

# Biodiversity Strategy and Action Plan 2030

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Delivering a nature positive future for public transport





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# 01. **Our Vision and Goals**

Translink are committed to sustainable travel and play an important role in connecting people with our natural environment. The boundaries of our transport network can provide valuable habitats to support a variety of flora and fauna including protected species of national and international importance. Our rail corridor, lineside estate and embankments support biodiversity that would otherwise face increased threats from surrounding farming practices, encroaching housing developments and climate change. Our Biodiversity Strategy and Action Plan provides an ambitious target-driven approach to deliver nature-positive operations across our transport network by 2030. We will continue to actively protect, conserve and enhance our natural assets by integrating biodiversity considerations into our decision making, whilst maintaining a focus on safety and performance.

Our approach to infrastructure projects and maintenance works will avoid or minimise impacts on nature and will create biodiverse enhancements. We have a unique position to contribute to Nature Recovery within Northern Ireland by improving ecological connectivity for habitats and species along our transport network and adjacent landholdings. To support our 2040 net zero emission targets, our natural climate change mitigation strategies will focus on carbon sequestration through woodland creation as well as protecting our carbon stores such as peatland and saltmarsh habitats.

Vision: To protect, conserve and enhance biodiversity connectivity across our transport network, supporting the recovery of our natural assets.

To achieve our vision, we are committed to the following goals:

- Achieve a Biodiversity Net Gain (BNG) of 10% by 20351.
- Contribute to the implementation of a National Nature Recovery Network.
- Support our Net Zero 2040 and Climate Positive 2050 targets by increasing carbon sequestration.
- Increase woodland cover on our adjacent landholdings from 14% to at least 30% by 2030.

We can play a positive role in managing biodiversity along our network by effectively monitoring our natural assets and taking advantage of best practice through advances in science and technology. This strategy outlines our vision for biodiversity conservation, with a focus on our railway network, across five strategic themes of Nature-based Solutions (NbS), Positive action for pollinators, Quantifying biodiversity change, Invasive Non-Native Species (INNS) and Partnership working and collaboration.

Target 3 - By 2030, develop a robust and quantifiable biodiversity monitoring strategy to ensure changes in biodiversity status can be detected, with our aim of achieving a biodiversity net gain of 10% by 2035.

#### Positive action for pollinators

Target 2 - By 2025, implement and deliver pollinator recording initiatives along our transport corridors, and by 2030 set aside at least 10% of our adjacent landholdings for habitat management practices.

### Nature-based Solutions (NbS)

Target 1 - By 2030, conserve and enhance biodiversity to at least 30% of our landholdings through Nature-based Solutions in support of carbon sequestration and local nature recovery networks

Figure 1. Themes and targets to achieve Biodiversity Net Gain

<sup>1</sup> In Northern Ireland, measurable improvement for biodiversity is not mandatory in Planning Policy, however the use of BNG is a robust way to demonstrate positive effects for the environment

#### Quantifying biodiversity change

#### Invasive Non-Native Species (INNS)

Target 4 - By 2030, achieve at least a 50% reduction in lineside INNS through the programme of measures used to prevent the introduction, spread and establishment of high-risk invasive species across the network.

#### Partnership working and collaboration

•<sup>1</sup>•

Target 5 - By 2030, develop and strengthen partnerships with key internal and external stakeholders, delivering projects and initiatives to support our local wildlife and mitigate against biodiversity loss.

### Translink route to Biodiversity Net Gain







Achieve Biodiversity Net Gain of 10% by 2035

# 02. Introduction

Our vision and goals are closely aligned to our Climate Positive Strategy's pledge to 'protect, maintain and enhance biodiversity helping habitats and ecosystems provide essential services such as carbon storage, clean air, food and our wellbeing'. The natural environment and biodiversity can play a significant role in tackling the climate crisis and delivering on our commitments to achieve Net Zero by 2040 and Climate positive by 2050. The implementation of our Biodiversity Strategy will also support other objectives to improve environmental sustainability in our Better-Connected Corporate Strategy (Climate Action) and Corporate Responsibility Strategy (Go Eco).

The increasing pressure on our natural environment is reflected in that only 38% of our protected habitats are in favourable condition (DAERA, 2023) and 11% of our 2,450 species in Northern Ireland are currently threatened with extinction (NBN, 2019). Evidence suggests that Northern Ireland ranks 12th worst out of 240 countries for biodiversity loss as natural habitats are fragmented.

The railway environment is an important natural resource offering habitats for species of flora and fauna through corridors. The connectivity of habitats has been identified as a key criterion in nature's recovery. Linear features such as our transport corridor, lineside verges, together with the wider estate landholdings can play a crucial role in reconnecting isolated or fragmented sites of limited biodiversity value. The biodiversity connectivity of our railway network can facilitate the natural dispersal for habitats and species, connecting semi-natural lineside vegetation such as grassland, scrub and woodlands with priority habitats and designated sites (Section 3.2). Our railway corridor or 'green network' extends to 462 kilometres of track and 328 route kilometres, with a lineside estate of over 1700 acres of land. There are 54 stations, with 700 bridges, 290 culverts, 10 viaducts, 3 tunnels. In addition, we own over 363 acres of agricultural lands with 39 acres designated as Areas of Special Scientific Interest. Approximately 35% of our network runs through or adjacent to designated sites (ASSIs, AONB) and priority habitats.

Management of our transport corridors must also consider and provide:

- Sustainable design and protection of biodiversity during construction and maintenance works.
- Increasing connections to adjacent habitats to reduce habitat fragmentation and isolated sites of limited biodiversity value.
- Increased integration of our railway corridor with the surrounding landscape character.
- Refuges for wildlife facing increased pressure from urban and intensive agricultural practices.



Biodiversity or biological diversity refers to all species of plants and animals, the habitats in which they live and the complexity of ecosystems in our natural world. The UN Convention on Biological Diversity emphasises the importance of biodiversity in maintaining healthy ecosystems. Biodiversity and climate change are inter-connected and both are key priorities in our Climate Positive Strategy. Biodiversity plays an important role in mitigating against the impact of climate change, whilst climate change increases the pressure on our natural assets and can contribute to and accelerate biodiversity loss.

In our management of transport infrastructure, it is becoming increasingly important to consider our environmental assets and green infrastructure to enhance our resilience to climate change through:

- carbon sequestration by reducing emissions,
- sustainable drainage by improving surface water management and reducing the effects of flooding,
- regulating high air-temperatures.

Aside from supporting species of conservation concern, our lineside semi-natural habitats such as woodlands, hedgerows, grasslands, peatlands and saltmarshes are effective carbon stores, acting as Nature-based Solutions for climate change and climate mitigation. Within the UK, peatlands store around 3 billion tonnes of carbon and blue carbon within saltmarshes is estimated at 36 million tonnes (ONS, 2019). However, poorly managed peatlands under intensive land management practices including afforestation, drainage, arable farming, and peat extraction for example can result in the emission of 23 million tonnes of CO2 each year (Evans et al., 2017).

Northern Ireland is one of the least wooded regions in Europe, with 8% woodland cover compared with the European average of 37%. In addition, almost 60% of our woodland is in the form of conifer plantations (Woodland Trust, 2021). A substantial increase in the rate of new woodland, supporting native broadleaved species, is required to help us meet our Climate Positive targets through carbon sequestration, whilst at the same time supporting the recovery of biodiversity. Broadleaf woodland has the potential to sequester between 300 and 350 tonnes of carbon per hectare over a 100-year period. It is therefore important to consider biodiversity in climate change action, ensuring that the right tree is planted in the right place to deliver resilient mixed woodlands that are effective carbon stores.

In addition to restoring and promoting awareness of the value of biodiversity, a significant element of managing our natural assets will focus on climate change mitigation through:

- habitat creation, increasing our woodland extent on our landholdings adjacent to the railway from 14% to 30% and,
- our management of our carbon stores in peatlands and saltmarshes to help us reduce CO<sub>2</sub> levels and achieve our 2040 Net Zero target.

Aside from climate change, other drivers of biodiversity loss include habitat loss and fragmentation through land use change, Invasive Non-Native Species and pollution. There have been profound changes in agricultural practice over the last century. Agriculture accounts for 75% of Northern Ireland's total land use, however, increased fertiliser and pesticide use has had an adverse impact on the natural environment. Wildlife corridors are important features to overcome habitat loss and the way we manage our railway corridor is a key consideration for species movement. Railway corridors can support a range of native species, but there is also an increased risk from invasive alien species. Nonnative species have the potential to outcompete native vegetation, reduce biodiversity, and disrupt ecosystem functioning. In addition, significant structural damage can be caused by Japanese knotweed while Giant Hogweed is a health hazard.

To address the potential for biodiversity loss along our lineside corridor and wider adjacent landholdings, our strategy and action plan focuses on 5 Biodiversity Themes:

- Nature-based solutions (NbS)
- Positive action for pollinators
- Quantifying biodiversity change
- Invasive Non-native Species (INNS)
- Partnership working and collaboration



### 2.2 Biodiversity – policy and legislation



**Figure 2.** Matrix showing International legislation and National and Corporate Strategies shaping our Biodiversity Themes.



In 2011, the Wildlife and Natural Environment Act (WANE) in Northern Ireland came into force, amending the Wildlife Order (NI) 1985. The Act places a statutory duty (Biodiversity Duty) on public bodies to further the conservation of biodiversity in line with carrying out their main functions.

To further the conservation of biodiversity we must consider the following five areas:

- Protection of biodiversity
- Maintenance of biodiversity
- Enhancing biodiversity
- Restoring biodiversity
- Promoting the understanding of biodiversity both within and outside the organisation

# 03. Our Biodiversity and Natural Assets

## 3.1 Changes in our railway landscape

Vegetation management along our lineside has evolved and as a result has a direct impact on biodiversity. Our rail network dates back to 1839 but as early as 1897, naturalist literature noted the diversity of habitats and flora along the railway lineside in Northern Ireland in 'The Botany of a Railway Journey' (Praeger, 1897). For example, the lineside at Lambeg had an abundance of Vicia Sylvatica (Wood Vetch) that extended from the hillside. Also, aquatic species were noted at the Moira canal as it was "fringed with the flowering rush Butomus umbellatus and the Sweet Flag Acorus Calamus". Furthermore, pools and swamps of sundews Drosera anglea and D. rotundifolia together with Bladderworts were identified adjacent to the track at Brackagh Bog. Further south along the Newry Canal, Cicuta and Oenanthe Phellandrium were abundant, fringed with "Arrow-head and floating Bog-bean in full blossom".



Aside from the WANE Act, there are other legislative requirements that we are committed to including:

- The Nature Conservation and Amenity Lands Order (NI) 1985, amended in 1989
- The Environment Order (NI) 2002
- The Conservation (Natural Habitats, etc.) (Amendment) (Northern Ireland) (EU Exit) Regulations 2019
- The Invasive Alien Species (Enforcement and Permitting) Order (NI) 2019

In 1934, one of the first references to invasive non-native species along the railway track was recorded as *Epilobium nummularifolium* (New Zealand), extending along the ballast for half a mile at Helen's Bay (Praeger, 1934). Other successful colonizers along the Bangor Line included *Tragopognon pratense* and *Matricaria cliscoidea*.

In recent years, lineside vegetation management has shifted towards continuous monitoring as it can pose severe safety risks for our railway environment (Section 3.3). For example, threats to infrastructure and operations include fallen trees, broken branches, high leaf fall and overgrown shrubs. The benefits of vegetation as a component of green infrastructure are evident through the improved stability of cuttings and embankments, protection against adverse weather and a reduction in soil erosion.

#### 3.2 Lineside estate and adjacent habitats

Our railway network, including our lineside corridor and extended landholdings, supports significant areas of biodiversity importance in Northern Ireland. A baseline assessment of our biodiversity assets (species and habitats) along the railway corridor, shows that approximately 35% of our rail network runs through or is adjacent to 24 designated sites, 13 priority habitats and 30 local wildlife sites (within 50 m) including:

- 11 Areas of Special Scientific Interest (ASSI) •
- 4 RAMSAR areas
- 4 Special Protected Areas (SPA) •
- 3 Areas of Outstanding Natural Beauty (AONB)
- 2 Special Areas of Conservation (SAC)



## 1% 1% Priority Woodland **Priority Fen** 28% 34% Local Wildlife Sites Area of Special Scientific Interest (ASSI) (inc. RAMSAR, SPA and SAC) 2% **Priority Grassland** 2% **Priority Peatland** 38% 1% Area of Outstanding Natural Beauty (AONB) Nature Reserve

#### Figure 3. Designated sites and priority habitats (%) within 50m of our railway corridor.

In addition, we currently have over 363 acres of land acquired through the closure of User-worked crossings (UWC). Here, we have opportunities to enhance biodiversity and support biodiversity initiatives through our proposed habitat and species management plans. The majority of our additional landholdings are agricultural (including 14% woodland).

Figure 4. Our additional land holdings showing designated sites and priority habitats with primary land use.

There are over 8500 species records within a 1km distance of the railway network recorded through our Local Environmental Record Centre (CEDaR, National Biodiversity Network Atlas). Across the railway there are 175 priority species of the total of 592, representing 30% of biological records included on the NI priority species list (NIEA, 2023). Priority species are those which require conservation action due to their decline, rarity and/ or importance. They can be susceptible to impacts from infrastructure works. Our forthcoming management action plans and conservation initiatives will be focused on a number of priority species or groups of species that are both characteristic to the railway and have local significance.

**Priority Species** 

Recorded within 1km of the rail network



Figure 5. Priority species recorded within 1km of our railway network.

# 2%



Figure 6. Key coastal, grassland and peatland habitats associated with our railway network and adjacent landholding.

#### Coastal

The Belfast-Bangor and Belfast-Larne lines run adjacent to the Inner and Outer Belfast Lough (ASSI, Ramsar) comprising of a series of intertidal mudflats and roosting lagoons. The exposed mudflats are used by migrant and over-wintering wildfowl and waders. This habitat supports internationally important numbers of Light-bellied brent geese, Redshank, Oystercatcher, Curlew, Dunlin, Ringed Plover, Bar-tailed Godwit, breeding Common, Roseate and Sandwich Terns. The Outer Lough is host to the largest UK overwintering population of the Great Crested Grebe.

The Derry-Londonderry line fringes 4km of the Magilligan (ASSI, SAC) coastal sand dune system at Downhill Strand, with successive vegetation communities supporting species such as Marsh Fritillary and Petalwort. Our railway borders 8 km alona Louah Foyle (ASSI, SPA, Ramsar) including intertidal mudflats, sandflats and saltmarsh. These habitats support migratory waterfowl and breeding waders (e.g. Lapwing). The 2.8 km of

railway along the Bann Estuary (ASSI, SAC) and our adjacent landholdings comprise coastal sand dunes and saltmarsh.

Coastal saltmarsh habitat is rare in NI as it totals c. 250 ha. The southern end of Larne Louah comprises extensive intertidal mudflats with upper mudflats containing distinctive saltmarsh vegetation succession dominated by Red Fescue and Saltmarsh Rush. There are a number of brackish water lagoons on the western side of Larne Lough formed through the construction of the railway in the 19th century.

# Grassland

The agricultural landscape bordering our rail network is comprised of speciespoor improved grassland managed for grazing. This supports a limited diversity of flora and fauna. Isolated priority grasslands bordering the railway can be found north of the Ballymena line. At Faranlester, along the Bann Estuary and east of Carrickbroad, Newry, mesotrophic grassland communities with prominent tussocks of rush pasture occur. Wildflower grassland consisting of Black Knapweed Centaurea nigra

and Meadow Vetchling Lathyrus pratensis dominate at the forest margins bordering the Bangor Line at Crawfordsburn.

### Peatland

North of Dunloy, the track borders Caldanagh Bog, a lowland raised bog and an important nesting and winter-feeding habitat for Snipe and Curlew. This supports a diverse range of Sphagnum mosses including Shagnum pulchrum which is locally abundant but nationally scarce.

On the Belfast to Dublin line, the railway embankment at Brackagh Bog and Brackagh Moss (ASSI) Nature Reserve, 2.6 km south of Portadown, consists of wet woodland, speciesrich fen and open water pools.

Our semi-natural peatlands are the largest stores of carbon, and when in favourable condition, can sequester carbon and make a significant contribution to our Climate Positive 2050 targets.



Figure 7. Key lineside, woodland and hedgerow habitats associated with our railway network and adjacent landholding.

### Lineside corridor

The transition in vegetation from urban stations and halts to rural areas is evident from formal landscaping with introduced shrubs such as laurel and barberry which are low maintenance, shifting to informal, native, species-rich vegetation along the railway. Our lineside vegetation bordering the railway typically consists of:

Dense scrub. Gorse Ulex europaeus, bramble Rubus fruticosus agg., Yorkshire fog Holcus lanatus, Red fescue Festuca rubra, Rosebay willowherb Chamaenerion angustifloium with Butterfly-bush Buddleia davidii occupying lineside ballast and weathered railway structures.

Broadleaved scattered trees. Ash Fraxinus excelsior and sycamore Acer pseudoplatanus dominant with Rowan Sorbus aucuparia and birch Betula sp.

Ruderal vegetation. Broad-leaved dock Rumex obtusifolius and Common nettle Urtica dioica.

Short perennial. Ragwort Senecio

jacobaea, creeping buttercup Ranunculus repens and cleavers Galium aparine.

green corridors directly (mammals) or indirectly (seed dispersal) moving flora and fauna. Invasive nonnative species have the potential to outcompete native vegetation leading to reduced biodiversity and can cause significant infrastructure damage e.g. Japanese Knotweed (Reynoutria japonica), Himalayan balsam (Impatiens glandulifera) and Giant hogweed (Heracleum ponds or wet ditches with willow and alder establishing. The restoration of our lineside habitats has the greatest potential to increase and enhance

## Woodland

Woodland distribution within our rail network reveals a small number of semi-natural woodlands. isolated coniferous plantations and linear sites. Adjacent priority woodlands consisting of mixed conifer and broadleaf forests include

Well-vegetated linesides act as mantegazzianum). In urban locations, wetland scrub may form in ephemeral landscape connectivity.

Goragh Wood, Umbra Wood and Crawfordsburn. Structurally diverse woodland is essential for foraging and breeding and can also reduce competition between species and within species populations.

#### **Hedaerows**

Native species-rich hedgerows (containing 5 or more species within a 30m length) are important features along the railway landscape, providing a unique opportunity for connectivity between habitats allowing flora and fauna to disperse. The unmown margins along hedgerows can prevent soil erosion and are equally important for wildlife, also providing shelter and food for nesting birds, foxes, badgers, hedgehogs, bats and insects.

Our hedgerows are typically adjacent to the lineside and semi-natural habitats and are species-poor dominated primarily by Hawthorn Crataegus monogyna with Holly Ilex angustifolium and Blackthorn Prunus spinosa.



#### **3.3 Our Biodiversity Management**

### **Biodiversity Mitigation Hierarchy**

To limit the adverse impacts of railway infrastructure development on biodiversity and achieve Biodiversity Net Gain, we will implement the Biodiversity Mitigation Hierarchy. Following the principles of avoiding, minimising, restoring, or offsetting impacts on biodiversity, the guidelines below illustrate the foundation for achieving Biodiversity Net Gain. Our habitat and species management plans will outline measures to protect our natural assets.

#### Increasing risk and cost





Japanese Knotweed - Illustration purposes only



Giant Hogweed - Illustration purposes only

#### **Lineside Vegetation Management**



Figure 8. Railway corridor vegetation survey showing Invasive Non-Native Species survey with Japanese Knotweed point features (green circles) and LIDAR survey showing vegetation structure and tree safety risk (green, yellow and orange).

Our lineside vegetation management including our Tree Management Programme contributes to the sustainable management of habitats as well as maintaining and enhancing safe rail operations. The removal of potentially hazardous lineside vegetation including shrubs and trees are managed in line with industry standards and best practice. The Lineside Vegetation Management Manuals<sup>2</sup> describe the risk assessment process defining areas for Immediate Action, Action and Alert.

We have over 255,000 trees within 65m of our operational railway and our 2019 baseline tree survey identified 16,500 trees as potentially hazardous using a risk model. Due to climate change, an increase in extreme weather events can cause unforeseen changes to lineside vegetation for areas that would be deemed low risk. Phase 1 (2020-2025) of our Tree Management Programme has prioritised the removal of the highest 25% together with compensatory planting of over 4000 trees per year. It is critical that offsetting will be located in suitable areas beyond the railway corridor to prevent the reintroduction of risk.

We are initiating a programme of measures to address Ash Dieback risks across our network. The disease, caused by the fungus Hymenoscyphus fraxineus, can result in wilting leaves, leaf loss, crown dieback and tree death over the coming decades. Our action plan

<sup>2</sup> Issue 3 NR/L2/OTK/5201, supported by Module 1 Lineside vegetation inspection and risk assessment NR/L2/OTK/5201/MOD01, and Module 2 Vegetation Management Requirements NR/L2/OTK/5201/MOD02.

includes carrying out a baseline survey of the rail network to establish the number of Ash trees affected and the appropriate management strategies required to minimise risk to safety and performance. To ensure the safe operation of our infrastructure, factors taken into consideration are tree condition and location relative to the railway.

Corridors can inadvertently aid the dispersal of Invasive Non-Native Species (INNS), leading to a negative impact on our natural assets and estate infrastructure. To mitigate against the negative impacts of INNS we have implemented management strategies to detect, monitor and treat high-priority INNS across our railway and properties through an Invasive Non-Native Species Programme. Species included in our INNS survey and herbicide treatment programme include Japanese Knotweed (Reynoutria japonica), Himalayan balsam (Impatiens glandulifera) and Giant hogweed (Heracleum mantegazzianum). A baseline survey (2018) and Phase 1 treatment plan (2019-2022) are complete with Phase 2 (2023-2026) underway. The surveys record information on the size and extent of the INNS, photographic evidence and vegetation control methods.

Our lineside vegetation management information will be used in conjunction with baseline habitat maps and orthophotography to identify biodiversity opportunities along the rail network and within our adjacent estate.

# 04. Nature recovery case studies

4.1 Re-connecting landscapes through Sustainable Woodland Creation: Dagger Wood

In March 2019, 19.9 acres of land adjacent to the railway, located 3.5 miles west of Lisburn city centre was acquired. This acquisition aimed to support the closure of user-worked crossings, improving safety and efficiency. As part of Translink's commitment to biodiversity and aim to be climate positive by 2050, this site was identified for native woodland creation supporting our Tree Management Programme.

The development of Dagger Wood also represented an opportunity for habitat expansion and re-connection as the site is adjacent to two existing woodlands (15 acres) owned by the Lisburn District Scout Association. A total of 14,450 native saplings were planted in 2022/2023 consisting of 8 species of native tree (Scots pine, Alder, Downy birch, Silver birch, Pedunculate oak, Rowan, Cherry and Hazel). This shared commitment to environmental conservation has demonstrated a unique opportunity to collaborate and engage with youth organisations, whilst delivering environmental and carbon benefits. The positive long-term outcomes include:

- Carbon sequestration Creating new woodland and planting a diverse range of tree species will significantly enhance carbon capture and will contribute to our journey to net zero.
- Biodiversity restoration Extending our green corridor through woodland creation and planting native trees will enhance the site's ability to support a wide range of flora and fauna and will help meet our ambitions to become nature positive.
- Community engagement Dagger Wood and its environs has the potential to engage with 15 active groups from the Lisburn District Scouts, offering a range of activities for 4-18 year olds. It also supports our Connecting Communities strategic objective as this project has actively involved local Scouting groups, collaborated with volunteers and established partnerships with conservation organisations.



Figure 9. Enterprise Train running in parallel to Dagger Wood, Lisburn.

### 4.2 Bat conservation, habitat protection and restoration

An on-going project to facilitate the reduction of user-worked crossing risk in south-east Antrim, involves the demolition of five existing derelict buildings and the construction of a new bridge and laneway over the existing railway track. An ecological appraisal and environmental assessment recorded seven of Northern Ireland's eight bat species foraging and commuting across the site.

In total, four day roosts for common and soprano pipistrelles, one Nathusius' pipistrelle (Rare/Annex II species) day roost and one large Leisler's maternity roost were identified within two of the derelict buildings. All species of bats in Northern Ireland are listed on Annex IV of the EC Directive and classified as European Protected Species (EPS) and are subject to a regime of strict legal protection in Northern Ireland under the provisions of the Habitats Regulations. Additionally, bats are granted further protection in Northern Ireland under the Wildlife (Northern Ireland) Order 1985.





and E) Timber larch cladding to provide crevices for bats and bat access points under fascia to replace existing roosting conditions.

To protect and compensate for the disturbance and loss of habitat, several mitigating measures are planned to protect the bats. These include:

- A custom-built 'bat barn' (Figure 10) built in summer 2023 to replicate their internal and external roosts and provide suitable hibernation conditions.
- The existing treeline on the southern aspect of the railway corridor will be retained. Any cut vegetation surrounding the buildings will be turned into a dead brash hedge to retain site connectivity.
- Lost woodland and scrub habitat will be replaced, and extra planting will provide compensation for any habitats lost around the existing roost.
- The new bat barn will be sited near a hedgerow and treeline, with climbing plant species added to the exterior to provide cover.

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# 05. **Translink route to Biodiversity Net Gain**

To achieve Biodiversity Net Gain by 2035 and support our vision To protect, conserve and enhance biodiversity connectivity across our transport network, supporting the recovery of our natural assets we have outlined five strategic themes with 5 targets and 32 priority actions.

### Targets

Our targets are measurable and timebound.

### Actions

Our actions outline activities designed to help achieve these targets.







A measurably positive 'net gain' on biodiversity will be delivered through creating and improving natural habitats. This approach supports our commitment to biodiversity enhancements during new infrastructure projects across our estate and network.

**Photos:** (L-R) Dagger Wood project team with Woodland Trust and Lisburn District Scouts. Sunflowers at Strabane Depot's meadow garden.

#### **5.1 Nature-based Solutions**



Target 1 – By 2030, conserve and enhance biodiversity in at least 30% of our acquired landholdings through nature-based actions to increase carbon sequestration and support local nature recovery networks.

We will aim to take actions to protect and enhance biodiversity through habitat creation, as this is one of the most effective Nature-based Solutions (NbS) against biodiversity loss and climate change. Habitat improvement projects must be actioned over the next 2-3 years to record species increasing by 2030 (Brotherton et al., 2021). We will focus our NbS on our adjacent estate through land identified and acquired by our User Worked Crossings Safety Improvement Programme. We will continue to identify opportunities to reconnect isolated sites of significant or limited biodiversity value utilising our adjacent landholdings, working alongside landowners, communities, environmental organisations and councils.

Priority Actions	Responsibility and Partners	Milestones
1.1 Conduct desktop and ground-truthed baseline assessments of our biodiversity assets within i) the railway network and ii) separate estate lands to identify key areas of high biodiversity value and those that require enhancement.	Infrastructure Division, CEDaR, NBN Atlas, OSNI Spatial NI, NIEA	Biodiversity Audit and baseline review 2023
1.2 Identify opportunities for woodland expansion and creation, with an aim to increase woodland cover on our additional landholdings from 14% to at least 30% by 2030.	Infrastructure Division, Council LBAPs, Woodland Trust, Forest Service	2023-2030
1.3 Develop Biodiversity Management Plans based around key habitats and species adjacent to priority and designated habitats for enhance- ment and conservation purposes.	Infrastructure Division, CEDaR, NIEA, Buglife NI, Butterfly Conservation NI, RSPB, BTO, Ulster Wildlife	2024-2026
1.4 Contribute to a National Nature Recovery Network (NRN) in Northern Ireland, identifying biodiversity hotspots and re-connecting habitats within and adjacent to the railway network through wildlife corridors.	Infrastructure Division Councils, Ulster Wildlife, Buglife NI, Biodiversity Steering Group	2024-2026
1.5 Provide compensatory habitat provision to mitigate against biodiversity loss following construction or remediation works and promote refuges in amenity lands e.g. hibernacula, bird and bat boxes.	Infrastructure Division, Licensed ecologists, Ecological Clerk of Works (ECoW)	2023-2030
1.6 Enhance biodiversity assets and increase sustainability by integrating Green Infrastructure (GI) components e.g. green roof/ green wall.	Infrastructure Division, Corporate SHE	2024-2030
1.7 Explore methods of in-situ bioremediation using plant species to minimise environmental pollutants and assist in the removal of contaminants.	Infrastructure Division	2024-2030

#### Outcomes

- Greater understanding of lineside habitat • condition and extent.
- Increased carbon capture through sequestration will add value to our Net Zero 2040 and Climate Positive 2050 targets.
- Biodiversity hotspots along the railway corridor identified with appropriate management plans developed for conservation.
- Increased nature conservation and restoration efforts to improve ecological connectivity using nature Nature-based Solutions (NbS).
- Greater opportunities to contribute to Nature ٠ Recovery Networks and landscape projects.



### Positive action for pollinators

5.2 Positive action for pollinators

Our linear transport corridors play a crucial role in enhancing connectivity between pollinators and their habitats. Evidence suggests that the substantial long-term decrease in species-rich grasslands since the 1930s together with climate change and diseases, has caused declines in pollinators. Translink is a key partner in the All-Ireland Pollinator Plan 2021-2025 (AIPP). The plan is an island wide strategy to reverse the declines in insect pollinators such as bees, butterflies, moths, and hoverflies through conservation and habitat restoration. We will adopt the Plan's practical guidelines, resources and advice on how to support pollinators through action. During our construction and maintenance works, a key consideration will be to incorporate native and/or pollinator-friendly natural regeneration.

Priority Actions	Responsibility and Partners	Milestones
2.1 Support the UK Pollinator Monitoring Scheme (UK PoMS) and All-Ireland Pollinator Plan 2021-2025 (AIPP) by complying with recommendations and implementing recording actions to support our pollinator population.	Infrastructure Division, Corporate SHE, AIPP, UKPoMs	2023-2030
2.2 Establish long-term management approaches to create, improve and naturally regenerate habitats through the implementation of sustainable semi-permanent, pollinator- friendly planting across the built estate (e.g. Translink Ulster in Bloom) and non-operational lands.	Corporate SHE, Infrastructure Division, AIPP, UKPoMs, Pollinator Monitoring and Research Partnership (PMRP), eNGOs, Community groups	2024-2025
<ul> <li>2.3 Implement systematic and repeatable annual pollinator monitoring programmes targeting:</li> <li>i) a fixed network of sites encompassing stations, ASSI lands, local wildlife sites and priority habitats.</li> <li>ii) linear features and transects across the railway network.</li> <li>To address data deficiencies identified in the NI Priority Species List.</li> </ul>	Infrastructure Division, AIPP, UKPoMs, DAERA, Butterfly Conservation NI, Buglife NI	Annually 2023- 2030
2.4 Establish baseline invertebrate monitoring in our wetlands (peatland and saltmarsh) increasing our stewardship and support for wetland conservation.	Infrastructure Division, Wildfowl and Wetlands Trust (WWT), Buglife NI, Butterfly Conservation NI	2024-2030
2.5 Map areas of pollinator-friendly habitat management and monitoring to track landscape wide changes.	Infrastructure Division, AIPP, Butter- fly Conservation NI	Annually 2024- 2030

#### Outcomes

- Habitat creation and management to support pollinators will contribute to Translink's Climate Positive Strategy.
- Greater spatial understanding of our pollinators across our transport network and additional land holdings.
- Active monitoring of rare and threatened species.

#### Target 2 – By 2025, implement and deliver pollinator recording initiatives along our transport corridors, and by 2030 set aside at least 10% of our adjacent landholdings for habitat management practices.



# Quantifying biodiversity change

#### 5.3 Quantifying biodiversity changes

Target 3– By 2030, develop a robust and quantifiable biodiversity monitoring strategy to ensure changes in biodiversity status can be detected, with our aim of achieving a biodiversity net gain of 10% by 2035.

To successfully manage our biodiversity assets, it is essential to establish a strong evidence base with robust baseline data and the continuous collection of long-term environmental measurements. A range of earth observation data and comprehensive environmental monitoring will help support our conservation action. Adopting a datadriven and evidence-based approach will enhance our understanding of biodiversity within our lineside estate and adjacent landholdings and better inform our habitat and species management plans.

Priority Actions	Responsibility and Partners	Milestones
3.1 Conduct a Natural Capital Assessment and qualitative review of strategic locations and/or habitats within Translink's natural estate.	Infrastructure Division	2024-2025
3.2 Where necessary, establish baseline ecological conditions (Phase 1 Habitat), ensuring monitoring and surveys are standardised and repeatable.	Ecologists	2023-2030
<b>3.3</b> Monitor and evaluate success of woodland creation by quantifying predicted carbon sequestration pre and post planting.	Infrastructure Division, Natural England, Councils, i-Tree Eco, WCC Carbon Calculation	2023-2030
<b>3.4</b> Calculate baseline carbon storage and potential sequestration within the lineside estate and across additional landholdings using land use type and condition assessments.	Infrastructure Division, Natural England, Councils, NIEA	2024-2025
3.5 Account for and measure biodiversity losses/net gain (BNG) pre and post habitat or land management change using the Biodiversity Metric Tool 4.0 (DEFRA).	Infrastructure Division, DEFRA	2024-2030
<b>3.6</b> Develop a 'Biodiversity Database' to record our natural assets including habitats (extent and type) and species (population size and extent).	Infrastructure Division, CE- DaR, NBN Atlas	2024-2030
3.7 Develop Species Distribution Models (SDM) to predict suitable area-based/linear habitats and model their distribution throughout the estate.	Infrastructure Division	2026-2030

#### Outcomes

- Measurable increases in the extent and condition of species-rich habitats.
- Increased awareness and value for our environmental assets and resources.
- Regular monitoring of our Biodiversity Net ٠ Gain metrics.
- ٠ A robust evidence base founded on a series of long-term environmental monitoring programmes.





## 5.4 Invasive Non-Native Species (INNS)

### Target 4 – By 2030, achieve at least a 50% reduction in lineside INNS through the programme of measures used to prevent the introduction, spread and establishment of high-risk\* invasive species across the network.

Invasive Non-Native Species are reported to have an estimated annual cost of £46.5 million to the economy in Northern Ireland and are widely regarded as the biggest threat to biodiversity worldwide (Kelly et al., 2013). Surveillance, early detection, and rapid response are key to managing newly arrived INNS. Translink are committed to the targeted control of INNS through an eradication programme once they have become established, with a focus on those most harmful to biodiversity and our economy (\*Giant Hogweed, Himalayan Balsam and Japanese Knotweed).

Priority Actions	Responsibility and Partners	Milestones
4.1 Measure the success of biosecurity through our INNS survey and identification across the railway corridor spatially and temporally against baseline (2018) and Phase 1 metrics (2019-2022).	Infrastructure Division, Environmental contractor, Translink GIS Information Services	2023
<b>4.2</b> Continue to implement prevention and treatment strategies for INNS, following best practice guidelines, over a 4 year programme of continued active management (Phase 2 2023-2026).	Infrastructure Division, Environmental contractor	Treatment programme 2023-2026
4.3 Identify, record and register additional lineside INNS that pose a potential threat to the estate's infrastructure, wider economy and health and safety.	Infrastructure Division, NIEA, Environmental contractor	2024-2026
4.4 Document and record the potential recovery and re- establishment of native species at sites where invasive species were eradicated.	Infrastructure Division	Annual surveillance surveys targeting INNS hotspots
4.5 Establish a baseline survey of INNS from our additional landholdings adjacent to the railway including priority peatland, grasslands and woodlands.	Infrastructure Division, NIEA	2024-2026
<b>4.6</b> Continue to issue biosecurity protocols and guidance to personnel.	Infrastructure Division	2023-2030

#### **Outcomes**

- Lead by example for our INNS land management practices.
- Sustainable land management practices to maintain and enhance natural habitats along the lineside estate.
- Cost effective surveillance, early detection, monitoring and rapid response.





### 5.5 Partnership working and collaboration

Target 5 – By 2030, develop and strengthen partnerships with key internal and external stakeholders, delivering projects and initiatives to support our local wildlife and mitigate against biodiversity loss.

We outline the actions needed to form and maintain relationships with our adjacent landowners and land managers to raise awareness of the benefits of biodiversity and our approach to vegetation management. Partnership working with relevant authorities, eNGOs and local communities will enhance surrounding habitats and protect species through positive biodiversity action. We will engage with 'citizen science' conservation providing opportunities for communities to become actively involved, taking responsibility for protecting our biodiversity whilst increasing the social value of our transport patwork for protecting our biodiversity whilst increasing the social value of our transport network.

Priority Actions	<b>Responsibility and Partners</b>	Milestones
5.1 Continue to strengthen our environmental responsibility through partnerships with eNGOs, local councils, landowners and community groups to support biodiversity initiatives and promote environmental conservation projects.	Infrastructure Division, Corporate SHE, UW, TCV NI, KNIB, RSPB, BTO, Buglife NI, Butterfly Conservation NI, Local schools, Councils, NILGA	2023-2030
<b>5.2</b> Engage with local authorities to assist in delivering actions within Local Biodiversity Action Plans (LBAPs), to promote, protect and improve biodiversity along our network.	Infrastructure Division, Councils	2023-2030
5.3 Support and contribute to planting schemes and Tree initiatives in accordance with Translink's Tree Management Programme (Phase 1 and 2).	Infrastructure Division, Councils, Woodland Trust, Community and Environmental Groups	2023-2030
<b>5.4</b> Develop a programme of citizen science projects to encourage staff participation, increase our environmental stewardship and support data collection across our estate.	Infrastructure Division, Corporate SHE, eNGOs	2024-2030
5.5 Continue to develop an internal and external communication strategy to promote awareness and understanding of biodiversity initiatives within projects.	Infrastructure Division, Corporate SHE	2023-2030
5.6 Centralise and collate environmental surveys and impact assessments through an internal database for submission to CEDaR.	Infrastructure Division	Annually
5.7 Publish and share best practice guidelines for conserving and promoting biodiversity management with stakeholders.	Infrastructure Division, Corporate SHE	Annually

#### Outcomes

- Improved staff engagement by increasing biodiversity skills and knowledge.
- Improved strategic planning for biodiversity ٠ management with external stakeholders.
- Increased awareness about the importance • of our biodiversity assets and environmental sustainability along the network, encouraging active participation through citizen science.





# 06. Glossary and abbreviations

**AIPP:** The All-Ireland Pollinator Plan is a framework to reverse the declines of pollinators (Ireland and Northern Ireland).

**AONB:** Area of Outstanding Natural Beauty designated in recognition of their national importance as landscapes of distinctive character and special scenic value.

**ASSI:** Area of Special Scientific Interest are protected areas that represent the best samples of our natural heritage and / or geological history.

**Biodiversity Net Gain (BNG):** Recovery of nature following development that leaves biodiversity in a better state than before.

Blue carbon: Carbon captured in marine and coastal ecosystems.

BTO: British Trust for Ornithology.

CEDaR: Centre for Environmental Data and Recording for Northern Ireland.

DAERA: Department of Agriculture, Environment and Rural Affairs.

**INNS:** Invasive Non-native Species are species which have been accidentally or deliberately introduced into our environment and result in damage to native habitats and/or species.

Lineside: Area adjacent to the track and ballast which is typically vegetated.

**Local Wildlife Sites:** Areas important for local biodiversity and/or geodiversity due to their nature conservation value and/or their ability to support important species.

**Nature-based Solutions (NbS):** Actions to protect, restore and sustainably manage natural assets in ways that provide social and economic benefits as well as help tackle challenges such as climate change.

**Nature Recovery Network:** A connected network of marine, water and terrestrial habitats where nature and people can thrive. Spatial strategies to help deliver nature recovery of habitats and species.

NIEA: Northern Ireland Environment Agency.

Priority habitats: Habitats identified as under threat and are of greatest concern.

**Priority species:** Species which require conservation action because of their decline, rarity and importance (all Ireland and UK context).

RAMSAR: Wetlands of international importance designated under the Ramsar Convention.

RSPB: The Royal Society for the Protection of Birds.

**SAC:** Special Area of Conservation; an area designated under the EU Habitats Directive for the protection and conservation of seriously threatened habitats and species.

Sequestration: The process of capturing and storing carbon dioxide from the earth's atmosphere.

**SPA**: Special Protection Areas are designated under the Conservation (Northern Ireland) 1995. They are classified for rare and vulnerable birds (as listed on Annex I of the Birds Directive (79/409/EEC as amended)), and for regularly occurring migratory species.

**Sustainable Development Goals (SDGs):** A collection of 17 interlinked global goals adopted by the United Nations in 2015 to end poverty, inequality and protect the planet.

TCV NI: The Conservation Volunteers NI.

UKPOMS: The UK Pollinator Monitoring Scheme generates systematic data on the abundance of pollinators.

# 07. References

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## **Further Information**

To find out more about Translink's Biodiversity Strategy 2030 please contact <u>suzanne.sinclair@translink.co.uk</u>





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