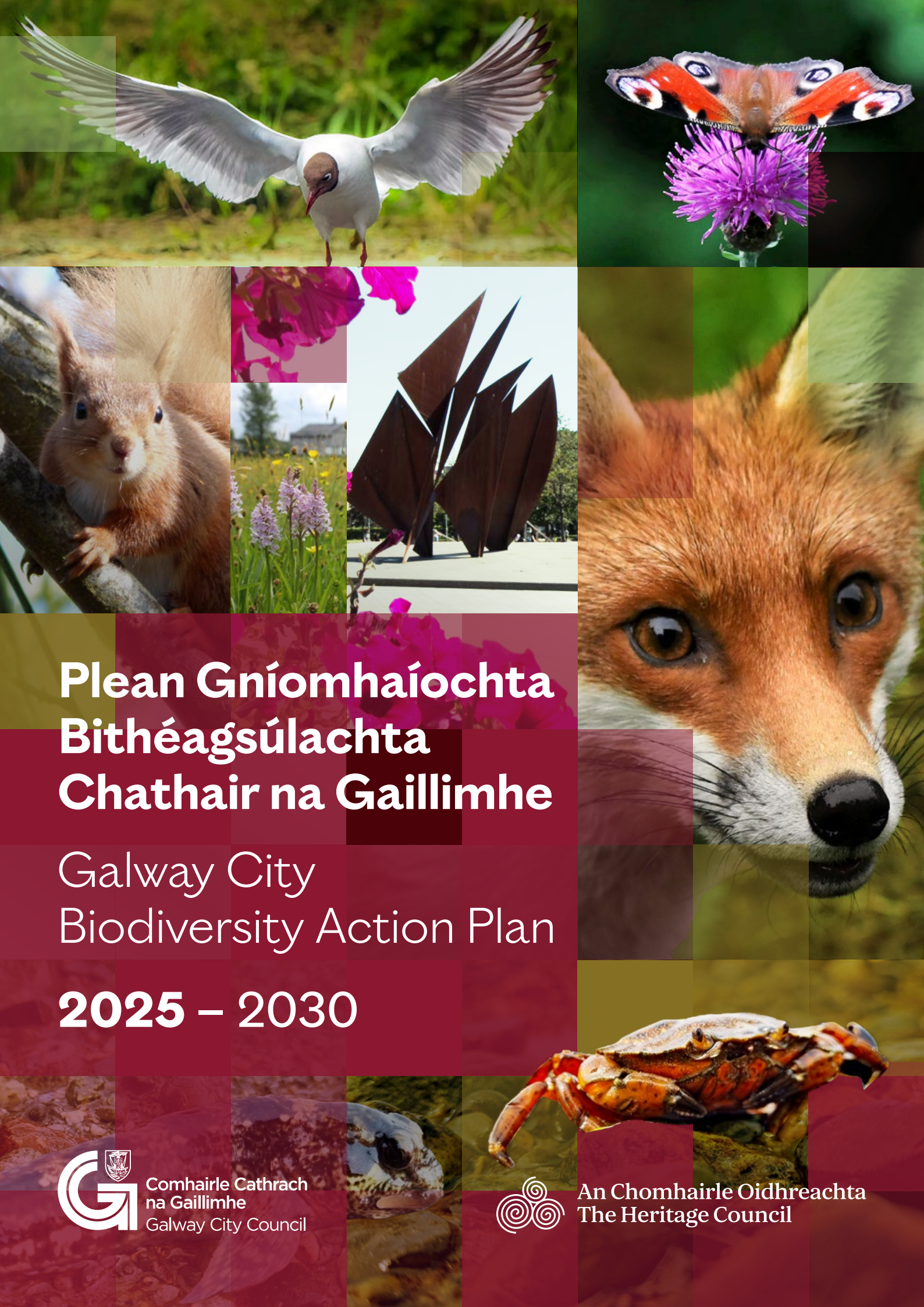

Plean Gníomhaíochta Bithéagsúlachta Chathair na Gaillimhe

Galway City Biodiversity Action Plan

2025 – 2030

Comhairle Cathrach na Gaillimhe
Galway City Council

An Chomhairle Oidhreachta
The Heritage Council

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Foreword

Galway City is a place of extraordinary natural beauty and ecological richness. From the fast-flowing River Corrib to our tranquil canals, wetlands, and coastal habitats, nature is woven into the very fabric of our urban landscape. These green and blue spaces are not only home to a remarkable diversity of species, but they are essential to our health, our climate resilience, and our shared sense of place.

As Chief Executive of Galway City Council, I am proud to present the Galway City Biodiversity Action Plan 2025–2030. This plan is a call to action and commitment to protect, restore, and celebrate the biodiversity that sustains us. It builds on the achievements of previous plans and reflects the urgency of the global biodiversity and climate crises, while also embracing the opportunities that come from working together across communities, sectors, and generations.

This is not just a biodiversity action plan. It is a vision for a greener, healthier, and more connected Galway. It outlines practical steps to enhance habitats, support species, and embed biodiversity into planning, education, and everyday life. It recognises that biodiversity is not confined to nature reserves, it thrives in our parks, gardens, schools, and streets.

I want to thank all those who contributed to the development of this plan including residents, researchers, community groups, and City Council staff. Your passion and insight have shaped a roadmap that is both ambitious and achievable.

Let us move forward with purpose and pride, knowing that every action we take to protect biodiversity is an investment in Galway City's future.

Leonard Cleary,
Chief Executive, Galway City Council

Message

By The Heritage Councils Dr Martina Moloney, Chairperson and Virginia Teehan, Chief Executive Officer.

Ireland's natural heritage is one of our greatest assets, which is woven through our landscapes, our culture, and our communities. In Galway City, this natural heritage is especially vibrant and it is integral to the city's identity and resilience.

The Heritage Council is proud to support the Galway City Biodiversity Action Plan 2025–2030, a timely initiative that places biodiversity at the heart of urban life. 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 Galway City, 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 the City's first Biodiversity Officer in 2023.

The Galway City Biodiversity Action Plan reflects a growing recognition that cities must accommodate nature and actively nurture it. It sets out a clear and ambitious roadmap for protecting habitats, restoring ecological networks, and engaging citizens in the stewardship of their local environment.

We commend Galway City Council for its leadership and vision, and we celebrate the collaborative spirit that shaped this plan with active engagement from community groups, schools, scientists and volunteers. Biodiversity is not the concern of any one sector; it is a shared responsibility, and this plan exemplifies how local action can contribute to national and global goals.

The Heritage Council looks forward to continuing our partnership with Galway City and supporting the implementation of this plan in the years ahead.

Dr Martina Moloney,
Chairperson of the Heritage Council

Virginia Teehan,
Chief Executive Officer
of the Heritage Council

Glossary & Acronyms

Glossary Term	Meaning
Annex I habitat	Habitat types listed on Annex I of the EU Habitats Directive whose conservation requires the designation of Special Areas of Conservation.
Annex II species	Species listed on Annex II of the EU Habitats Directive whose conservation requires the designation of Special Areas of Conservation.
Annex IV species	Species listed on Annex IV of the EU Habitats Directive which are afforded strict protection under EU and national legislation.
Appropriate Assessment	An assessment carried out under Article 6(3) of the Habitats Directive as to whether a proposed development would adversely affect the integrity of a European site
Birds Directive	Council Directive 2009/147/EC on the conservation of wild birds
Designated sites	Sites which have special status as protected areas under legislation because of their natural and cultural importance.
Ecosystem Services	All the benefits that humans freely derive from nature
European site	'European site' has the meaning given to it by the Planning and Development Act 2000 as amended, section 177R of Part XAB. Collective term used when referring to nature conservation sites protected under the Habitats or Birds Directives (SACs or SPAs).
Fragmentation	Impacting the connectivity of the site due to the works fragmenting the area which will have a direct impact to species or habitats.
Flora Protection Order, 2022	This order prohibits the cutting, uprooting, or damaging of the listed species and their habitats, making it illegal to interfere with them without a licence from the National Parks & Wildlife Service (NPWS).
Habitat	A place in which a particular plant or animal lives. Often used in a wider sense, referring to major assemblages of plants and animals found together such as woodlands or grassland.
Habitats Directive	Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EU Habitats Directive).
Impact	The effects and consequences of human activities, natural events, or environmental changes on biodiversity.
Monitoring	The observation, measurement and evaluation of environmental data over a period of time.

Glossary Term	Meaning
Natura 2000	The Natura 2000 network is defined under the Habitats Directive 92/43/EEC (Article 3) and the Birds Directive 2009/147/EC (Article 4) as a coherent European ecological network of Special Areas of Conservation (SAC) and Special Protection Areas (SPA).
Special Area of Conservation (SACs)	SACs are sites designated under European Communities Directive 92/43/EEC known as the 'Habitats Directive'. This requires the conservation of important, rare or threatened habitats and species across Europe. SACs are composed of sites hosting the Qualifying Interest (QI) habitat types listed in Annex I and/or species listed in Annex II (under Habitats Directive Article 3).
Special Protection Area (SPAs)	SPAs are sites designated under the European Communities Directive 2009/147/EC, known as the 'Birds Directive', to conserve the habitats of certain migratory or rare birds. SPAs are composed of sites supporting Special Conservation Interests (SCI) comprising Annex I bird species, regularly occurring migratory species and the supporting wetland habitats (under Article 4 Birds Directive).
Strategic Environmental Assessment (SEA)	SEA is a systematic process to evaluate the likely significant environmental, social, and economic effects of policies, plans, or programs before their adoption.
Water Framework Directive (WFD)	The Water Framework Directive (2000/60/EC) requires all member states of the EU protect and improve the quality of their water within their respective states. This aims to achieve good ecological status of at least good by 2027 at the latest. It applies to rivers, lakes, groundwater, and transitional coastal waters.

Acronym	Full Phrase
AIPP	All Ireland Pollinator Plan
ATU	Atlantic Technological University
BCI	Bat Conservation Ireland
BNG	Biodiversity Net Gain
BWI	Birdwatch Ireland
C&V	Community and Voluntary
CBD	Convention on Biological Diversity
CBA	City Biodiversity Areas (formerly known as Local Biodiversity Areas (LBA))
CDP	City Development Plan
CFI	Community Foundation Ireland
COP	Conference of the Parties
DAFM	Department of Agriculture, Fisheries and Marine
DECC	Department of Energy and Climate Change
DHLGH	Department of Housing, Local Government and Heritage
EPA	Environment Protection Agency
EU	European Union
GCC	Galway City Council
GBUE	Green and Blue Urban Environment
GBF	Global Biodiversity Framework
HSE	Health Service Executive
IAS	Invasive Alien Species
IDA	Industrial Development Association
LAWPRO	Local Authority Waters Programme
LBA	Local Biodiversity Area
LBAP	Local Biodiversity Action Plan
NBAP	National Biodiversity Action Plan
NBDC	National Biodiversity Data Centre
NbS	Nature-based-solutions
NGO	Non-Governmental Organisation
NHA	National Heritage Area

Acronym	Full Phrase
NPWS	National Parks and Wildlife Service
NRP	Nature Restoration Plan
NUIG	National University Galway
SAC	Special Area Conservation
SDGs	UN Sustainable Development Goals
SPA	Special Protection Area
SuDS	Sustainable Urban Drainage System
TOR	Terms of Reference
UNCCD	United Nations Convention to Combat Desertification
UNCLOS	United Nations Convention on the Law of the Sea
WFD	Water Framework Directive

Acknowledgements

Galway City Council (GCC) wishes to acknowledge the support of The Heritage Council in co-funding the preparation of the Galway City Biodiversity Action Plan 2025-2030, the Biodiversity Officer post and the provision of annual funding for the implementation of Galway City BAP actions.

GCC is also very grateful for the support of the National Parks and Wildlife Service (NPWS) under the Local Biodiversity Action Fund in co-funding numerous biodiversity projects across the City since 2020.

GCC wishes to sincerely thank the public who participated in the consultation process and the Galway City Biodiversity Working Group in the development of the Plan.

The working group includes Council members, Atlantic Technical University, University of Galway, Barna Tidy Towns, Clean Coasts, Conservation Volunteers, County and City Libraries, Friends of Barna Woods, Tuatha Terryland Forest Park, Friends of Merlin Woods, Galway City Community Network, GCC departments including Climate, Communications, Environment, Galway Sports Partnership, Housing, Recreation and Amenity, Planning, Galway West Community Group, Galway West Community Group and Galway's Westend Businesses.

GCC wish to thank ecological consultants Dr. Frances Giaquinto, Linda Gilsenan, and Phoebe O'Brien in facilitating the Biodiversity Working Group consultations, development of actions and assisting in formulating the Plan. We also wish to thank Anne Mullen from JBA Consulting and Ruth Minogue from Minogue & Associates for the preparation of the Strategic Environmental Assessment Screening and Appropriate Assessment Screening assessments of the draft Plan.

Finally, we would like to thank the Senior Management Team of GCC and the Elected Members of GCC for their support in the development of this plan and continued support to protect and enhance biodiversity in Galway City.

1. Galway City Council Biodiversity Action Plan

A local Biodiversity Action Plan (LBAP) provides a framework for the conservation of biodiversity and natural heritage at a local level.

It is designed to translate international, European and national policies and obligations, including the 4th National Biodiversity Action Plan (NBAP) 2023–2030, into effective action on the ground; to assist sustainable planning and development; to raise public awareness of and involvement in the conservation of biodiversity, and to collect and collate information on the biodiversity of the area. It ensures that national and international targets for the conservation of biodiversity can be achieved while at the same time addressing local priorities.

Vision for Galway City Biodiversity Action Plan (BAP):

Galway City is committed to safeguarding and restoring its rich biodiversity through a coordinated and strategic approach. By fostering dynamic partnerships between GCC, statutory bodies, voluntary organisations, and the wider community, we will implement innovative and effective measures to halt biodiversity loss. Together, we will create a thriving, resilient natural environment that benefits both people and wildlife for generations to come.

1.1 What is Biodiversity?

The term biodiversity[1], short for biological diversity, was defined at the Rio de Janeiro Earth Summit in 1992, at which almost every country in the world was represented and more than 100 Heads of State participated. The aim was to address the state of the Earth's natural resources.

Biodiversity is defined as **'the variability among living organisms from all sources including terrestrial, marine, and other aquatic ecosystems, and the ecological complexes of which they are part.** (Earth Summit 1992)

Biodiversity can be likened to a finely tuned engine in which all living parts play an essential role. If some of the parts are removed, the engine stops functioning well and will eventually break down.

The protection of biodiversity means the protection of species including the habitats in which they live and the connections they make with other organisms. For example when we speak about the protection of red squirrels, we must consider the provision of sufficient habitat for them to find food, shelter, a safe place to rear their young and space for the population to expand and flourish. This includes wildlife corridors along which they can safely move to other suitable habitats.

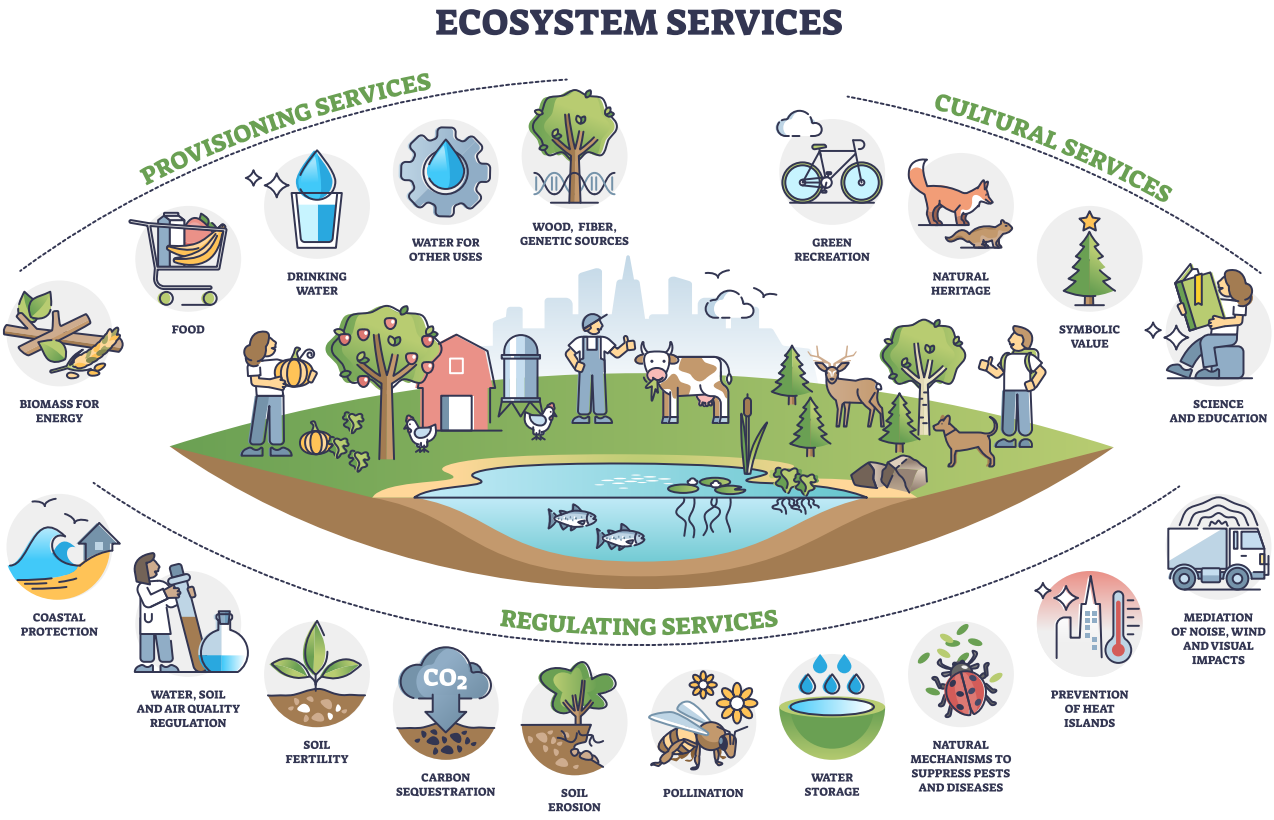
1.2 Why is Biodiversity Important?

The importance of biodiversity as a resource for humans was recognised in the 1970s when Mooney et al. (1997)[2] coined the term ecosystem services to describe 'all the benefits that humans freely derive from nature'. The four pillars of ecosystem services are described in **Table 1.1** which shows the benefits and essential role of biodiversity for humans. One simple example is the decomposition and recycling of organic matter, which is the role of invertebrates, fungi and bacteria. We would be buried beneath millions of tons of leaf litter if it was not broken down into carbon, nutrients and minerals each autumn by soil-dwelling organisms.

1. The term biodiversity is often used interchangeably with 'nature', but they do have different meanings. Biodiversity means all living things, nature encompasses all living systems, including geology, water, and climate. EPA: Ireland's State of the Environment, 2024. www.epa.ie
2. Mooney et al., 1997. Ecosystem Services: A Fragmentary History. Island Press, Washington.

Table 1.1. The four pillars of ecosystem services

Pillar	Function
Provisioning services	Products we freely derive from nature, such as food, water and resources, including wood, oil, genetic resources and medicines.
Regulating services	Benefits obtained from the natural processes and functioning of ecosystems, including climate regulation, flood regulation, pollination, water and air purification, decomposition, and formation of soils.
Cultural services	Non-material benefits that people can obtain from ecosystems, including spiritual enrichment, emotional and physical wellbeing, intellectual development, recreation and aesthetic values. These services can be hard to monitor and value compared to regulating and provisioning services, but research in this area is growing. For example, the ability to see or interact with nature through hospital windows and in hospital gardens increases the speed of patient recovery.[3]
Supporting services	Services which support the functioning of habitats, including photosynthesis, and water, carbon, and nutrient cycles. They include the maintenance of viable species gene pools.



3. Ulrich, R S (1984). View through a window may influence recovery from surgery. https://www.science.org/doi/10.1126/science.6143402?utm_medium=website&utm_source=archdaily.com

Artwork by Esther Blodau, channels the voices of young people in Galway City which was captured during the Comhairle na nÓg consultation event in October 2024 and expresses their aspirations for biodiversity and thriving ecosystems.

Case Study

The economic costs of not protecting biodiversity and its ecosystem services have been recognised in New Zealand, which estimates that biodiversity protection will save the country $270 billion over the next 50 years.[4] Although it requires an immediate investment in nature protection by up to 6.5 times the current spend, it is estimated that by 2035 the economic benefits will have outweighed the costs of inaction related to biodiversity loss and will result in significant long-term growth. Research has shown that nature-based solutions to climate change, such as native forest restoration and wetlands restoration, could capture and store an additional 13.7 million tonnes of carbon dioxide every year from 2030, saving New Zealand $56.4 billion by 2080.

1.2.1 UN Sustainable Development Goals

The UN Sustainable Development Goals (SDGs), also known as the Global Goals, include a set of 17 interconnected goals which are a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030.

The SDGs and the biosphere are intrinsically linked. The SDG 'wedding cake'[5] illustrates how to achieve the SDGs with biodiversity (see **Figure 1.1**). This image visually represents the interconnectedness of the SDGs, with the biosphere of Life Below Water (SDG 14) and Life on Land (SDG 15) forming the foundation upon which all other goals are built. This structure emphasises that the biosphere, encompassing all living organisms and their environment, is crucial for supporting human well-being and economic development.

Figure 1.1: The SDG 'Wedding cake' shows the biosphere as the foundation of economies and societies, and the basis of all SDGs.[6]

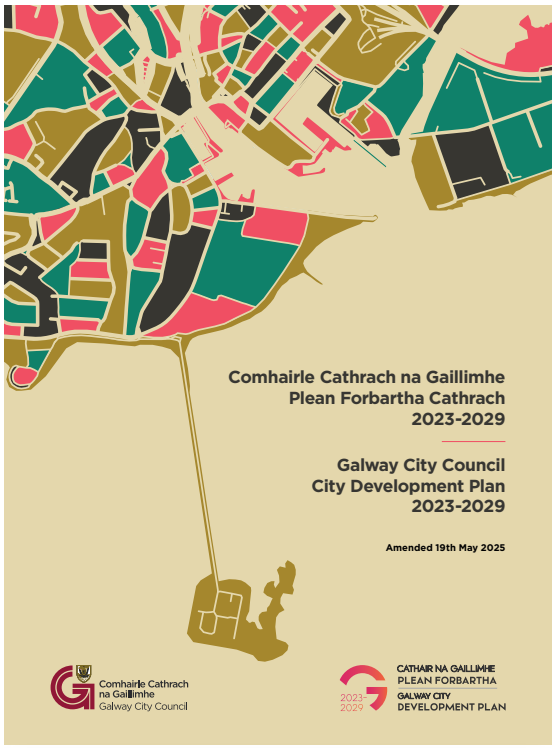
4. https://wwf.org.nz/news/our-planet/tackling-nature-loss-could-bring-major-economic-boost-nz#:~:text=The%20report%2C%20the%20first%20of,medium%2D%20to%20long%2Dterm.
5. Naeem S, Chazdon R, Duffy JE et al (2016) Biodiversity and human well-being: an essential link for sustainable development. Proc R Soc B 283:20162091. https://doi.org/10.1098/rspb.2016.2091
6. Obrecht, Andreas & Pham-Truffert, Myriam & Spehn, Eva & Urbach, Davnah & De Bremond, Ariane & Altermatt, Florian & Fischer, Manuel & Passarello, Cristian & Moersberger, Hannah & Schelske, Oliver & Guntern, Jodok & Prescott, Graham & Geschke, Jonas. (2021). Achieving the SDGs with Biodiversity. 16. 11. 10.5281/zenodo.4457298.

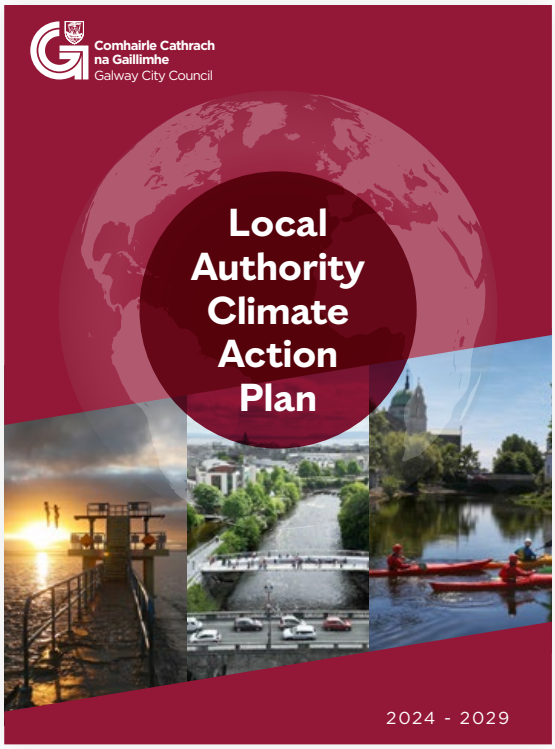
2. Legislation Plans and Policies Relevant to the Biodiversity Action Plan

The urgency to address environmental degradation and biodiversity loss, with all its associated decline in healthy functioning ecosystem services, has led to the development and enforcement of a range of international, European and national legislation, plans and policies.

The Galway City BAP has been developed to correspond with national and EU legislation, including the EU Biodiversity Strategy 2030, the Habitats Directive, and Ireland's Biodiversity Sectoral Climate Change Adaptation Plan. It also integrates with local policies such as the Galway City Development Plan 2023–2029 and the GCC Climate Action Plan 2023–2029 (**Appendix A**).

By aligning with these frameworks, Galway City's BAP contributes to urgent conservation and restoration efforts, enhances biodiversity awareness, and ensures that local actions support Ireland's broader biodiversity commitments.





2.1 Legislation

Ireland is a signatory to several conventions and agreements, bound by numerous global, European and national level legislation aimed at biodiversity conservation, as set out in **Figure 2.1.** Further details on legislation are given in **Appendix B**.

International Legislation

- Migratory Species Convention (Bonn Convention)[7]
- Ramsar Convention on Wetlands[8]
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)[9]
- Kunming Montreal Global Biodiversity Framework
- Inclusive Conservation Initiative COP 15
- United Nations Convention on the Law of the Sea (UNCLOS) for the conservation and sustainable use of marine biological diversity

At a European Union level, Ireland is bound by:

- European Union Bird and Natural Habitat Directives
- European Union Water Framework Directive
- Invasive Alien Species EU Regulation 1143/2014
- EU Nature Restoration Regulation

At a national level, the following are key:

- Wildlife Acts
- Flora Protection Order, 2022
- Planning and Development Acts
- European Union (Invasive Alien Species) Regulations 2024 (S.I. No. 374 of 2024)

7. https://www.eea.europa.eu/help/glossary/eea-glossary/bonn-convention
8. https://www.ramsar.org/
9. https://cites.org/eng/disc/what.php

International Legislation

- Convention on Biological Diversity and associated Strategic Plan for Biodiversity 2011-2020
- Migratory Species Convention (Bonn Convention)
- Ramsar Convention on Wetlands
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- Kunming Montreal Global Biodiversity Framework
- Inclusive Conservation Initiative COP 15
- United Nations Convention on the Law of the Sea (UNCLOS) for the conservation and sustainable use of marine biological diversity

European Union level

- European Union Bird and Natural Habitat Directives
- European Union Water Framework Directive
- Invasive Alien Species EU Regulation 1143/2014
- EU Biodiversity Strategy for 2030
- EU Soil Strategy for 2030
- Commission Decision on Good Environmental Status 2017
- 8th Environmental Action Programme to 2030
- EU Nature Restoration Law

National Level

- Wildlife Acts
- Flora Protection Order, 2022
- Planning and Development Acts
- European Union (Invasive Alien Species) Regulations 2024 (S.I. No. 374 of 2024)
- National Peatlands Strategy 2015
- All Ireland Pollinator Plan 2021-2025
- Marine Protected Areas Bill 2022
- 4th National Biodiversity Action Plan 2023-2027

Figure 2.1: Legislation for the protection of biodiversity

2.2 Irelands Nature Restoration Plan

Ireland is developing a national Nature Restoration Plan (NRP) under the EU Nature Restoration Regulation, which came into force in August 2024 and sets binding targets for ecosystem restoration by 2030 and 2050. The NPWS is coordinating this plan, which includes a public consultation process and an independent advisory committee to guide the development of measures for terrestrial, marine, freshwater, and urban ecosystems across Ireland. It is yet to be determined the role local authorities will have in achieving national restoration targets, however a number of actions are set out in this Plan, corresponding to the National Biodiversity Action Plan, Objective 2: Meet Urgent Conservation and Restoration Needs and Target 2f5.

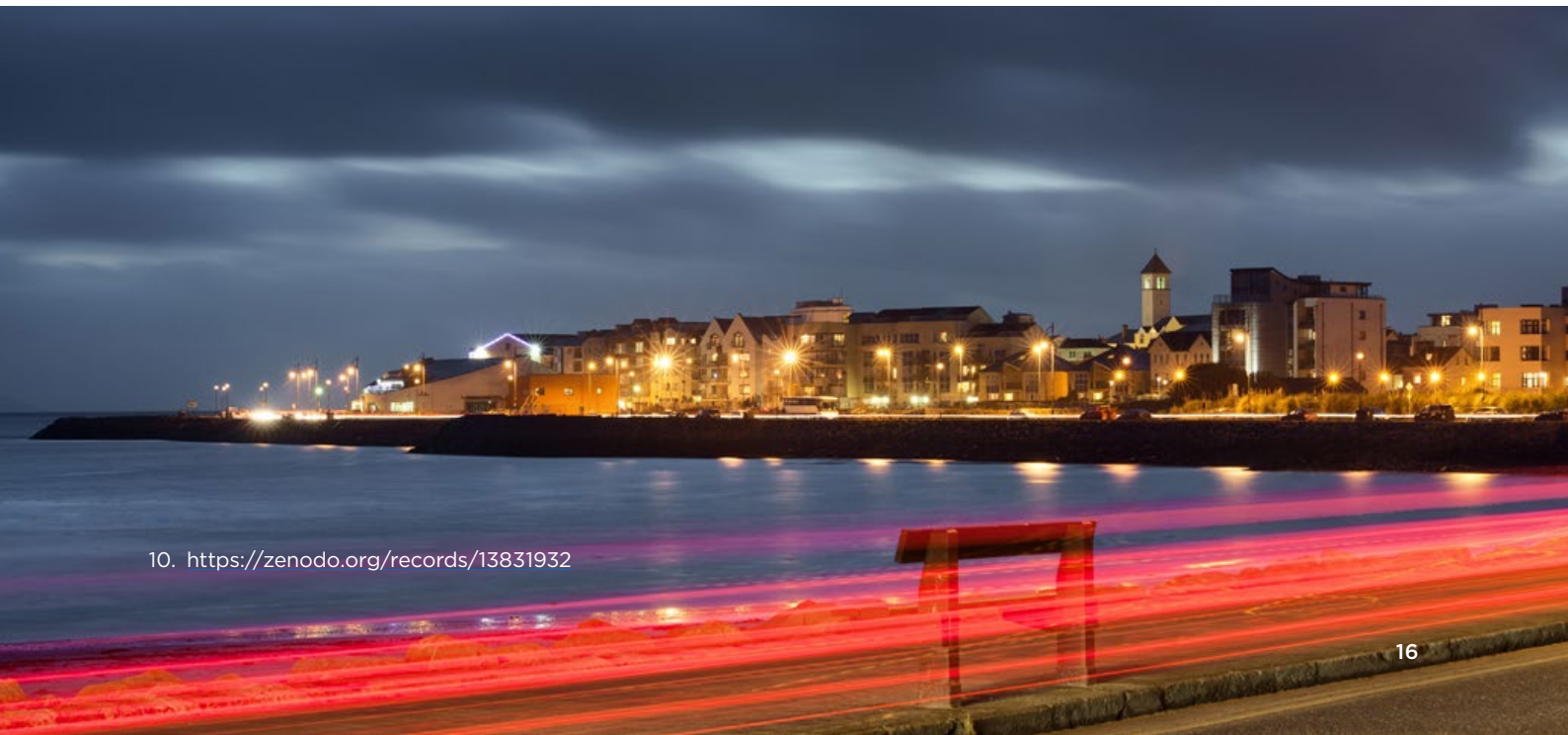
2.3 Need for Future Legislation

2.3.1 Light Pollution

The European Light Pollution Manifesto (2024)[10] calls for coordinated action to reduce the negative impacts of artificial light at night (ALAN). It proposes strategies for monitoring and reducing light pollution and urges European institutions to integrate these efforts into new and existing EU policies.

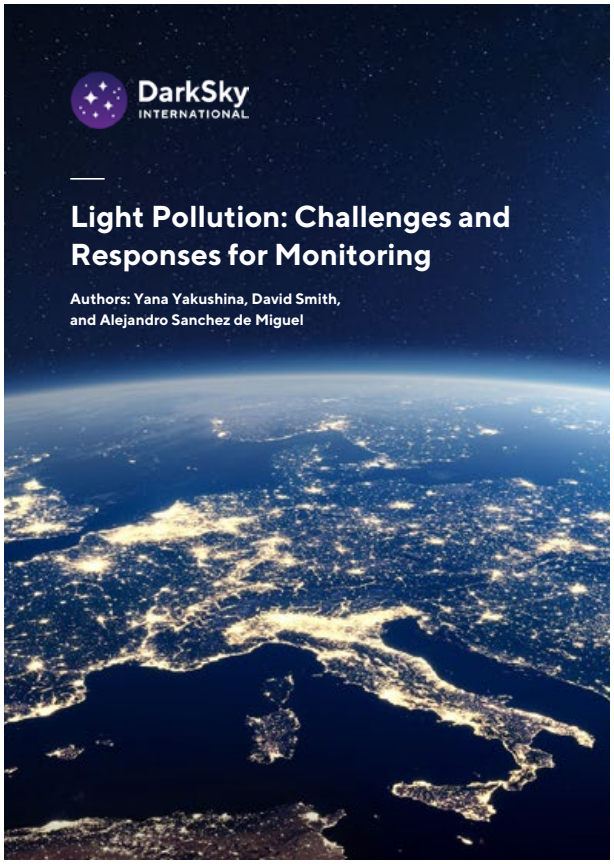
Currently, Ireland has no legislation or policies in place to reduce light pollution, yet light output from Ireland has nearly doubled since 2014. The annual cost of public lighting is €7.4 million and 98% of the electricity use is unmetered. Domestic lighting results in 71,000 tons of carbon dioxide emissions annually.

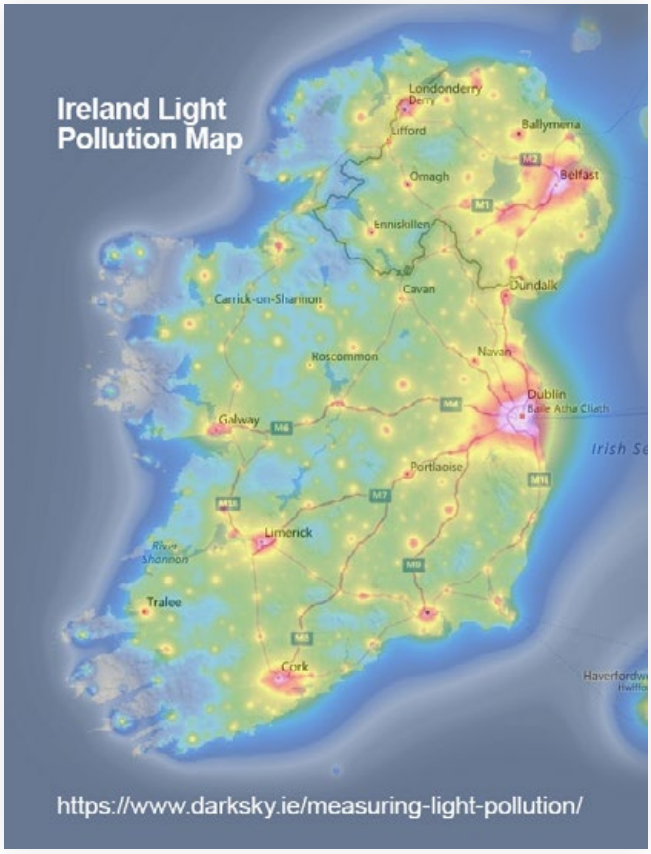
Light pollution significantly disrupts biodiversity by interfering with the natural behaviours of nocturnal animals and plants, affecting circadian rhythms, impacting pollination, predation and reproduction, and creating barriers and habitat fragmentation for nocturnal pollinators, birds, and mammals, such as bats. This can lead to reduced population sizes and disruption to food chains. It is a major contributor to biodiversity loss.



10. https://zenodo.org/records/13831932

Dark Sky Ireland has prepared an Environmentally Friendly Lighting Guide[11] and policy document which includes toolkits and guidelines for Local Authorities.[12] Action is urgently needed to address current and future lighting proposals in the city





11. https://www.darksky.ie/wp-content/uploads/2024/05/DSI-Environmentally-Friendly-Lighting-Guide-4.pdf
12. https://www.darksky.ie/wp-content/uploads/2019/04/Dark-Sky-Ireland-Policy-Document-2019.pdf

2.3.2 Biodiversity Net Gain (BNG)

Biodiversity Net Gain (BNG) is a tool that has been developed in Britain to ensure that development of a site results in an overall increase in biodiversity value. In 2021, the British government passed the Environment Act, which states that all new developments that apply for planning permission must ensure they increase the biodiversity value of the site by 10% as a minimum. It has not yet become mandatory in Ireland, but it may well do so in the future.

BNG is promoted by claims that it helps to protect the natural environment, and it can be economically beneficial for landowners. It also provides a way by which 'biodiversity units' can be traded as a commodity. One main weakness is that the assessment, which is based on habitat, does not consider protected species. This may result in baseline surveys that misinterpret crucial data or ignore Europe-wide legislation that governs the protection of species. Nevertheless, it does put a greater onus on developers to carefully consider the impact of a development on habitat and species richness, and to take measures to mitigate and reverse potential impacts and increase biodiversity.

3. Current State of Galway City's Biodiversity

Galway City lies within several national and European designated sites, and this creates significant challenges and responsibility for biodiversity protection for GCC. The challenge is compounded by substantial urban pressures and the negative impacts of climate change, including high-wind storms impacting our woodlands and flooding of coastal areas.

To fully understand the status of Galway City's biodiversity, it first needs to be set against the national picture. In 2024, the Environment Protection Agency (EPA) published its eighth report, Ireland's State of the Environment. The news is stark.[13] Also, NPWS' 6-yearly assessment (2019) of the conservation status of Special Areas Conservation (SACs) and Special Protection Areas (SPAs) shows that most of Ireland's protected habitats have an unfavourable status with almost half showing ongoing declines, including marine, peatland, grassland and woodland habitats. Ireland is currently close to the bottom of the 28 Member States when it comes to the number of habitats reported as having 'good' conservation status.

13. EPA, 2024 Ireland's State of the Environment. www.epa.ie

3.1 Protected Sites

Galway City is rich in biodiversity, with many protected habitats and species, including coastal habitats such as mudflats, reefs and estuaries, alongside freshwater habitats of Lough Corrib and the River Corrib, which are home to key indicator species, including salmon, otter, and many waterbirds.

Inner Galway Bay is a designated Ramsar site, which is a wetland site designated to be of international importance under the Ramsar Convention. It provides for national action and international cooperation regarding the conservation of wetlands and the wise and sustainable use of their resources.

The Special Areas of Conservation (SAC) and Special Protection Area (SPAs) in Galway City (**Appendix C**) are designated under the EU Habitats Directive. The SACs and SPAs are part of the Natura 2000 Network which is the largest coordinated network of protected areas in the world, established by the EU in 1992 to safeguard Europe's most valuable and threatened species and habitats.

In addition to European sites, other sites of national ecological importance, namely Natural Heritage Area (NHA) and Wildfowl Sanctuaries, are designated and protected under the Wildlife (Amendment) Act 2000. The aim of the NHA network is to conserve and protect nationally important plant and animal species and their habitats and sites of geological or geomorphological interest. There are fragments of Moycullen Bog NHA (Site Code 002364) located east of Tonabrocky, which is part of an extensive lowland blanket bog complex in County Galway. Lough Rusheen is designated a Wildfowl Sanctuary.

Table 3.1: Protected sites in Galway City

International Protected Sites
Ramsar Wetland Site
Inner Galway Bay (Ramsar Site number:838)
European Protected Sites
Special Areas of Conservation (SAC)
• Galway Bay Complex SAC (Site Code 000268)
• Lough Corrib SAC (Site Code 000297)
Special Protection Areas (SPA)
• Inner Galway Bay SPA (Site Code 004031)
• Lough Corrib SPA (Site Code 004042)
National Protected Sites
Natural Heritage Area (NHA)
• Moycullen Bogs NHA 2364
Designated Salmonid Water EU Water Framework Directive 2000
• Corrib system
Wildlife Sanctuary Wildlife (Amendment) Act 2000
• Lough Rusheen Wildfowl Sanctuary

3.2 Habitats, Flora and Fauna Outside of Designated Sites

3.2.1 Habitats and Flora

The habitats of Galway City which form part of the Green Network comprise 60% of the total area of the city. Artificial surfaces including buildings and roads comprise the remaining landcover. The habitats are described below.

Grasslands (amenity, semi-natural, improved, and wet)	Semi-natural wet and dry grasslands provide high-value habitats for biodiversity, supporting diverse plant and animal life, including wildflowers, insects, and birds. Grasslands rich in wildflowers and pollinators can be found in parks and roadside verges. Semi-natural grasslands offer resilience to climate change through diverse root systems and soil structures and have significant capacity for carbon storage compared to intensively managed grasslands. Some of these grasslands are Annex I grassland habitats, most notably Semi-natural dry grasslands on calcareous substrates (6210) and Lowland hay meadows (6510), which are protected under the EU Habitats Directive. These can be found on the city's limestone geology in the eastern part of the city and the small white orchid (*Pseudorchis alba*) protected under the Flora Protection Order 2022 has been recorded in the wider area.
Peatlands (blanket bog, fen, wet and dry heath)	Peatlands and heathlands found in the west of Galway City, near Knocknacarra, Cappagh, Ballymoneen and Ballagh and are important for carbon storage and biodiversity. While not as extensive as those in the surrounding county, they play a vital ecological role and are part of a broader network of wetland habitats that support biodiversity, climate resilience, and cultural heritage. A rare plant, slender bog cottongrass (*Eriophorum gracile*), a Flora Protection Order, 2022 species, occurs in the particularly wet, quaking bogs and peaty lake edges and is found within the city boundaries.
Bare soil and disturbed ground	Bare soil and disturbed ground in Galway City provide crucial nesting habitats for solitary bees and can support unique communities of plants, particularly in areas of low nutrient soil.
Forests and woodlands (Broadleaved, coniferous, mixed, and transitional)	Galway City is fortunate to have several urban woodlands at Barna, Dangan, Merlin Park and Menlo, as well as the Terryland Forest Park planted in 2000. While these woodlands are not all dominated by native species, woodlands are crucial for wildlife, particularly birds, bats and other small mammals. The priority habitat in the EU Habitats Directive 'Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-padion, Alnion incanae, Salicion albae (91E0) is found in Barna woods and the oak-ash-hazel woodland at Menlo is seriously in decline across Ireland and has a high nature value in Galway. Beyond their intrinsic biodiversity value, they function as crucial ecological corridors, enabling safe and uninterrupted movement of species between fragmented habitats and also contribute to flood mitigation and carbon sequestration.

Coastal and estuary environs	Galway Bay is designated Galway Bay Complex SAC and Inner Galway Bay SPA, and features marine and intertidal habitats including mudflats, sandflats, reefs, lagoon complexes, and saltmarshes. The bay supports rich plant and animal life, including kelp forests and seagrass beds in subtidal areas, with important populations of seabirds, dolphins, porpoises, seals and otter. The diverse invertebrate species are crucial to supporting Galway Bay as one of the best ornithological areas in the western region, with a diversity of wintering birds including divers, grebes, cormorants, ducks, swans, geese and waders. The near threatened coastal plant Sea Kale (*Crambe maritima*) is a Flora Protection Order, 2022 species and has been recorded on the coastline.
Cultivated land	Sustainably managed farmland supports crucial ecological functions like pollination, nutrient cycling, pest control, soil health, flood prevention, and carbon storage. Habitats associated with farmland in Galway city include hedgerows, field margins and grassy verges, ponds and wetlands, small patches of native woodland and scrub, peatlands and heaths, stonewalls and drainage ditches which provide valuable habitat for a variety of different plants, animals (birds, bats, badger, fox), insects, and microorganisms.
Exposed rock and sediments	Exposed rock and sediment habitats can support rare and protected habitats that are classified as various Annex I habitats under the EU Habitats Directive, such as “Reefs” [1170] and “Perennial vegetation of stony banks [1220] which includes “vegetated shingle” and other habitats found on rocky coasts. On land exposed rock can include the Annex I Priority Habitat Limestone Pavements [8240], which can be found in Menlo, through Merlin Woods and near the coastline at Roscam.
Hedgerows and treelines	Hedgerows and treelines, often interwoven with the city’s historic stone wall networks, form an essential component of Galway’s green infrastructure. These linear habitats act as lifelines for biodiversity, offering food, shelter, and nesting sites for a wide array of birds, mammals, and plant species. Their presence not only enriches the urban landscape but also ensures ecological connectivity by linking fragmented habitats across the city. This connectivity is crucial for wildlife migration, seasonal movement, and gene flow, helping maintain healthy and resilient populations. Moreover, these corridors contribute to climate adaptation by supporting pollinators, reducing wind speeds, and enhancing carbon storage.
Scrub	Scrub habitats provide vital food, shelter, and breeding grounds for wildlife in Galway City, acting as a crucial, often underestimated, transitional habitat that supports biodiversity and habitat connectivity. Species such as blackthorn, hazel, hawthorn, gorse and brambles, are often found in scrub habitats and are particularly valuable for butterflies, birds, and small mammals. Maintaining and restoring scrub habitats is essential for biodiversity and for preventing habitat loss within the city.

Water (and wetlands)	Galway City's freshwater habitats include the River Corrib, Lough Corrib, Galway Bay, and various canals and wetlands. This 'blue' network boasts rich biodiversity, supporting important fish populations like salmon, lamprey, eels, numerous waterfowl, and various mammals including otters and bats. This network is vital for species movement, providing ecological corridors and connecting designated sites within the city's green and blue infrastructure. Water and wetlands provide vital nature-based solutions for climate adaptation in Galway City by acting as natural sponges for floodwater, improving air and water quality, supporting biodiversity, and mitigating urban heat through cooling effects.
Artificial surfaces	Some 'Artificial surfaces' like buildings can provide essential breeding and roosting sites for numerous species, including swifts and bats. Swifts require cavities in walls or under roof eaves, while bats utilise wall cavities, crevices, and attics. Designing buildings with integrated nesting sites, such as swift bricks or bat boxes, can significantly support wildlife. However, without careful planning, artificial lighting and development, can disrupt wildlife behaviour, contribute to habitat fragmentation, and accelerate biodiversity loss. Balancing urban growth with ecological sensitivity is key to fostering a cityscape where both humans and wildlife can thrive.

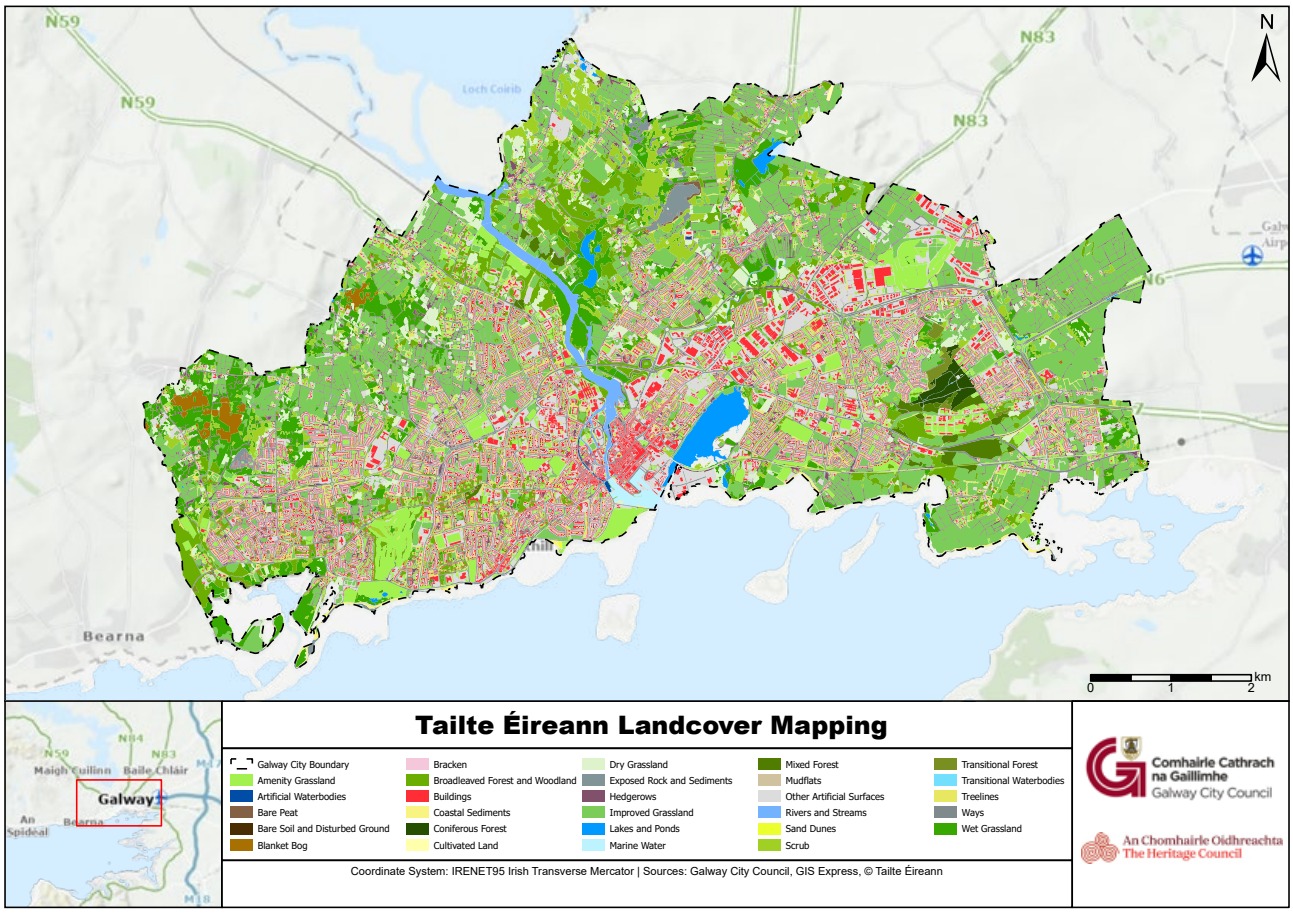


Figure 3.1: Landcover Map and Green Network (Tailte Eireann)

3.2.2 Fauna

Galway City has a relatively rich small mammal fauna for an urban area of its size, which reflects the extent of the wild or semi-natural areas that occur in the city. Studies[14] have shown that at least 12 species of mammals occur in Terryland Forest Park including fox and Irish hare with a healthy population of red squirrels in Merlin Woods. Other mammals found in the city include otter, stoat, badger, pine marten, wood mouse, bank vole, pygmy shrew, hedgehog and all nine of the resident bat species recorded in Ireland (lesser horseshoe, whiskered, Daubenton's, brown long-eared, Natterer's, Leisler's, and soprano, common and Nathusius' pipistrelle bats). A healthy small mammal population is essential for the maintenance of a dynamic food web.

Galway Bay supports a variety of animal species including dolphins, porpoises, sharks, and rays, with the critically endangered angel shark and flapper skate. European otter and harbour seals can be found along the coast in the sheltered bays and islands.

Many of our mammals are protected under Schedule 5 of the Wildlife Act 1976 as amended. All cetaceans and all bats are protected under Annex IV of the EU Habitats Directive. Harbour Porpoise, Common Bottlenose Dolphin, Grey Seal, Harbour Seal, Otter and Lesser Horseshoe Bat are also protected under Annex II of the EU Habitats Directive.

The Irish hare is protected under the Wildlife Acts and is listed in Annex V(a) of the Habitats Directive and is listed as an internationally important species in the Irish Red Data Book (Whilde, 1993). The presence of the Irish hare in an urban setting is significant as they rely on the interconnectedness of the natural areas within the city for survival. A national species action plan for the Irish hare has been developed and will be supported as part of this local biodiversity action plan.

In addition to the SPAs, there are a range of important sites and habitats for birds in and around the city. These include woodland, scrub, hedgerows, wetlands (including the canals), bridges, farmland and gardens. Important bird species such as the barn owl (on BirdWatch Ireland's red list) have been recorded within the city.

14. Zoology Department of NUI, Galway (Haigh and Lawton 2007)

Galway Bay is an important ornithological site with its shallow waters providing excellent habitat for species including Great Northern Divers and Red-breasted Merganser. Inner Galway Bay support species such as Black throated Diver, Light-bellied Brent Goose, and Common Tern. Lough Atalia supports an impressive variety of bird species including Little Grebe, Goldeneye and Red-breasted Merganser and common waders such as Oystercatcher. Nimmo's Pier in the Claddagh supports gulls and waders in winter and at low tide. The Claddagh basin is known for its herd of Mute Swans, as well as the migratory gulls such as Ring-billed Gull.

The River Corrib and Lough Corrib have been designated as important for salmon and trout. This reflects the high-water quality of the Corrib because these fish are demanding in terms of their requirement for clean waters. The Corrib system also has a population of Sea Lamprey, a scarce species which is probably under-recorded, and brook lamprey. Salmon, Sea and Brook Lamprey are listed in Annex II of the EU Habitats Directive.

3.2.3 City Biodiversity Areas (CBAs)

Within the green network, there are City Biodiversity Areas (CBA) which are non-designated sites that contribute significantly to the ecological framework of the city. These sites, while not formally designated, play a crucial role in supporting biodiversity at a local level, and are protected by the policies and objectives of the City Development Plan. They offer essential ecosystem services to nearby communities and contribute to the overall ecological health of the city – See Appendix D.

In some cases, CBA are located adjacent to formally designated sites and aid the dispersal of species, thus increasing the effectiveness of protected areas. The CBAs (previously known as Local Biodiversity Areas in the Biodiversity action Plan 2014-2024), have been informed by habitat information available for the city. They have also been revised to exclude sites that are within boundaries of European Sites as they are subject to specific legislative protection. Indicative locations are provided in **Appendix D**; however, to determine the specific boundaries of these sites, field surveys and mapping will be required as set out in **BAP Action 6.1.**

Table 3.1: City Biodiversity Areas (CBA)

CBA No.	CBA Name	CBA Description
1	Barna Woods, Stream & Wetlands outside Galway Bay Complex SAC	Woodland, wet heath, scrub, Barna Stream, acid grassland and wet grassland to the north of the site and species rich calcareous grassland bordering Rusheen Bay, supporting several orchid species.
2	Cappagh-Ballymoneen Peatlands	Large peatland habitat complex, south of Moycullen Bog NHA which supports blanket bog, fen, Tonabrocky stream, transition mire, wet heath, dry heath, wet grassland, acid grassland and scrub located between Cappagh and Ballymoneen roads.
3	Ballagh-Barnacranny Hill Peatlands	Connemara peatland, including blanket bog, fen, wet grassland, heath and scrub, located east of Tonabrocky. Proximal to Moycullen Bog NHA.

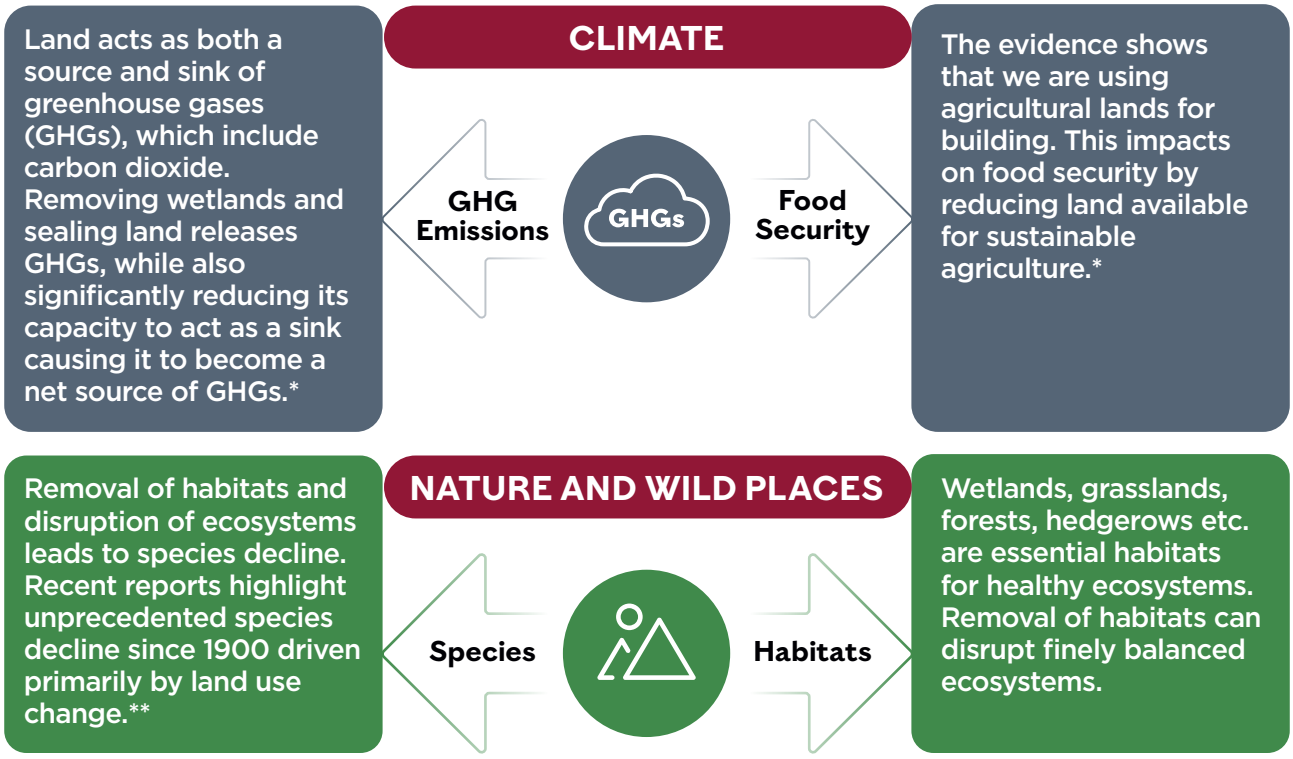
CBA No.	CBA Name	CBA Description
4	Cappagh/ Knocknacarra Hill Heathland	Known locally as 'The Kidney' supports habitats including wet heath, dry heath, acid grassland, wet grassland, scrub and ponds.
5	Dangan Grasslands & Scrub	Alluvial woodland and scrub, with species rich calcareous grasslands.
6	River Corrib, Tributaries and Canal System outside River Corrib SAC	City Canal and River System including the Eglinton Canal, Gaol River, Distillery River, and species rich lowland hay meadows near Jordans Island.
7	Menlo to Coolough Hill Limestone habitats outside SAC	Oak-ash-hazel woodland at Menlo Woods, and exposed limestone rock, calcareous grassland and small turloughs.
8	Ballindooley-Castlegar Limestone & Wetland Habitats	Ballindooley Lough, with fen, reed swamp, wet grassland, scrub and exposed limestone. Castlegar area contains smaller areas of wet grassland, swamps, scrub, exposed limestone and small turloughs.
9	Ballybrit Grasslands	Species rich calcareous grassland and small turlough.
10	Merlin & Rosshill Woods	Broadleaved woodland, limestone pavement, wetlands, limestone caves and petrifying springs.
11	Doughiska Grasslands	Species rich calcareous grassland.
12	Roscam Grasslands	Calcareous grassland and shrub.
13	Roscam-Curragrean Limestone Habitats	Limestone pavement, dry heath and species rich calcareous grassland.
14	Doughiska-Ardaun Limestone Habitats	Limestone pavement, with calcareous grassland and scrub located to east of city. Orchid-rich grassland, including the protected small white orchid.
15	Coolagh Grasslands	Limestone pavement, with species rich calcareous grasslands.
16	Terryland Forest Park	Broad-leaf woodland, wetlands, species rich grasslands, the Terryland River and Cooper's Cave.

4. Threats to Biodiversity in Galway City

For local authorities and other bodies charged with the responsibility of protecting the environment, it is crucial to understand why biodiversity continues to decline.

There are many reasons and many complex, compounding factors. The three most serious are climate change, habitat loss, and invasive species. Waste and pollution (air, light, water and noise) are also major contributors.

Impacts of Land Changes



Source: Ireland's Environment 2020 – An Assessment Report (EPA 2020)

* IPCC Report on Climate Change and Land (2019).

** IPBES Global Assessment Report on Biodiversity and Ecosystem Services (2019).

4.1 Climate Change

4.1.1 The Link between Climate Change, Invasive Species and Biodiversity Loss

Climate change, invasive species, and biodiversity loss are deeply interconnected forces that collectively threaten ecosystem stability and a cycle of environmental disruption.

Rising temperatures, altered precipitation patterns, and extreme weather events driven by climate change disrupt native habitats, making them more vulnerable to colonisation by non-native species. About 10%–15% of non-native species become invasive and outcompete local flora and fauna for resources, alter food webs, and degrade habitat quality, accelerating the decline of native biodiversity. As ecosystems lose species and associated genetic diversity, their resilience to further environmental stress diminishes, creating a feedback loop that intensifies the impacts of climate change and biological invasions (**Figure 4.1**).

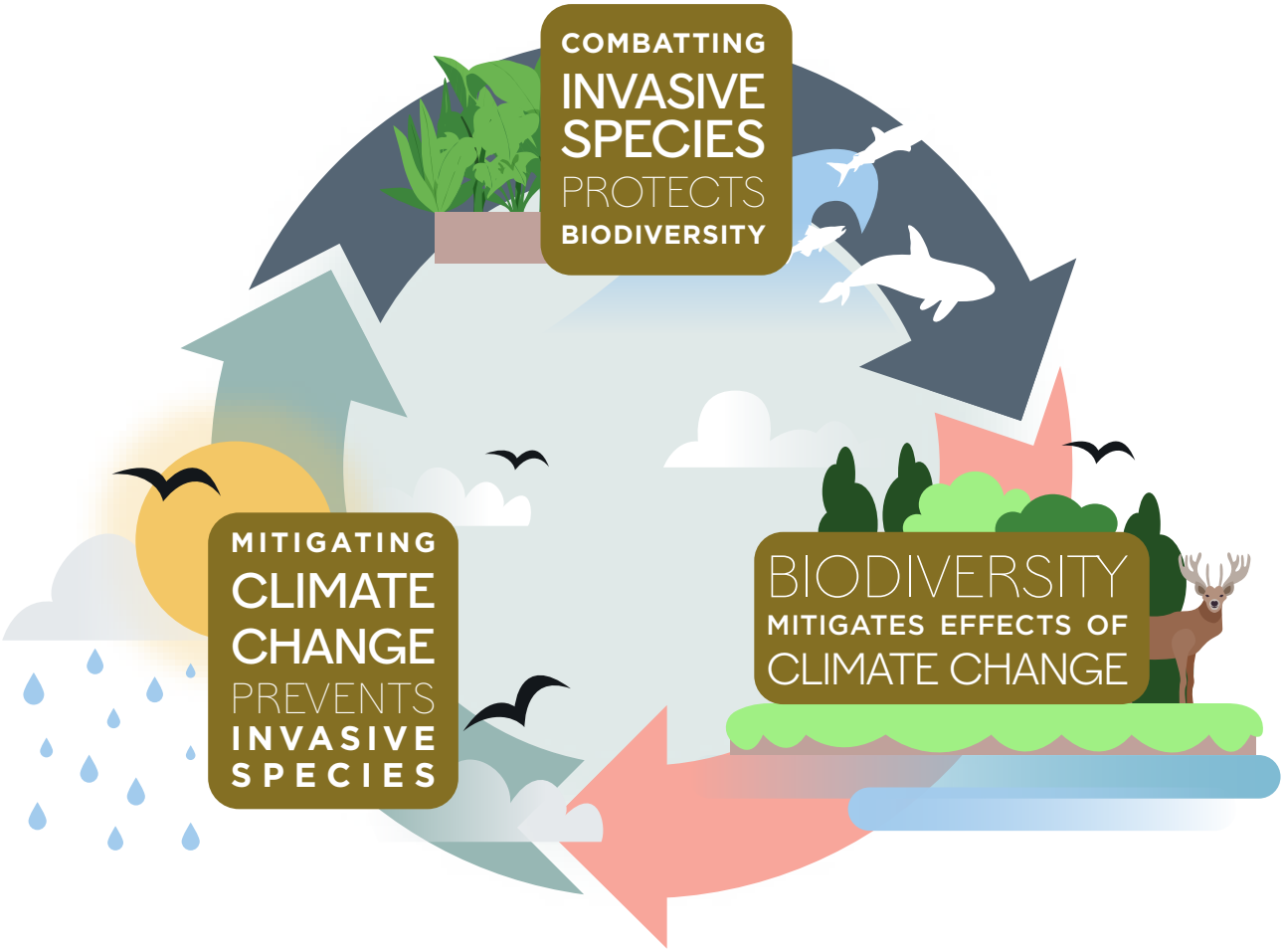


Figure 4.1: The Feedback Loop: Interrelationship between Climate Change, Invasive Species and Biodiversity[15]

We cannot address climate change without attending to the protection of our habitats, the species that live within them, and the ecosystem services they provide. Addressing these challenges requires integrated conservation strategies that consider the complex interplay between climate dynamics and ecological integrity.

15. https://www.invasivespeciescentre.ca/invasive-species/what-is-at-risk/climate-change/

4.2 Habitat Loss

The decline in biodiversity in Ireland, including Galway City, has been caused largely by habitat loss driven by changing land use. The current demand for housing and associated infrastructure puts pressure on natural habitats within the city. Drainage of wetland areas, water pollution, illegal dumping, abandonment of agriculture, intensively managed species-rich semi-natural grasslands[16], and inappropriate coastal works can all lead to habitat destruction, and fragmentation of habitats that are no longer large enough to support healthy populations of birds, invertebrates, and small mammals.

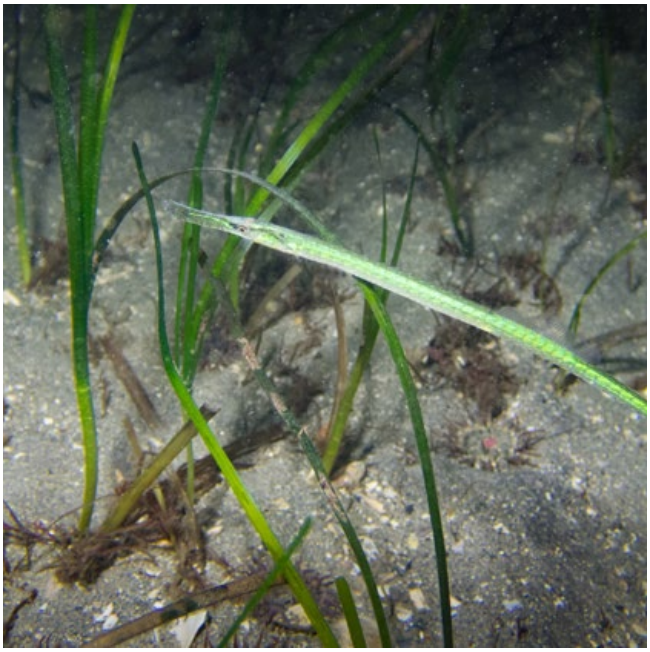
Invasive species will be a constant and increasing pressure because of downstream dispersal from Lough Corrib and other rivers and their riverbank habitats.

European protected marine seagrass habitats in Galway Bay are hotspots for biodiversity and provide vital nursery habitats for various fish species. They are a key player in helping to combat climate change, accounting for an estimated 10%–18% of blue carbon storage[17] and it can store carbon for thousands of years.[18] In Galway and elsewhere, they are seriously threatened by waste sewage and pollution discharging through storm drains.

4.2.1 Habitat Loss – Wildlife Corridors

Habitat loss not only reduces total habitat area, but it can fragment the remaining habitat. What remains are often small and scattered habitat patches, such as remnants of woodland or heathland, sitting within a wider landscape of less suitable habitat, including highly improved agricultural land or urban areas. Barriers such as fences, walls and roadways can also deny some species freedom to move between habitats. However, connectivity can be effectively provided by linear features such as hedgerows, treelines, river corridors, and small habitat patches that act as stepping stones to more favourable habitats.

The EU Habitat's Directive (Article 10) requires that member states protect, through planning and development policies, those features of the landscape which provide linear features or stepping stones for wildlife.



16. https://www.greatirishgrasslands.ie
17. https://www.marine.ie/site-area/news-events/press-releases/capturing-irelands-blue-carbon-potential
18. https://www.mcsuk.org/news/seagrass-the-ocean-superhero-at-risk-from-sewage/

Case Study

In 2022, GCC engaged with the Vincent Wildlife Trust to conduct a desktop study to understand the functional connectivity of the landscape features within Galway City using the Circuitscape model. Circuitscape modelling is predictive software that uses electrical circuit theory to represent the landscape as a resistance surface through which a species can move, according to resistance values posed by landscape features, including lighting, roads, buildings.

The lesser horseshoe bat was the focus of the study, which is an Annex II species (Habitats Directive) and therefore of high conservation significance. Lesser horseshoe bats are photophobic; i.e., they are particularly sensitive to disturbance and artificial lighting. Artificial lights can act as barriers to movement, isolate populations, and lead to a lack of suitable habitat.

The output of the model (**Figure 4.2)** shows a high landscape connectivity in Red and a low connectivity shown in Blue. It is clear from the image that wildlife movement is likely to be restricted to a narrow pathway along the northern edge of Galway City. Consequently, this area is critical to maintain connectivity between populations east and west of Lough Corrib. Other corridors along the River Corrib and southeast of Galway City can also be observed. The model also indicates opportunities to improve connectivity along the yellow bands.

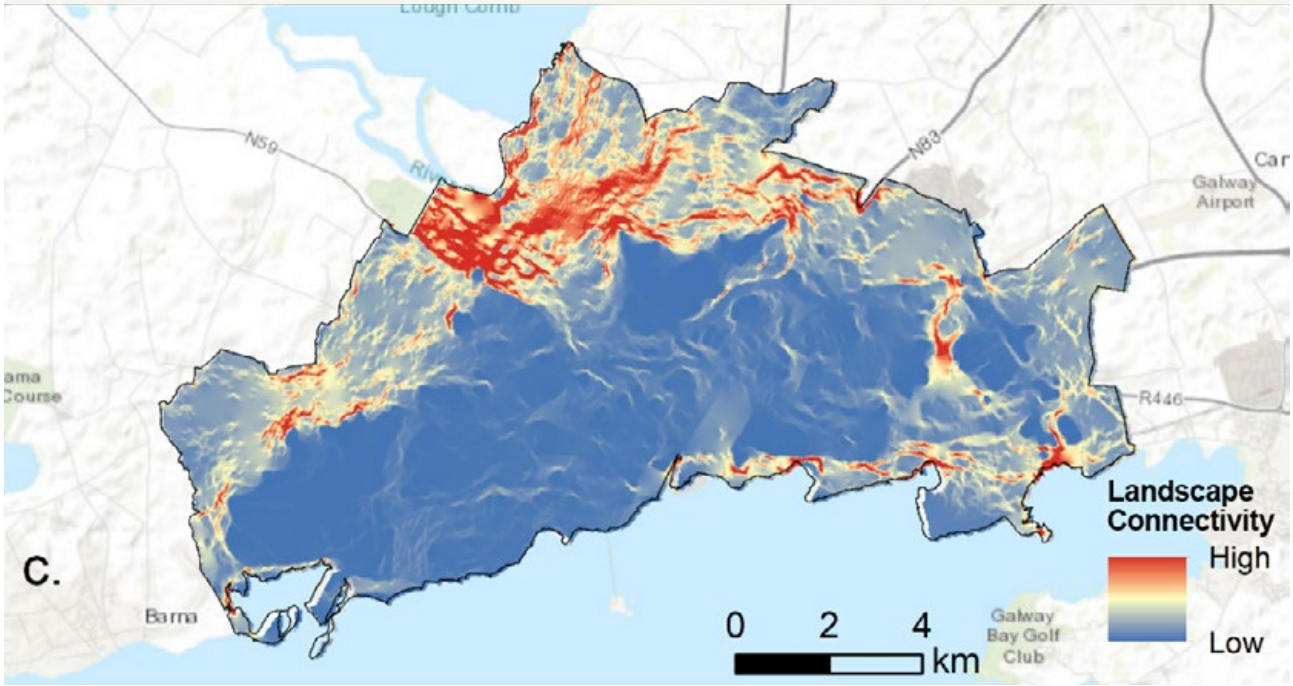


Figure 4.2 Cirsuitscape Landscape Connectivity Mapping, RED indicates high connectivity, BLUE indicates low connectivity with connectivity improvement opportunities along the YELLOW bands (VWT, 2023[19]).

19. Wright, P. (2023) Modelling of landscape connectivity for lesser horseshoe bats in Galway City. Vincent Wildlife Trust, Eastnor, Ledbury, HR8 1EP

4.3 Species Loss

In Ireland, the International Union for Conservation of Nature (IUCN) Red List is used to assess and categorise the conservation status of species. It is an important tool to identify and prioritise species threatened with extinction and it can guide conservation efforts. The Red Data Book is revised every five years, listing rare, endangered, and threatened species. This process involves input from many organisations, including the National Biodiversity Data Centre (NBDC), the National Parks and Wildlife Service (NPWS) and Inland Fisheries Ireland (IFI).

From the 2024 CSO Environmental Indicators on biodiversity in Ireland between 2006 and 2019, 2.7% of 3,140 assessed species were found to be regionally extinct, (**Table 4.1**).

Data collated by NBDC of plant and animal species recorded in Galway City's terrestrial, freshwater and marine environments informed the image below. This graphic highlights species which are vulnerable to threats such as habitat loss, pollution, disturbance and climate change.

Year	Species	Regionally Extinct	Threatened	Near Threatened	Least Concern	Data Deficient	Total*
2006	Bees	3.0	30.3	12.1	38.4	16.2	99
2009	Water Beetles	3.3	16.8	9.8	60.7	9.4	244
2009	Non Marine Molluscs	1.3	29.8	4.0	60.3	4.6	151
2010	Butterflies	3.0	18.2	15.2	63.6	0.0	33
2011	Amphibia, Reptiles and Fresh Water Fish	0.0	35.0	5.0	55.0	5.0	20
2011	Odonata	0.0	16.7	4.2	79.2	0.0	24
2012	Ephemeroptera	0.0	18.2	6.1	69.7	6.1	33
2012	Bryophytes	4.9	18.8	11.8	60.1	4.5	824
2016	Macro-Moths	2.8	8.6	4.0	83.8	0.8	501
2016	Vascular Plants	1.4	9.6	8.9	80.2	0.0	1,106
2016	Cartilagenous Fish	0.0	29.3	32.8	37.9	0.0	58
2019	Terrestrial Mammals	3.7	3.7	0.0	92.6	0.0	27
2019	Stoneflies	5.0	10.0	0.0	85.0	0.0	20
	Total	**2.7**	**14.7**	**9.1**	**70.6**	**2.9**	**3,140**

Table 4.1: CSO Environmental Indicators Ireland 2024*

Source: National Biodiversity Data Centre

* Excludes non-evaluated

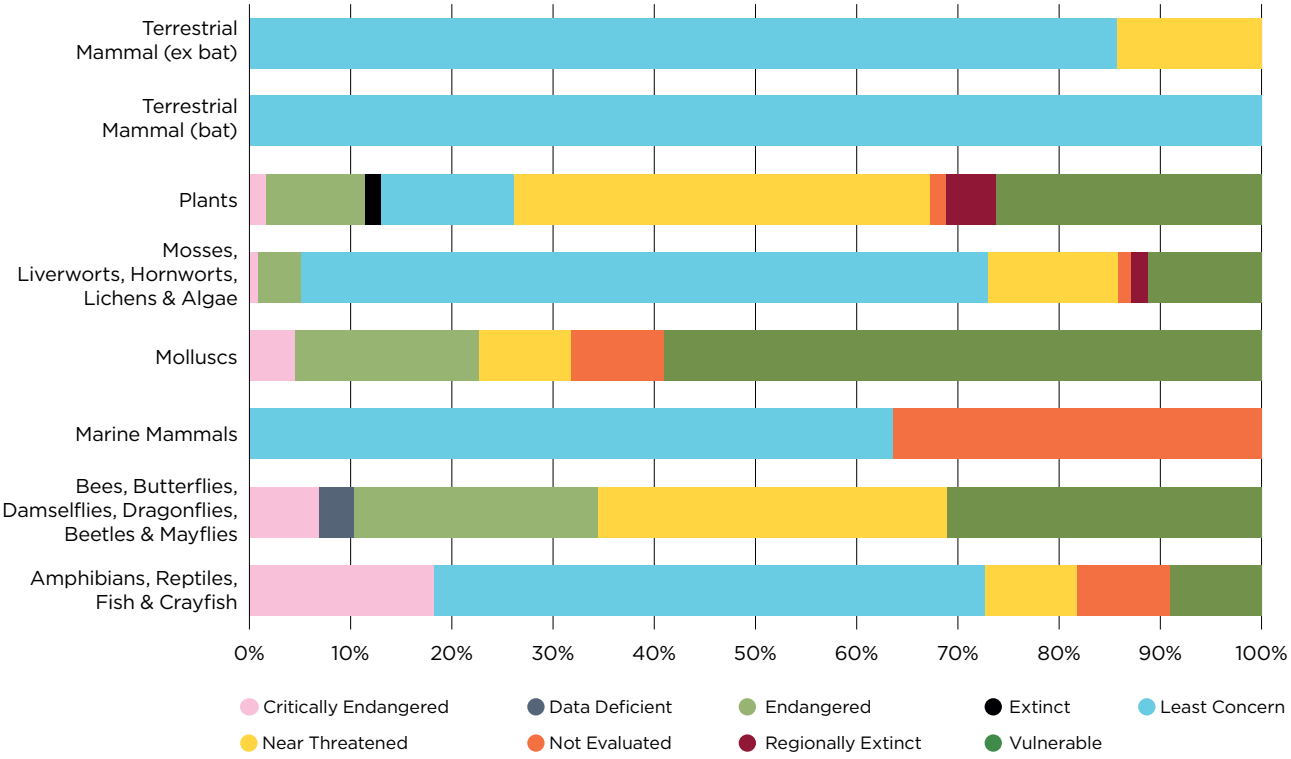


Figure 4.3: Biodiversity Status of IUCN classified species in Galway City

From **Figure 4.3**, the species groups including plants, insects (bees, butterflies, damselflies, dragonflies, beetles and mayflies), amphibians, reptiles, fish, and crayfish include species that are categorised as Extinct, Endangered or Critically Endangered.

The category 'Data Deficient' is also included in the insect group, which reflects the global underrepresentation of invertebrates on assessments of species extinction risk (IUCN Red Lists).[20] The best data are from moths and butterflies (*Lepidoptera*) with strong evidence of 35% decline globally over 40 years. 7.6 times more species and 1.6 times more butterfly numbers can be found on undisturbed sites vs. disturbed sites globally.[21]

Therefore, restoring natural ecosystems is essential to safeguard insects and invertebrates, the unsung heroes of global food security (**Figure 4.4**).

Insects perform vital ecological functions by pollinating crops, decomposing organic matter, cycling nutrients, and controlling pests, which sustain agricultural productivity and biodiversity. Yet habitat destruction, pollution, and climate change have pushed many of these species to the brink. By restoring forests, wetlands, grasslands, and other native habitats, we create resilient environments where insect populations can thrive. This stabilises food systems and it also strengthens the ecological networks that support life on Earth. Without healthy ecosystems, the intricate web of life that feeds us begins to unravel.

20. Eisenhauer, N., Bonn, A., & Guerra, C. A. (2019). Recognising the quiet extinction of invertebrates. Nature communications, 10(1), 50. https://www.nature.com/articles/s41467-018-07916-1
21. Dirzo, Rodolfo & Young, Hillary & Galetti, Mauro & Ceballos, Gerardo & Isaac, Nick & Collen, Ben. (2014). Defaunation in the Anthropocene. Science (New York, N.Y.). 345. 401-6. 10.1126/science.1251817.

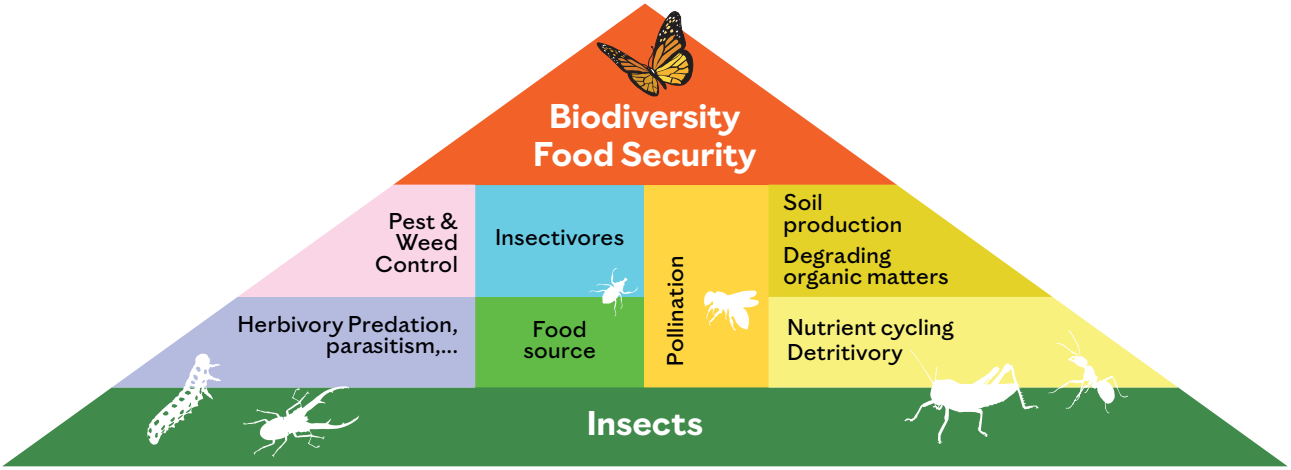


Figure 4.4: Little things that run the world[22,23]

4.3.1 Birds

The Birds of Conservation Concern in Ireland 4: 2020–2026 (BoCCI)[24] is an assessment of the conservation status of all regularly occurring birds on the island of Ireland. The criteria on which the assessment is based include conservation status at global and European levels.

In Ireland, the criteria include historical decline, trends in population and range, rarity, localised distribution, and international importance. The conservation status of species is signalled using a traffic light system, which categorises them as 'Red', 'Amber', and 'Green', based on their conservation status. Species on the Red List are the highest concern and are at risk of extinction due to habitat loss, climate change, and other environmental pressures (**Figure 4.5**).

BoCCI: Conservation Status Traffic Light System

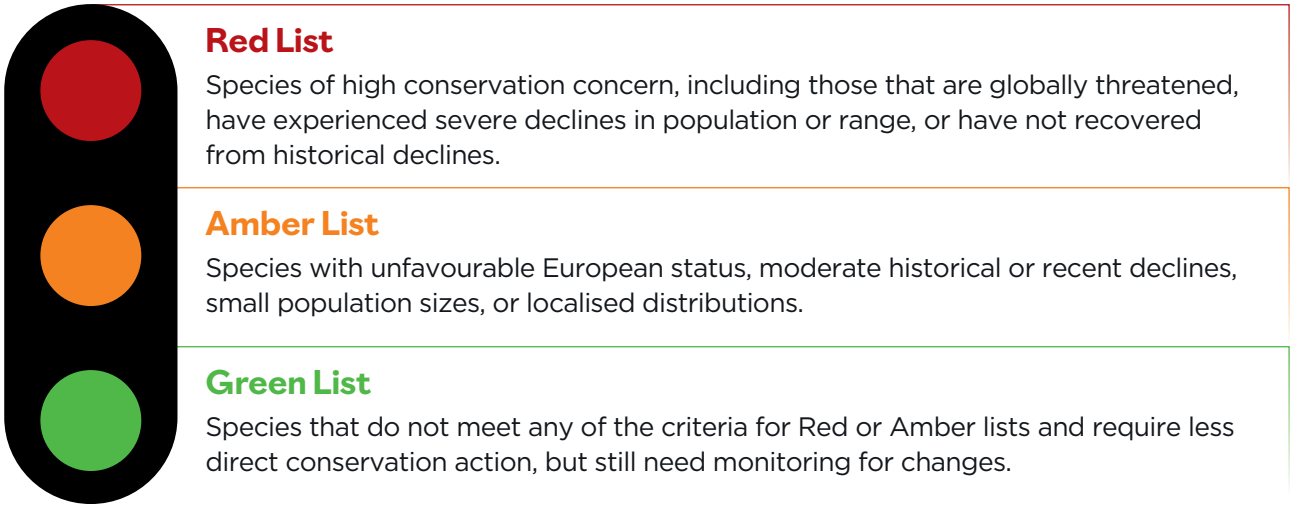


Figure 4.5: BoCCI Conservation Status Categories

22. Gordon, I., Calatayud, P.-A., Le Gall, P. & Garnery, L. (2019) We are losing the "Little things that run the world". United Nations Environment Foresight Brief 011. https://wedocs.unep.org/bitstream/handle/20.500.11822/27255/Foresight_Brief_No_011.pdf
23 https://biodiversityireland.ie/the-silent-extinction-of-insects/
24. Gilbert, G., Stanbury, A., and Lewis, L. (2021). Birds of Conservation Concern in Ireland 4: 2020–2026. Irish Birds, Number 46, pages 1-22.

Of the 211 species assessed in the BoCCI, 54 (26%) were placed on the Red list, 79 (37%) on the Amber list and 78 (37%) on the Green list. This means that 63% of Ireland's bird species are of conservation concern.

Species that are now on the Red List, include Lapwing (*Vanellus vanellus*), Kestrel (*Falco tinnunculus*), Meadow Pipit (*Anthus pratensis*), Oystercatcher (*Haematopus ostralegus*) and Swift (*Apus apus*), which have suffered significant population declines. Swifts were once a common visitor to Galway City but they have experienced more than a 50% decline in numbers in recent years.

In Galway City, 178 species of the 211 species assessed in the BoCCI have been recorded, as shown below and in **Figure 4.6**.

- **48 (27%)** Red-listed species including: 1. Redwing (*Turdus iliacus*), 2. Twite (*Carduelis flavirostris*), 3. Curlew (*Numenius phaeopus*), 4. Common Swift (*Apus apus*), 5. Bar-tailed Godwit (*Limosa lapponica*), 6. Redstart (*Phoenicurus phoenicurus*)
- **70 (39%)** Amber-listed species including: 1. Arctic Tern (*Sterna paradisaea*), 2. Teal (*Anas crecca*), 3. Pied Flycatcher (*Ficedula hypoleuca*), 4. Gannet (*Morus bassanus*), 5. Mediterranean Gull (*Ichthyaetus melanocephalus*), 6. Skylark (*Alauda arvensis*)
- **60 (34%)** Green-listed species including: 1. Greenshank (*Tringa nebularia*), 2. Goldfinch (*Carduelis carduelis*), 3. Long-tailed Tit (*Aegithalos caudatus*), 4. Great Black-backed Gull (*Larus marinus*), 5. Redpoll (*Acanthis flammea*), 6. Sanderling (*Calidris alba*)

This means that 66% of Galway City's bird species are of conservation concern.

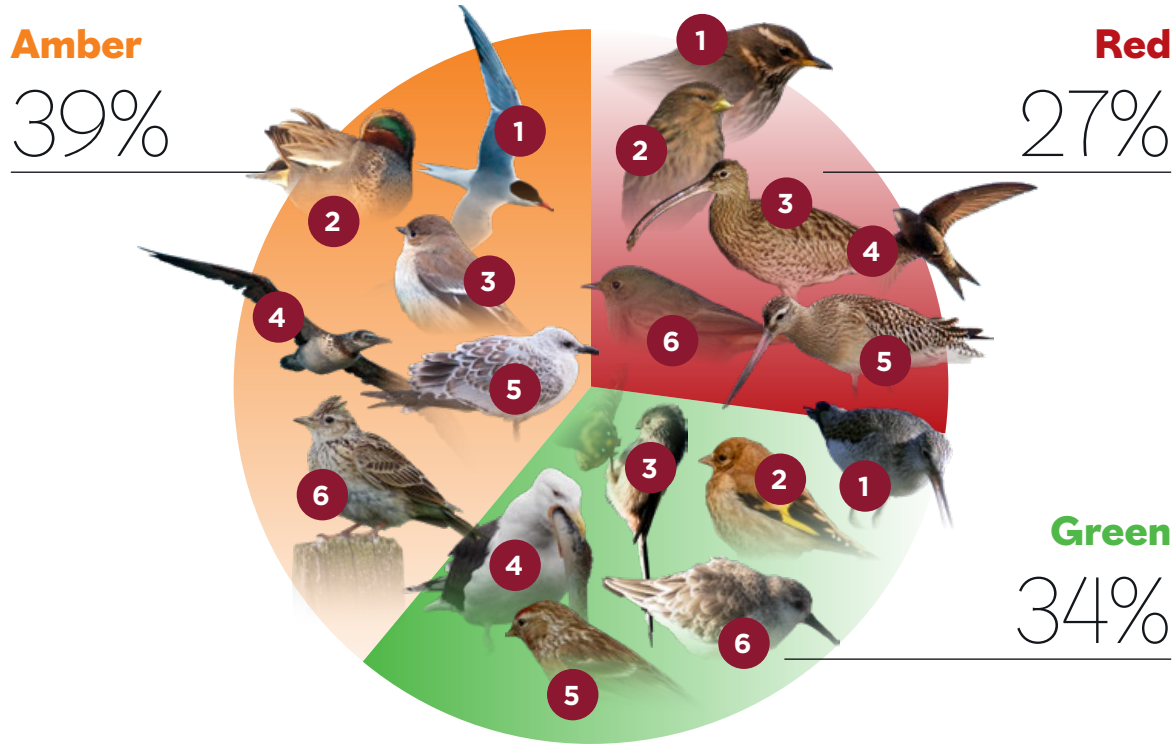


Figure 4.6: Galway City's Bird species of conservation concern

Source: All bird images by Tom Cuffe

4.4 Achievements Since the Last Iteration of the Plan

Of the 21 actions and sub-actions of the previous Galway City BAP 2014-2024, numerous actions have been completed, or they are underway or ongoing. Actions not delivered or ongoing have informed this Biodiversity Action Plan.

GCC is actively involved in tangible habitat restoration projects with the support of the NPWS under the Local Biodiversity Action Fund, including the restoration of wildflower meadows, pollinator corridors, ponds, mini orchards, mini woodlands and community gardens as part of the All-Ireland Pollinator Plan and the Burrenbeo Trust The Hares Corner initiative.

Some examples are Living labs for Nature Based Solutions at Grattan Beach Sand Dune restoration project, and Buaile Bó conservation grazing project at Ballyloughane.

Galway City Council, in collaboration with local universities, is exploring opportunities to restore coastal and marine habitats, particularly seagrass beds and saltmarshes, through nature-based solutions. This approach aims to enhance biodiversity by creating vital habitats, capture carbon in "blue carbon" sinks, and strengthen coastal resilience by absorbing wave energy and mitigating storm surges.

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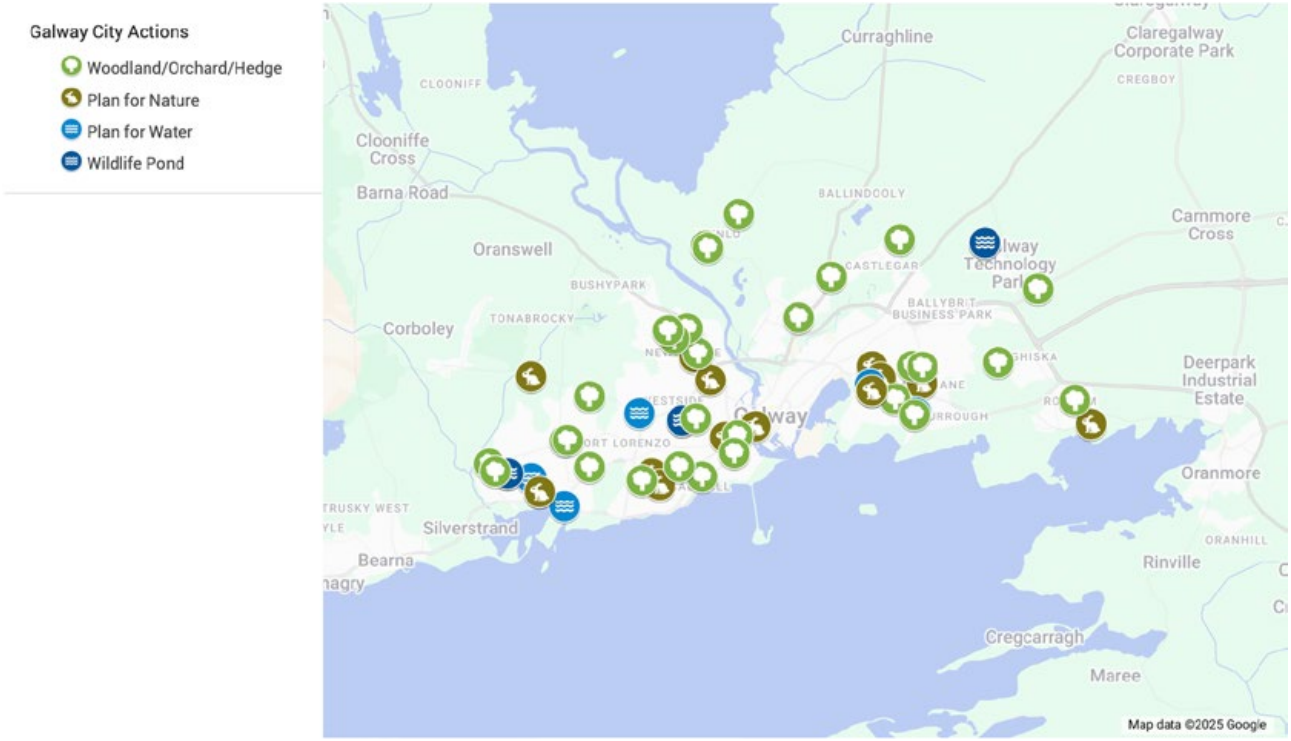
Galway City's woodlands, including Barna Woods, Terryland Forest Park, and Merlin Woods, provide outdoor classrooms for schools, universities, and community groups which provide immersive experiences in our living ecosystems, fostering citizen science and meaningful connections to our local habitats. This is essential for their long-term conservation.

Nature Based Solutions

The Hares Corner 2024-2025



Community Engagement – All Ireland Pollinator Plan & Healthy Green Spaces

National Biodiversity Data Centre
A Heritage Council Programme

All-Ireland Pollinator Plan

4.5 Raising Awareness

European, national and regional policies and legislation can be effective if sufficient resources are made available to implement and enforce them. Effectively communicating the importance of biodiversity is crucial, particularly its role in creating healthy functioning ecosystem services on which humans depend. GCC's Biodiversity Action Plan emphasises the value of effective dissemination of information, education, training and mentoring for both professionals and public to achieve a high level of individual motivation to protect green spaces.

Galway City is very fortunate in having several active environmental community groups including those at Tuatha Terryland Forest Park, the Friends of Merlin Woods and Conservation Volunteers Galway to name a few, who have proactively implemented measures to halt biodiversity decline locally. These groups are actively engaged with the GCC Biodiversity Officer. The Galway Community Voluntary Group has hundreds of members and can readily generate many helping hands for specific projects.

Case Study

New Zealand has been inspirational in bringing citizen science alive. The government has recognised that a top-down approach to biodiversity protection is limited because of the scale of challenge and there will never be sufficient funding to cover all the work that is needed. In response, it has implemented an impressive citizen science initiative across the country to bridge the gap between scientists and the public, empowering individuals to contribute to data collection, analysis and reporting. This helps to monitor local ecosystems and drive evidence-based action. Citizen science can accelerate scientific research by collecting large data sets, which is impossible for individual researchers. It educates and enables, encouraging the public to connect with their local environments in meaningful ways. It shapes policy and decision-making because the data can inform conservation efforts, and it boosts wellbeing and environmental stewardship.

5. Galway City Biodiversity Actions 2025–2030

The biodiversity actions that have been compiled for the years 2025–2030 are the result of extensive consultation with GCC staff, representatives from other statutory bodies, academic institutions such as ATU and University of Galway, voluntary and community groups, and the public.

Facilitated live workshops and online surveys were used. Draft actions were circulated for comment. The agreed and finalised actions are based on 1) the capacity to achieve them, 2) priorities in terms of legislation, and 3) the views of all participants in the consultation process.

5.1 Objectives and Themes

The GCC Biodiversity Action Plan has five key objectives and seven themes:

No.	Objective
Obj.1	To develop and maintain Galway City's ecological network and increase the resilience of the network by restoring degraded habitats and habitat creation.
Obj.2	To tackle key pressures on species and habitats.
Obj.3	To ensure that (inter)national targets for species and habitats are translated into effective conservation action at local level in Galway City.
Obj.4	To raise public awareness and encourage involvement in biodiversity action by the wider community.
Obj.5	To increase our knowledge and understanding of biodiversity and monitor impacts of biodiversity actions through ecological research

No.	Themes
T.1	Galway City Council actions for biodiversity
T.2	Planning and development
T.3	Building resilience, including climate resilience
T.4	Prevent biodiversity loss: invasive species
T.5	Prevent biodiversity loss: habitat and species
T.6	Mapping, surveying and monitoring
T.7	Raising awareness

Underlying the themes are the actions to support the building of capacity among professionals and the public, future proofing Galway's wild and semi-natural habitats against climate change, compliance with national and European legislation and policy, and halting biodiversity loss. Each action is linked to indicators that can help to measure and monitor progress.

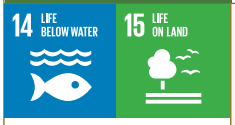
5.1.1 Alignment with UN Sustainable Development Goals

Further to Section 3.3.1, GCC used the "Accelerating Action" software platform to assess the Galway City BAP objectives and themes, to determine how they align with SDGs.

The assessment found that the plan aligns closely with several SDGs, particularly those focused on environmental sustainability, community engagement, and ecological resilience. It highlights that the plan has been developed to address local biodiversity challenges but it can also contribute to broader global sustainability goals.

By focusing on ecological resilience, community engagement, and education, the Plan has the potential to create a lasting positive impact on both the environment and the community.

In summary, the Galway City BAP not only aims to halt biodiversity loss but also fosters community engagement and sustainable development. By aligning with multiple SDGs, the project sets a strong foundation for a resilient and thriving natural environment that benefits both people and wildlife for generations to come.

	**SDG 4 – Quality Education** Promotes public awareness and education for sustainable development through community engagement and ecological research, empowering citizens to support biodiversity and sustainability.
	**SDG 6 – Clean Water and Sanitation** Supports water quality and ecosystem health by protecting habitats and reducing environmental pressures, contributing to cleaner water sources.
	**SDG 11 – Sustainable Cities and Communities** Enhances urban biodiversity and quality of life by safeguarding natural heritage, expanding green spaces, and fostering community involvement in conservation.
	**SDG 12 – Responsible Consumption and Production** Encourages sustainable resource use and innovative approaches to halt biodiversity loss, aligning with goals for efficient environmental management.
	**SDG 13 – Climate Action** Restores habitats to boost carbon sequestration and climate resilience, helping mitigate climate-related hazards.
	**SDGs 14 & 15 – Life Below Water & Life on Land** Core to the plan, these goals focus on protecting and restoring marine, aquatic, and terrestrial ecosystems, ensuring long-term biodiversity and ecological stability.
	**SDG 17 – Partnerships for the Goals** Emphasizes collaboration among government, communities, and organisations to achieve shared sustainability objectives through knowledge exchange and joint action.

5.2 Monitoring of the Galway City Biodiversity Action Plan

Action prioritisation and progress reporting on the implementation of the BAP will be the responsibility of the Biodiversity Working Group. This group will include representatives of the various council departments involved in the delivery of biodiversity actions such as Recreation and Amenity, Planning & Strategic Infrastructure, Roads, Housing and Environment. Councillors and representatives of the PPN, nature conservation NGOs, and universities. Agencies such as the NPWS, LAWPRO and the OPW will be invited to participate in this forum.

An annual report will be prepared to report on progress that has been made under the plan's actions. This report will be presented to the Biodiversity Forum, various Strategic Policy Committees and the full Council. GCC will be the main coordinating body to oversee the implementation of the biodiversity actions and the protection of the ecological network through the planning process. GCC will also provide support for other organisations and private landowners, to see where and how they can contribute towards the implementation of the actions and the establishment of the ecological network.

The Biodiversity Officer will be the main coordinator within the City Council and will act as the main contact person for issues related to the ecological network and the Biodiversity Action Plan.

Through GCC commitment and funding supports it is anticipated that the biodiversity team will be sufficiently resourced to ensure the effective delivery of this plan.

6. Galway City Biodiversity Action Plan 2025-2030: Actions

6.1 Theme 1: Galway City Council Actions for Biodiversity

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
1.1	1, 2	1C6	Maintain Biodiversity Working Group (BWG) to review, ensure accountability, and drive forward BAP actions. Prepare and review Terms of Reference. GCC to resource the delivery of the plan with grant support and setting up a Biodiversity team.	Resources available. TOR prepared. BAP prepared and implemented. Biodiversity team resourced.		Senior Management Team, Biodiversity Team
1.2	1, 2	1D12	Set up Galway Bay Marine Biodiversity working group as a subset of BWG to deliver actions on seagrass restoration, algal blooms, water quality, and provision of ecosystem services. Encourage partnership with C&V sector, key stakeholders, and trans-jurisdictional partners to support marine biodiversity, data collection and management actions.	Resources available, TOR prepared. Action plan prepared and implemented.	Protected Species: Wildlife Acts, EU IAS Regs	Biodiversity Team, Recreation & Amenity, Environment, Water Services
1.3	3	1D12	Put policies in place to ensure that all staff, particularly new staff, are inducted in biodiversity and they are informed of their responsibilities regarding compliance with legislation and the biodiversity-related actions listed in the BAP, CDP, Heritage Plan, Climate Action Plan etc. Implement a regular review process and update content, annually.	Induction programme designed and implemented. Biodiversity manual created and implemented using a compliance system to 'run' regular short training videos for all staff and updates provided to SPC. Manual used routinely across all departments. Reviewed and updated annually.		Senior Management Team, Biodiversity Team

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
1.4	1, 2, 3	2B6	Work with GCC Departments to review current use of herbicide by GCC and its contractors. Trial and invest in herbicide free alternatives, as promoted by AIPP and Target 7 of the NBAP. Prepare a protocol which details use of glyphosate against invasive species in public spaces.	Clear written protocols and leaflets for private landowners and the public prepared and distributed. Ongoing training delivered for GCC staff. Protocols on glyphosate and other herbicide use prepared and distributed to other authorities, landscapers, contractors, and public. Awareness raising efforts are monitored and education programmes delivered regularly.	Habitats Directive, Sustainable Use of Pesticides, Water Framework Directive	Senior Management Team, Roads and Transport (Operations), Housing, Recreation and Amenity
1.5	4, 5	5A5, 2B13	Review and survey areas currently managed under AIPP guidelines and modify as required for biodiversity and amenity requirements. Partner with effective programmes; e.g., GCC Biodiversity Garden Competition. Explore opportunities to partner with other landowners in the city e.g. IDA, HSE, businesses and faith communities to increase biodiversity on their land. Consult with Catholic Church to assist in the delivery of Laudato Si' actions.	AIPP areas effectively managed and monitored for biodiversity changes. Public spaces mapped to highlight the balance between biodiversity areas and more intensively managed recreation areas. Direct other city landowners to AIPP and encourage open communication.		Roads and Transport (Operations), Infrastructure Development Active Travel team, Housing, Recreation and Amenity, Environment, Planning, Recreation and Amenity, Cross Department

6.2 Theme 2: Planning and Development

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
2.1	1, 3	2F5	With relevant GCC departments, establish an oversight committee to monitor all biodiversity actions and initiatives across current and future plans and strategies including GCC CDP 2023–2029, Galway City Heritage Plan 2024–2029, Galway City Climate Action Plan 2024–2029 and Green Spaces Strategy.	Biodiversity/ecological assets and its importance for the provision of ecosystem services is widely recognised and considered in all GCC city-wide strategies, plans and policies and as part of the development management process.	Habitats Directive, Wildlife Acts	Planning, Heritage, Climate Action Team, Recreation and Amenity
2.2	2	2C7, 3C1, 3C2	Work with Architectural Services to identify opportunity and funding for a pilot biodiversity inclusive design for a social housing estate to demonstrate principles of biodiversity using the NbS initiative, including SuDS, landscaping to support wildlife and connectivity, and nest bricks for bats and birds in all new developments. Prepare planning guidance on NbS for circulation to GCC staff and developers.[25]	Planning guidance prepared and NbS routinely considered in project planning. A showcase social housing estate planned and developed with a biodiversity inclusive design.		Senior Management Team, Cross department including Architectural Services, Planning, Roads and Transport Infrastructure Development, Active Travel team, Housing, Recreation and Amenity, Environment.

25. An example, is https://www.cluid.ie/wp-content/uploads/2023/05/Landscaping-and-Biodiversity-Guide-for-web.pdf

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
2.3	2	2C7, 3C1, 3C2, 3C3	Engage with national authorities, regional assemblies, and professional bodies in the development of National Biodiversity Net Gain (BNG) Guidance. Galway City Council will support the integration of BNG principles through a plan-led approach, aligned with the City Development Plan and other statutory frameworks. Any future implementation will be informed by national policy, regional coordination on a case-by-case basis.	BNG Guidelines for GCC prepared and included in future planning policy to support and enhance the biodiversity of the city.		Senior Management Team, Planning, Architectural Services, Biodiversity Team.

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
2.4	2, 4	1D5, 1D12, 2A8, 2D1	Conduct audit of lighting ecological sensitive sites in the city. Develop guidance for GCC, developers and homeowners on dark-sky friendly lighting and design in accordance with the Institution of Lighting Professionals (ILP) Guidance Note (GN01/21) The Reduction of Obtrusive Light. Implement measures to mitigate effects of existing lighting. Ensure that new developments eliminate or mitigate potential light pollution. Ensure coastal infrastructure mitigates light pollution on aquatic habitats.	Audit of lighting in ecologically sensitive sites and locations identified as barriers to wildlife movement. Measures implemented to mitigate effects in accordance with Dark Sky Ireland, ecological experts and ILP Guidance. The Institution of Lighting Professionals (ILP) Guidance Note (GN01/21) is a standard condition in planning consents.	Reg SI 374/2024 (Ireland), Reg. SI477 (Ireland), Protected Species: Wildlife Acts, EU Habitats Directive	Biodiversity Team with Cross Department including Architectural Services, Planning, Roads and Transport Infrastructure Development, Active Travel team, Heritage and Conservation, Community, Galway Chamber, Economic Development, Housing, Recreation and Amenity, Environment.

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
2.5	1, 2, 3	1D12, 2B11	Provide planning and design guidance on the protection and management of ecological corridors including watercourses, hedgerows, treelines, and scrub during the planning process and in green space management. Research options to develop ecological corridors connecting the three municipal woodland parks with Galway Bay and Corrib waterways.	Planning, design and maintenance guidance on the protection and management of ecological corridors prepared and implemented.		Biodiversity Team, Planning, Architectural Services, Recreation and Amenity.
2.6	2	1D12	Prepare, circulate, and provide appropriate training on city-wide design guidance for all GCC housing, parks and infrastructure projects, and all developers, to ensure good landscape design and that public spaces are managed for biodiversity, as far as practical. The design guidance will be informed by AIPP, ensures minimal maintenance, and does not introduce invasive species.	Biodiversity focused Landscape Design guidance prepared and circulated. Training provided on its implementation on an annual basis and included in GCC staff induction.		Biodiversity Team, Planning, Architectural Services, Recreation and Amenity.

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
2.7	2, 4		Prepare guidelines that local businesses can adopt on-site and encourage supply chain measures that protect and enhance biodiversity. Provide workshops and training so that businesses are well informed and actively engaged.	Guidelines prepared and distributed with training provided as required.		Biodiversity Team, Planning, Heritage and Conservation, Roads, Recreation and Amenity, Galway Chamber, Economic Development.

6.3 Theme 3: Building Resilience, including Climate Resilience

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
3.1	1, 2	2C7, 3C2	Provide guidance and a checklist explaining how climate change impacts species and habitats, and how protecting species /habitat richness and diversity enhances climate resilience. Ensure this checklist of appropriate measures to improve climate resilience is incorporated into all relevant GCC plans and policies.	Guidance and a check list prepared and disseminated. Check list of appropriate measures considered in all GCC plans and policies.	Habitats Directive	Biodiversity Team, Planning, Climate Action
3.2	1, 5		Cooperate with LAWPRO on biodiversity/protection of habitats, water pollution, climate resilience and flooding control.	Measurable actions implemented to control flooding.	New action added	Biodiversity Team, Planning, Climate Change and Sustainability, LAWPRO

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
3.3	3, 5	2A8, 2C7	Undertake study to identify the habitats and species at risk of climate change in the city to comply with legislation.	Baseline surveys conducted and recommendations planned and implemented. Vulnerable habitats prioritised.	Habitats Directive	Biodiversity Team
3.4	1, 2, 3, 5		Identify coastal habitats, such as wetlands, seagrass and salt marsh, which could be sustainably managed under climate adaptation for coastal flooding and habitat enhancement. Collaborate with the Coirib go Cósta Galway flood relief scheme for opportunities for NbS, such as sponge city concept[26]. Collaborate with local and national agencies to address problems of storm water management which is leading to pollution of freshwater and marine habitats.	Habitats identified for sustainable climate adaptation management. Actions implemented. Cooperation with Coirib go Cósta Galway flood relief scheme achieved. Storm water management addressed, and changes made to protect aquatic habitats.		Biodiversity Team, Climate Change and Sustainability, LAWPRO, Uisce Éireann, Academic Institutes

26. Dong, R. et al., (2019) Constructing the Ecological Security Pattern for Sponge City: A Case Study in Zhengzhou, China. Available from https://pdfs.semanticscholar.org/b76b/24957cf416e380a0b05463ee6a70a1ff2ee8.pdf

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
3.5	5	2C7, 3C1, 3C2, 5A5	Conduct baseline assessment of carbon levels in ecosystems in Galway City to inform the management, restoration, and creation of carbon capture initiatives. Implement a process to monitor the changes in carbon sequestration and storage. Include seagrass, salt marsh and other high carbon sequestration habitats.	Baseline assessment of carbon in ecosystems in Galway City conducted. Process developed to monitor changes in carbon sequestration and storage.		Biodiversity Team, Recreation and Amenity, Academic Institutes.
3.6	1, 2	2F5, 2D21, 2C7	Work with relevant agencies and landowners to assess wildfire risk to peatlands and heathland habitats and their management.	Wildfire risk assessment completed, and management measures identified.		Senior Management Team, Biodiversity Team, Community, Housing, Recreation and Amenity, Environment.

6.4 Theme 4: Prevent Biodiversity Loss: Invasive Species

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
4.1	1, 2, 3, 4	2B6, 2H2, 2H3	Update, launch, and adequately resource the invasive species management strategy, IAS Training Portal, and GIS mapping for invasive species. Ensure GIS maps displaying invasive species locations are readily available and accessible for all departments.	Invasive species strategy launched and being implemented, measured, and monitored. Planning Dept. informed of all invasive species locations. Greater awareness among professionals and public.	Reg SI 374/2024 (Ireland), Reg SI477 (Ireland), Protected Species: Wildlife Acts, EU IAS Regs	Biodiversity Team, Planning, Climate Action, Architectural Services, Housing, cross department.
4.2	2	2B6, 2H2	Prioritise the assessment and management of new invasive species discoveries in the city. Consult with NBDC and NPWS to design a rapid reporting system.	Reporting system in place whereby new records can be received quickly by the GCC Biodiversity Team and acted upon.	Reg SI 374/2024 (Ireland), Reg SI477 (Ireland), Protected Species: Wildlife Acts, EU IAS Regs	Biodiversity Team, Architectural Services, NBDC, NPWS
4.3	1, 4	2B6, 2H2	Design and introduce biosecurity protocols to prevent arrival and spread of invasive species. Ensure these are routinely implemented by all GCC staff, developers, contractors, and other statutory bodies. Include protocols to prevent invasive tree diseases.	Biosecurity protocols in place with evidence they are routinely used.	Reg SI 374/2024 (Ireland), Reg SI477 (Ireland), Protected Species: Wildlife Acts, EU IAS Regs	Biodiversity Team, Cross department, Architectural Services, NBDC, NPWS, C&V sector

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
4.4	2, 4	2B6, 2H2	Provide ongoing training for GCC staff and C&V sector so they can quickly identify and report invasive species and routinely use biosecurity protocols. Prioritise aquatic habitats and recreational users of waterbodies. Provide guidance to GCC Planning Dept.	Training completed, staff and C&V sector supported with identification tools and biosecurity knowhow. Early warning system in development.	Reg SI 374/2024 (Ireland),Reg SI477 (Ireland), Protected Species: Wildlife Acts, EU IAS Regs	Cross department, Biodiversity Team, Architectural Services, NBDC, NPWS, C&V sector, LAWPRO
4.5	1, 3	2B6, 2H3	Provide ongoing guidance and training to relevant GCC departments and other bodies on planning conditions relevant to invasive species. Ensure land clearance projects are assessed for invasive species by suitably qualified ecologist or horticulturist personnel before starting.	Continue to engage with NBDC on the development and implementation of early warning system to ensure early intervention takes place Planning Department has clear guidelines on invasive species prevention and management. Training on the guidelines delivered.		Biodiversity Team, Planning, Architectural Services, Roads, Community, Recreation and Amenity,
4.6	2, 3	2B6, 2H2	Routinely review and revise list of garden escapes (plants to avoid) and ensure that information is regularly circulated.	There is no further planting of troublesome invasive plants.	Reg SI 374/2024 (Ireland),Reg SI477 (Ireland), Protected Species: Wildlife Acts, EU IAS Regs	Biodiversity Team, Planning, Architectural Services, Recreation and Amenity.

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
4.7	1, 2, 5	2B6, 2H3	Design and implement control programmes on an area basis and a species basis. Introduce measures to monitor progress. Consult with bordering local authorities, government agencies and academic institutes to support research, secure funding and implement programmes that are delivered beyond the city.	Research supported, management trials underway and contracts in place with skilled contractors to manage invasive species controlled by legislation, and those which are seriously problematic but not yet controlled by legislation.	Reg SI 374/2024 (Ireland),Reg SI477 (Ireland), Protected Species: Wildlife Acts, EU IAS Regs	Biodiversity Team, Planning, Roads, Community, Recreation and Amenity, bordering local authorities, NBDC, NPWS and academic institutes
4.8	2	2B6, 2H4	Create a check list of species and prioritise control programmes based 1) on legislation and 2) threat to protected and sensitive habitats.	Invasive species strategy includes a detailed list of species to control with prioritisation and actions required to implement	Reg SI 374/2024 (Ireland),Reg SI477 (Ireland), Protected Species: Wildlife Acts, EU IAS Regs	Biodiversity Team, NBDC, NPWS and academic institutes
4.9	2, 4		Launch public awareness campaign regarding exotic pet ownership and the risk of these becoming invasive if released into the wild. Link with national NBDC campaign.	Public awareness campaign regarding exotic pet ownership launched.		Biodiversity Team

6.5 Theme 5: Prevent Biodiversity Loss: Habitat and Species

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
5.1	1, 2, 3	1D12, 2B11, 2D1	Prepare planning and design guidance for the protection of ecological corridors and CBA.	Habitat management plans prepared for different ecological corridor types (e.g., hedgerows, waterbodies, stone walls).		Biodiversity Team
5.2	1, 2		Recommend adopting a CDP policy requiring ecological impact assessments for developments affecting CBA and ecological corridors, ensuring no net loss of habitat or ecosystem services. Developers are required to share records with NPWS, BCI, BWI, and NBDC.	Ecological impact assessments conducted on all developments that may impact on CBA and associated ecological corridors.	Habitats Directive	Planning
5.3	1, 2, 3		Provide training to developers, contractors, GCC and public on relevant legislation including Bern Convention, Wildlife Acts, and Habitats Directive and GCCs commitment to not cut trees/ hedgerows/ scrub vegetation during the bird nesting season (1st March to 31st August). Work with relevant Departments to develop a viable approach to hedgerow and tree maintenance regimes, in a manner that prevents no unnecessary or undue damage to biodiversity, whilst ensuring adequate road safety.	Annual media reminders distributed. Guidance noted developed and make it a standard condition for planning applications and tendering process for procurement of roadside hedgerow and tree management services. Toolbox talks to GCC General Operatives.	Wildlife Acts	Biodiversity Team, Cross department, Roads Department, Recreation & Amenity Department.

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
5.4	1, 3	1D5, 2A8, 2D2	Proactively explore opportunities to improve or restore ecosystems and landscape connectivity as part of the development of Greenway and Blueway recreation plans, projects, and strategy. This will ensure the development of Greenways and Blueways is informed by robust ecological assessments to ensure sensitive habitats and species are avoided.	BAP informs Greenway and Blueway plans and strategies for the city. Baseline ecological assessments completed and used to inform projects.	Habitats Directive, Wildlife Acts	Cross department
5.5	1, 2, 3		Require bat and bird surveys before restoring historical structures to implement species protection measures in advance.	Planning guidelines developed and data shared with NPWS, BWI and NBDC.	Habitats Directive, Wildlife Acts. Bern Convention	Heritage and Conservation, Architectural Services, Planning
5.6	1, 2, 3		Work with GCC Roads Department, Transport Infrastructure Ireland, and C&V sector to improve habitat and connectivity for wildlife. Erect wildlife crossing signs at key locations across the city.	Crossing points identified, projects initiated with C&V sector to erect wildlife crossings and monitor.	Habitats Directive	Roads Department, Transport Infrastructure Ireland, and C&V sector

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
5.7	1, 3		Work with NPWS, LAWPRO, C&V sector, and bordering counties to develop effective restoration projects, where the conservation status of habitats and species is assessed as 'unfavourable - inadequate' or 'unfavourable - bad' as per the NPWS Habitats Directive Article 17 Reporting and Conservation objectives for European sites.	ATU, Ryan Institute, Galway Aquarium, NPWS, and C&V sector actively engaged.	Habitats Directive	NPWS, Uisce Éireann, LAWPRO, C&V sector, and bordering counties
5.8	1, 2, 3	2D1, 2F5	Support Water Framework Directive initiatives for ecological restoration of water bodies. Work with GCC Water Services, the Environment Department, LAWPRO, and Uisce Éireann to identify opportunities and prevent pollution. Include Coastwatch in water monitoring efforts.	Engagement with key stakeholders. Sources of contamination identified and monitored. Prevention measures identified, implemented, and monitored with the aim of zero waste entering the bay from storm and foul sewer network.		Water Services, Environment, LAWPRO, Uisce Éireann, Coastwatch

6.6 Theme 6: Mapping, Surveying, and Monitoring

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
6.1	1, 5	1D5	Commission a city-wide habitat mapping survey.	Suitably qualified and experienced surveyors identified and funded. Survey completed.	Reg SI 374/2024 (Ireland), Reg. SI477 (Ireland), Protected Species: Wildlife Acts, EU Habitats Directive	Biodiversity Team
6.2	1, 5	2C7, 5A5	Build capacity to collate, analyse, monitor, share, and manage data, including GIS capacity.	Engagement with NPWS, UoG, ATU, C&V sector, and NBDC with shared mapping and monitoring. Identification and engagement with the NBDC on the development and implementation of a procedure for urgent rapid reporting. Training resourced and completed. Data analysed more effectively.		NPWS, UoG, ATU, C&V sector, and NBDC

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
6.3	1, 5	2B6	Monitor changes and update mapping of existing and new CBA, in line with the Heritage Council advice. Develop a management plan and annual monitoring programme. Investigate measures to further protect them, through planning (existing and future city development plan policies), engagement with private landowners and developers. Engage C&V sector in citizen science monitoring schemes to help build knowledge.	CBA surveyed, mapped, and listed in next CDP. Annual monitoring programme established. Policy developed to afford these areas local protection. C&V sector actively engaged in citizen science initiatives.	Reg SI 374/2024 (Ireland), Reg. SI477 (Ireland); Protected Species: Wildlife Acts, EU Habitats Directive	Planning, Biodiversity Team, C&V sector, the Heritage Council.
6.4	1, 5	2B11	In line with Article 10 of the Habitats Directive, update ecological network map of the city to survey existing corridors, identify additional corridors, including aquatic corridors, stepping stones, and pinch points. Increase connectivity by habitat restoration and new planting.	Ecological corridors surveyed, mapped using GIS, restored where required, and monitored.	Habitats Directive	Biodiversity Team, Recreation & Amenity
6.5	1, 4, 5	1D12	Support Citizen Science Initiatives to encourage recording of species by schools, colleges, universities, and C&V sector. Liaise and share results with NPWS, BWI and NBDC.	Citizen science initiatives identified, communities engaged, funding secured, initiatives implemented and monitored.		Biodiversity Team, NPWS, UoG, ATU, C&V sector, BWI and NBDC

6.7 Theme 7: Awareness and Engagement

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
7.1	1, 4, 5	2B11, 2B12, 2B13, 2C7, 2F5	Identify communities, including underrepresented groups in Galway City with biodiversity plans and hold workshops to assess and support their implementation. Identify supports for mentoring and guidance to help communities fully implement their plans and apply for relevant funding (e.g., CFI).	Local community biodiversity plans identified. C&V sector encouraged to apply for funding. Guidance and support posted onto GCC website and social media.		Tidy Towns, C&V sector, local communities, Biodiversity Team
7.2	4	B11, 2B12, 2B13, 2C7, 2F5	Work with faith communities to identify lands and properties within the City and implement biodiversity measures in collaboration with local parish and communities.	Secure funding to develop this as a project, to identify faith communities, the land they own, their level of interest and requirements		Faith communities, Biodiversity Team,
7.3	4	1D12, 2B11, 2B12, 2B13, 2C7, 2F5	Acknowledge and celebrate the contribution of the C&V sector and NGOs. Develop an annual schedule of biodiversity training and mentoring for C&V sector.	C&V sector and NGOs celebrated through community events held each year and advertised through social media, radio, newspapers, community centres, libraries etc.		Tidy Towns, C&V sector, local communities, Biodiversity Team,
7.4	4	1D12	Create a biodiversity page on GCC website that has education resources, grant opportunities, and other useful information for the C&V sector and GCC staff and stakeholders.	Biodiversity page on GCC website is created and maintained.		ICT, Communications officer, Biodiversity Team

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
7.5	4	1D12	Promote and expand the delivery of the 'Share the Shore' and responsible dog owner engagement on wildlife disturbance and dog fouling.	Responsible dog ownership campaigns launched, and ambassador scheme set up.		Environment Awareness Officer, Biodiversity Team, Communications officer,
7.6	4	1D12	Promote responsible cat owner engagement through GCC.	Responsible cat ownership campaign launched.		Environment Awareness Officer, Biodiversity Team, Communications office
7.7	4	1D12, 2B12, 2B11	Promote biodiversity in schools, including outdoor learning opportunities, by collaborating with existing organisations and programmes, such as LAWPRO, Green schools, Heritage in Schools, Globe Ireland, and others.	Number of schools supported and participating in education and biodiversity programmes.		Environment Awareness Officer, Biodiversity Team, Communications officer.
7.8	4	2B11, 2B12, 2B13, 2C7, 2F5	Support community in setting up community tree nurseries, using locally and sustainably collected native seed, for use in community woodland/ hedgerow/ orchard planting projects. A similar programme to be developed to sustainably harvest local wildflower seed and create a seagrass nursery.	Agreement secured to set up community nurseries, sites identified, communities identified, training provided		Recreation & Amenity Department, Biodiversity Team, Communications officer.

Ref. No.	BAP Obj.	NBAP Align.	Actions	Performance indicators	Legislation	Partners
7.9	4	1D12	Continue to work with C&V sector to develop NbS with demonstration sites across the city, particularly for water quality. Include a fully accessible demonstration garden showcasing biodiversity.	Number of NbS demonstration sites developed. Demonstration garden showcasing biodiversity linked to the existing 'biodiversity garden' competition within GCC. Active public participation and engagement enjoyed.		Recreation & Amenity Department, Environment Awareness Officer, Biodiversity Team, Communications officer.
7.10	4	1D12, 2D1	Initiate a project in collaboration with coastal and freshwater groups to highlight and celebrate the importance of our seas, rivers, lakes, ponds, and wetlands for biodiversity. Collaborate with Clean Coasts, Coast Watch, LAWPRO and other existing networks.	Project with stakeholders developed and delivered annually.		Clean Coasts, Coast Watch, LAWPRO, Environment Awareness Officer, Biodiversity Team, Communications officer.

Appendix A
Legislation and Policy

A1 UN Convention on Biological Diversity

The need to protect the Earth's natural resources was first recognised at a global level at the Earth Summit in Rio de Janeiro in 1992, at which most countries of the world were represented and more than one hundred Heads of State participated.

Three Rio Conventions were initiated during the meeting:

- **United Nations Convention on Biological Diversity (CBD)** which has been signed by 196 nations, including Ireland. The CBD is the international legal instrument for the 'conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources'.[27]
- **United Nations Convention to Combat Desertification (UNCCD)** aims to combat desertification and mitigate drought in an integrated approach and supported by international cooperation and partnership arrangements.
- **United Nations Framework Convention on Climate Change** sets an overall framework for intergovernmental efforts to tackle the challenges of climate change. Its objectives are to stabilise green-house gas concentrations within a timeframe to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed sustainably.

The CBD's governing body is the Conference of the Parties (COP) which holds a meeting every two years to review progress, set priorities and commit to work plans.

A2 Kunming-Montreal Biodiversity Framework COP 15

The Kunming-Montreal Biodiversity Framework, also known as the Global Biodiversity Framework (GBF) or Biodiversity Plan, is a landmark agreement to guide global action on nature to 2030. It was initiated at COP 15 in December 2022. The GBF consists of four overarching global goals to protect nature and has 23 targets to achieve by 2030. These include the effective conservation and management of at least 30% of the world's land, coastal areas and oceans (currently, only 17% of land and 8% of marine areas are under protection); restoration of 30% of terrestrial and marine ecosystems; and reduction to near zero of the loss of areas of high biodiversity importance and high ecological integrity.

27. https://www.un.org/en/observances/biological-diversity-day/convention

A3 UN Decade on Restoration 2021–2030 COP 16

The UN Decade on Ecosystem Restoration was developed as part of the UNCCD and aims to prevent, halt and reverse the degradation of ecosystems on every continent and in every ocean with the goals of ending poverty, combatting climate change and preventing a mass extinction of biodiversity. Its text emphasises that it can only succeed if everyone plays a part. It was initiated at COP 16 and offers a range of actions, toolkits and restoration flagships to achieve its aims.[28]

A4 Birds and Habitats Directives

The Birds and Habitats Directive form the cornerstones of EU biodiversity policy, providing a strong legislative framework for member states to protect their most valuable and threated biodiversity. Together, the two directives form the Natura 2000[29] network, which is the largest coordinated network of protected sites in the world. The EU Birds Directive[30] aims to protect all wild birds and their habitats within the European Union, while the Habitats Directive[31] focuses on the conservation of natural habitats and wild fauna and flora. Ireland is obligated to designate Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) to safeguard these critical habitats and species.

- The Habitats Directive[32] aims to protect over 1000 species, including mammals, reptiles, amphibians, fish, invertebrates and plans, and 230 characteristic habitat types. These habitat types have been designated by member states, known as Special Areas of Conservation (SACs) (Section 3.1). The objective is to restore these sites to a favourable conservation status and to thrive over the long term.
- The Birds Directive[33] aims to protect all naturally occurring bird species in Europe and their most important habitats. There are about 500 bird species in Europe but more than 30% are threatened or have a poor conservation status. Special Protection Areas (SPAs) (Section 3.1) have been designated to protect 197 bird species.

A5 EU Water Framework Directive (WFD)

WFD aims **to** protect the aquatic environment.[34] It requires member states to use their River Basin Management Plans (RBMPs) and Programmes of Measures (PoMs) to protect and, where necessary, restore water bodies to reach good status and prevent deterioration. The main responsibility for the WFD lies with the Environmental Protection Agency (chemical status) and Inland Fisheries Ireland (ecological status).

28. https://www.decadeonrestoration.org/
29. https://www.npws.ie/faq/natura2000
30. https://www.npws.ie/legislation/eu-directives/birds-directive
31. https://www.npws.ie/legislation/eu-directives/habitats-directive
32. https://environment.ec.europa.eu/topics/nature-and-biodiversity/habitats-directive_en
33. https://environment.ec.europa.eu/topics/nature-and-biodiversity/birds-directive_en
34. https://www.catchments.ie/guide-water-framework-directive/

A6 EU Biodiversity Strategy for 2030

This aims to protect nature, restore ecosystems and effectively manage natural resources by 2030.[35]

A7 Nature Restoration Law

Nature Restoration Law entered into force in August 2024[36] aims to restore degraded ecosystems and promote the recovery of declining species. It is a crucial part of the EU Green Deal (which strives to be the first climate-neutral continent)[37] and is designed to make the EU economy sustainable by turning climate and environmental challenges into opportunities.

A8 Wildlife Acts

The Wildlife Acts (1976 as amended) is the main legislative framework for the protection of native flora and fauna in Ireland.[38] Under the Wildlife Acts, Natural Heritage Areas (NHAs) have been designated to conserve species and habitats of national importance.

A9 Flora Protection Order 2022

The current list of plant species protected in Ireland is listed in the Flora Protection Order[39], which states that it is illegal to cut, uproot, damage in any way, or offer for sale (plants and seed) the listed species. The Order includes 68 vascular plants, one lichen, and two stoneworts, and applies wherever the plants are found, not confined to designated sites. Bryophytes (mosses) are listed separately and now include 65 species.

A10 Planning and Development Acts

The Planning and Development Act 2000[40] brought together all planning legislation since 1963, simplifying the process into one piece of legislation. It has been amended several times since 2000 but forms the basis of the Irish planning code, providing guidelines for Local Authorities. It provides the statutory basis for protecting natural and architectural heritage. It is mandatory for regional and local development plans to include objectives for the protection of the environment, including SACs, SPAs and other designated sites. Galway City's current development plan 2023–2029 includes a comprehensive section and suite of actions on protection of the environment.[41]

35. https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en
36. https://environment.ec.europa.eu/news/nature-restoration-law-enters-force-2024-08-15_en
37. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en
38. https://www.npws.ie/legislation/irish-law/wildlife-act-1976
39. https://www.irishstatutebook.ie/eli/2022/si/235/
40. https://www.npws.ie/legislation/irish-law/planning-and-development-act-2000
41. https://www.galwaycity.ie/services/planning/development-plan-2023-2029

A11 Invasive Alien Species (IAS) Regulations

Invasive species are one of the biggest drivers of biodiversity loss along with climate change and habitat loss. The main regulations include:

- European Union IAS Regulations SI 1143/2014 which includes 41 plant and 47 animal species on the list. It puts the onus on nation states to prevent introductions, quickly identify and remove new arrivals, and control invasive species that have become established.
- National IAS Regulations SI 477/2011 and SI 374/2024 have been brought into law to implement the EU IAS Regulations. Section 49 of the EC (Birds and Natural Habitats) Regulations SI 477 came into effect in Ireland in 2011 and made it an offence to knowingly allow the dispersal or escape of 76 species, 35 of which are plants. Section 50, which was concerned with trade and movement of the listed species was not enacted. However, in July 2024, the long-awaited EU(IAS) Regulations SI 374/2024 was signed into Irish Law. These ban the import, export, breeding, introducing, placing on the market, reproducing, growing or cultivating or releasing into the environment, the listed species. The species list is almost identical to SI 477/2011.

A12 Plans and Policies

A summary for the plans and policy influencing the biodiversity are summarised in the Table below.

Global, European, National and Local Level Plans and Policies

Level	Framework	Role & Connection
Global	UN Convention on Biological Diversity (CBD)	Sets international biodiversity commitments.
European (EU)	EU Biodiversity Strategy 2030	Directs biodiversity policy across EU member states, influencing national plans.
National (Ireland)	4th National Biodiversity Action Plan (NBAP) 2023–2030	Ireland's primary biodiversity framework, backed by legislation through the Wildlife (Amendment) Act 2023.
Sectoral & National Policies	National Climate Action Plan, Biodiversity Sectoral Adaptation Plan	Integrates biodiversity goals with climate resilience strategies.
Local Level	• Galway City Development Plan 2023-2029 • Galway Green Spaces Strategy • Galway City Climate Action Plan • Local Biodiversity Action Plans (e.g., Galway City BAP)	Implements national biodiversity objectives at a community level.

A13 Ireland's 4th National Biodiversity Action Plan

The Galway City BAP aligns closely with Ireland's 4th National Biodiversity Action Plan (NBAP) 2023–2030. The national plan emphasises a "whole of government, whole of society" approach, ensuring that every citizen, business, and local authority actively contributes to biodiversity conservation. Galway City's plan supports this by fostering partnerships between statutory bodies, voluntary organisations, and the public to implement effective biodiversity measures.

Ireland's 4th National Biodiversity Action Plan (NBAP) is legislated for by the Wildlife Act 1976 as amended by the Wildlife (Amendment) Act 2000. In addition, the Wildlife (Amendment) Act 2023 introduced a new public sector duty on biodiversity.[42] The legislation provides that every public body, as listed in the Act, is obliged to have regard to the objectives and targets in the NBAP.

The NBAP contains several actions relevant to local authorities, including Action Codes 2B6, 2C7, 2D1, 3A3 and 3C.

A14 Galway City Development Plan 2023-2029

Galway City Development Plan 2023-2029 includes policies that support nature by promoting nature-based solutions, green infrastructure, and biodiversity enhancement, such as tree planting and habitat restoration.

Key policies involve integrating green infrastructure into new developments, protecting sensitive, and applying a "Biodiversity Net Gain" for development proposals. Furthermore, the plan incorporates measures to manage and improve water quality, as seen with the Blue Flag status of local beaches, and supports the All-Ireland Pollinator Plan.

42. https://www.npws.ie/legislation

Galway City Development Plan 2023-2029 policies specific to Biodiversity

Policy Area	Key Focus	Role in Biodiversity Conservation
5.1 Green Infrastructure & Biodiversity **5.2** Protected Spaces: Sites of European, National and Local Ecological Importance **5.3** Blue Spaces: Coast, Canals and Waterways **5.4** Green Spaces: Urban Woodlands and Trees	• Alignment with national and EU biodiversity legislation and policies. Conservation of ecosystems. • Integrating nature into urban spaces • Public involvement in biodiversity initiatives.	Supports the implementation of the National Biodiversity Action Plan (2017-2023), All-Ireland Pollinator Plan 2021-2025 and the Galway City Biodiversity Action Plan. Supports wildlife corridors, parks, and sustainable urban design. Safeguards protected sites and sites of ecological importance including wetlands, coastal areas, and woodlands from degradation. Includes for the control and management of invasive species and educational opportunities. Promotes awareness, participation, and stewardship for local biodiversity.
2.2 Climate Action **9.4** Sustainable Urban Drainage Systems (SuDS)	Resilience against climate change	Strengthens ecosystems to adapt to environmental shifts. Promotes nature-based solutions to contribute to climate resilience

Appendix B
Consultation

In 2024, GCC carried out consultations with members of the public, NGOs, government organisations, GCC departments, and youth groups to inform the development of the Galway City BAP 2025-2030. By participating in the pre-draft consultation phase, the people of Galway identified local issues and needs which informed the actions required to protect and enhance biodiversity in Galway City.

Consultation was carried out in tandem with biodiversity events during Biodiversity Week between May 17th - 26th, Heritage Week between 16th - 26th August, included the Wild Bee Festival Sat 17th - Sun 18th August, Youth Biodiversity Workshops held in the City's Libraries between the 22nd and 24th August and the Comhairle na nÓg Youth Biodiversity event on the 23rd of October.

In June 2024, the inaugural Biodiversity Working Group convened with representatives across Council Departments, academia, PPN, NGOs and community groups. The focus of the meetings was to identify the biggest challenges facing Galway City's biodiversity and to develop meaningful actions to address these challenges.

Through Galway City Council's outreach and community participation we hope that the plan is practical, sustainable, and resilient, because the actions are grounded in real-world experience. The plan is not just about protecting nature; it's about building a city where biodiversity and community thrive together.

Pre-draft Consultation Information and feedback

Snapshot of consultation events

Appendix C
Designated Sites – Conservation Objectives

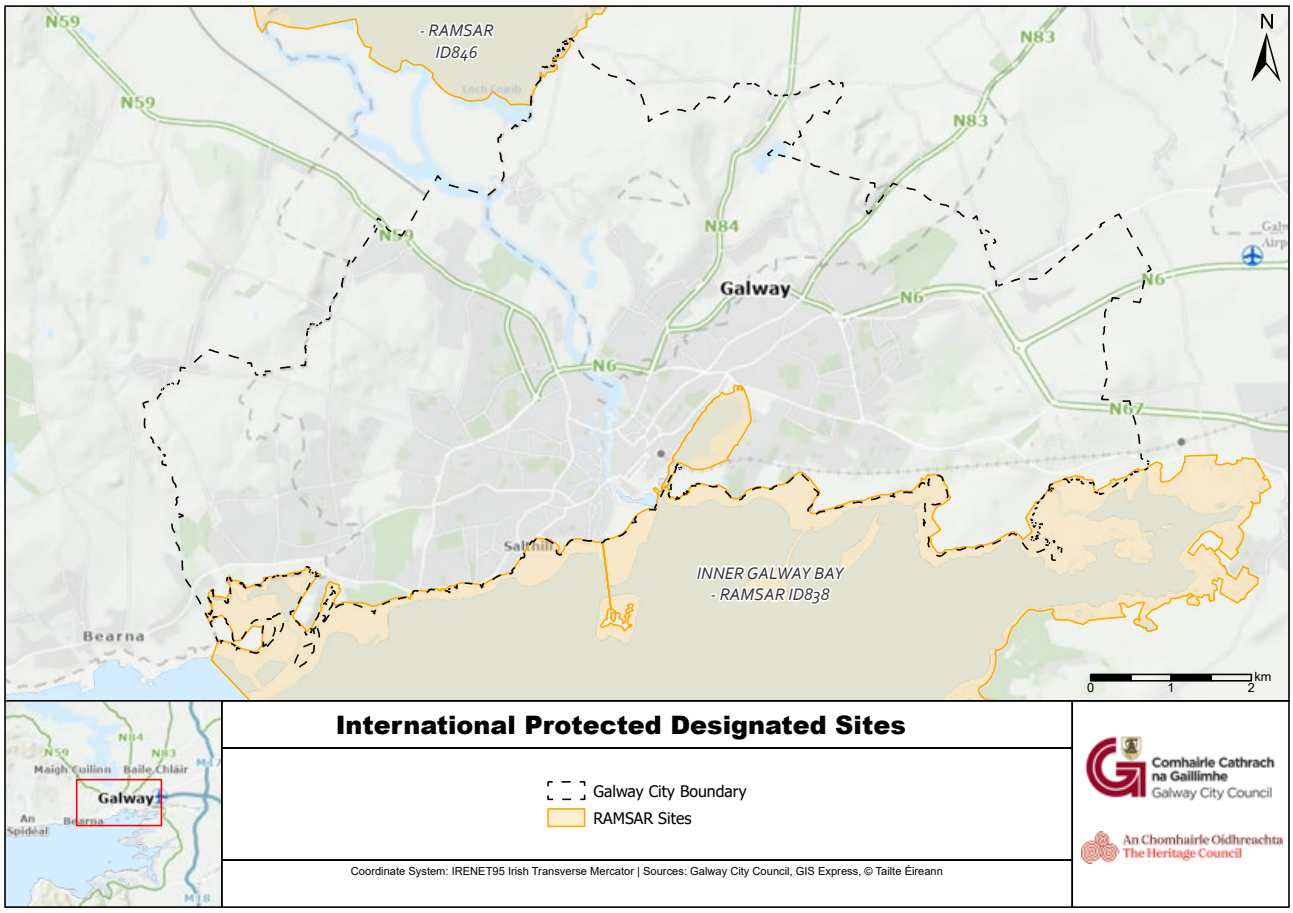
Inner Galway Bay SPA (004031) https://www.npws.ie/sites/default/files/protected- sites/conservation_objectives/CO004031.pdf	
Qualifying Interests	Conservation Objective: Maintain or Restore favourable conservation condition
Black-throated Diver (Gavia arctica) [A002]	Maintain
Great Northern Diver (Gavia immer) [A003]	Maintain
Cormorant (Phalacrocorax carbo) [A017]	Maintain
Grey Heron (Ardea cinerea) [A028]	Maintain
Light-bellied Brent Goose (Branta bernicla hrota) [A046]	Maintain
Wigeon (Anas penelope) [A050]	Maintain
Teal (Anas crecca) [A052]	Maintain
Red-breasted Merganser (Mergus serrator) [A069]	Maintain
Ringed Plover (Charadrius hiaticula) [A137]	Maintain
Golden Plover (Pluvialis apricaria) [A140]	Maintain
Lapwing (Vanellus vanellus) [A142]	Maintain
Dunlin (Calidris alpina) [A149]	Maintain
Bar-tailed Godwit (Limosa lapponica) [A157]	Maintain
Curlew (Numenius arquata) [A160]	Maintain
Redshank (Tringa totanus) [A162]	Maintain
Turnstone (Arenaria interpres) [A169]	Maintain
Black-headed Gull (Chroicocephalus ridibundus) [A179]	Maintain
Common Gull (Larus canus) [A182]	Maintain
Sandwich Tern (Sterna sandvicensis) [A191]	Maintain
Common Tern (Sterna hirundo) [A193]	Maintain
Wetland and Waterbirds [A999]	Maintain

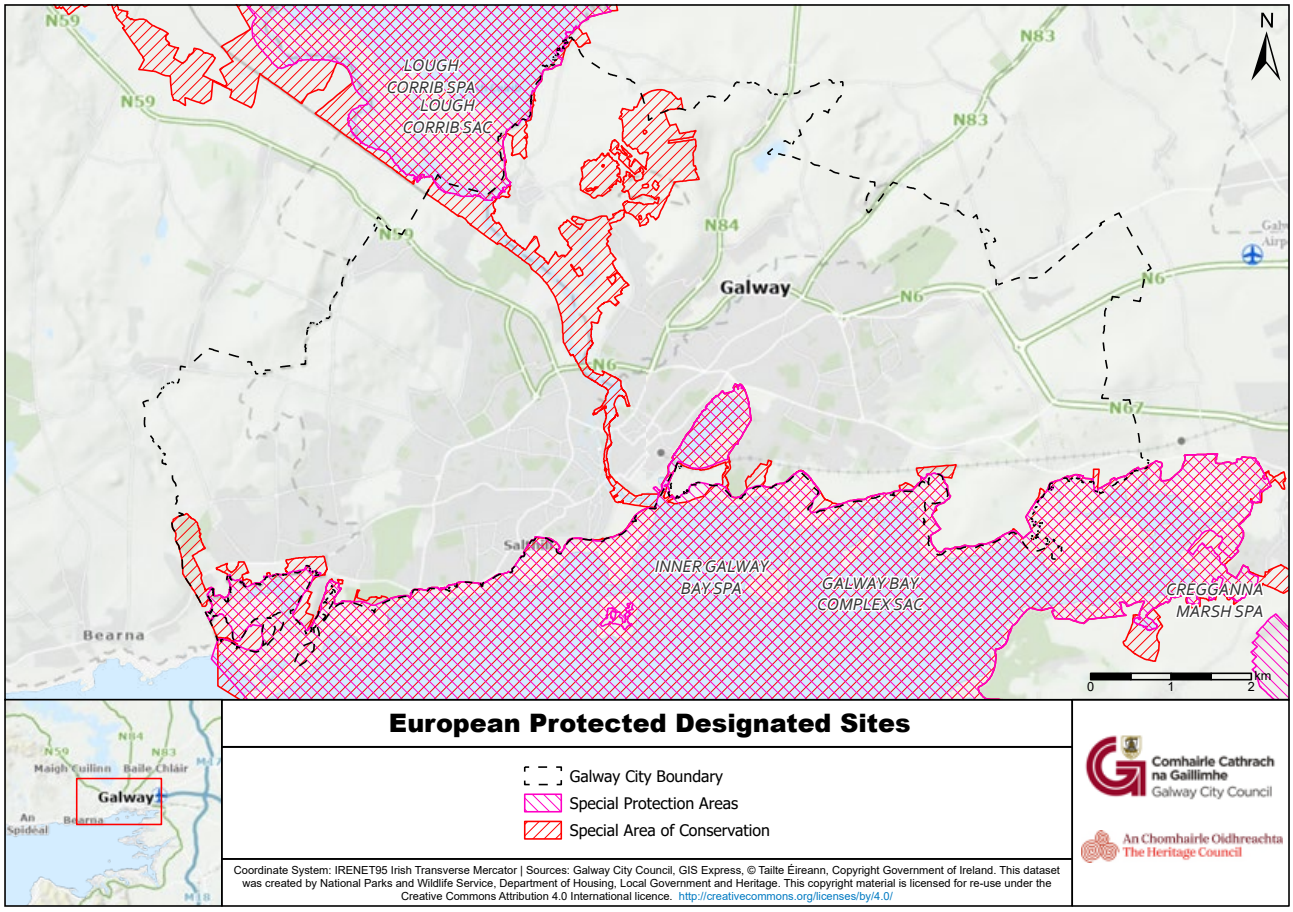
Galway Bay Complex SAC (000268) https://www.npws.ie/sites/default/files/protected- sites/conservation_objectives/CO000268.pdf	
Qualifying Interests	Conservation Objective: Maintain or Restore favourable conservation condition
Mudflats and sandflats not covered by seawater at low tide [1140]	Maintain
Coastal lagoons [1150]	Restore
Large shallow inlets and bays [1160]	Maintain
Reefs [1170]	Maintain
Perennial vegetation of stony banks [1220]	Maintain
Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	Maintain
Salicornia and other annuals colonising mud and sand [1310]	Maintain
Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]	Restore
Mediterranean salt meadows (Juncetalia maritimi) [1410]	Restore
Turloughs [3180]	Maintain
Juniperus communis formations on heaths or calcareous grasslands [5130]	Restore
Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210]	Maintain
Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210]	Maintain
Alkaline fens [7230]	Maintain
Limestone pavements [8240]	Maintain
Lutra lutra (Otter) [1355]	Restore
Phoca vitulina (Harbour Seal) [1365]	Maintain

Lough Corrib SAC (000297) https://www.npws.ie/sites/default/files/protected- sites/conservation_objectives/CO000297.pdf	
Qualifying Interests	Conservation Objective: Maintain or Restore favourable conservation condition
Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110]	Restore
Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130]	Restore
Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140]	Restore
Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]	Maintain
Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210]	Maintain
Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]	Maintain
Active raised bogs [7110]	Restore
Degraded raised bogs still capable of natural regeneration [7120] (refer to 7110)	Maintain
Depressions on peat substrates of the Rhynchosporion [7150] (refer to 7110)	Maintain
Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210]	Maintain
Petrifying springs with tufa formation (Cratoneurion) [7220]	Maintain
Alkaline fens [7230]	Maintain
Limestone pavements [8240]	Maintain
Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]	Maintain
Bog woodland [91D0]	Maintain
Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]	Restore
Austropotamobius pallipes (White-clawed Crayfish) [1092]	Maintain
Petromyzon marinus (Sea Lamprey) [1095]	Restore

Lampetra planeri (Brook Lamprey) [1096]	Maintain
Salmo salar (Salmon) [1106]	Maintain
Rhinolophus hipposideros (Lesser Horseshoe Bat) [1303]	Restore
Lutra lutra (Otter) [1355]	Maintain
Najas flexilis (Slender Naiad) [1833]	Restore
Hamatocaulis vernicosus (Slender Green Feathermoss) [6216]	Maintain
Lough Corrib SPA (004042) https://www.npws.ie/sites/default/files/protected- sites/conservation_objectives/CO004042.pdf	
Qualifying Interests	Conservation Objective: Maintain or Restore favourable conservation condition
Gadwall (Anas strepera) [A051]	Restore
Shoveler (Anas clypeata) [A056]	Restore
Pochard (Aythya ferina) [A059]	Restore
Tufted Duck (Aythya fuligula) [A061]	Restore
Common Scoter (Melanitta nigra) [A065]	Maintain
Hen Harrier (Circus cyaneus) [A082]	Restore
Coot (Fulica atra) [A125]	Restore
Golden Plover (Pluvialis apricaria) [A140]	Maintain
Black-headed Gull (Chroicocephalus ridibundus) [A179]	Restore
Common Gull (Larus canus) [A182]	Restore
Common Tern (Sterna hirundo) [A193]	Restore
Arctic Tern (Sterna paradisaea) [A194]	Restore
Greenland White-fronted Goose (Anser albifrons flavirostris) [A395]	Restore
Wetland [A999]	Maintain

Appendix D
Maps



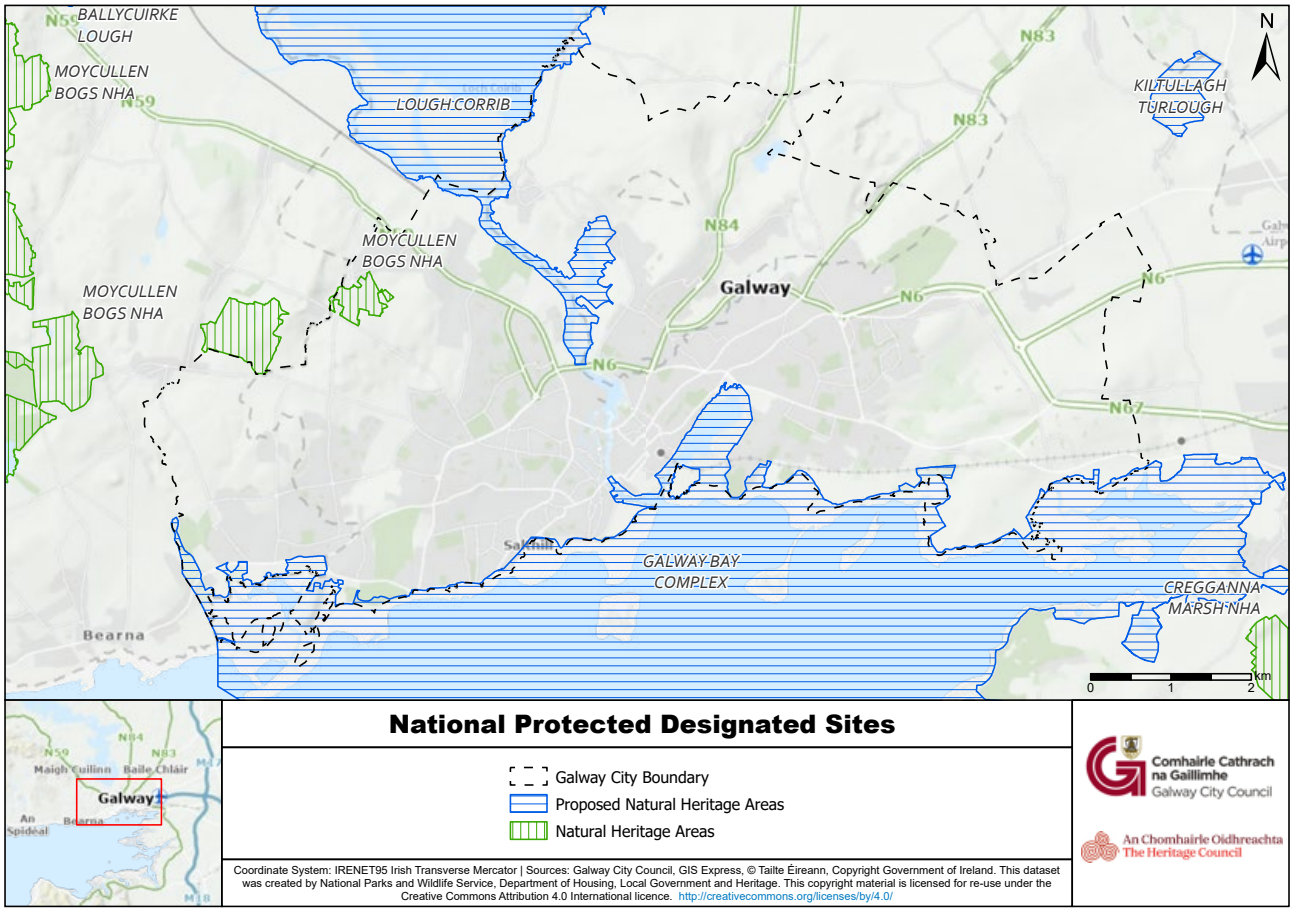


European Protected Designated Sites

- Galway City Boundary
- Special Protection Areas
- Special Area of Conservation

Comhairle Cathrach na Gaillimhe Galway City Council

An Chomhairle Oidhreachta The Heritage Council

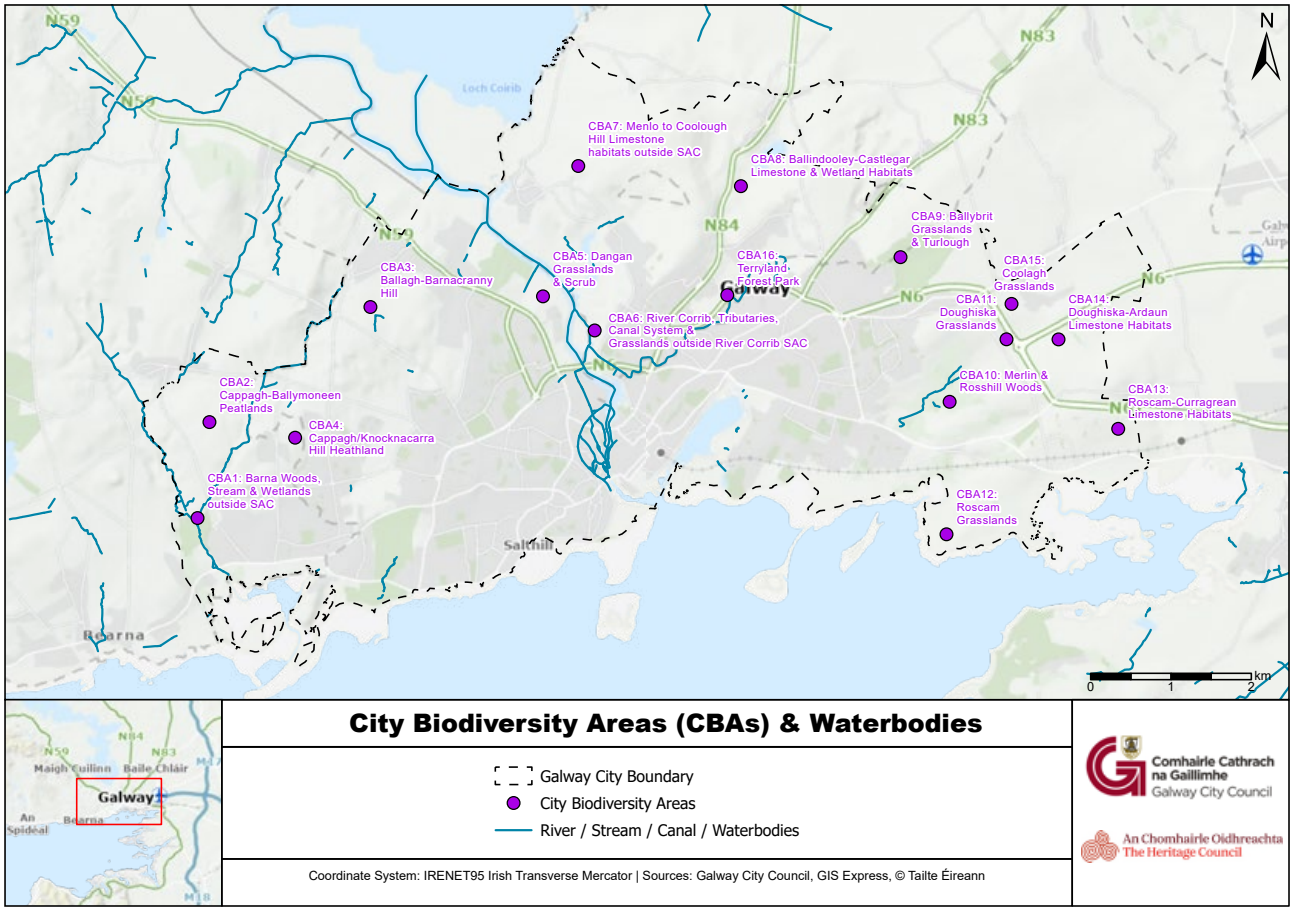


National Protected Designated Sites

- Galway City Boundary
- Proposed Natural Heritage Areas
- Natural Heritage Areas

Comhairle Cathrach na Gaillimhe Galway City Council

An Chomhairle Oidhreachta The Heritage Council



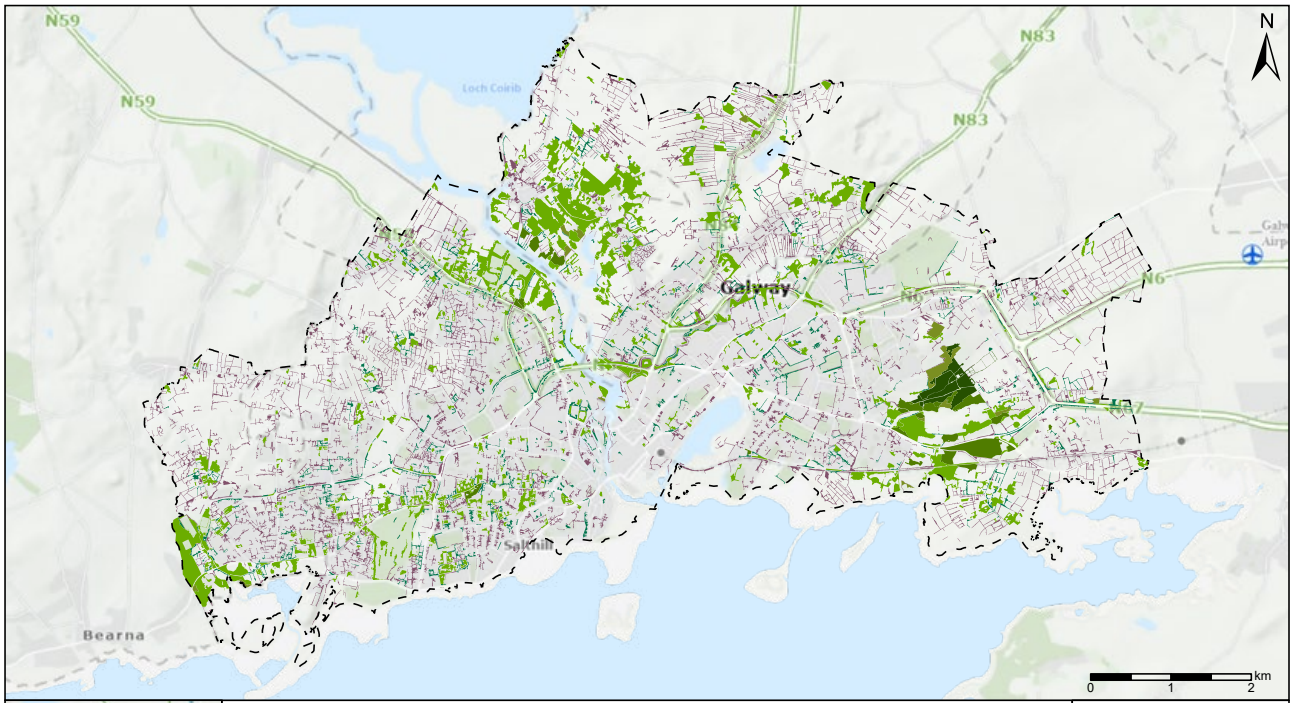
City Biodiversity Areas (CBAs) & Waterbodies

- Galway City Boundary
- City Biodiversity Areas
- River / Stream / Canal / Waterbodies

Coordinate System: IRENET95 Irish Transverse Mercator | Sources: Galway City Council, GIS Express, © Tailte Éireann

Comhairle Cathrach na Gaillimhe Galway City Council

An Chomhairle Oidhreachta The Heritage Council



Tailte Éireann Forests Treelines & Hedgerows

- Galway City Boundary
- Coniferous Forest
- Mixed Forest
- Transitional Forest
- Treelines
- Broadleaved Forest and Woodland
- Hedgerows

Coordinate System: IRENET95 Irish Transverse Mercator | Sources: Galway City Council, GIS Express, © Tailte Éireann

Comhairle Cathrach na Gaillimhe Galway City Council

An Chomhairle Oidhreachta The Heritage Council

Comhairle Cathrach
na Gaillimhe
Galway City Council

An Chomhairle Oidhreachta
The Heritage Council