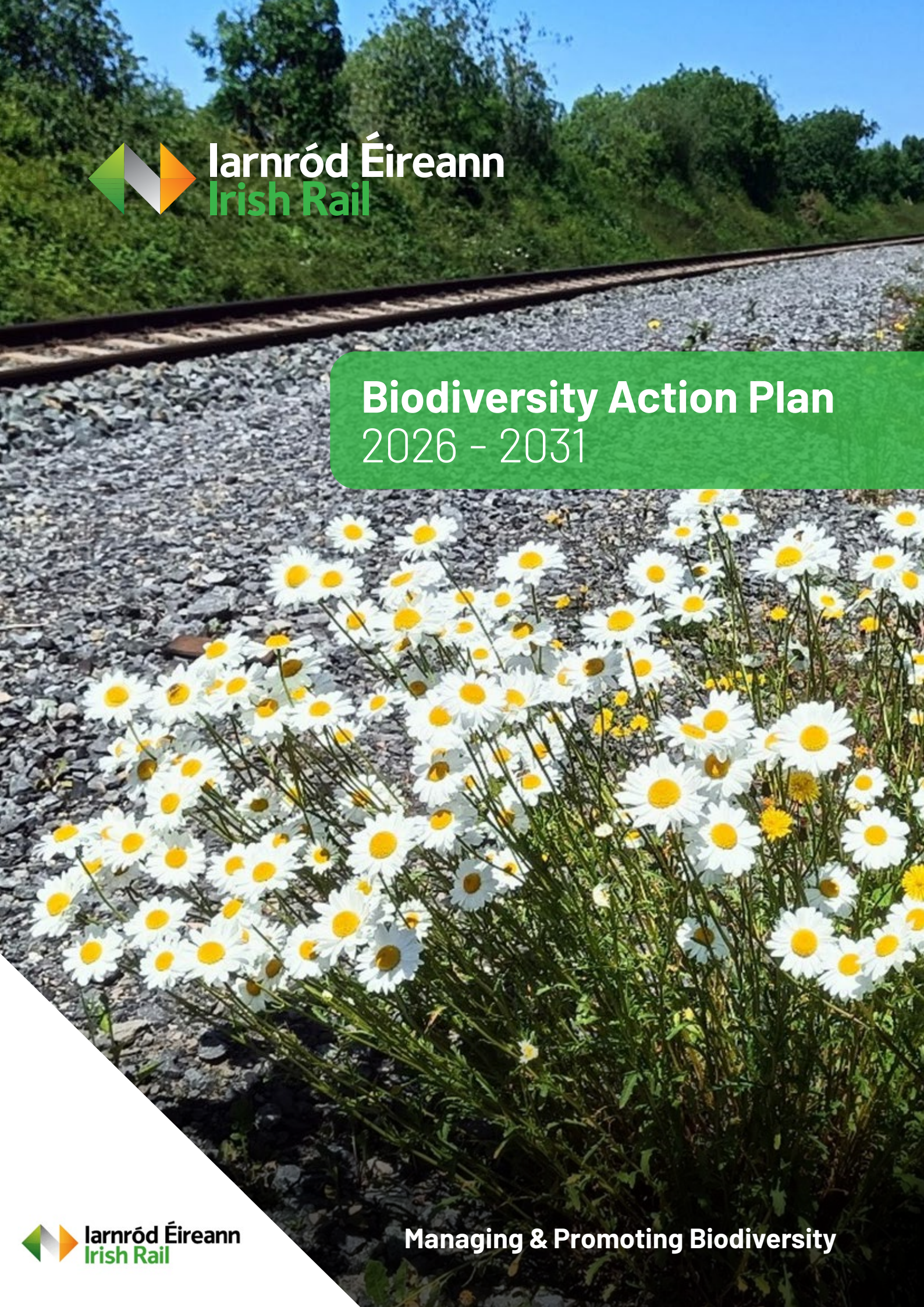


Iarnród Éireann
Irish Rail

Biodiversity Action Plan
2026 - 2031

Iarnród Éireann
Irish Rail

Managing & Promoting Biodiversity

Contents

Foreword

Iarnród Éireann is the backbone of sustainable transport in Ireland, currently delivering sustainable mobility of over 55 million customers annually.

With passenger journeys set to surpass 80 million by 2030, an ambitious Capital Investment programme of projects underway, Port expansion at Rosslare Europort and new trains entering operations, the onus has never been greater on Iarnród Éireann to protect and enhance the diverse landscape and waterways that we neighbour.

Implementation of this Biodiversity Action Plan will ensure Iarnród Éireann can deliver our investment programme of works, and the planned future uplift in capacity and services, whilst prioritising and protecting national biodiversity.

This Biodiversity Action Plan ensures that biodiversity is considered from the outset of any project or essential works and that we protect and enhance the hedgerows, trees and grasslands of which we are custodians. The actions outlined within this plan will build on existing practices and incorporate new technologies, trialling of new initiatives, and implement new ways of working.

In addition, Iarnród Éireann remains committed to advancing environmental sustainability through delivery of our Sustainability in Motion Strategy, decarbonisation of operations via the Climate Action Plan and ensuring climate change resilience via implementation of our Climate Adaptation Strategy.

As we work to decarbonise operations whilst expanding services, successful implantation of the Biodiversity Action Plan will ensure that future generations can continue to enjoy the diverse range of habitats, plants and animals that our network operates alongside, connects and supports today.

Mary Considine
Chief Executive

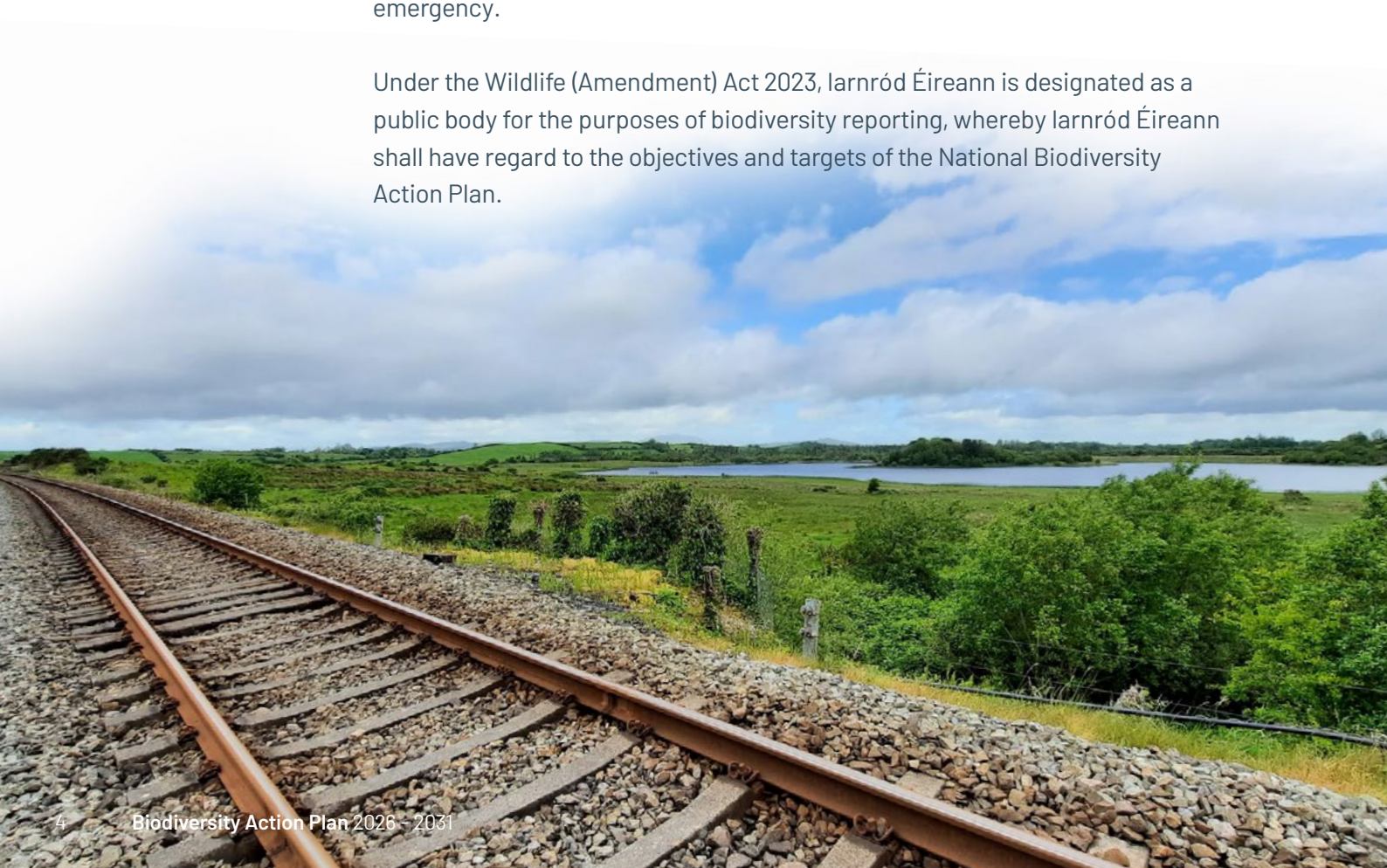
1. Introduction

Iarnród Éireann's network and services are the backbone of the national transport system, ensuring continued connectivity to regional cities and towns, and enabling customers to utilise a sustainable means of transport for business, education and amenities.

Iarnród Éireann's network extends to approximately 2,100 km of railway corridor and serves 147 stations nationwide. The outer boundaries of the network largely consist of mature hedgerows, and these inevitably interact with the surrounding environment. Acting as responsible custodians ensures rail services can continue to operate while also promoting the protection and conservation of biodiversity rich boundaries. Management of the railway boundaries also relates to ensuring resilience of railway assets to changes occurring in the environment and to factors such as climate change, in regard to stronger winds and more intense storms.

This Biodiversity Action Plan 2026-2031 is prepared to detail specific objectives and targets that Iarnród Éireann will progress to promote and enhance biodiversity within our zone of influence. The plan demonstrates how Iarnród Éireann will act to conserve the natural environment within our land boundary, and the actions that will be taken in support of support of the National Biodiversity Action Plan. The ultimate aim is to positively contribute to the "Whole of Government – Whole of Society" approach to address the biodiversity loss emergency.

Under the Wildlife (Amendment) Act 2023, Iarnród Éireann is designated as a public body for the purposes of biodiversity reporting, whereby Iarnród Éireann shall have regard to the objectives and targets of the National Biodiversity Action Plan.



2. Iarnród Éireann Network – Extent and Characteristics

Iarnród Éireann's network consists of segregated railway corridors built largely in the mid to late 19th century. The geographic extent of the railway network throughout Ireland is shown on Figure 1.

Whilst the infrastructure was originally constructed in the 19th century, it is maintained and operated to current safety, technical, and operational requirements (both European and national standards). Rail expansion projects are being advanced by Iarnród Éireann at present to ensure that rail can meet the customer demand in the future and deliver on the ambitious set out in the All Island Strategic Rail Review.

The rail network is intrinsically linked to the natural landform and topography. When constructed, the railway was designed for track geometry with low vertical gradients. This means that the railway track lies level with its surrounds or in cutting/raised embankments relative to the surrounding lands. The side slopes of cuttings and embankments are vegetated. In addition, the railway traverses many watercourses, streams, and drains. The bridges and culverts spanning these water features are maintained to ensure that structural requirements are met, and water flows are unimpeded.

Iarnród Éireann's network (infrastructure and services) is classified as "Critical Infrastructure", which means it comprises assets that are essential to the functioning of the country and the delivery of vital societal functions. Therefore, on an ongoing basis, the railway infrastructure is maintained in a manner that enables safe and efficient passage of trains.

Hedgerows and trees have grown along the railway corridor boundaries and verges, which have matured since the railway's construction. Whilst the segregation of the railway corridor is important for safety reasons, it has also provided a subsidiary opportunity for biodiversity protection. The rail network traverses a diverse mosaic of landscapes, natural habitats, and ecosystems. Whilst the railway is a man-made feature, given its age, it has been largely integrated into its surroundings, with over 4,200 km of railway boundary (largely hedgerow on either side of railway corridor), and watercourses culverted beneath the track.

Iarnród Éireann is also required to report to the Minister for Transport within 18 months of the publication of the National Biodiversity Action Plan and every 12 months thereafter, specifying:

- Measures adopted for the purposes of achieving the objectives and targets of the National Biodiversity Plan
- Progress made in performance of its functions for biodiversity protection

A map illustrating the geographic extent of the railway network throughout Ireland.

The overarching aim of the Iarnród Éireann Biodiversity Action Plan is to ensure activities conducted by the company are carried out in a considerate manner towards the surrounding environment and to implement projects that will, overall, enhance biodiversity, ensuring that the objectives outlined within the 4th National Biodiversity Action Plan are incorporated.

Iarnród Éireann undertakes various activities which interact with the natural environment to varying degrees, such as vegetation management, maintenance of railway assets (bridges, culverts), application of pesticides, invasive species management, as well as implementing biodiversity initiatives such as our partnership in the All-Ireland Pollinator Plan. Iarnród Éireann are actively involved in the planting of native tree species under the Department of Agricultures Creation of Woodlands on Public Lands Scheme.

3. Biodiversity – Importance and Action

3.1. What is biodiversity?

Biodiversity is short for biological diversity or the variability of all living organisms (plants and animals), which can be found throughout a variety of different habitats (terrestrial, aquatic, and marine ecosystems). This diversity encompasses the variety within species, between species, and the ecosystems in which they're found. Essentially, biodiversity is the variety of life on Earth, and the inter-relationship between humans and biodiversity is inextricable linked.

Ireland is rich in biodiversity, with approximately 31,000 species found across the Island and surrounding seas.

- There are approximately 27 terrestrial land mammals native and long established in Ireland. There are several non native mammal species present in Ireland such as the American Mink, Muntjac Deer and the Grey Squirrel.
- There are over 450 bird species currently on the Irish Bird list. Ireland is an important destination for migratory birds and holds significant populations of birds which are rare elsewhere across Europe, as well as internationally. Important for wetland bird communities which visit the numerous Special Protection Area's (SPAs) which are protected for birds under the EU Birds Directive (2009/147/EC).
- The majority of Ireland's habitats are managed agricultural pastures and managed forestry. The bulk of semi-natural vegetation is made up of grassland, heath, and bog, with lesser speciality habitats, such as natural woodlands, salt marshes, limestone pavements.
- Much of Ireland's richest biodiversity is found within the marine environment, such as high numbers of whale and dolphin species, as well as large seabird breeding colonies.
- As of the end of 2024, the National Parks and Wildlife Service has designated approximately 440 Special Areas of Conservation (SAC), comprising 13,500 square km (of which 53% is land and 47% is marine), as the prime wildlife conservation area in the country, considered to be important on a European and Irish level. There are also approximately 170 Special Protection Areas (SPAs), comprising approximately 6,000 square km of marine and terrestrial habitats for the protection of birds — rare and vulnerable species, regularly occurring migratory birds, and wetlands supporting bird species. SACs and SPAs are afforded legal protection under the EU Habitats Directive (EC Birds and Natural Habitats Regulations 2011 as amended).

Given the geographic spread of the railway network, Iarnród Éireann's infrastructure interfaces with Ireland's sensitive biodiversity.

3.2. Why does biodiversity matter?

Biodiversity is relied upon heavily for services that ecosystems provide, which are essential for life, such as clean air, water, and food. Preserving the health of ecosystems ensures continued access to these services, ensuring prosperity now and for future generations.

Ireland is rich in biodiversity, with over 31,000 species found across the island and surrounding seas

As well as the environmental benefits, biodiversity can have considerable economic benefits too, with a study commissioned by the Department of Environment, Heritage and Local Government offering a conservative estimate that biodiversity contributes at least €2.6 billion to the Irish economy annually. It is therefore vital to protect biodiversity not only for the sake of protecting nature but also for our own future. Conserving biodiversity in Ireland matters, due to many of these habitats being internationally important because of their scarcity elsewhere across continental Europe and the unique species communities found within them.

3.3. Challenges and threats to biodiversity

Biodiversity across Ireland is facing severe challenges, with pressure on the country's habitats and species from direct habitat fragmentation or loss through activities such as wetland drainage or reclamation. Land-use change, and intensive agriculture threaten native habitats, with some of the most vulnerable being grasslands, with the National Park and Wildlife Services surveys highlighting approximately 30% losses in overall area. This includes biodiversity rich grasslands such as species-rich hay meadows and quality calcareous grasslands, which are being replaced by species-poor improved agricultural grasslands. Other pressures faced by biodiversity include agricultural practices, habitat change, water pollution, unsustainable exploitation (overfishing), the introduction and spread of invasive species, with climate change also likely to have an impact.

Climate change, with variance in seasonal patterns, is also a longer-term pressure on biodiversity. Climate change may cause the most major impacts on biodiversity, as it interacts and intensifies other stressors, and it is well researched that degraded habitats are less resilient to the impacts of climate change and are less productive in regard to the ecosystem services it provides to humanity. Changes to ecosystems as a result of climate change can have both a negative impact on the social, cultural, and economic aspects of life, but for biodiversity, it can also disrupt the timing of seasonal events (phenology), such as the timing of bird migration, breeding, or egg-laying.

4. Legislation & Policy Background

4.1. International Policy & Legislation

The protection of biodiversity, at the global scale, has been driven by the UN Convention on Biodiversity (CBD), with Ireland signing in 1996, committing to actions to conserve biodiversity, which are described in the principle aims:

- The conservation of biological diversity
- The sustainable use of its components, and
- The fair and equitable sharing of benefits arising from the use of genetic resources

EU Biodiversity Strategy 2030 - Bringing Nature Back into Our Lives

The EU Biodiversity Strategy for 2030, launched in May 2020, indicates that the global population of wild species has fallen by 60% over the last 40 years and that a million species are now at risk of extinction. The EU Biodiversity Strategy sets out an ambitious objective for the establishment of protected areas in at least 30% of the land across Europe and 30% of the seas of Europe. It also aspires to the restoration of degraded ecosystems of member states, both on land and at seas, through various measures, including halting the decline of pollinators, restoring 25,000 km of rivers as free-flowing, and reducing the use of pesticides by 50% by 2030.

The European Union (EU) Biodiversity Strategy for 2030 responds to the alarming loss of nature that undermines our wellbeing and prosperity. The strategy is a comprehensive, ambitious, and long-term plan to both conserve nature and reverse the continued degradation of ecosystems. The overarching aim of the strategy is to ensure a path to recovery for Europe's biodiversity by 2030, with over 100 specific actions and commitments described across several policy areas.

The aim of the strategy is to adopt a whole-of-society approach to the implementation and mainstreaming of biodiversity across all European Union's (EU) policies and funds. The European Commission's European biodiversity governance framework will aid towards mapping obligations and commitments and use of a roadmap to guide implementation.

EU Nature Restoration Regulation 2024

This Regulation sets legally binding restoration targets for a wide range of ecosystems, aiming to restore 20% of the EU's degraded ecosystems by 2030 and all ecosystems in need of restoration by 2050. It is now up to Member States to develop ambitious National Restoration Plans by the end of 2026.

The EU Nature Restoration Law is the first continent-wide legislation for the long-term recovery of nature. This regulation sets legally binding restoration targets for a multitude of ecosystems, which aim to restore 20% of the EU's degraded ecosystems by 2030 and all ecosystems in need of restoration by 2050.

The EU Nature Restoration Law aims to promote nature conservation across the EU and actively strives to focus on other priorities as well, such as the EU's climate commitments. The law aims to build on the current well-established EU environmental policies: the Birds and Habitats Directives and ensures the prioritisation of the restoration of Natura 2000 network sites until 2030. The restoration of the natural environment will also help improve food security for the EU, promote ecosystem services and ensure the Union's international environmental commitments are met.

Member States are required to develop comprehensive plans with the aim of restoring 30% of terrestrial, coastal, freshwater, and marine ecosystems to good condition by 2030 and improving biodiversity indicators in forest and agricultural ecosystems.

This plan should include restoring and partially rewetting 30% of drained agricultural peatlands by 2030. In the city context, the document should set targets for urban greening, as EU cities urgently need to adapt to climate change. The IUCN Global Standard for Nature-based Solutions, as well as other knowledge tools and standards, can greatly support EU Member States in the development of documents.

The EU Nature Restoration Law also provides a legal framework to enhance pollinator biodiversity and populations across Europe, as well as to develop a standardised monitoring approach for pollinators across the EU.

The EU Nature Restoration Law also encourages Member States to contribute to restoring at least 25,000 km of rivers into free-flowing rivers and to plant three billion trees by 2030, which are two commitments outlined in the EU Biodiversity Strategy 2030.

The Law requires EU Member States to prepare National Restoration Plans by 1 September 2026, which need to detail how each member state plans to meet the targets and obligations set by the Regulations. This period is crucial for EU Member States to plan strategically and identify opportunities for restoration using relevant tools and ensuring they follow best practices.

UN Sustainable Development Goals

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for both people and the planet for the present and into the future. There are 17 Sustainable Development Goals (SDGs), which act as an urgent call for action by all countries, regardless of stage of development, to form a global partnership. It is recognised that ending poverty and other deprivations must be incorporated into strategies that improve health and education, reduce inequality, and promote economic growth – all while tackling climate change and working to preserve the natural environment.

A diagram illustrating the 17 Sustainable Development Goals (SDGs)

European Directives

The European Communities (Birds and Habitats) Regulations 2011 (S.I. No. 477 of 2011) are transposed into Irish law that implements two key European directives:

- The Birds Directive (2009/147/EC)
- The Habitats Directive (92/43/EEC)

These EU directives play a vital role in biodiversity conservation within Ireland by designating protected areas, conserving species as well as outlining actions to maintain healthy, functional ecosystems to benefit wildlife.

The EU Habitats Directives are among the most important nature conservation legislations across Europe, with the aim of maintaining and restoring to a favourable conservation status for both habitat and species, which can be considered rare or threatened across Europe.

The Habitats Directive requires member states to designate Special Areas of Conservation (SAC) for both habitat types and species that require protection as part of a network of designated sites across Europe called Natura 2000. Birds are not included in the Habitats Directive but are afforded protection under the EU Birds Directive. The Birds Directive requires member states to designate Special Protection Areas (SPAs) to protect the most important areas utilised by birds for both foraging and nesting across the country.

The National Parks & Wildlife Service (NPWS) is responsible for the selection and designation of SPA sites in the Republic of Ireland. NPWS has developed a set of criteria, incorporating information relating to the selection of wetland sites developed under the Ramsar Convention (Ramsar Convention Bureau, 1971), which is used to identify and designate SPAs. Sites that meet any of the following criteria can be selected as SPAs:

- A site holding 20,000 waterbirds or 10,000 pairs of seabirds
- A site holding 1% or more of the all-Ireland population of an Annex I species
- A site holding 1% or more of the biogeographical population of a migratory species
- A site that is one of the most suitable sites in Ireland for an Annex I species or a migratory species

Annex Habitats and Species

The EU Directive on the Conservation of Habitats, Flora and Fauna (92/43/EEC), commonly known as "the Habitats Directive", was adopted in 1992, came into force in 1994, and was transposed into Irish law in 1997. The main aim of the Habitats Directive is to contribute towards the conservation of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species listed on the Annexes to the Directive at a favourable conservation status. These annexes list habitats (Annex I) and species (Annexes II, IV, and V), which are considered threatened in the EU territory. The listed habitats and species represent a considerable proportion of biodiversity in Ireland and the Directive itself is one of the most important pieces of legislation governing the conservation of biodiversity in Europe.

Annex	Status
I	Habitat types whose conservation requires the designation of Special Areas of Conservation (SAC)
II	Both animal and plant species whose conservation requires the designation of Special Areas of Conservation (SAC)
IV	Both animal and plant species in need of strict protection
V	Animals and plant species whose taking in the wild and exploitation may be subject to management measures

Throughout Ireland, there are approximately 60 Annex I habitats that require special conservation measures, with 16 of these defined as priority, as they are considered to be in danger of disappearing. This highlights the importance of protecting Annex I habitats due to their significance for nature conservation at national and European levels. It is imperative that EU countries establish strict protection for animal and plant species which are particularly threatened, and which are listed in Annex IV of the Habitats Directive.

The animal species listed in Annex IV, which occur in Ireland, are:

- Otter
- Bat species
- Cetaceans (whales and dolphins)
- Natterjack toad
- Leatherback turtle
- Kemp's ridley turtle
- Loggerhead turtle
- Hawksbill turtle
- Kerry slug

The plant species listed in Annex IV, which occur in Ireland, are:

- Slender naiad
- Yellow marsh saxifrage
- Killarney fern

Each of the species described above is strictly protected in Ireland, and any person who deliberately captures, kills, or disturbs a specimen in the wild, or who damages or destroys a breeding site or resting place of such an animal, would be guilty of an offence.

Annex IV species may be found throughout the country, and so the protection of these species is not restricted in geographical terms and is not necessarily associated with areas subject to a specific nature designation.

EU Water Framework Directive

The Water Framework Directive (WFD) was signed into law in October 2000, requiring EU Member States to achieve water quality of at least good status, both ecologically and chemically, in rivers, lakes, groundwater, estuaries, and coastal waters by 2027.

Having this one framework for determining water quality allows comparison between Ireland and countries throughout Europe, with waterbodies such as rivers, lakes, etc., that can be awarded one of five statuses:

- High
- Good
- Moderate
- Poor
- Bad

While groundwater systems can be awarded only two statuses – good and poor, the WFD requires member states to develop both River Basin Management Plans (RBMPs) and Programmes of Measures (PoMs) to protect and, where necessary, restore water bodies in order to achieve good status and to prevent deterioration. These River Basin Management Plans must be prepared and renewed in six-year cycles to remain compliant.

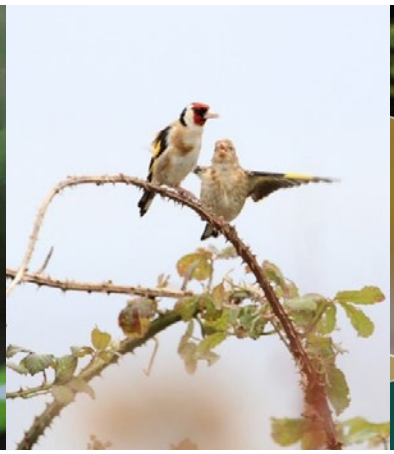
4.2 National Policy & Legislation

Wildlife (Amendment) Act 2023

The primary legislation regarding the protection of wildlife in Ireland is the Wildlife Acts (1976–2018), and the Wildlife Amendment Act, 2020 and the European Communities (Birds and Natural Habitats) Regulations 2011. Natural Heritage Areas (NHAs) under the Act are designated for the conservation of species and habitats of national importance.

This 2023 Amendment Act makes licences mandatory for certain activities which may interfere with ecosystems, while also regulating the procession, trade, and movement of wildlife. The 2023 Act imposes new statutory duties on public bodies to prepare and submit a report to the Minister. This report must include data on measures adopted and progression on those implemented measures.

Perhaps the most well-known element of the Wildlife Act is the restriction of hedge cutting, which under the Act is not permitted between March and August inclusive, with the purpose of this ban being to prevent the disturbance and destruction of nesting sites of many Irish wild bird species.



The above-mentioned legislation covers areas such as the protection of birds, the protection of specific wild animals, and the protection of certain lands, sites, and habitats. The public consultation has been and will continue to be undertaken and reviewed by the National Parks and Wildlife Service (NPWS) at the Department of Housing, Local Government and Heritage.

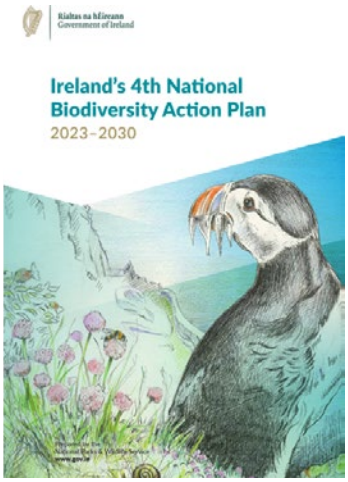
The objective of the review is to facilitate collaboration with the public to ensure that updates to legislation ensure the better protection of nature, help work towards halting biodiversity loss, whilst overall ensuring it continues to remain compliant with European legislation. This will support the enforcement of laws and ensuring compliance.

The updating of this legislation will be undertaken over several years, with several phases of public consultation, with the key focus of the initial phase being on strengthening the enforcement of wildlife crime, which has been severely under-resourced and under-funded in previous years.

National Biodiversity Plan

In May 2019, Dáil Éireann declared both a climate and biodiversity emergency in Ireland, following stark warnings from organisations such as the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the UN Intergovernmental Panel on Climate Change (IPCC). *"Nature is declining globally at rates unprecedented in human history – and the rate of species extinction is accelerating, with grave impacts on people around the world."*

Delaying responses to both climate change and biodiversity loss has left little time to reverse it, but thankfully there has been a renewed and sustained focus on climate action over the last number of years. This is both welcome and critical, as both biodiversity loss and climate change are projected to negatively impact genetic variability between species, impact species richness and overall populations, and interfere with ecosystems and the services they provide.



This is particularly evident in the loss of biodiversity in wetlands and peatlands, which can increase emissions from land-use changes, highlighting the importance and need to include biodiversity at the heart of climate action.

Prior to drafting this Biodiversity Action Plan, "Biodiversity Guidelines" was published by Iarnród Éireann in September 2022 to support staff and other stakeholders during projects which interfaced with biodiversity with legislation discussed in greater detail with the aim of promoting and conserving biodiversity across the railway network.

Ireland's 4th National Biodiversity Action Plan (NBAP), published in January 2024, sets the national biodiversity agenda for 2023-2030, with the aim of delivering the transformative changes required to protect nature and highlight its value. The NBAP is discussed in further detail in Chapter 7 below. The most recently published NBAP strives for a "whole-of-government, whole-of-society" approach to the conservation and protection of biodiversity. The aim is to include citizens, communities, businesses–right up to local authorities, semi-state, and state agencies in sharing an awareness of biodiversity and its importance, understanding the implications of its decline and loss, while also understanding the need to act on addressing the biodiversity emergency.

This latest National Biodiversity Action Plan 2023-2030 builds upon the achievements of previous plans and works to continue to implement actions within the framework set by five strategic objectives, which aim to address new and emerging issues:

1. **Objective 1:** Adopt a Whole of Government, Whole of Society Approach to Biodiversity
2. **Objective 2:** Meet Urgent Conservation and Restoration Needs
3. **Objective 3:** Secure Nature's Contribution to People
4. **Objective 4:** Enhance the Evidence Base for Action on Biodiversity
5. **Objective 5:** Strengthen Ireland's Contribution to International Biodiversity Initiatives

Flora Protection Order 2022

The Flora Protection Order is legislation that offers legal protection to the rarest and most threatened native plant species by making it an offence under the Wildlife Acts. Under these Acts, it is illegal to cut, uproot, or damage the listed species in any way, or to offer them for sale. This prohibition even extends to the taking or sale of seed.

Additionally, it is illegal to alter, damage, or interfere with habitats where these plants may be found, with this protection applying to anywhere these species are growing and not limited to sites designated for nature conservation.

The first Flora (Protection) Order became law in 1980, with the most recent update in 2022, detailing 136 species of wild plants afforded protection throughout the State: 60 flowering plants, 8 ferns, 25 hornworts and liverworts, 40 mosses, 2 stoneworts (algae), and 1 lichen.

If any of the listed plant species are found and there is a requirement to interfere with the plant or alter the habitat, the National Parks and Wildlife Service should be consulted to determine if a derogation licence is required for the proposed works.

Killarney Fern which is protected under the Flora Protection Order.

Forestry Act 2014

Forestry in Ireland operates within a legal and regulatory framework, and in May 2017, the Forest Act 2014 and the Forestry Regulations 2017 (SI No 191 of 2017) came into force. This legislation is vital to ensure the protection of forests and trees and to ensure that forestry operations and activities are conducted in compliance with the principles of sustainable forest management.

Iarnród Éireann is exempt from requiring a felling licence for the removal of trees under 19(1)(e) of the 2014 Forestry Act: "(e) removed by a public authority in the performance of its statutory functions," and also;

Under the Transport (Railway Infrastructure) Act 2001:

"Lopping of Trees 49"

(1) The Agency, CIÉ, or a railway undertaking may lop, remove, or cut any tree, shrub or hedge which obstructs or interferes with:
    (a) surveys or inspections under section 36,
    (b) railway works authorised by a railway order,

(c) the maintenance, operation, or improvement of railway works, or cables, or other railway apparatus,
(d) the operation of a railway,
(e) the laying and erection of electric wires, or
(f) the safe passage of the railway vehicles, including the safety of any passengers on board such vehicles on a railway line.

(2) Subject to subsection (4), before lopping or cutting any tree, shrub, or hedge under this section, the Agency, CIÉ, or railway undertaking shall serve on the owner or occupier of the land, or, in the case of a public road, on the road authority charged with the maintenance of such road on which such tree, shrub or hedge is standing, notice in writing of its intention to do so and, after the expiry of 28 days from the date of such service, the Agency, CIÉ, or railway undertaking, may lop or cut any tree, shrub or hedge if the owner or occupier has not already done so.

(3) Where an occupier or owner of land cuts or lops any tree, shrub, or hedge under this section, the expense incurred by him or her in so doing shall be paid to him or her on demand by the Agency, CIÉ, or railway undertaking, and the amount of such expenses shall be recoverable from the Agency, CIÉ, or railway undertaking, in default of agreement, as a simple contract debt in any court of competent jurisdiction.

(4) If a railway undertaking, for reasons of safety, needs to fell or lop any tree, shrub, or hedge, the conditions in subsections (2) do not apply.

(5) Where a railway undertaking fells or lops any tree, shrub or hedge under subsection (4), it shall give written notice to the owner or occupier of the land concerned, informing them of such felling or lopping and the reasons for so doing.

(6) The requirement for a tree felling licence under section 37 of the Forestry Act 1946 does not apply to the Agency, CIÉ, or railway undertaking for the purposes of a railway development under this Part.

Planning and Development Act 2000
This Act forms the basis of the planning code in Ireland and consolidates all planning legislation from 1963 to 1999, and during this time, clarified and simplified the process into one self-contained piece of legislation.

This 2000 Act has set out the details of regional planning guidelines, development plans, and local area plans, as well as being the basic framework of both development management and the Irish planning consent system. It also provides the statutory basis for protecting the natural environment, as well as architectural heritage, and describes when Environmental Impact Assessments and/or Appropriate Assessments are required.

Development across the country is subject to control under the Planning Acts and requires permission from the planning authorities or An Bord Pleanála prior to being undertaken. In certain instances, there may be exemptions from the need to obtain planning permission, which is based on the size of the development, nature, or limited effect on surroundings, or because the development is authorised under another enactment.

In the event an appropriate assessment of environmental impact is required, the exempted development loses its exempted status.

Planning and Development Act 2024
The Planning and Development Act was signed into law in October 2024, with the aim of providing a well-resourced, fit-for-purpose planning system, which could last into the future whilst ensuring that legislation is aligned with current policy, and overall, is a more streamlined process from a legal perspective.

This 2024 Act introduces significant changes to the system, particularly in regard to land use plans. In addition to longer-lasting development plans, the Act includes a new legal framework for establishing 'Urban Development Zones' and for plan-making for 'Urban Areas', 'Priority Areas', and 'Co-ordinated Areas'.

As part of the new Act, An Bord Pleanála has been replaced and renamed as An Coimisiún Pleanála – or 'the Commission' – with the organisation being fundamentally restructured and reorganised. The process regarding decisions on applications, appeals, referrals, and requests will be managed by 15 Planning Commissioners, including a Chief Commissioner and Deputy Commissioner, who will work in divisions, with the sole responsibility being decision-making. The focus will be on ensuring collaboration on decision-making, ensuring decisions are made efficiently and swiftly. This new process will allow the gaining of relevant experience and capacity within the divisions to ensure new timeframes for decisions are met, which are set out in the Act, particularly in regard to the stricter timelines for renewable energy and grid infrastructure as required by European Law.

Climate Action and Low Carbon Development (Amendment) Act 2021

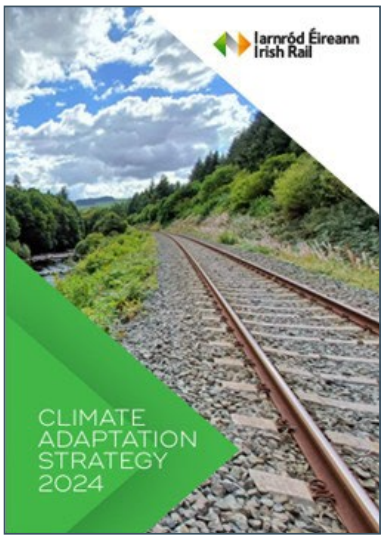
The Climate Action and Low Carbon Development (Amendment) Act 2021 aims to support Ireland's transition to net zero and achieve a climate-neutral economy no later than 2050. It establishes a legally binding framework with clear targets and commitments set in law, and ensure the necessary processes are embedded on a statutory basis to ensure national, EU, and international climate goals and obligations are achieved in both the short and long term.

The following key elements are included within the Act:

- Places a statutory basis on a 'national climate objective', which commits to pursue and achieve no later than 2050, the transition to a climate resilient, biodiversity-rich, environmentally sustainable, and climate neutral economy
- Actions for each sector will be detailed in the Climate Action Plan, updated annually
- A National Long Term Climate Action Strategy will be prepared every five years
- Responsibility will lie with Government Ministers for achieving legally binding targets for their own sectoral areas, with each Minister accounting for their performance towards sectoral targets and actions before an Oireachtas Committee each year
- Provides that the first two five-year carbon budgets proposed by the Climate Change Advisory Council should equate to a total reduction of 51% in emissions over the period to 2030, in line with the Programme for Government commitment
- Public bodies will be obliged to perform their functions in a manner consistent with national climate plans and strategies and furthering the achievement of the national climate objective.

Transport Sectoral Adaptation Plan

Climate change is significantly affecting the country's transport system. Flooding events, storms and rising sea levels due to extreme weather are some main causes to disruption of services. The Department of Transport has responded to these challenges by developing the Transport Sectoral Adaptation Plan (T-SAP I) which outlines how Ireland's transport sector will adapt to climate change.



Transport Sectoral Adaptation Plan (T-SAPII) published in November 2025 has identified with the help of key stakeholders a range of possible climate impacts on all transport modes in Ireland. These prioritised climate impacts have been assessed in detail focusing on regional and asset specific vulnerabilities to gain an understanding on where the key risks to transport infrastructure lie over varying timeframes: short (2030), mid (2050) and long-term (2100).

Following the assessment and screening of over 150 climate impacts a total of 39 actions have been developed in collaboration and consultation with transport sector stakeholders to address these key climate risks. The list of actions includes policy measures, technical solutions adapting nature-based options, organisational changes as well as actions aimed at attracting potential funding and financing for climate resilience.

While the actions have been developed for each transport mode there are several crossing-cutting actions aims to support different stakeholders to ensure a more cohesive and unified approach to delivering climate adaptation in Ireland.

Under the guidance and leadership of the Department of Transport, TSAP II and associated actions are expected to help deliver long-term resilience of the transport sector against climate change.

Climate Action Plan
The Climate Action Plan for 2025 (CAP25) is the third statutory annual update, which has been approved by Government. It builds upon the plan released in 2024 (CAP24), which aims to provide a roadmap for taking decisive action to halve Ireland's emissions by 2030 and achieve climate neutrality by no later than 2050, as committed to in the Climate Action and Low Carbon Development (Amendment) Act 2021.

Annual updates must be approved by government before publishing, be consistent with Ireland's carbon budget programme, contain sector-specific actions to ensure compliance with carbon budgets and sectoral ceiling emissions, as well as actions to address any failure or projected failure to comply with budgets and ceilings.

CAP25, like future CAP publications will be linked to other legislations which could have an effect on the results. Examples would be the Planning and Development Act 2024 and the National Planning Framework 2025.

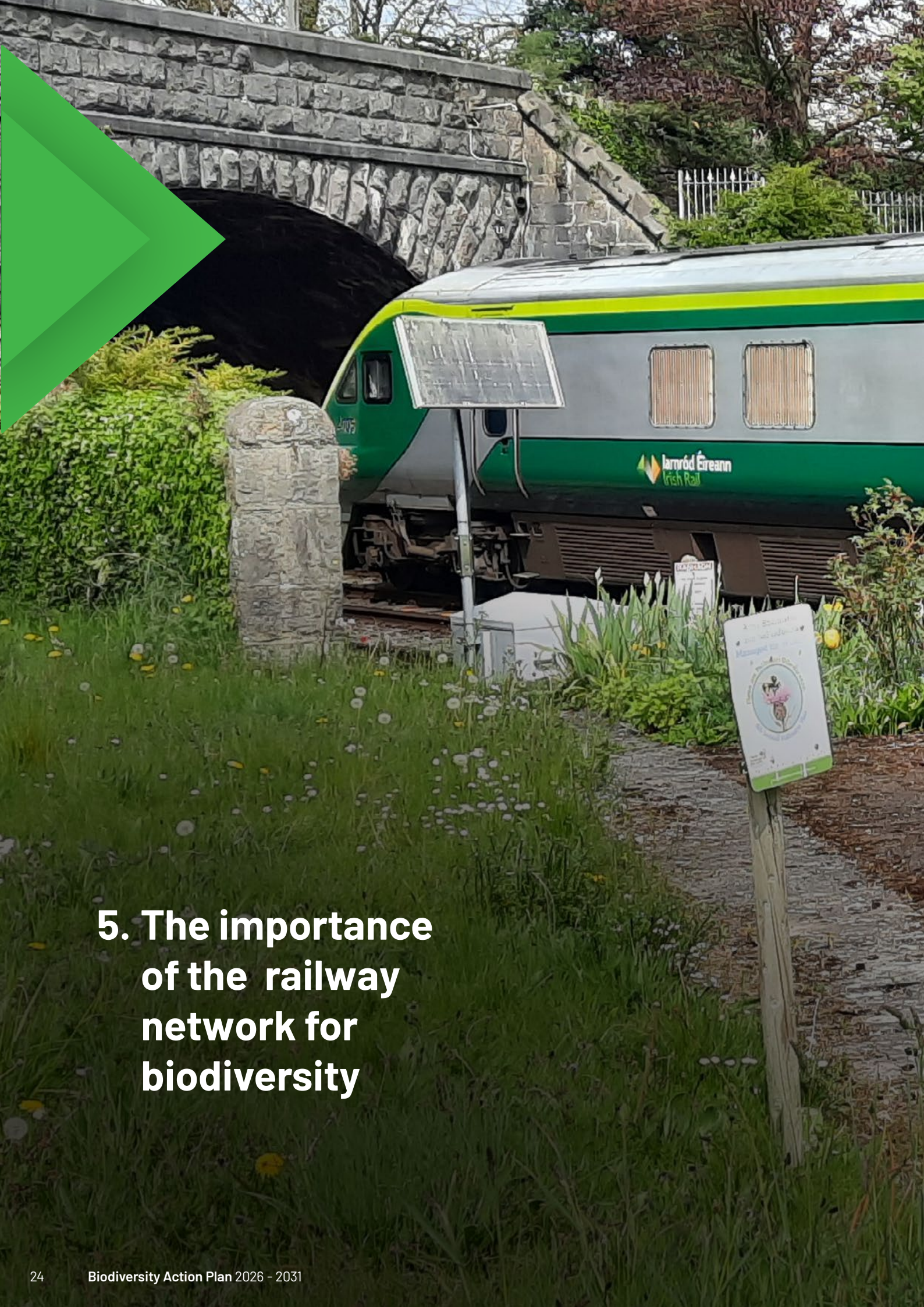
4.3. Regional Transportation Policy

The transport sector plays an important role in reaching Ireland's climate targets, and the system needs to promote and make accessible sustainable transport modes to shift away from the car-dependent mindset through consideration of the proximity between people and places in land use and housing policy. There has been significant support, as well as funding from the government under the rail infrastructure programme, with significant projects underway such as:

- Cork Area Commuter Rail Programme delivering a new platform at Kent Station, a signalling and telecommunications upgrade and a second rail line between Glaunthaune to Midleton as well as a plan for 8 new stations, electrification and a new fleet maintenance depot.
- DART+ Programme which will treble the current DART network and deliver frequent, modern, electrified services to the Greater Dublin Area. This includes enhanced electrified services to Maynooth and M3 Parkway under DART+ West, Hazelhatch & Celbridge under DART+ South West, to Drogheda under DART+ Coastal North and to Greystones under DART+ Coastal South.
- The DART+ Programme will also see delivery of up to 750 new electric and battery electric rail carriages over a ten year period to ensure enhanced service and capacity for customers.

Existing and new DART fleet will benefit from increasing renewable energy content of the national grid, doubling to 80% by 2030, compared to roughly 40% currently, as well as the proposed Iarnród Éireann Corporate Power Purchasing Agreements (CPPAs). In the Greater Dublin Area, the delivery of DART+ elements funded under the National Development Plan will double the capacity of our services and triple the electrified network.

New DART Line



5. The importance of the railway network for biodiversity

The railway corridor is an extremely dynamic environment, with the potential to greatly support the protection of biodiversity, with many rare and protected species found within its remaining refuges. The railway network consists of approximately 2,100 km of railway corridor, or approximately 4,200 km of linear boundary.

Whilst providing a service to passengers by connecting communities to both rural and urban areas, the same service is used by wildlife to move between habitats and territories. Linear features such as earth embankments and culverts provide the opportunity for species to disperse to other habitats or to forage for food.

The track corridor traverses a mosaic of different habitat and land types, which supports a variety of flora and fauna, which must be considered prior to maintenance activities, as there will inevitably be some interface with the natural environment.

An important feature of the railway corridor is the native hedgerows, which dominate the lineside vegetation found along the boundary fence lines.

5.1. Native Hedgerows

Native hedgerows are important, as they support a variety of species by providing a vital food source and offering shelter for breeding birds within their impenetrable thickets, especially when species like Hawthorn *(Crataegus monogyna)*, Blackthorn *(Prunus spinosa)*, or Holly *(Ilex aquifolium)* are present. The wren is an example of a bird that relies on hedgerows for both food and shelter, feeding on a variety of small insects, spiders, and seeds, with the males building dome-shaped nests for females to choose to lay eggs. The phrase "hedgerows are natures highways" is an actuality in Ireland. Our hedgerows provide safe passage for mammals and birds between fragmented and isolated habitats.

As well as birds, there are a variety of mammals which rely on hedgerows for food sources and shelter, such as hedgehogs, badgers, foxes and the pygmy shrew. Hedgehogs are one mammal that relies heavily on the protective cover of the hedgerow, with hibernation within dry leaves under hedges occurring in Ireland from October right through to March.

5.2. Grasslands

Grasslands are the most abundant habitat types that exist in Ireland today, and over 60% of the country is covered by agricultural grasslands. Grasslands in Ireland are divided into two categories:

- Semi-natural grassland
- Improved grassland (agricultural)

Semi-natural grasslands, more so than improved grasslands, are hugely important reservoirs for biodiversity, supporting a diverse range of plant and animal species. They also perform a wide range of other ecosystem services, such as healthy soil, climate regulation, flood attenuation, etc. In Ireland, there are large areas of semi-natural grassland, including six types which are listed for protection under the EU Habitats Directive. Sadly, however, these are now among the most threatened habitat types in Ireland.

Some management is required to ensure that these grasslands remain and are not invaded by other species, which could include scrub, bracken, or immature shrubs or trees. This management could include at least some periodic grazing by livestock or mowing. Along the railway corridor, there is minimal management of lineside embankments, which includes mowing, that has allowed an abundance of vascular species to appear, providing a food source and habitat for a variety of important pollinators.

Several initiatives are undertaken in our partnership with the All-Ireland Pollinator Plan to promote pollinators, such as reducing the frequency of mowing across stations and depots, planting selected species of native plants to support pollinators, and sowing native wildflower seeds in areas after maintenance projects or letting areas regenerate naturally.

5.3. Wetlands

A wetland is an area of land that is saturated with water, either permanently or seasonally, and where the water table is near or at the surface. There are special suites of plants adapted to cope with wet conditions, and, as these wet conditions vary spatially, a mosaic of habitats comprising different plant communities may occur within a single wetland.

Wetland habitats can range from the very small, like a freshwater spring, to habitats which dominate the Irish landscape, such as lakes, rivers, turloughs and bogs. They are home to a large diversity of plant and animal species and form an important network of ecological sites for many species on migration.

However, in addition to their biodiversity value, wetlands contribute significantly to our economic wellbeing and quality of life in a number of ways:

- Improvement and maintenance of water quality by removing and sequestering pollutants and sediments.
- Reduction of the effects of storm and flood events by naturally storing water in the landscape, like a sponge, and releasing it slowly.
- Maintenance of water tables and nutrients in floodplains, thereby helping the production of crops and timber.
- Performance of a vital role in mitigating climate change effects by acting as a carbon store. Peatlands, in particular, store 20–30% of the world's soil carbon (three times more than the amount stored in tropical rainforests).

Wetlands are also an intrinsic part of our cultural heritage in Ireland, providing material for traditional buildings and contributing to placenames and folklore.

Wetland habitats can range from the very small (like a freshwater spring) to habitats which dominate the Irish landscape, such as lakes, rivers, turloughs and bogs.

5.4. Aquatic species

The railway network, encompassing culverts and bridges across the country, also acts as refuge for various native freshwater species, such as freshwater pearl mussel and white-clawed crayfish, particularly in areas of the riverbed which have boulders that the crayfish seek out as refuge. Aquatic species are also known as bioindicator species, as the presence or absence of these organisms can reveal information about the health of an ecosystem, such as a river system. Changes in their distribution or presence can act as an early warning system to changes within environmental conditions, because of factors such as pollution, habitat loss, or climate change.

5.5. White-clawed Crayfish

The White-clawed Crayfish which is the only species of crayfish naturally occurring in Ireland.

The white-clawed crayfish is listed on Annex II and Annex V of the Habitats Directive, protecting it across Europe, and in Ireland, it is protected under the Wildlife Acts. This freshwater species is an important food source for some of the charismatic species associated with Ireland's waterways: otter and heron.

White-clawed crayfish translocated during Electrofishing during instream works in Mullingar (under licence by NPWS and IFI).

The white-clawed crayfish can be defined as an indicator species for water quality, as it is a species thought to be particularly sensitive to changes in water chemistry.

5.6. Otter

Ireland has long since been considered one of the strongholds of otter populations remaining in Western Europe, and previous surveys confirmed the species to be widespread across the country in both freshwater and coastal habitats.

Otter habitats are protected under the EU Habitats Directive, which requires that Ireland reports on the status of the species every six years under Article 17 reporting requirements. Earlier surveys reported a decline in otters, but recent reports suggest it remains widespread throughout the country. There are still pressures and threats to otters, such as river corridor management through creating culverts, canalisation, and dredging, or pollution, oil spillages, and road traffic accidents. It is therefore vital that the conservation status of the species is assessed regularly.

The most recent otter survey of Ireland was conducted in 2024. The 2025 published results estimated a combined population of 5,774 for both the Republic and Northern Ireland and that otter occurrence increased significantly with river width. The results suggested that otters preferred wild, unmaintained riverbanks, avoiding sites with bank maintenance including vegetation trimming or cutting.

The otter is afforded protection under Annex II and Annex IV of the EU Habitats Directive, as well as nationally under the Wildlife Acts of 1976 and 2000. Special Areas of Conservation (SACs) are strictly protected areas designated under the EU Habitats Directive, with Ireland having designated over 400 SACs, of which 44 having been designated for otters.

Otters live in holts, which are underground or covered refuges, often among boulders or fallen tree stumps, which are generally located within a short distance of the water's edge, with a well-worn path highlighting the entrance. On slopes along riverbanks, otters may access the water by sliding on their belly, creating a slide or chute. The area surrounding railway bridges and culverts provides habitats for otters to create holts or to forage for food, so it is vital that otters are considered and protected prior to undertaking any maintenance projects.

A screenshot from a camera trap showing an adult otter scoping out a potential holt location along the River Nore System adjacent to the active railway line.

5.7. Bats

There are 9 species of bats that have been confirmed resident in Ireland, which include Daubenton's (Myotis daubentoni), whiskered (Myotis mystacinus), Natterer's (Myotis natterei), Leisler's (Nyctalus leisleri), common pipistrelle (Pipistrellus pipistrellus), soprano pipistrelle (Pipistrellus pygmaeus), Nathusius pipistrelle (Pipistrellus nathusii), brown long-eared bat (Plecotus auritus), and the lesser horseshoe bat (Rhinolophus hipposideros).

Ireland also has a non confirmed resident species, a vagrant species, the Brandt's bat (Myotis brandtii).

All bat species are protected in Ireland under both national legislation (Wildlife Act 1976, as amended) and European legislation (Habitats Directive (92/43/EEC)). The Habitats Directive is transposed into Irish law in the European Communities (Natural Habitats) Regulations (S.I. 94 of 1997).

The Habitats Directive provides protection for the habitats and roots of all bat species, as well as individual bats. Under Annex II of the Habitats Directive, the government is required to designate Special Areas of Conservation (SACs) for the lesser horseshoe bat. The National Parks and Wildlife Service (NPWS) of the Department of the Environment, Heritage and Local Government is responsible for the selection and designation of these sites.

Bat roosts are protected anywhere across the country, even if not within the boundary of the SAC. The NPWS must be contacted if an active roost is identified to ensure that a derogation licence is approved, with attached conditions to prevent disturbance or damage to the roost. It is an offence to disturb, injure, or kill bats, or to cause damage to their roost.

Confirmed Roost Location

Roost Entrance

The surrounding environment bordering the railway provides support in the form of foraging opportunities, such as hedgerows for bats, as well as habitat opportunities, such as many of the railway assets (masonry bridges, buildings), providing an opportunity for bats to establish a roost.

5.8. Nesting Birds

Masonry structures, provide nesting opportunities for various Irish bird species. These can include migratory species such as swifts and barn swallows, which are site-faithful and use sites such as those under the eaves of buildings or any crevice or holes in walls. Lineside vegetation, such as hedgerows and mature trees, also provides nesting opportunities for birds, which prefer creating nests within dense vegetation for protection from predators.

5.9. Domestic Species

While native wildlife can be encountered along the railway network, there is also the issue of animal incursions of domestic species, such as livestock, onto the active track. This is mitigated by ensuring adequate fencing to prevent trespass and communication with local landowners and other road users, particularly at level crossings, to ensure gates are closed following use. There are instances where animals have been reported on the live railway line, and staff are called to ensure the animals are removed to maintain the continued safety of the network and to the passengers.

It is important, while planning and implementing our maintenance activities, that we consider the protection of the natural environment throughout all elements and phases of maintenance, from design stages to planning stages, right through to implementation.

6. Managing Vegetation on a Railway Network

Safety is integral to everything Iarnród Éireann does, and this includes vegetation management along the railway. However, the railway corridor and railway assets are not static, and are subject to dynamic processes, for example, they are exposed to meteorological conditions and vegetation growth. Excessive vegetation growth can hinder views and inspection of the track, signals, speed signboards, etc. Excessive vegetation growth also poses a risk to railway operations through fires (during drought conditions) and/or obstruction (falling during high winds). Various technical management standards have been drafted to highlight procedures which should be followed during any vegetation control requirements. Additional technical bulletins have also been drafted to educate staff on various aspects of invasive species identification and management as well as the identification and management of ash dieback.

Iarnród Éireann has developed a Sustainability Policy and Biodiversity Policy prior to the publication of the National Biodiversity Action Plan, a copy of these policy documents can be viewed by clicking on the polices above and following the hyperlink.

To ensure the safety of the public, employees, and rail services, Iarnród Éireann undertakes periodic vegetation management across the rail network. This process includes mechanical cutting back of hedge lines and also the application of pesticides to prevent vegetation regrowth.

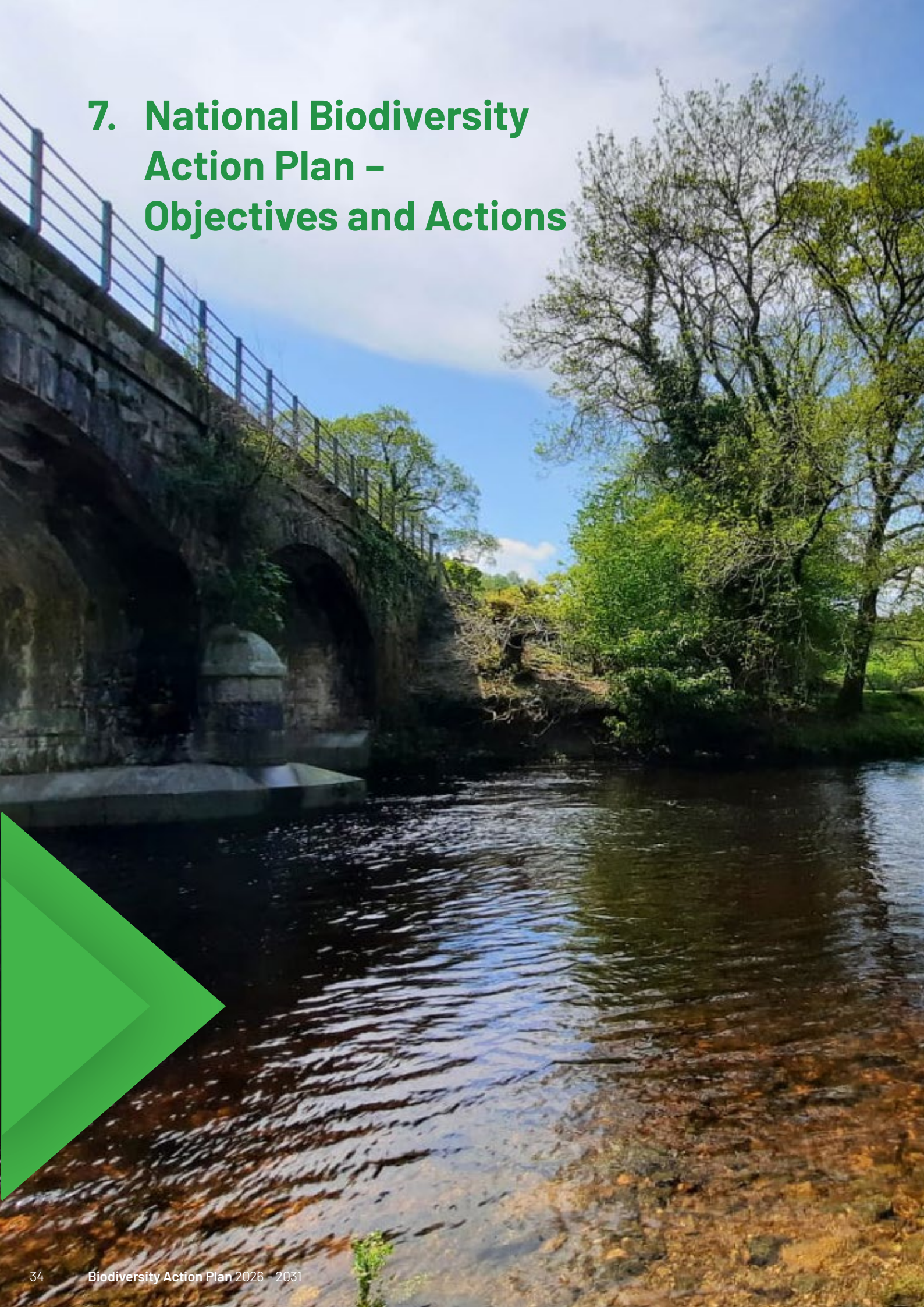
Lineside vegetation management is required:

- To cut back vegetation periodically to maintain a clear envelope for safe train movements
- To remove visual obstruction of key safety assets (signals, speed boards, level crossings, etc.)
- To remove vegetation growth of buildings and structures to maintain their integrity
- For emergency removal, following extreme storm events
- To re-establish boundary fencing to minimise access (human and animal) and maintain safety
- To treat and remove invasive species
- To complete in an efficient and safe manner for all employees and contractors
- To minimise business impacts on rail services and customers
- To minimise impacts on wildlife
- To protect and enhance biodiversity
- To minimise impacts on watercourses
- To mitigate the impact of works on neighbours and adjacent sensitive receptors

Lineside vegetation management follows a logical flow:

- Investigate the scale of the works
- Plan the works
- Assess the planned works (IAMs review, desktop study, specific ecological surveys (as necessary)
- Modify, as necessary, the planned works to account for constraints
- Stakeholder communication
- Conduct the works
- Document the works

7. National Biodiversity Action Plan – Objectives and Actions



The development of Ireland's fourth National Biodiversity Action Plan 2023-2030 (NBAP) builds upon unprecedented levels of public awareness at the national level and an elevated global and regional policy landscape. In doing so, the NBAP takes account of the wide range of policies, strategies, conventions, laws, and targets at the global, EU, and national levels that influence our shared environment, in order to scale up biodiversity action.

The delivery of Iarnród Éireann's Biodiversity Plan will benefit from the commitment of government departments and state agencies through the strategic co-ordination of biodiversity action, and the Minister will bring a progress report to Cabinet at least once a year. But we need everyone – from local authorities, the private sector, NGOs, community groups, farmers, fishers, foresters, children and young people, and everybody else – to help make space for nature in our homes, gardens, farms, forests, places of work, and urban environments.

7.1. Objectives of the NBAP

Objective 1: Adopt a Whole-of-Government & Whole- of-Society Approach to Biodiversity
Proposed actions include capacity and resource reviews across government; determining responsibilities for the expanding biodiversity agenda; providing support for communities, citizen scientists, and businesses; and mechanisms for the governance and review of this National Biodiversity Action Plan.

Objective 2: Meet Urgent Conservation and Restoration Needs
Supporting actions will build on existing conservation measures. Efforts to tackle invasive alien species will be elevated. The protected area network will be expanded to include the marine protected areas. The ambition of the EU Biodiversity Strategy will be considered as part of an evolving work programme across government.

Objective 3: Secure Nature's Contribution to People
Actions highlight the relationship between nature and people in Ireland. These include recognising the tangible and intangible values of biodiversity, promoting nature's importance to our culture and heritage, and recognising how biodiversity supports our society and our economy.

Objective 4: Enhance the Evidence Base for Action on Biodiversity
This objective focuses on biodiversity research needs, as well as the development and strengthening of long-term monitoring programmes that will underpin and strengthen future decision-making. Action will also focus on collaboration to advance ecosystem accounting that will contribute towards natural capital accounts.

Objective 5: Strengthen Ireland's Contribution to International Biodiversity Initiatives
Collaboration with other countries and across the island of Ireland will play a key role in the realisation of this objective. Ireland will strengthen its contribution to international biodiversity initiatives and international governance processes, such as the United Nations Convention on Biological Diversity.

7.2. Highlighted Actions of the NBAP Relevant to Iarnród Éireann

There are 194 actions and targets in total in the NBAP. The targets relevant to Iarnród Éireann are shown below and will be the focus of the company-wide biodiversity action plan:

Action 1A4. By 2024, and in each year thereafter, relevant entities report on their progress against this Plan. Each entity responsible for actions within this Plan will provide an annual update on progress and contribute to an Interim and Final Review of the Plan.

Action 1B2. By 2024, roles and responsibilities of government departments, bodies and agencies as they relate to the achievement of biodiversity action identified. NPWS will conduct a review of nature governance in Ireland, including the roles and responsibilities of government departments, bodies and agencies as they relate to the achievement of biodiversity actions and commitments.

Action 1B10. By 2024, funding is secured to implement long term biodiversity conservation and restoration. Relevant Departments and Agencies will implement long term measures to support biodiversity conservation and restoration through the Infrastructure, Climate and Nature Fund.

Action 1E1. By 2027 the NPWS will complete a review of Wildlife Legislation

Action 2A1. By 2024, the NPWS under the enhanced implementation of the Habitats and Birds Directives will publish detailed site-specific conservation objectives along with the approach used, for all existing SACs and SPAs.

Action 2B6. By 2030, in line with the EU Biodiversity Strategy, the use and risk of pesticides is reduced by 50% by 2030. DAFM, Local Authorities and other relevant stakeholders will implement existing and new measures to reduce chemical pesticide use, in line with the EU regulatory framework for pesticides.

Action 2B11. Continued support for native tree planting. DAFM will continue to promote and/or support native tree planting by Local Authorities and other State/semi-state bodies.

Action 2B13. By 2030, in line with the EU Biodiversity Strategy, the decline of pollinators is halted and reversed. NBDC with partners in Northern Ireland and other actors listed in the All-Ireland Pollinator Plan 2021-2025 will implement appropriate actions listed in the Plan and support farmland pollinator conservation activities post-2025.

Action 2D1. By 2027, protection and restoration measures detailed in the latest RBMP (River Basin Management Plan) are implemented to ensure our natural waters are sustainably managed, freshwater resources are protected to ensure no further deterioration and other water bodies are restored to at least good ecological status.

Action 2F1. By 2026 a National Restoration Plan is published by NPWS and other stakeholders to align existing indicators and/or establish new ones for monitoring restoration of ecosystems.

Action 2H2. By 2030, Invasive Alien Species (IAS) are controlled, managed, and where possible, eradicated. NPWS, together with other relevant Departments and public bodies, will develop national plans to implement aspects of the EU IAS Regulation and relevant national legislation, as well as work on cooperative plans where there is an all-island or North-South aspect for IAS impacts.

Action 3C1. By 2030, shared responsibility for the conservation of biodiversity acted on. All Public Authorities and private sector bodies move towards no net loss of biodiversity through strategies, planning, mitigation measures, appropriate offsetting and/or investment in Blue-Green infrastructure.

Action 5A5. By 2025, the All-Island Pollinator Plan (AIPP) is supported, and all relevant bodies still continuing to support and utilise the All-Ireland Pollinator Plan.

8. Iarnród Éireann's Biodiversity Objectives and Actions

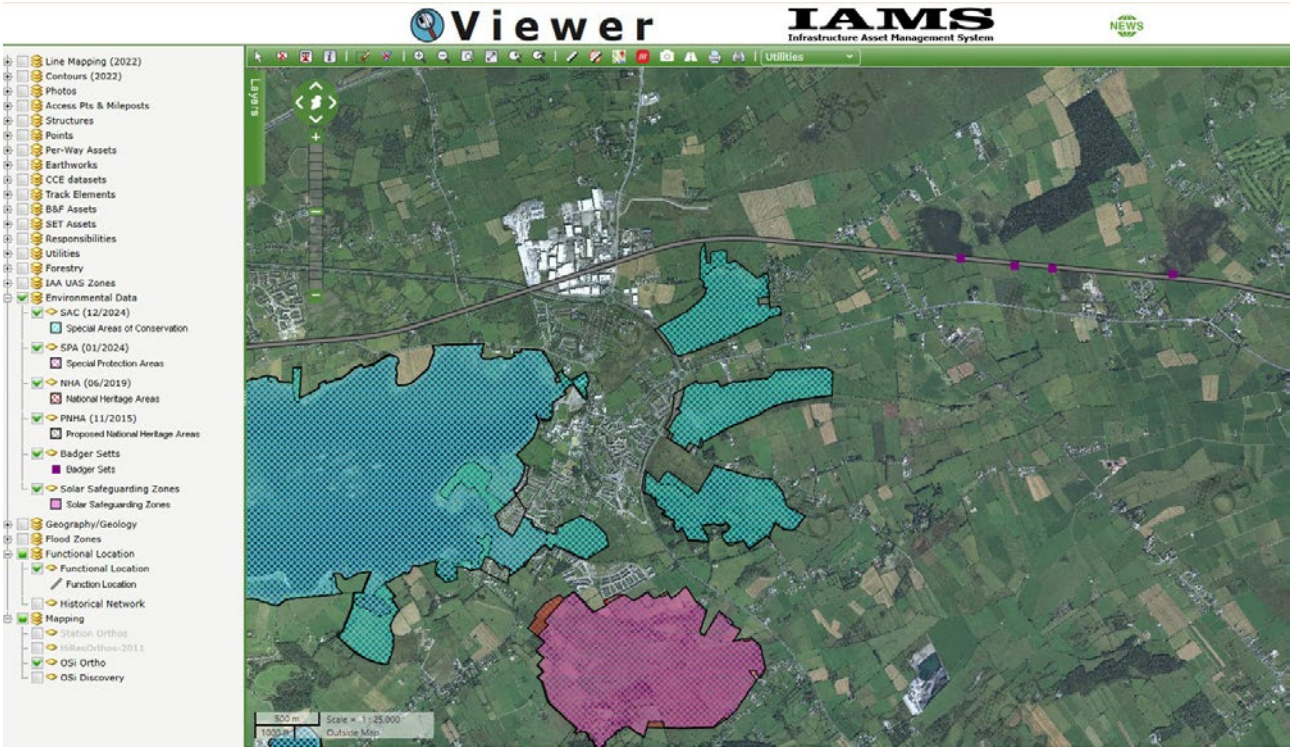
Iarnród Éireann's Biodiversity Action Plan details specific objectives and actions to address the biodiversity emergency. These objectives and actions align with Iarnród Éireann policy-level strategic objectives and have been developed in such a way that they can be implemented over an acceptable timeframe. The plan will be reviewed and updated every five years in line with the company's periodic review.

The following key objectives have been identified:

Objective 1: To develop datasets of environmental assets and viewing platforms to easily access attributes

Objective 1 is to continue the progression of internal datasets which will be consistently updated to reflect natural and ecological features along the network. Historically, Iarnród Éireann has collated data regarding infrastructure such as signal locations, bridges, and culverts, which can be accessed on an internal mapping system. However, with growing attention on our natural assets, Iarnród Éireann is continually updating this system to include environmental data as well.

Action 1.1: The collection of ecological and environmental features to be continuously added to internal databases. This data may be provided by internal staff and external contractors. These layers will allow staff to identify if proposed projects are planned in proximity or within ecologically important sites and allow them to plan accordingly. This could be in regard to ecological surveys needed, what supervision is necessary, and what mitigation measures are required.



This screenshot highlights the internal mapping system used by Iarnród Éireann to map databases regarding infrastructure with environmental databases being incorporated as well.

Action 1.2: Excluding internal Iarnród Éireann ecological data, other relevant ecological datasets can be incorporated into internal GIS system.

It is important to note that the occurrence of protected habitats, plants, and animal species is not only confined to the designated conservation sites. Several habitats listed in Annex I of the Habitats Directive occur on sites outside Special Areas of Conservation (SACs).

Annex	Status
I	Habitat types whose conservation requires the designation of Special Areas of Conservation (SAC)
II	Both animal and plant species whose conservation requires the designation of Special Areas of Conservation (SAC)
IV	Both animal and plant species in need of strict protection
V	Animals and plant species whose taking in the wild and exploitation may be subject to management measures

Action 1.3: Contentious observations and learnings from peer reviewed scientific and ecological data relevant to IR.

Action 1.4: Habitats occurring within Iarnród Éireanns lands will be classified in accordance with national and European classification standards.

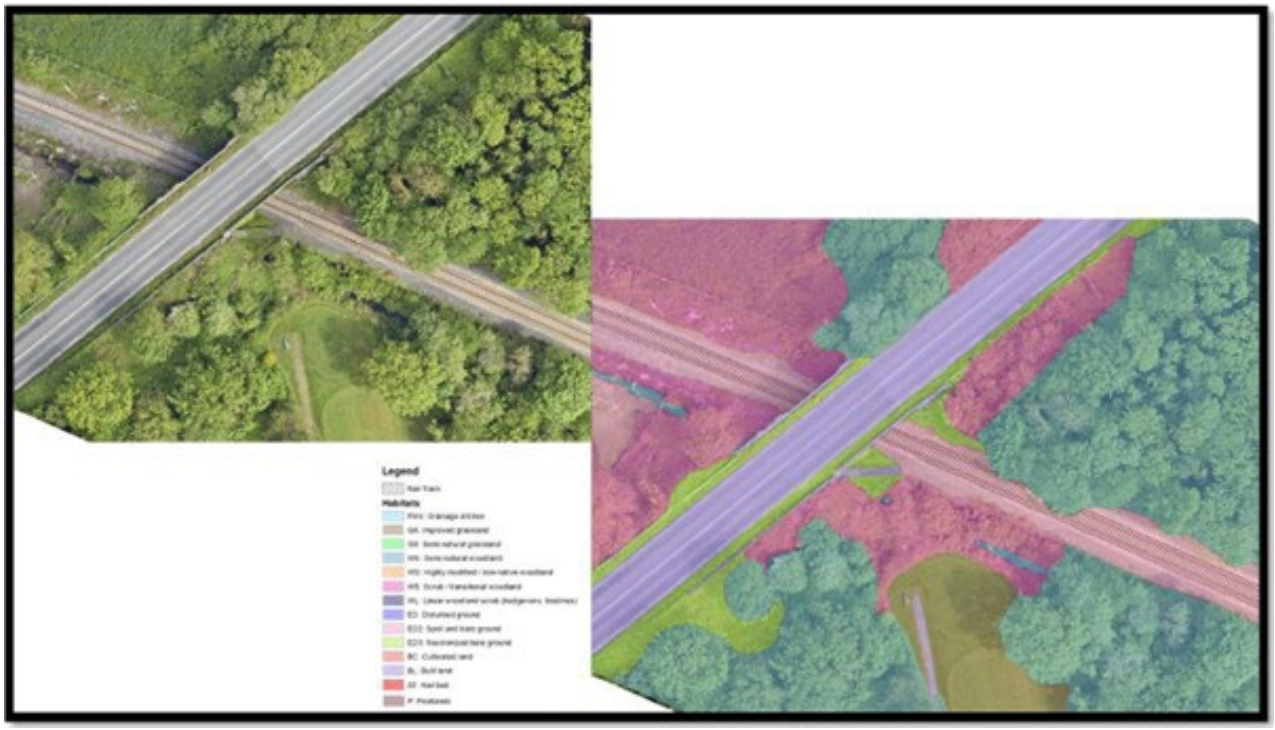
Action 1.5: Iarnród Éireann is also investigating the feasibility of different bespoke asset management systems for the management of vegetation (trees) along the rail network. The use of online apps allows us to perform in-field data collection for surveys, inspections, enquiries, and also allows for the creation of workflows with contractors, ultimately enabling a works sign-off for trees, outdoor assets, and landscaping features on mobile devices and desktops.

An asset management system dedicated to trees and vegetation would improve the overall process of vegetation management across the network, as trees are a considerable risk to the railway and its associated infrastructure. This allows for future planning and/or monitoring of the condition of trees ahead of storm events and allows the reporting of diseased trees to be centrally stored and accessed. It will also make the removal of trees easier for contractors, as the trees can be geo-referenced, ensuring the correct ones are removed or any other maintenance is conducted on the correct trees.

This screenshot highlights a potential internal mapping system designed by Ezytreev to map tree inventory databases.

Objective 2: Classification of the lineside habitats to determine the ecological baseline data for the network

Action 2.1: Iarnród Éireann's will develop a system to classify line side habitats and to collect ecological baseline data for the network using remote sensing, as well as the development and implementation of AI monitoring systems.



A screenshot of an example habitat classification map created using orthophoto imagery to determine the habitats found along the railway line.

Classifying the habitats will be based on the interpretation of aerial imagery. Habitats to be identified from aerial imagery are outlined within the table below, and will be based on Fossitt's 'Guide to Habitats in Ireland', 2000.

	Habitat Type	Defining Characteristics
1	FW3 - Canals	• Linear water bodies • Lack strong currents and bank erosion • Channel typically >5m wide • Cross reference may be needed with GE Pro to aid classification
2	FW4 - Drainage ditches	• Artifical in origin • Typically <5m wide • May be dry but will be capable of supporting wetland vegetation
3	GA - Improved grasslands	• Intensively managed • Species poor (monoculture) • <10% species variation
4	GS - Semi-Natural grasslands	• Minimal management • <25% shrub coverage • Greater grass species variation
5	P - Peatlands	• Broad category • Cross reference with external NPWS data SPA, SAC, NHA, pNHA, RAMSAR shp files before allocation
6	WN - Semi-Natural woodland	• Canopy height >5m • >75% native tree cover
7	WD - Highly modified / Non-native woodlands	• Native and non-native trees • Canopy height >5m
8	WS - Scrub/Transitional woodland	• Dominated by >50% cover of shrubs, stunted trees or brambles • Precursor to woodland • Canopy height <4m
9	WL - Linear Woodland/Scrub	• Strips of woodland with occasional trees • <5m high and <4m wide
10	ED2 - Spoil and Bare Ground	• Spoil and rubble • Transient • Should not exceed 50% vegetative cover
11	ED3 - Recolonising Bare Ground	• Artifical surfaces such as hardocre, concrete etc. • Vegetative cover should be >50%
12	BL - Built Land	• Plant cover <50% • Man made features: stone, concrete, buildings etc.

The table above illustrates the different habitat types that will be classified along the Iarnród Éireann network

Action 2.2: Iarnród Éireann will develop and implement remote sensing and AI monitoring systems to determine environmental baselines. Iarnród Éireann will utilise orthophotography and remote sensing to detect changes in habitat composition, together with targeted ground surveys to ground-truth and assess the diversity of species living on the line side. Iarnród Éireann will develop a methodology to measure values of ecological habitat based on potential, connectivity, distinctiveness, habitat type and difficulty to recreate.

There are also many ecological benefits provided by hedgerows, such as the sequestration of carbon, which is stored in the soil and earth banks in which hedgerows grow. Many species rely on hedgerows for food and shelter, such as various birds and small mammals. Hedgerows also provide connectivity to surrounding habitats and the broader environment and are particularly important features for foraging bats. Hedgerows are also an important element of Ireland's cultural, historical, and archaeological heritage, with hedgerows previously acting as townland boundaries.

The classification and scoring of habitats will allow the monitoring of current vegetation management practices to ensure a balance is met between carrying out maintenance to provide a safe railway network and ensuring the preservation of the ecological value of the hedgerow.

Objective 3: Undertake a nationwide aerial tree inventory survey

Iarnród Éireann are undertaking a nationwide aerial tree inventory survey to determine the health of line side trees. The risk of trees falling onto the line is a persistent and ongoing issue, with over 110 reports of fallen branches or trees, obstructions, or train strikes reported by train drivers and staff between 2020 and 2024.

Another issue increasing the risk of trees falling onto the track is disease, in particular ash dieback, which has had a devastating effect on ash throughout the island of Ireland since its accidental introduction in 2012. It is a devastating disease that is affecting the population of ash trees, one of the most common trees found within Irish hedgerows and landscapes. Ash dieback is a fungal airborne disease that is expected to kill the majority of Ireland's ash trees.

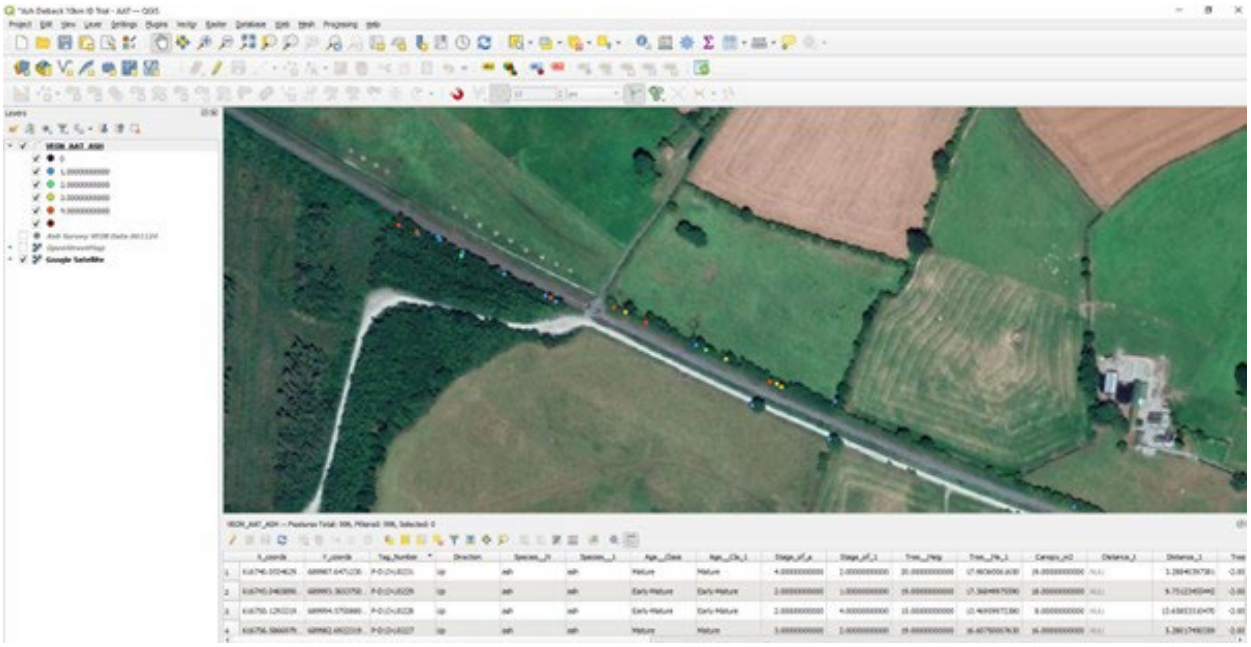
Results of ash dieback are going to have a devastating impact on the landscape and the biodiversity of the landscape. As the ash tree declines, it will need to be managed to address health, safety, and operational risks for the railway.

Hazardous trees present a huge safety risk to the railway, putting passengers and Iarnród Éireann staff in danger, and can also result in long delays and disruption to passenger and freight services when engineers are called out to remove trees from the track.

Action 3.1: Iarnród Éireann are currently conducting its largest-ever tree survey and operational plans to identify and remove many of the hazardous ash trees along the railway corridor. To help prevent the spread of ash dieback, tree surgeons will, where possible, work to remove the more heavily infected ash trees, allowing the more genetically resistant ones more time to potentially repopulate the species.

Action 3.2: Iarnród Éireann is developing an ash dieback strategy to deal with this devastating problem of ash dieback, whilst using the opportunity to benefit the environment in the long term. Surveying the lineside environment, including trees and vegetation on the network as well as on adjacent land, is one part of wider efforts to proactively identify and safely remove as many dangerous trees as possible from alongside the railway.

A specialist drone survey, ground-checked by an arboricultural ground survey of all Iarnród Éireanns tree population, which includes data gathering and risk scoring, is currently underway to assess the levels of ash dieback along the rail network. This survey will be further enhanced by routine in-house visual on-foot inspections.



A screenshot from one of Iarnród Éireann's GIS systems showing surveyed ash trees and associated attribute table.

Objective 4: Promote no net loss / net gain for biodiversity

Biodiversity Net Gain (BNG) is a concept focused on undertaking developments in a manner that leaves biodiversity in an improved ecological condition post operations. This is achieved by avoiding impacts on ecological features of high value, minimising unavoidable impacts, enhancing the value of existing features, and providing new ecological features that were not previously present.

A term associated with BNG is No Net Loss (NNL), which strives that any negative impacts resulting from operations, be balanced by biodiversity gains resulting in a zero biodiversity decrease. For BNG, the emphasis is on achieving more gains than losses, resulting in a positive effect.

There is currently no formal legislation or policy regarding BNG in the Republic of Ireland. It is thought that BNG will eventually be implemented in Ireland, complete with a statutory recognised matrix.

Iarnród Éireann, as an organisation, is aware of the potential for railway activities to have an impact on the natural environment and biodiversity, and is continually striving to ensure that we provide a sustainable, environmentally conscious, and safe transport service.

As detailed in Action 2.1 above, Iarnród Éireann are looking to introduce a habitat assessment and scoring mechanism. To allocate a habitat score, or biodiversity scoring unit, the extent and individual habitats being assessed must be defined and mapped as part of this process. In summary, the size of each parcel, habitat type and potential, location (within natura sites etc.) and connectivity of the habitat are recorded. This process is normally undertaken by a 'walk-over' or 'in-field' approach and is completed by a competent ecologist. Each habitat is assessed based on a range of parameters set out at the beginning of the project which may include distinctiveness, management, condition, invasive species, rare or intrinsic species presence, connectivity etc. The resulting data collected is collated into a spreadsheet for calculation purposes, resulting in a Biodiversity Score Unit allocated to the individual habitats identified within the survey area.

Action 4.1: Due to the overall length of network, complexity and safety concerns of employing a ground-based assessment throughout an active railway network, a modified approach to achieve a similar biodiversity metric is being explored. An approach is being developed by utilising high-resolution aerial imagery data, expert ecologists with experience in remote sensing and the use of AI. Key parameters are being identified in order to allocate a baseline biodiversity score to each individual habitat identified.

For larger capital projects, biodiversity is considered specifically within the biodiversity chapter of the Environmental Impact Assessment Report (EIAR/EIA), whereby an assessment of the effects of a project or development on the environment is conducted.

EIA identifies, describes, and assesses the direct and indirect effects of a proposed project in relation to the following environmental factors:

i. Population and human health
ii. Biodiversity, with particular emphasis on species and habitats protected under the EU Directives
iii. Land, soil, water, air, and climate
iv. Material assets, cultural heritage and the landscape
v. The interaction between the factors mentioned in (i-iv)

The Capital Investments team works in collaboration with contracted ecological consultants to ensure the appropriate EIA is completed, to ensure biodiversity and designated sites are considered, as well as identifying areas to enhance biodiversity and offset any net losses.

The Chief Civil Engineers (CCE) Department's responsibilities focus on the maintenance of existing railway infrastructure, such as the track, bridges, culverts, and level crossings. A breakdown of infrastructure across the entire rail network is listed below:

- 5,100 bridges and culverts
- 944 level crossings
- 147 stations
- 372 platforms
- 14 tunnels
- 1,300 Point Ends
- Over 3,700 cuttings and embankments
- 2,400 km of track

Maintenance activities across the network are undertaken to ensure a safe, sustainable transport service is provided and include:

- Vegetation management of the lineside environment
- Treatment of invasive species
- Maintenance of lineside drainage systems, earth embankments, and cuttings
- Repairs to abutments, piers of bridges, and culverts (concrete and masonry)
- Instream works to repair scour occurring at bridges or culverts

Action 4.2: Prior to undertaking any maintenance projects, a desktop analysis is conducted. This will allow Iarnród Éireann to determine if any Natura 2000 sites are located within the 15km ZOI (zone of influence) and if there are hydrological connections. An Appropriate Assessment Screening may be required and if the project is screened in (mitigation required), then a move to stage 2 of the process is necessary. Stage 2 may include a Natura Impact Statement (NIS). The NIS will investigate the required mitigation measures to prevent the project having an adverse effect on the designated Natura 2000 sites, either isolated or in-combination with external projects.

Iarnród Éireann also undertakes and abides by Ecological Impact Assessments (EcIA). The EcIA considers direct and indirect impacts, as well as cumulative effects over time, on the greater environs, not focusing solely on Natura 2000 sites.

Iarnród Éireann undertakes ecological assessments for planned maintenance and renewal projects. There are opportunities across the network to enhance biodiversity. These could include the restoration of habitats, such as planting native species in hedgerows to reduce gaps and to promote greater connectivity to habitats throughout the wider environment. An example of maintenance within Iarnród Éireann would be ensuring the resilience of new assets such as bridges and culverts to ensure protection against future flooding events.

Action 4.3: ***Afforestation across the rail network***
Iarnród Éireann, together with CIÉ, owns several parcels of land located alongside the rail network. Iarnród Éireann is committed to planting 100 acres of native woodland by 2030, as part of our biodiversity commitments, to assist in providing a sustainable transport service and to compensate for any tree felling along the rail network due to ash dieback and other vegetation management.

2,500 native Irish trees being planted at Iarnród Éireann's Portlaoise Depot.

In 2021, Iarnród Éireann was the first recipient of funding under the Department of Agriculture's Creation of Woodland on Public Lands Scheme, whereby a 10.5-acre site was planted with 12,000 native trees adjacent to a closed level crossing.

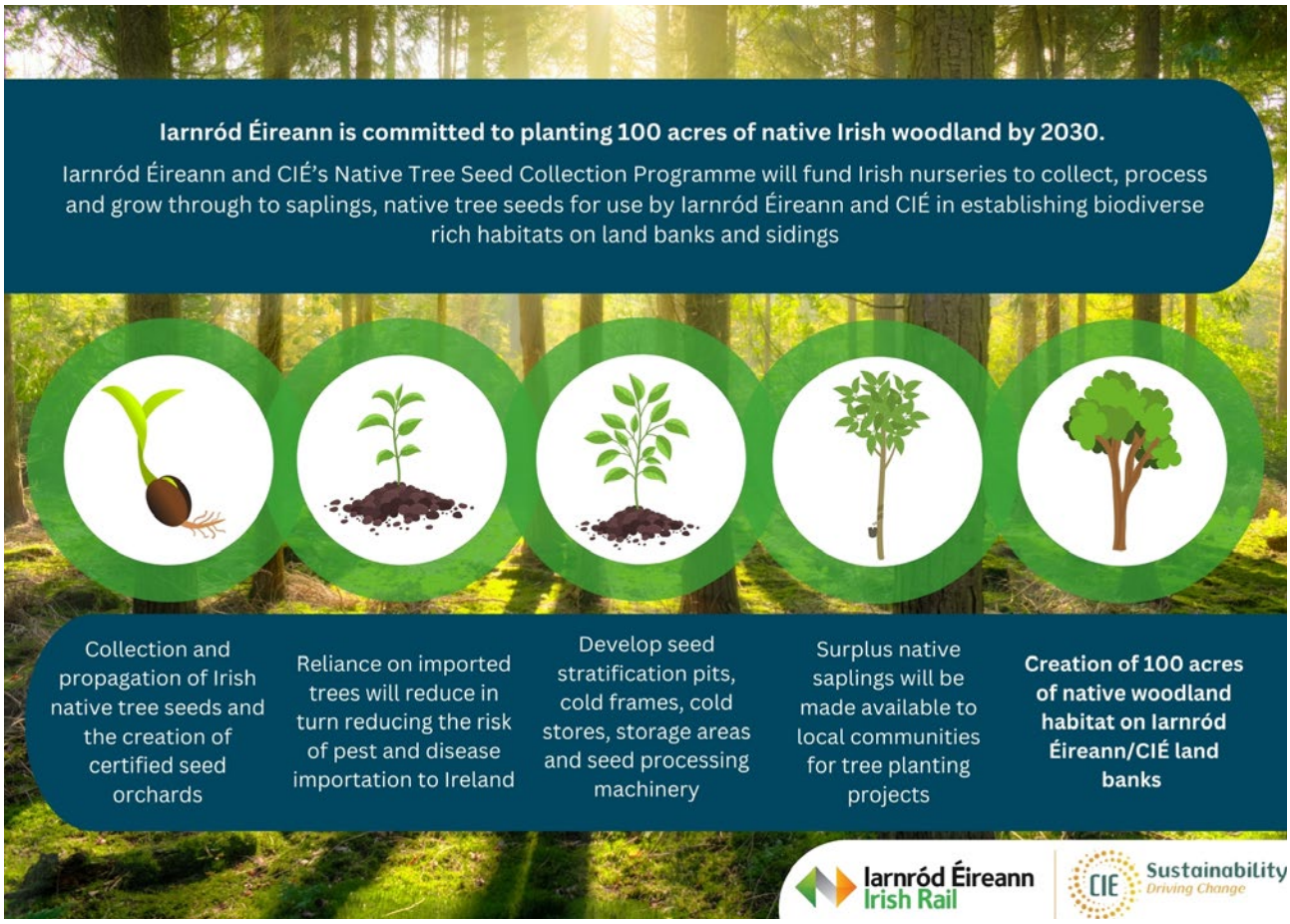
Other sites have since been planted, with further sites being selected for afforestation with native broadleaves by 2030.

Photos highlighting the planting completed at an Iarnród Éireann owned site at Ballykilty Co. Wexford.

All afforestation projects over 0.10 ha must obtain prior written approval from the DAFM, termed 'Technical Approval'. DAFM can only approve a forestry-related application where it deems, at screening stage, that there is no possibility of an effect on any Natura site, or (at appropriate assessment stage, if required) that there will be no adverse effect on the integrity of any Natura site. Further funding applications will be sought under the New Forestry Programme 2023-2027 to continue planting native tree species.

Action 4.4: *Native Seed Collection Programme*

Iarnród Éireann plans to support and encourage the expansion of native seed collection by nurseries based in Ireland. In 2024, Iarnród Éireann launched the **Native Seed Collection Programme** supported by the CIÉ Sustainability Fund.



At present, Iarnród Éireann relies on native tree purchases from Irish nurseries, but the availability of native stock is not always reliable. Iarnród Éireann is working with Irish nurseries to increase the level of seed collection from known native Irish source.

Seeds collected through this programme are grown by a participating nursery and will then be used in one of Iarnród Éireann's woodland or hedgerow planting projects.

Iarnród Éireann's former CEO Jim Meade along with Joe Codd Environmental Specialist with Iarnród Éireann and Caoimhe Donnelly Chief Sustainabilty Officer, CIE Group, along with Nurseries None So Hardy and Fermoy Nurseries at the launch of the Native Seed Collection Programme.

Action 4.5: *Biodiversity Enhancements: Artificial Roosting and Nesting Structures*

During essential maintenance, CCE will take opportunities to incorporate and install biodiversity enhancements, such as artificial roosts and swift boxes.

A bat tower has been installed along a section of track on the Galway Line, following the removal of bats found in a signal box under derogation from the National Parks and Wildlife Service. This was not a condition of the licence but was installed to provide an alternative roost to the opportunistic bats and a safer option than the signal, which is important infrastructure for the rail network.

Bat tower

Protected species discovered within an Iarnród Éireann signal box

In Rathmore Station, in collaboration with IRD Duhallow, a Swift Tower was installed within the station carpark, with a speaker playing swift calls to signal to the birds the presence of the tower as a nesting site. Unfortunately, the swift population has been decreasing in recent years and is now listed as a Bird of Conservation Concern in Ireland (BoCCI), with it being a red-listed species of high conservation concern.

Communication will be initiated between Iarnród Éireann and Swift Conservation Ireland. Surveys conducted on station buildings may provide evidence of breeding swifts and would help avoid disturbance if any maintenance activities are required.

Swift towers erected on Iarnród Éireann lands.

Action 4.6: Partnership in the All-Ireland Pollinator Plan (AIPP)
Iarnród Éireann joined the All-Ireland Pollinator Plan as a partner in 2019.

The actions discussed included adopting a sustainable pesticide strategy to benefit pollinators, as well as, where appropriate, pollinator-friendly native trees could be planted across land holdings. Across stations of the network, pollinator-friendly actions, which could be adopted, include planting pollinator-friendly perennials or herbs, with bee hotels to provide shelter for pollinators.

Iarnród Éireann has a target set to ensure pollinator plans are implemented across all stations (147) of the network by 2030. Progress has been made, with roughly one-third completed, and funding secured for a further eight stations in 2026.

The photos (top left and right) highlight the colourful annual plants which were originally planted in Athlone which offer very little food (pollen) to native pollinators with the photos (bottom left and right) showing the newly planted pollinator friendly plants and herbs.

Planting of pollinator-friendly flowers has been undertaken across various stations of the network, as well as the installation of insect hibernaculum's.. There are over 80 Irish solitary bee species, with each nesting in different ways, such as the leafcutter solitary bee, which cuts circular pieces out of leaves with its teeth to line the nest, often found in hollow twigs or bamboo canes, or mining solitary bees, which dig holes in bare soil in the ground.

Photos highlighting the pollinator planting conducted at stations and the installation of bug hotels to offer refuge to native pollinators.

Iarnród Éireann will look across the estate landbanks for opportunities to create new, restore, and manage existing habitats to improve biodiversity and the resilience of ecosystems.

Objective 5: Strengthen collaboration and stakeholder engagement for the conservation of biodiversity

International :

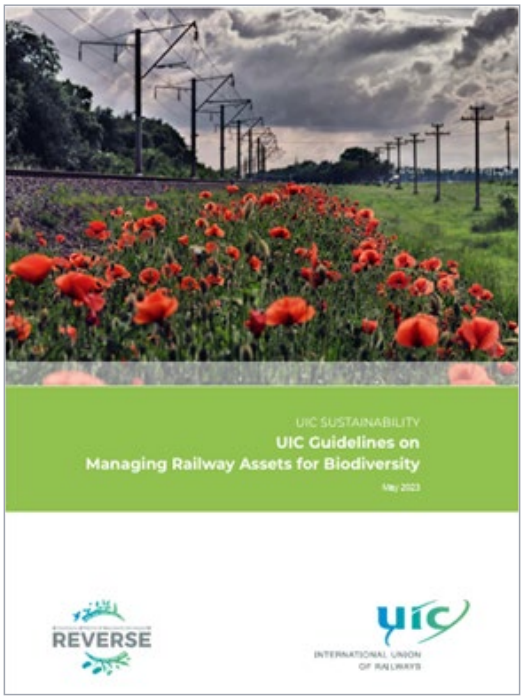
Iarnród Éireann understands the importance of collaboration for the conservation of biodiversity and has a strong history of collaborating with various organisations across multiple sectors, both nationally and internationally. The most relevant collaboration to Iarnród Éireann within the railway sector is that with UIC (International Union of Railways), and under the CIE Group company umbrella, which has been an active member since 1958.

The UIC is the worldwide professional association representing the railway sector and promoting rail transport, with a focus on leading an innovative and dynamic sector, which aims to encourage members to be successful through active participation in working groups.

Action 5.1: Iarnród Éireann participates in the Ecological Effects of Railways on Wildlife (rEvERsE) project, with the UIC in collaboration with other railway operators, including: Network Rail, ProRail, SNCF, as well as the UK Centre for Ecology & hydrology (UKCEH). The aim of the project is to improve the understanding of the impact of railways on biodiversity and identify opportunities to enhance it.

The objectives of the project are to:

- Avoid habitat fragmentation and enhance biodiversity conservation on railways by sharing experience and knowledge
- Identify how railways threaten the survival of wildlife in Europe and identify solutions to overcome them
- Describe and promote measures that constitute a railway contribution to the UN Sustainable Development Goals



The photos highlight the cover pages of the Biodiversity Action Plan and strategic guidelines published by the Reverse Project. https://uic.org/projects-99/reverse

Working on collaborative projects such as rEvERsE with the UIC allows for a wonderful opportunity to network and make connections with European rail network colleagues to meet and discuss shared issues and solutions.

National

One of the commitments in the EU Biodiversity Strategy is to put forward a proposal for legally binding EU nature restoration targets, with each member state needing to draw up a national restoration plan over two years, which sets out how targets will be achieved, as well as exploring which lands can be prioritised for restoration actions.

Below are some examples of articles within the draft Regulation which set out the legally binding targets relating to the restoration of specific habitats:

Article 4; Wetlands, forests, grasslands, rivers and lakes, heaths a scrubs, rocky habitats, and dunes:

- Restoration of terrestrial, coastal, and freshwater ecosystems (listed habitats and species throughout the State)
- Improve and re-establish biodiverse habitats on a large scale
- Bring back species populations by improving and enlarging their habitats

Article 7; River connectivity:

- Restoration of the natural connectivity of rivers and functions of floodplains
- Remove artificial barriers that prevent the connectivity of surface waters, so that at least 25,000 km of rivers are restored to a free-flowing state by 2030

Action 5.2: Iarnród Éireann to liaise with statutory agencies and open dialogue where projects such as degraded raised bog restoration and removal of artificial river barriers are proposed. Fluctuating water levels could impact on the railway network.

Iarnród Éireann to also collaborate with county level Biodiversity officers across the State.

Action 5.3: Iarnród Éireann will collaborate with relevant stakeholders to improve and enhance biodiversity within land banks what are owned and maintained by Iarnród Éireann.

There is also the opportunity for Iarnród Éireann to investigate the use of suitable landbanks for protected breeding wader species such as:

- Curlew
- Golden Plover
- Lapwing
- Redshank
- Snipe
- Dunlin.

Action 5.4: Iarnród Éireann has become a member of Business for Biodiversity Ireland. Business for Biodiversity Ireland (BFBI) was established in 2021 to work with the Irish business community to create a nature-positive economy for Ireland that can transform our collective future. BFBI is a research-driven biodiversity initiative without political affiliation and is supported in its development by Natural Capital Ireland (NCI), the National Biodiversity Data Centre (NBDC), and Business in the Community Ireland (BITCI).

Objective 6: Strengthen measures to control and manage Invasive Alien Species

Invasive Alien Species (IAS) are plants and animals that have either been introduced accidentally or deliberately into an environment, which is not their natural territory or where they are not normally found, and which can have serious consequences. Invasive species pose a major threat to native plants and animals, and in Europe, it is reported that they are one of the five major causes of biodiversity loss. These alien species can also have significant adverse impacts on the country's economy due to the difficulty in identifying infestations and costly treatments and remediations.

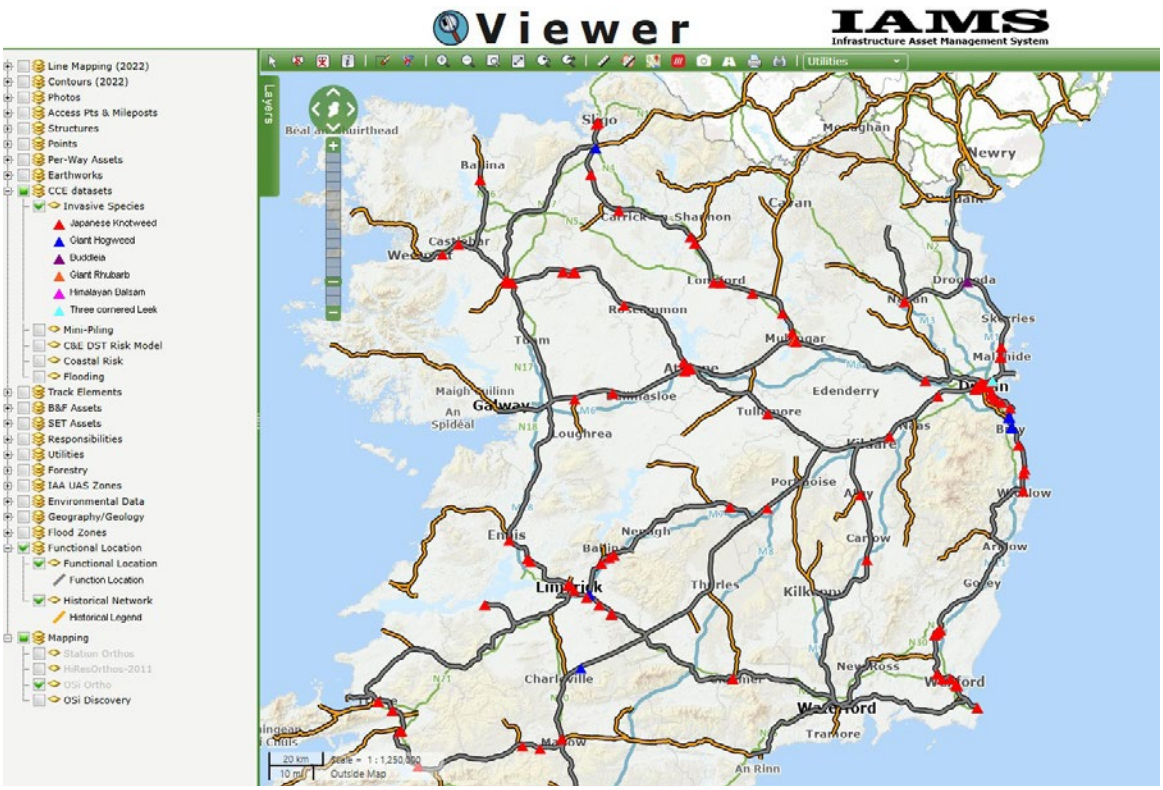
The European Communities (Birds and Natural Habitats) Regulations 2011 introduced important legislation regarding invasive species in the Republic of Ireland, particularly Articles 49 & 50.

In summary, Article 49 mainly addresses the unlicensed and knowing release of invasive species while Article 50 addresses the importation of invasive species.

Action 6.1: Mapping Infestations of Invasive Species

The control and management of invasive species is an ongoing concern for Iarnród Éireann, with considerable work being undertaken to find, record, and treat infestations that are located on the rail network. The main species of concern to the railway are Japanese Knotweed *(Reynoutria japonica)*, Giant Hogweed *(Heracleum mantegazzianum)*, Himalayan balsam *(Impatiens glandulifera)*, Giant rhubarb *(Gunnera manicata)*, Three-cornered Leek *(Allium triquetrum)* and Buddleia *(Buddleja davidii)*.

Infestations are recorded and mapped on Iarnród Éireann's internal GIS system to monitor treatment methods and to allow staff to identify any potential infestations within worksites, which allows for adequate planning of resources, treatment requirements and the prevention of the spreading of invasive species.

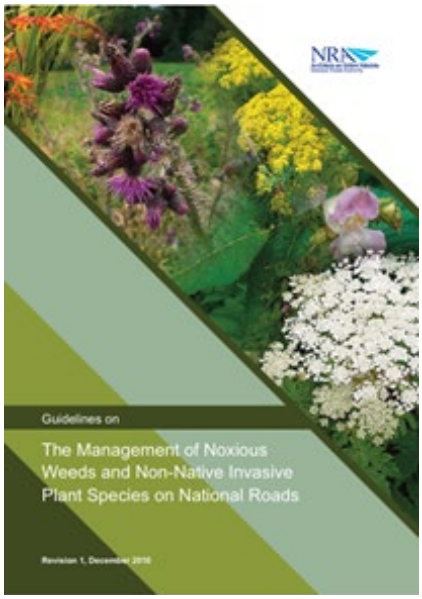


The map above, taken from our internal GIS, illustrates the rail network, each red marker highlights an invasive species infestation.

These records of infestations can also be shared with external contractors prior to the start of treatment to identify extent, best treatment options, monitor yearly treatments, and remove infestations from the system in the case of eradication. Contractors must be suitably qualified and registered as professional users with the Department of Agriculture and produce a Professional User (PU) Number to treat invasive species using chemicals.

Action 6.2: Best Practice Guidelines to be followed

It is imperative that trained staff or external contractors conducting the treatment methods for invasive species are aware of seasonal constraints and follow best practice guidelines, as treatment methods may vary between species identified. Treatments can include chemical treatment, physical removal, or a combination of both. Iarnród Éireann is developing guidance documents on the identification and treatment of invasive species to be issued to all staff and contractors.



The cover page of a guidance document that has been presented by TII and a typical stand of Japanese Knotweed that has been identified growing within a hedgerow along the railway network.

Action 6.3: Staff Engagement and ongoing training

An important aspect of the ongoing treatment and management of invasive species is to ensure that staff are engaged in the process and have ongoing training to allow for the correct identification of infestations. Regular briefings through presentations are delivered to staff, who patrol the track and report any faults. Invasive species should be included and reported through this forum too.

Technical bulletins for the target invasive species have been created and published to ensure staff have access to act as guidance when invasive species are located along the network. These bulletins highlight the appropriate treatment options for each species and detail the timing for treatment, i.e., when the plant is actively growing, for chemical treatment.


CCE-TEB-ENV-2023-003, Version 1.0 - Guidance on Identification, Management and Control of Buddleia

CCE Technical Bulletin

Guidance on the Identification, Management & Control of Buddleia

Reference No.	CCE-TEB-ENV-2023-003
Version	1.0
Operative Date	19/06/2023
Status	Live
Prepared By	Shubhangi Singh
Checked By	Mark Conroy
Approved By	Cathal Mangan

1. SCOPE

The purpose of this document is to provide information on the identification, management and control of Buddleia within the Railway Environment.

2. AUDIENCE

This document is intended for CCE Technical Staff, Senior Track & Structures Engineers, Buildings and Facilities Staff, Bridge Inspectors, Infrastructure Managers and Regional Managers, Per Way Inspectors, Contractors.

3. BUDDLEIA: Threats to Railway

The Buddleia is a perennial shrub capable of growing just about anywhere; waste ground, embankments, rooftops of derelict buildings and, it is a shrub which branches from ground level. Buddleia is an invasive plant, meaning it out-competes and crowds out beneficial native plants that have been naturally growing for centuries.

Due to its growth rate, Buddleia has the potential to obscure visual boards along the railway during summer months. It also impedes visibility of, and access to, railway assets (bridges, embankments, etc.) for inspection

The plant can cause damage to buildings, such as crumbling brickwork - its tiny wind-blown seeds can germinate in decaying mortar. Buddleia has a habit of growing in walls where it can interfere with overhead power lines and obscure signals. While it does not cause "serious" problems such as blocking train lines, it does have a habit of popping up in "annoying places" where removing it takes up valuable time and resource.

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Iarnród Éireann is working on the development and implementation of remote sensing and AI monitoring systems to identify different species of trees and other species along the network. New frameworks and detection techniques are being sought and developed to ensure infestations can be identified and managed quickly.

Action 6.4: Investigate alternatives to Chemicals

While the treatment of invasive species is required to ensure a safe transport corridor, there is a need, under the National Biodiversity Action Plan to reduce the use and risk of pesticides by 50% by 2030. It is necessary therefore to investigate alternatives to pesticides, where feasible.

Trials are underway to identify potential alternatives such as the use of boiling foam as a cleaning and pesticide treatment and the use of a soil based pesticide system.

Photos highlighting the foamstream system in use during a trial conducted in Templemore Station.

Objective 7. Periodic review to monitor, measure and record progress on objectives

Iarnród Éireann will periodically review this Biodiversity Action Plan to monitor progress and maintain accuracy.

Summary Table of Iarnród Éireann's Objectives in line with the NBAP

Relevant NBAP Action	Associated Iarnród Éireann Objective (1-7)	Target	Collaboration (Stakeholder Engagement)	Iarnród Éireann planned action/response
Action 1A4	7	Report on biodiversity progress under NBAP	All relevant stakeholders including Iarnród Éireann	Iarnród Éireann to annually track internal progression on all proposed biodiversity actions within objective 7 of this document.
Action 1B2	4, 7	NPWS to review nature governance including roles and responsibilities of government departments	NPWS, Governmental Departments	Iarnród Éireann to wholly cooperate with the NPWS upon review of their nature governance in Ireland.
Action 1B10	2,3	Relevant Departments will implement long term measures to support biodiversity conservation and restoration through available funding.	Iarnród Éireann, CIE Funding, NTA, Department of Transport	Iarnród Éireann to continue assessing landbanks and areas of potential to implement long term measures to support biodiversity, funding to be sourced from internal budgets, collaborations with other organisations such as CIE and other existing funding means such as TII and NTA etc.
Action 1E1	5,7	NPWS to undertake complete review of Wildlife Legislation	NPWS	On completion of the review of Wildlife Legislation Iarnród Éireann will ensure that any amendments will be followed to ensure compliance to Environmental Legislation. Internal relevant technical documents will be updated.
Action 2A1	1,4	NPWS will complete the selection and notification of sites for the protection of Annex habitats and species listed on the EU Habitats and Birds Directives	NPWS	Iarnród Éireann to undertake all required ecological surveys prior to any planned works concerning Natura 2000 sites. As an action of the NPWS publication, Iarnród Éireann will integrate the data appropriately to all Iarnród Éireann documentation and policies.
Action 2B6	6	By 2030 reduce the use and risk of pesticides by 50%.	Department of Agriculture, Food and the Marine, Local Authorities and relevant stakeholders including Iarnród Éireann	Iarnród Éireann will continue to investigate non pesticide methodologies of controlling vegetation along the network and assets.
Action 2B11	3,4	Continued support for native tree planting	Department of Agriculture, Food and the Marine	Iarnród Éireann's continuation of FT3 afforestation submissions to DAFM while also explore viable options for FT1 and FT2 afforestation submissions. Other areas of landbanks to be assessed for native tree planting suitability
Action 2B13	4,5	By 2030 the decline of pollinators is halted and reversed.	Iarnród Éireann, Córas Iompair Éireann, All-Ireland Pollinator Plan	Iarnród Éireann to remain a committed partner of the All-Ireland Pollinator Plan and increase the number of stations benefiting from pollinator enhancement projects. Expansion of the invasive species control programmes including GIS mapping along the network.

Blue: Planning stages | Orange: Action underway | Green: Action completed

Relevant NBAP Action	Associated Iarnród Éireann Objective (1-7)	Target	Collaboration (Stakeholder Engagement)	Iarnród Éireann planned action/response
Action 2D1	4,5	By 2027, protection and restoration measures are implemented to ensure protection of natural waters and to prevent further deterioration	Iarnród Éireann, Inland Fisheries Ireland, National Parks and Wildlife Service	Iarnród Éireann to manage chemical usage on works adjacent to waterbodies in line with current guidance. Iarnród Éireann to investigate the suitability of afforestation under the Forests for water scheme. Iarnród Éireann to ensure any essential works adjacent to waterbodies are included within adequately robust ecological and environmental surveys preconstruction.
Action 2F1	2,4,5	In September 2026, a National Restoration Plan is published by NPWS	Iarnród Éireann, Córas Iompair Éireann, National Parks and Wildlife Service, Department of Agriculture, Food and the Marine	Iarnród Éireann to create a habitat baseline dataset for its property and apply a scoring metric measure of biodiversity units. This baseline enabling future measurements of biodiversity increase / decrease.
Action 2H2	6	By 2030, Invasive Alien Species (IAS) are controlled, managed, and where possible, eradicated.	Iarnród Éirean, National Parks and Wildlife Service, Department of Agriculture, Food and the Marine	Iarnród Éireann to improve mapping and geo location of invasive species along the network and assets. Systems to be implemented to assist internal staff and external contractors manage, control and where possible eradicate IAS. Iarnród Éireann to update all relevant technical notes on Invasive species and deployment of qualified contractors to control the invasive installation.
Action 3C1	4	By 2030, shared responsibility for the conservation of biodiversity acted on. All Public Authorities and private sector bodies move towards no net loss of biodiversity through strategies, planning, mitigation measures, appropriate offsetting and/or investment in Blue-Green infrastructure	NPWS, Iarnród Éireann	Iarnród Éireann are committed to: • Continuation on development of biodiversity baseline and biodiversity scoring matrix. • Implement ground truthing for the biodiversity baseline. • Explore Land use changes for historical land parcels not directly connected to the essential infrastructure. • Thorough ecological reports commissioned as required.

Blue: Planning stages | Orange: Action underway | Green: Action completed

Conclusion

Following the publication of Iarnród Éireann's Biodiversity Action Plan ongoing monitoring will be undertaken to track progress on the objectives that have been set, in line with the objectives of the National Biodiversity Action Plan.

Iarnród Éireann as the backbone of sustainable transport in Ireland, understands and prioritises sustainability and mobility for the customers, communities and businesses it services nationally, whilst delivering the objectives outlined in the Biodiversity Action Plan.

With a significant number of trials and initiatives underway across the organisation Iarnród Éireann is well positioned to recognise, manage and mitigate risks to habitat and wildlife along the rail corridor and on its lands. Through ongoing work to understand and classify the types of line side habitats that exist, more informed decision can be made in everyday operations as well as within new projects to better protect biodiversity and promote net biodiversity gains.

Iarnród Éireann will continue to work with national and international partners and stakeholders to achieve the targets set out in this newly published Biodiversity Action Plan and ensure that adequate resources are available to reach targets and reporting requirements annually.


Iarnród Éireann
Irish Rail
CUSTOMERS AT THE HEART OF OUR BUSINESS
IARNRÓD ÉIREANN ONE TEAM
VALUING OUR PEOPLE
ALWAYS SAFE
PROUD OF OUR PAST, PASSIONATE ABOUT OUR FUTURE
SUSTAINABILITY IN MOTION