to assist them in improving habitats in their locality. LCC and partners will also seek to protect and enhance biodiversity by supporting and implementing national plans such as the fourth NBAP and the all-Ireland Pollinator Plan.

2. **Enhance knowledge base on habitats and species present in Longford.**

To assess what habitats and species are present and in need of protection LCC will seek to have a variety of surveys carried out. In many cases the knowledge gained will also provide a baseline on which success of other actions taken can be measured. LCC will seek to promote citizen science and to freely share information gathered with the public, partner organisations, government agencies, and the National Biodiversity Data Centre NBDC.

3. **Positively promote biodiversity in plans, and strategies for the County.**

Biodiversity will be further protected in the planning processes in LCC through the development of guidelines for demolitions, bridge works, hedgerow retention, and the development of plans for the control of alien invasive species. LCC will also investigate the use of nature-based solutions for urban drainage.

4. **Develop training and monitoring programmes to help track and protect biodiversity in the county.**

A range of biodiversity relevant training will be delivered to LCC staff, community groups, and relevant sections of society such as landowners. This training will help to put biodiversity to the forefront of people's minds and will help to create a population of people all protecting biodiversity in Co. Longford. LCC will also develop monitoring programmes to help in detailing the biodiversity present and any trends in biodiversity within the county.

5. **Promote biodiversity awareness and engagement in Co. Longford**

LCC will undertake awareness campaigns on a range of biodiversity related issues. This will promote action by the public, as well as promoting the reporting of issues such as the presence of alien invasive species. This will also help to promote national awareness campaigns such as the all-Ireland pollinator plan, and 'Citizen Science' campaigns such as the garden bird survey by Birdwatch Ireland and the bumblebee survey by the NBDC.

11. Actions

Aim 1. Conserve protect and enhance biodiversity and habitats in Co. Longford

The 13 actions under this aim will be carried out by LCC, LAWPRO, Coillte, Hedgerows Ireland, community groups, and any other relevant organisations. These actions will help to minimise and mitigate negative impacts on habitats and species, as well as to improve habitats present for species to thrive.

Conserve, protect, and enhance biodiversity and habitats in Co. Longford			
	Action	**Partners**	**Indicators**
A1	LCC and relevant partners will work to identify and resolve sources of water pollution and water quality deterioration.	Relevant LCC departments & LAWPRO	Sources identified and appropriate follow up action taken
A2	LCC will ensure a riparian zone along new walkway developments to prevent the destruction of habitat for species such as otters, and bats.	Roads, Active Travel, Planning and other relevant LCC departments	New walkways with a minimum five metre riparian zone. Policies developed to require five metre riparian zones.
A3	LCC will facilitate, in partnership with community groups, annual clean ups of rivers, verges, hedges, and other sensitive habitats.	LCC and Community Groups	Number of clean ups operations undertaken each year.
A4	All council policies should be biodiversity proofed to ensure that biodiversity is embedded in all council activities.	Biodiversity Officer and relevant LCC departments	Number of policies that have been biodiversity proofed.
A5	LCC will develop a policy on public lighting in sensitive areas (e.g. public walkways) and how it impacts on biodiversity.	Biodiversity Officer and LCC planning, roads, active travel, and relevant departments	Policy developed.
A6	LCC will promote pollinator friendly initiatives such as No-Mow-May.	Biodiversity Officer and relevant LCC departments	Number of pollinator friendly initiatives.
A7	LCC will engage in the installation of infrastructure to attract species to appropriate sites (e.g. bird boxes and bat boxes).	Biodiversity Officer and relevant LCC departments	Number of installations.
A8	LCC will support the planting of trees and hedges, with an emphasis on trees of Irish provenance.	LCC, community groups, Coillte, Hedgerows Ireland and relevant organisations	Number of trees with Irish provenance provided during national tree week and throughout the year.
A9	LCC will raise awareness of wildlife corridors and provide protection for them.	Biodiversity Officer and relevant LCC departments	Number of wildlife corridors identified and protected.
A10	LCC will implement the fourth NBAP, the All-Ireland Pollinator plan, and other biodiversity related national policy and legislation.	LCC	Annual progress report for LCC on the fourth Nation Biodiversity Action Plan.
A11	LCC will reduce the councils use of pesticides except where it is deemed necessary in treating alien invasive species.	LCC	Percentage reduction in annual pesticide use.
A12	Work with the relevant authorities to support the preparation of, and implement, Ireland's Nature Restoration plan, when adopted, and where relevant for Longford County Council to help achieve national restoration targets.	LCC	No. of targets of national restoration plan acted on.
A13	Ensure that any actions in this Biodiversity Action Plan deemed relevant receive commensurate policy provision in the County Development Plan for Longford in order to manage and protect such ecological assets as part of the planning and development process.	LCC	Biodiversity Action Plan Actions included the next County Development Plan.

Aim 2. Enhance knowledge base on habitats and species present in County Longford
The actions under this aim will be carried out by LCC, Teagasc, the biodiversity working group (BWG), Coillte, NPWS, LAWPRO, Bord na Mona, and the public. There are a total of 10 actions under this aim. These actions will have the effect of increasing the knowledge base on habitats and species in the county and helping to identify trends in biodiversity. This will be key to measuring success and to informing future actions on biodiversity.

Enhance knowledge base on habitats and species present in Longford			
	Action	**Partners**	**Indicators**
B1	LCC will engage with the agricultural community to identify species rich grasslands in the County.	LCC and Teagasc	New grasslands identified.
B2	The biodiversity working group will identify habitats and locations of particular interest for monitoring of species present.	BWG	Locations identified.
B3	LCC will carry out surveys of various habitat types (e.g. peatlands, wetlands, forestry, grasslands).	LCC, Coillte, NPWS, LAWPRO, Teagasc, BnaM	Surveys carried out
B4	LCC will carry out population surveys on various animal species and groups.	LCC	Surveys carried out
B5	LCC will carry out surveys on various plant species and groups.	LCC	Surveys carried out
B6	LCC will identify and map Locally Important Biodiversity Sites, in line with Heritage Council Guidance, to aid the implementation of county development plan biodiversity policies.	LCC	Sites Mapped
B7	Where species population data is gathered during habitat or species surveys, the data will be recorded with the National Biodiversity Data Centre.	LCC, Surveyors, BWG, Public	Data from surveys sent to NBDC
B8	LCC will identify important wildlife corridors that connect and act as routes between habitats.	LCC	Number of important wildlife corridors identified
B9	LCC will promote the recording of species data and the reporting of data to the national biodiversity data centre by the public generally and through citizen science schemes.	LCC and all relevant stakeholders	Increase in the number of records to the NBDC for Co. Longford
B10	LCC will support scientific studies and monitoring programmes to fill knowledge gaps and improve our understanding of local biodiversity.	LCC and relevant stakeholders	Studies carried out by external bodies and supported by LCC
B11	Review what we know and don't know about Longford's Biodiversity, including habitats, species, and protected areas.	LCC	Knowledge gaps identified

Aim 3. Positively promote biodiversity in plans, and strategies for the county.
These actions will be carried out primarily by LCC and by the biodiversity working group, landowners, and other relevant stakeholders as they are identified. There are a total of 10 actions under this aim. These actions will achieve the aim of promoting biodiversity in plans and strategies through developing guidelines, promoting community plans, and making submissions to infrastructure plans.

Positively promote biodiversity in plans, and strategies for the County			
	Action	**Partners**	**Indicators**
C1	LCC will require the inclusion of bat surveys for all buildings proposed for demolition.	Biodiversity Officer, LCC planning department	Development of guidelines with the planning department
C2	LCC will develop a policy for tree and hedgerow retention in proposed developments.	Biodiversity Officer, LCC planning department	Development of guidelines with the planning department
C3	LCC will conduct an assessment for impact on sensitive species prior to any bridge remediation works being carried out.	LCC and Roads Department	Development of guidelines with the planning department
C4	LCC will promote the development of biodiversity action plans for communities.	Biodiversity Officer and LCC Environment department	Additional plans developed
C5	LCC will assist community groups in planning biodiversity friendly zones.	Biodiversity Officer and relevant LCC departments	Number of groups helped
C6	LCC will promote nature-based solutions for urban drainage.	Biodiversity Officer and relevant LCC departments	Submissions to plans
C7	LCC will ensure that proposed projects will not have an adverse effect on the conservation objectives of Natura 2000 sites.	Planning Department	Plans with negative impacts amended or rejected
C8	LCC will develop an alien invasive species management plan.	Biodiversity Officer and relevant stakeholders such as the BWG and landowners	Plan developed
C9	Natural borders to enhance biodiversity will be included on new road, housing, and other infrastructural projects.	LCC planning, roads, housing departments and releveant stakeholders	Borders and buffers included in housing and infrastructure projects
C10	LCC will support the development of the Lough Ree Biosphere Reserve.	LCC	Lough Ree Granted Biosphere status

Aim 4. Develop training and monitoring programmes to help track and protect biodiversity in the county.

Many of the actions under this aim will be undertaken by LCC in conjunction with training partners. Other actions will be carried out alongside Hedgerows Ireland, NPWS, community groups, civil defense, and educational training boards. There are a total of 10 actions under this aim. Training actions will ensure that more people have the knowledge and skill to assist in protection and enhancement of biodiversity., and to ensure that positive outcomes are sustained longer term.

Develop training and monitoring programmes to help track and protect biodiversity in the county			
	Action	**Partners**	**Indicators**
D1	Training will be delivered to the relevant departments on assessing ecological impacts in planning applications	LCC and a training partner	Training programme undertaken
D2	Training will be delivered to relevant departments on public lighting options for proposed developments and the use of mammal friendly lighting.	LCC and a training partner	Training programme undertaken
D3	Training will be delivered to the agricultural community and other groups to improve hedge laying and hedgerow quality	LCC, Teagasc, and Hedgerows Ireland	Training programme undertaken
D4	LCC will undertake monitoring for bumblebees in line with NBDC's bumblebee monitoring scheme. The monitoring will be carried out by LCC staff or by community groups as appropriate.	Biodiversity Officer and community groups	Number of transects monitored per year
D5	LCC will develop a monitoring scheme for invasive plants.	Biodiversity Officer LCC	Capture records of invasives species
D6	LCC will carry out annual monitoring at sites of particular interest.	Biodiversity Officer	Monitoring sessions carried out
D7	Biodiversity Awareness training will be provided to staff and contactors carrying out maintenance on walkways.	LCC and a training partner.	Training has been undertaken
D8	Biodiversity Awareness training will be rolled out for volunteer groups for the cleaning and monitoring of sensitive habitats.	LCC and Civil Defense	Training has been undertaken
D9	Training will be developed with and delivered to the roads department to ensure a viable approach to the maintenance of hedgerows and trees.	LCC, NPWS, and a training Partner	Training has been undertaken
D10	Develop a relationship with ETBs to deliver accredited training days to teachers.	LCC and ETBs	Training programme has been explored with ETB

Aim 5. Promote biodiversity awareness and engagement in county Longford.
The actions under this aim will be carried out by LCC, NPWS, Teagasc, LAWPRO, Hedgerows Ireland, landowners, relevant external organisations, and the public. There are a total of 16 actions under this aim. This aim connects well with aim 4 to secure a longer-term shift in society towards noticing and protecting the natural heritage in Longford.
These actions will engage the public in biodiversity and secure participation in recording and acting for the positive benefit of biodiversity.

Promote biodiversity awareness and engagement in Co. Longford			
	Action	**Partners**	**Indicators**
E1	LCC will conduct an awareness campaign on the need to reduce the use of herbicides in roadside settings.	LCC	Campaign undertaken
E2	LCC will conduct an awareness campaign on the negative effects of cut grass being dumped on roadside verges, ditches, and waterways.	LCC	Campaign undertaken
E3	LCC will launch a biodiversity competition for schools (e.g. a nature table, or biodiversity project competition).	LCC and Schools	Competition held
E4	LCC will promote initiatives to encourage native wildflower growth in gardens, farms, and council owned lands (e.g. no-mow May, short/long flower meadows, removing of cut grass).	LCC	Promotion events held and interest in taking part logged
E5	LCC will engage in a public campaign to increase awareness of invasives species within and threatening the county.	LCC, NPWS, Teagasc, LAWPRO, and relevant stakeholders	Campaign undertaken
E6	LCC and partners will promote native forest planting schemes for farmers and landowners.	LCC and Teagasc	Promotion event held. Schemes information given to landowners.
E7	LCC's Biodiversity Officer will hold regular clinics in areas accessible to the public (e.g. the library network)	Biodiversity Officer, Libraries	Number of clinics held.
E8	LCC's Biodiversity officer will facilitate regular talks and presentations for community groups.	Biodiversity Officer, Community Groups	Number of talks given (target 8 per annum).
E9	LCC will promote engagement in citizen science schemes in Longford (e.g. FIT counts, garden bird survey, etc.)	LCC and public	Interest and taking part logged. Increase in data sent to NBDC and other organisations
E10	LCC will promote awareness of the species rich grasslands in the County	LCC, Teagasc and landowners	Engagement events held
E11	The Biodiversity Officer will network with other Biodiversity Officers and relevant agencies throughout the country.	Biodiversity Officer and relevant external agencies	Networks meetings attended
E12	LCC will disperse promotional information and funding opportunities for biodiversity initiatives to interested parties such as community groups.	Biodiversity Officer, PPN, Community Groups	A network of groups is identified, and relevant information dispersed to them as it emerges

E13	LCC will target secondary schools for biodiversity awareness campaigns and projects.	LCC and secondary schools	Engagement events held with schools and projects assisted or advised on
E14	LCC will promote the Heritage in Schools programme in communications with primary schools.	LCC and primary schools	Heritage in schools programme promoted and availed of by schools
E15	LCC will promote hedgerow biodiversity and natural services awareness.	LCC, hedgerows Ireland, and relevant partners	Hedgerow training and awareness events held
E16	LCC will promote the development of nature related community groups.	LCC	New nature related community groups developed

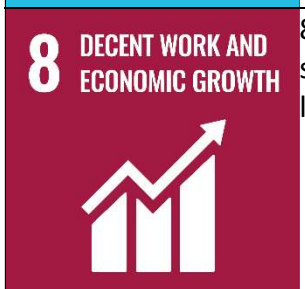
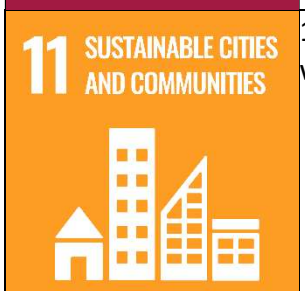
12. Measuring success

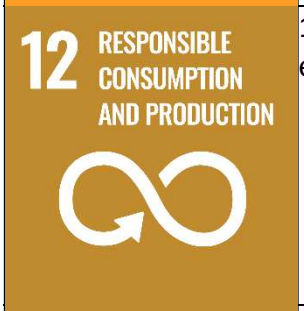
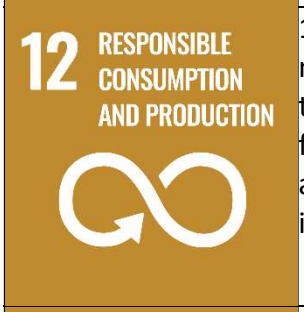
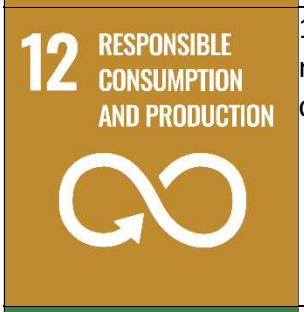
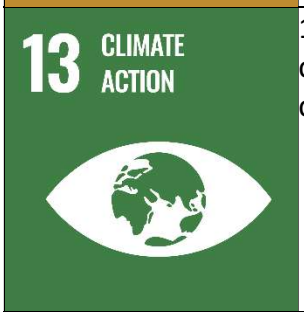
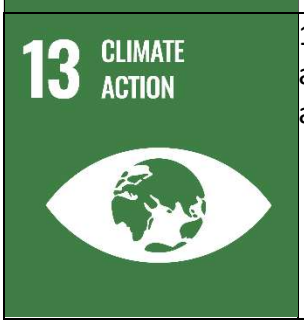
The overall goal of the County Longford Biodiversity Action Plan is for the protection and enhancement of biodiversity in County Longford. This in turn will help to improve biodiversity nationally as positive impacts will spread beyond the borders of the county. Within the action plan there are actions that include surveying and monitoring of various groups and habitats. Surveys of habitat types such as forestry and wetlands, will provide a baseline for the current health and extent of these habitats and when compared to previous and future surveys, will provide trend information. Surveys, including citizen science surveys, of species and groups will also provide trend information. This information will help to measure the success of the Biodiversity Action Plan.

Annual reports on the County Longford Biodiversity Action Plan will provide updates on the progress of the plan and the success of LCC, and partners, in carrying out the actions contained within the action plan. Annual reports will also record biodiversity actions that will be possible in the future due to legislative or policy changes, funding availability, or technological advancements, which are not captured in the actions of this plan.

APPENDIX I

United Nations (UN) Sustainable Development Goals

Sustainable development goal	Relevant SDG Target	Relevant actions in County Longford Biodiversity Action Plan
	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	A1 A11
	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping, and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and substantially increasing recycling and safe reuse globally	A1 A2 A3 A11
	6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes	A1 A2 A3 A11
	8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products	A2 C7 C10 D7 D8
	11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage	A1; A2; A3; A6 A7; A8; C1; C2 C3; C7; D1; D2 D3; D7; D8; D9

	11.7 By 2030, provide universal access to safe, inclusive, and accessible, green, and public spaces, in particular for women and children, older persons, and persons with disabilities	A2 A5 C5 D7 D8
	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	A1 A3
	12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment	A11
	12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	D1; D3 D8; E1 E2; E5 E6; E9
	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	C6
	13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	D10

	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains, and drylands, in line with obligations under international agreements	A1; A2 A3; A5 A11; C1 C2; C5 C9; D1 D3; D8 D9
	15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	A8 C2 E6
	15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	A1; A2 A3; A9 A11; C1 C2; C3 C7; C8 D1; D7
	15.8 By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species	A11 C8 D5 E5
	17.14 Enhance policy coherence for sustainable development	A4; A5; C2; C8;

Maps

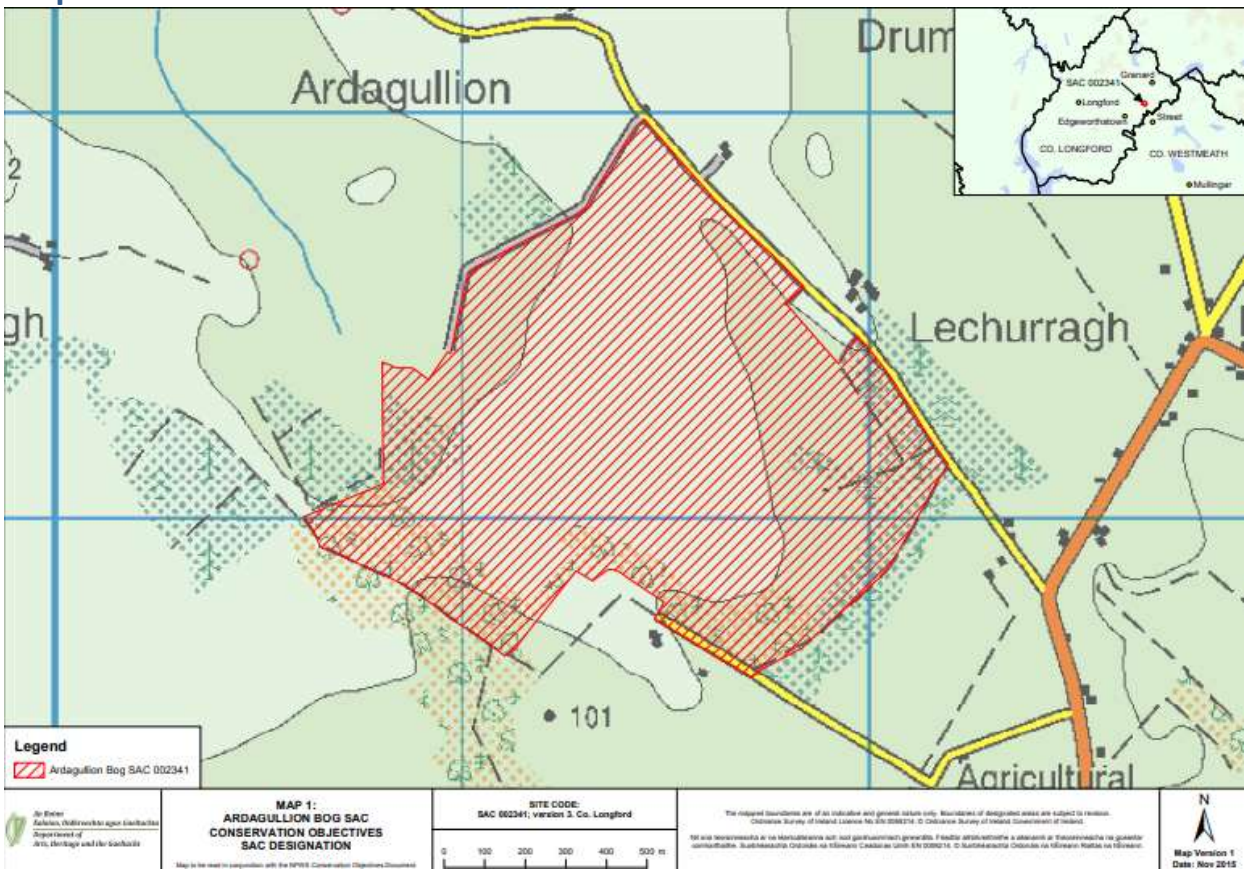


Fig. 15. Map 1: Ardagullion Bog SAC - From Site Conservation Objectives on NPWS.ie

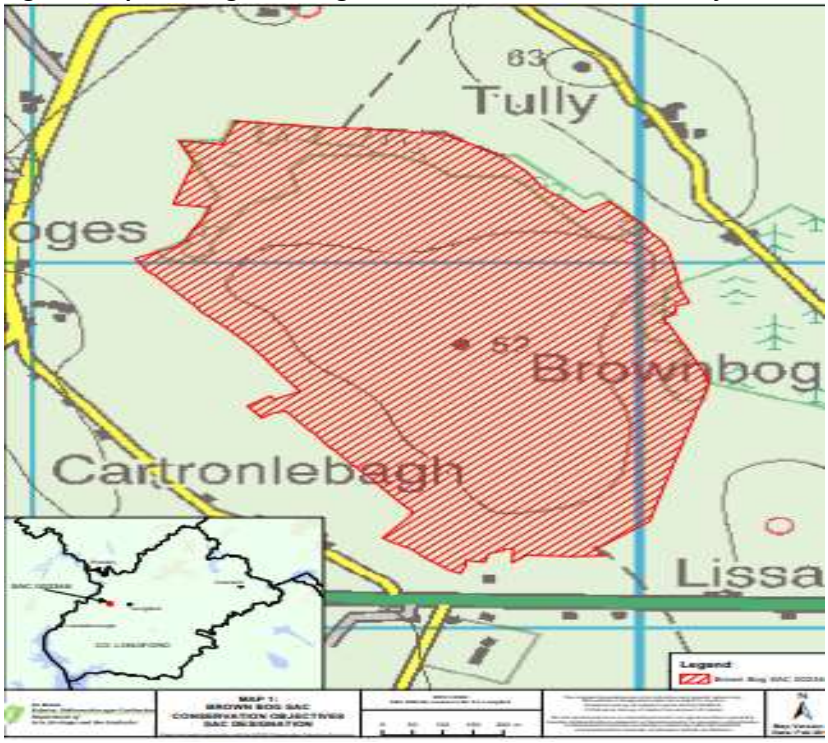


Fig. 16. Map 2: Brown Bog SAC - from site conservation objectives on npws.ie

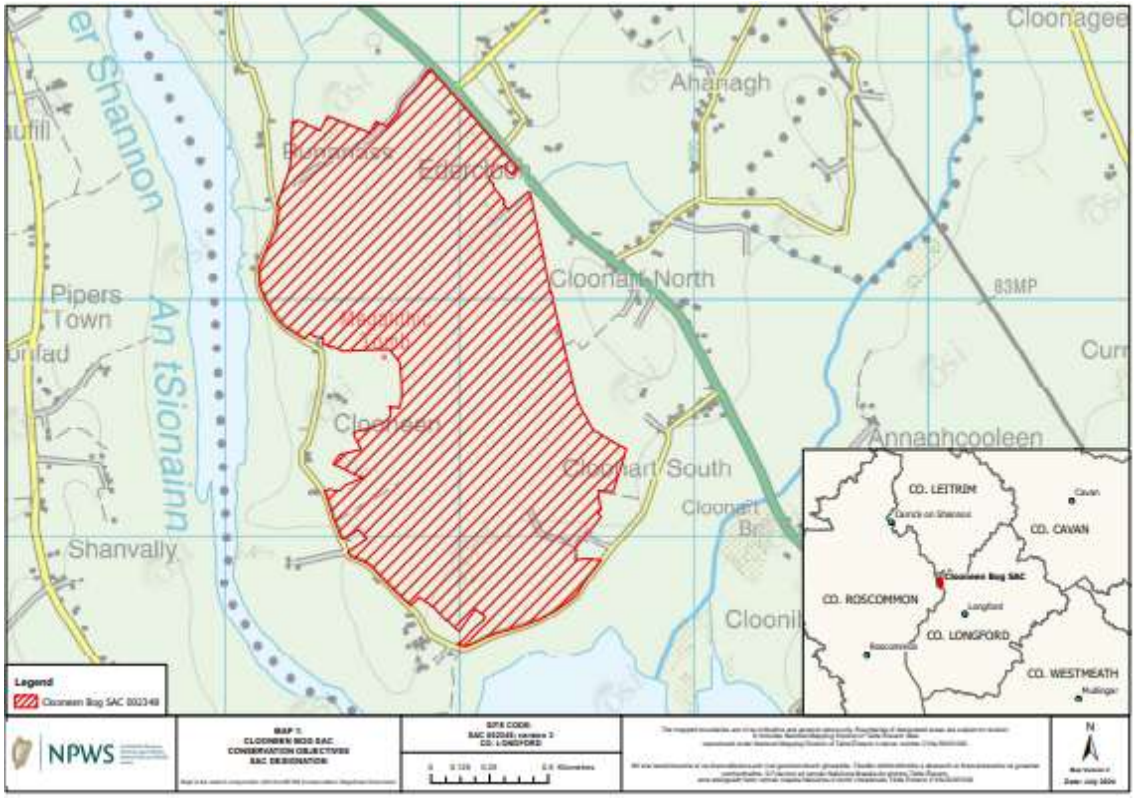


Fig. 17. Map 3: Clooneen Bog SAC - from site conservation objectives on npws.ie

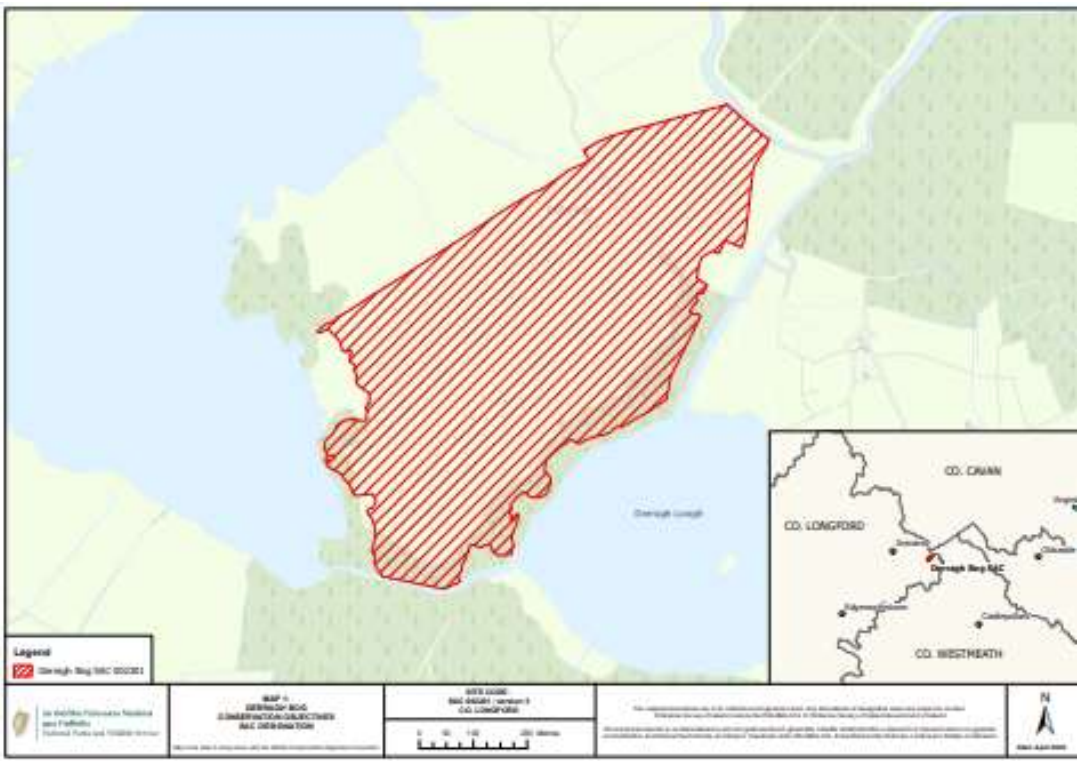


Fig. 18. Map 4: Derragh Bog SAC - from conservation objectives on npws.ie

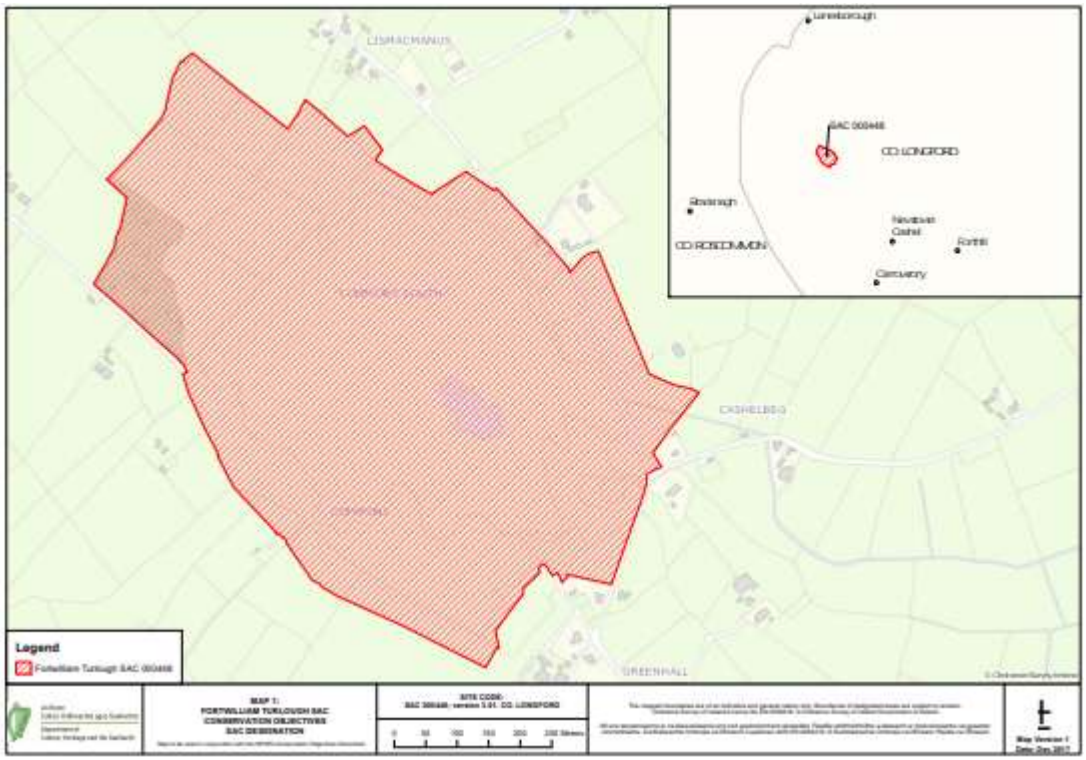


Fig. 19. Map 5: Fortwilliam Turlough SAC - from site conservation objectives on npws.ie

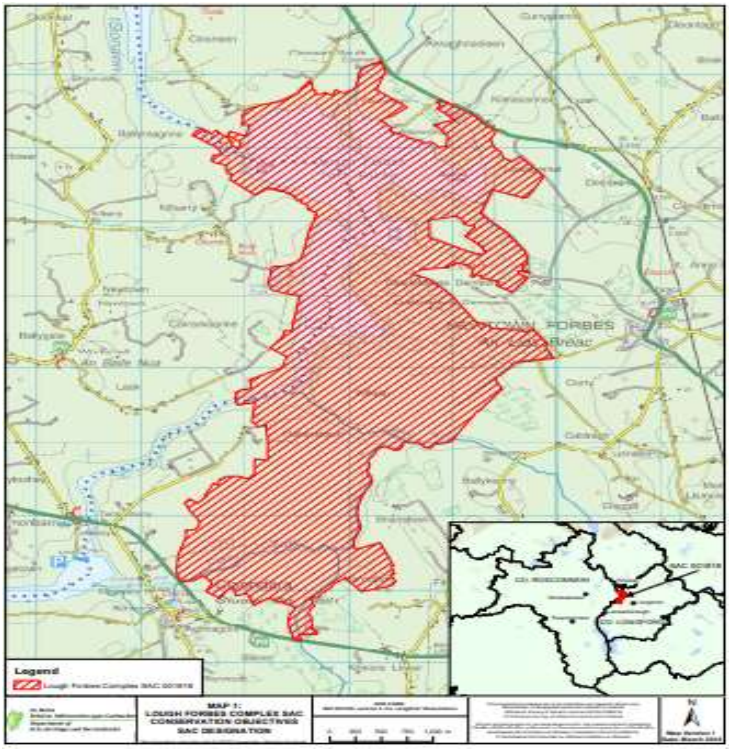


Fig. 20. Map 6: Lough Forbes Complex SAC - from site conservation objectives on npws.ie

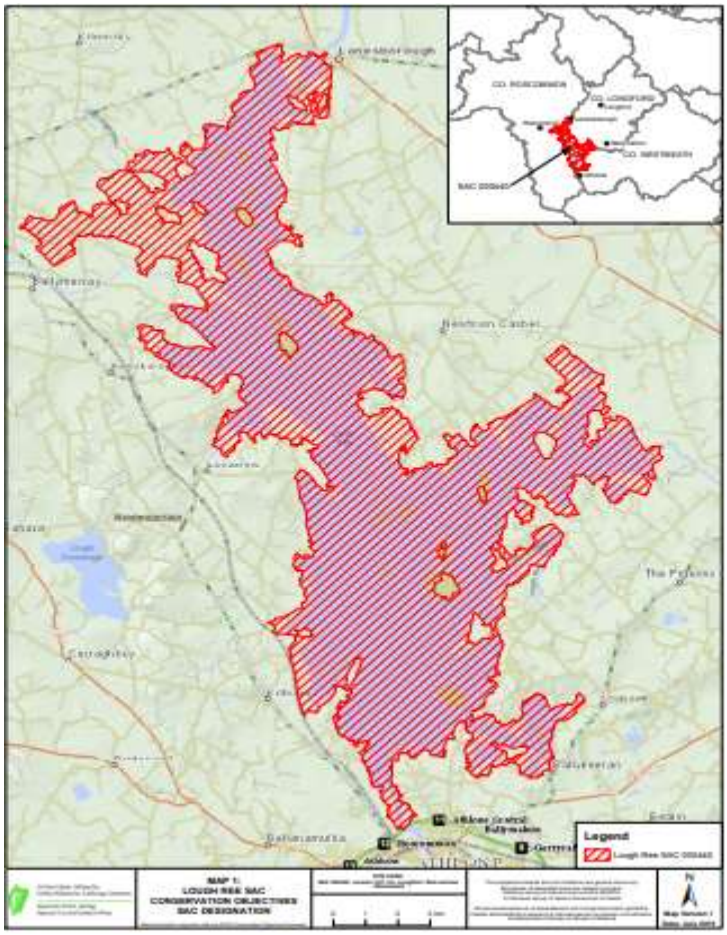


Fig. 21. Map 7: Lough Ree SAC - from site conservation objectives on npws.ie

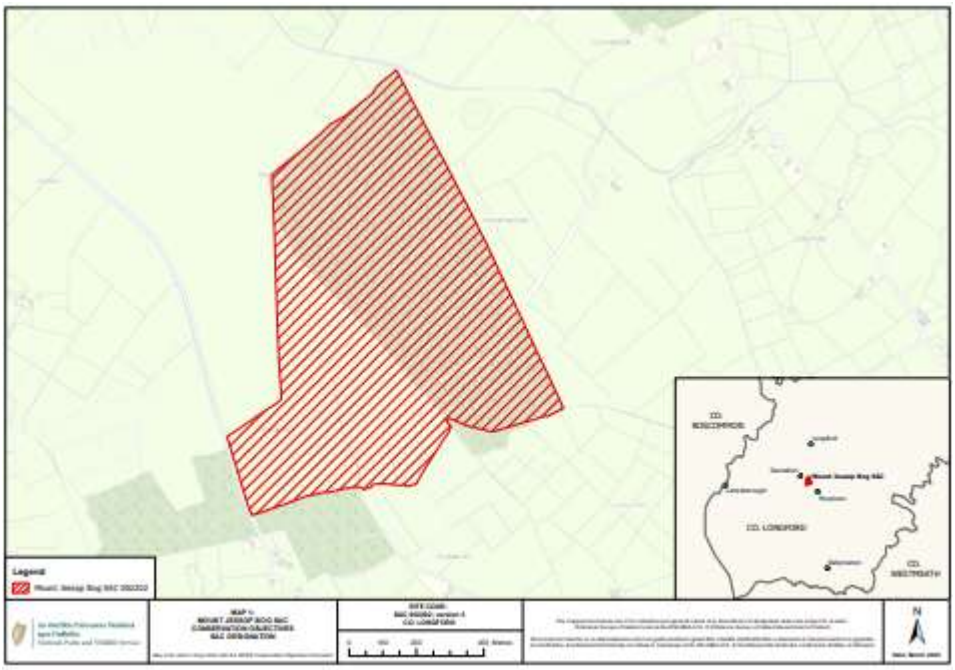


Fig. 22. Map 8: Mount Jessop SAC - from site conservation objectives on npws.ie

Schedules

Survey Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Badger survey												
Botanical Survey												
Bats – Activity survey												
Bat – Hibernation survey												
Birds – Wintering bird survey												
Birds – Breeding bird survey												
Fish survey												
Invertebrate survey												
Reptile Survey												
Red Squirrel Survey												
Otter Survey												

	Optimal time
	Sub-optimal time
	Out of season

Fig. 23. Schedule of selected survey timings per annum

Citizen Science Scheme	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Organiser
Flower-insect timed (FIT) count													All Ireland Pollinator Plan
Record a plant													BSBI
Irish Butterfly monitoring scheme													National Biodiversity Data Centre
Garden Butterfly Monitoring Scheme													National Biodiversity Data Centre
Marsh Fritillary Monitoring Scheme													National Biodiversity Data Centre
Bumblebee Monitoring Scheme													National Biodiversity Data Centre
Irish Hedgehog Survey													University of Galway
Hop-to-it Frog Survey													IPCC
Daubenton's Bat survey													Bat Conservation Ireland
Brown Long-eared Bat survey													Bat Conservation Ireland
Irish Wetland Bird Survey													Birdwatch Ireland
Irish Garden Bird Survey													Birdwatch Ireland

Useful links for these citizen science scheme and others that may come on stream:
Biodiversityireland.ie
Pollinators.ie
bsbi.org/record-a-plant
IWT.ie
Batconservationireland.org
Birdwatchireland.ie
Cieem.net/resource/citizen-science-programmes-in-ireland/
ipcc.ie/help-ipcc/hop-to-it-national-frog-survey-irelandcard/

	Optimal time
	Sub-optimal time
	Out of season

Fig.24. Schedule of annual Citizen Science schemes open in Ireland.

Month	Annual event
January	
February	World Wetlands Day International Day of Women and Girls in Science
March	National Tree Week World Wildlife Day World Book Day International Day of Forests and the Trees
April	International Earth Day
May	National Biodiversity Week Invasive species week World Bee Day World Migratory Bird Day International Day for Biological Diversity
June	World Environment Day
July	Longford Show World Bod Day
August	National Heritage Week National Hedgerow Week
September	National Hedgerow Week World Rivers Day
October	World Migratory Bird Day World Animal Day World Habitat Day
November	National Science Week
December	World Soil Day

Fig.25. Schedule of local, national, and international events for potential community engagement

Appendix 2

Actions in the National Biodiversity Action Plan relevant to Local Authorities

Target	Action Number	Action
By 2024, and in each year thereafter, relevant entities report on their progress against this Plan	1A4	Each entity responsible for actions within this Plan will provide an annual update on progress and contribute to an Interim and Final Review of the Plan
From 2024, progress reports will be submitted annually to relevant Groups/Committees	1A8	The Minister will receive a report on progress on the implementation on the NBAP at least once a year and will bring that report to Cabinet
By 2026, all Local Authorities have increased capacity to facilitate and implement all required duties relating to biodiversity at the local level	1B9	The Heritage Council will work with Local Authorities on establishing a Biodiversity Officer Programme with a dedicated Biodiversity Officer in each Local Authority
By the end of 2026, all Local Authorities will have a Biodiversity Action Plan in place	1C6	All Local Authorities will have a Biodiversity Action Plan adopted by the end of 2026 which is subject to regular review and revision processes in line with relevant guideline standards
By 2030, trends in the status of the protected habitats and species under the Habitats and Birds Directives are improving	2A3	NPWS and relevant stakeholders will implement the conservation measures necessary to achieve the conservation objectives for Natura 2000 sites, and will develop and implement additional measures as necessary, to contribute towards achieving favourable conservation status nationally
By 2030, in line with the EU Biodiversity Strategy, habitats and species under the Habitats and Birds Directives show no deterioration in conservation trends and status and at least 30% of those not in favourable status will reach that status or show a positive trend	2A6	NPWS and other relevant organisations will support species and habitat-specific conservation programmes
By 2024, Ireland has identified preliminary areas that will be pledged as future protected areas under the EU Biodiversity Strategy	2A8	NPWS, with relevant stakeholders will identify areas that will be pledged as protected areas following the criteria laid out under the EU Biodiversity Strategy
By 2030, at least 4% of agricultural land has biodiversity rich landscape features	2B5	DAFM and other relevant stakeholders will support farmers to protect, restore and create on -farm biodiversity rich landscape features

By 2030, in line with the EU Biodiversity Strategy, the use and risk of pesticides is reduced by 50% by 2030	2B6	DAFM, Local Authorities and other relevant stakeholders will implement existing and new measures to reduce chemical pesticide use, in line with the EU regulatory framework for pesticides
Continued support for native tree planting	2B11	DAFM will continue to promote and/or support native tree planting by Local Authorities and other State/semi-state bodies
By 2030, in line with the EU Biodiversity Strategy, the decline of pollinators is halted and reversed	2B13	NBDC with partners in Northern Ireland and other actors listed in the All-Ireland Pollinator Plan 2021-2025 will implement appropriate actions listed in the Plan and support farmland pollinator conservation activities post-2025
By 2025, measures under the National Peatlands Strategy are implemented	2C1	NPWS, Bord na Móna, DECC, DAFM, Coillte and other relevant stakeholders will implement the National Peatlands Strategy 2015-2025, and subsequent policy changes, taking account of the 2021 mid-term review
By 2026, Bord na Móna to rehabilitate 33,000 hectares of its peatlands under the Enhanced Decommissioning, Restoration and Rehabilitation Scheme (EDRRS)	2C3	Bord na Móna as operator of the Enhanced Decommissioning Rehabilitation and Restoration Scheme (EDRRS), NPWS as Regulator of the scheme, and other relevant Departments will work in partnership to implement the scheme. Programmes will be in place on the EDRRS peatlands to monitor carbon emissions, water quality, vegetation, habitat, and biodiversity
By 2025, nature-based solutions are contributing to national climate ambitions	2C7	To support the National Climate Objective of achieving a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy, DECC, DAFM, DHLGH, Local Authorities, and Climate Action Regional Offices will promote terrestrial nature-based solutions in national, regional, and local rural and urban programmes
By 2027, protection and restoration measures detailed in Ireland's third RBMP are implemented to ensure that our natural waters are sustainably managed, that freshwater resources are protected so that there is no further deterioration; and where required, Ireland's rivers, lakes and coastal water bodies are restored to at least good ecological status	2D1	Relevant bodies such as DHLGH, DAFM, Local Authorities and partners will deliver a RBMP to better protect, enhance and monitor the ecological status of water during the third cycle of the RBMP

By 2027, optimised benefits in flood risk management planning and drainage schemes are in place	2D5	OPW will work with relevant authorities to ensure that Flood Risk Management planning and associated Strategic Environmental Assessment (SEA), EIA and Appropriate Assessment (AA), minimises loss of biodiversity and ecosystem services through policies to promote more catchment-wide and non-structural flood risk management measures
By 2027, optimised benefits in flood risk management planning and drainage schemes are in place	2D7	The OPW, in coordination with other relevant stakeholders, will continue to enhance its knowledge and capacity with regards to Nature-based Solutions for Catchment Management (NBS-CM) and will assess the potential NBS-CM as part of the development of the future flood relief schemes
By 2027, implementation of a National Restoration Plan has begun	2F5	DHLGH and all stakeholders across Government, will put in place restoration measures as described in the National Restoration Plan, within the appropriate timeframes
By 2027, implementation of the National Restoration Plan is monitored	2F6	DHLGH and all stakeholders across Government, will monitor implementation of the National Restoration Plan
By 2030, IAS are controlled, managed, and where possible, eradicated within Protected Areas and effectively controlled in urban, peri-urban areas, the wider countryside, and marine and coastal areas	2H4	NPWS in collaboration with all relevant stakeholders will resource and implement on the- ground actions to control, manage and where possible and feasible, eradicate occurrences of invasive alien species, including the removal of stands of invasive species from Protected Areas and National Parks
By 2030, IAS are controlled, managed, and where possible, eradicated within Protected Areas and effectively controlled in urban, peri-urban areas, the wider countryside, and marine and coastal areas	2H6	NPWS, NBDC and relevant partners will implement recommended measures arising from the 2021 EPA Report No. 368 Prevention, Control and Eradication of Invasive Alien Species
By 2027, all actions relating to biodiversity and natural heritage are in progress or completed	3A1	DHLGH will fund and deliver on Heritage Ireland 2030, Ireland's 10-year national heritage plan
By the end of 2027, the biocultural value of green and blue urban environments (GBUE) in all local authority areas is enhanced	3A3	Local Authorities will work to identify and respond to opportunities for enhancing the biocultural value of GBUE through appropriate design strategies, the use of visual and performing arts, and enhancing equity of access and promoting use of GBUE by community groups, and integrating cultural services in local biodiversity action plans
By 2030, shared responsibility for the conservation of biodiversity acted on	3C1	All Public Authorities and private sector bodies move towards no net loss of biodiversity through strategies, planning, mitigation measures, appropriate offsetting and/or investment in Blue-Green infrastructure

By 2030, the objectives of the NBAP, where relevant, are aligned with and integrated, within the statutory land use plans of the Regional Assemblies and Planning Authorities and within LBAPs	3C3	All Regional Spatial and Economic Strategies, City and County Development Plans, Local Area Plans and LBAP's shall be aligned with the objectives of the NBAP, where relevant
By 2026, a review of biodiversity skills gaps is complete	4A1	An application will be made by relevant organisations to the Expert Group on Future Skills Needs (EGFSN) to conduct a review of skills needs to address the biodiversity crisis e.g., ecologists, taxonomists, and biodiversity data experts
By 2024, biodiversity monitoring programmes are sufficiently robust to detect changes over time and fulfil our national, regional, and global reporting obligations	4C4	The contribution from citizen science to support biodiversity monitoring will be supported by all relevant organisations
By 2027, first national assessment of ecosystem accounts is completed	4D5	Relevant organisations will conduct a national assessment of stocks, flows and trends in ecosystem services to identify priority ecosystems and threats to natural capital using appropriate tools, to be coordinated with relevant authorities in NI