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Llywodraeth Cymru
Welsh Government

Llwybr Newydd i Natur

The Welsh Strategic Road Network Nature Recovery Action Plan

Foreword

From the Deputy Minister



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Deputy Minister
for Climate Change

We are facing a Nature Emergency with an average decline of 20% in the abundance of our native species in the last 30 years alone; and one in six species currently at risk of disappearing from Wales completely. Despite increasing conservation effort, the overall trends are still negative and our wildlife and the habitats they depend on are threatened by numerous pressures, not least a rapidly changing climate. As our awareness of these issues continues to grow, now is the time to act. We have put in place much of the legislation and policy required to drive the changes we need to make to address the joint climate and nature emergency and protect our nature for future generations. Now everyone must recognise and play their part to protect our environment and help nature recover.

When we published Llwybr Newydd - the Wales Transport Strategy in 2021 we committed to maintain and enhance biodiversity and increase ecosystem resilience through transport operations and infrastructure projects. The need for this action has only become clearer since 2021, supported by the outcomes of the Welsh Government's Roads Review and the United Nations Biodiversity Conference (COP 15).

The Strategic Road Network in Wales is one of the most important national assets we have. While the roads provide vital connections for Wales' people and our economy, the many miles of roadside hedgerows, grasslands and woodlands create connectivity for wildlife through our landscapes too. Operating, maintaining and improving the Network for people must no longer come at the cost of our environment, but be recognised as opportunities to work with nature to provide benefits for all, now and in the future.

Crucially, we cannot act alone as the Network is connected to Wales' wider landscape and the ecological networks it contains. We must build on our work with our partners and stakeholders, strengthening our relationships and work collaboratively to deliver for nature in Wales.

I am proud to launch Llwybr Newydd i Natur – the Nature Recovery Action Plan for the Strategic Road Network in Wales. This plan brings to the forefront how we think about, plan for, and deliver for nature, driving a step change in our work for biodiversity and ecosystem resilience on the Network estate across Wales. It will embed actions to protect and enhance nature as a core principle of every aspect of our work.

Introduction

The term 'biodiversity' describes the full variety of life. It is the variability between and within species, and the ecological complexes they form. It can be applied at any scale; Global biodiversity, Welsh biodiversity, biodiversity of a landscape, or a specific site. The web of interactions between living organisms and their environment sustains all life, including our own. These ecosystems regulate our climate, provide us with the oxygen we breathe, our food and clean water; they maintain the world as we know it.

The biodiversity within an ecosystem is strongly associated with its condition, extent and connectivity. Ecosystems that are isolated and depleted in extent and diversity are fragile and vulnerable to change. They are not reliable to provide the services we need.

In the face of a rapidly changing climate, ensuring our ecosystems are as resilient to future changes as possible is vitally important.

Measures to improve the condition of habitats and increase their extent and connectivity will encourage an increase in biodiversity and the ecosystem's resilience to future pressures.

[Globally, biodiversity is declining rapidly and the same is true in Wales.](#) The Welsh Government has declared a Climate and Nature Emergency to highlight the seriousness and interconnected nature of climate change and biodiversity decline, and to concentrate efforts to tackle both. By helping biodiversity to recover and ecosystems to be more resilient we can help mitigate the impacts of climate change and sustain the benefits of biodiversity for current and future generations.

Welsh Ministers are directly responsible for the operation, maintenance and improvement of the trunk road and motorway network of Wales, collectively known as the Strategic Road Network. [Llwybr Newydd: the Wales Transport Strategy](#) commits Welsh Government to **"...maintain and enhance biodiversity, and increase ecosystem resilience through transport operations and infrastructure projects."**

Llwybr Newydd i Natur, our Nature Recovery Action Plan for the Strategic Road Network has been developed to support the Wales Transport Strategy, setting the actions we will take to deliver its ambitions, priorities and commitments. The actions presented in Llwybr Newydd i Natur will also enact the biodiversity and ecosystem resilience recommendations made by the [Roads Review Panel](#) in their advice on [The Future of Road Investment](#).



Llwybr Newydd i Natur has been developed to meet the commitments and legal requirements contained in the following:

- [Programme for Government 2021 – Update](#) clearly demonstrates that tackling the climate and nature emergency is a priority for Welsh Ministers, including an objective to “Embed our response to the climate and nature emergency in everything we do”.
- [The Co-Operation Agreement](#) reinforces the Programme for Government priority, including the statement “We are committed to restoring biodiversity for species and habitats in both terrestrial and marine environments.”
- [The Well-being of Future Generations Act](#) – Supporting nature to recover will contribute to achieving several of the well-being goals defined under the Act, particularly ‘A Resilient Wales’.
- [Environment \(Wales\) Act Section 6](#) biodiversity and ecosystems resilience duty mandates public authorities (including Welsh Government) to seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems.
- [Nature Recovery Action Plan Wales](#) – the Biodiversity Strategy for Wales is an all-Wales plan for everybody involved in biodiversity action in Wales, setting objectives to address the decline in biodiversity and support recovery.



The Strategic Road Network

What We Do

The Strategic Road Network comprises over 75 miles of motorway and over 1000 miles of dual and single carriageway trunk roads extending across Wales. The Network constitutes about 5% of the length of roads in Wales but carries over a third of all traffic, so the operation, maintenance and improvement of this asset is vital.

There are significant areas of land associated with our Network including grassland, heathland, trees and scrub, rocky embankments, watercourses, water bodies and wetlands that sometimes extend to tens of metres from the road itself. These areas are known as the Soft Estate and contain a wide range of habitats that support a broad diversity of wildlife.

In our management of the Soft Estate, we aim to maintain and improve these habitats for biodiversity whilst ensuring Welsh Government's duty to maintain the safety of all road users. Our management also takes into consideration other functions that the soft estate provides or has been designed for, such as visual screening, access and integrating the road into the surrounding landscape.

Welsh Government has already been working to improve the biodiversity value of the Strategic Road Network. [The Trunk Road Estate Biodiversity Action Plan](#) was used to target that work from 2004 to 2014 and beyond. Since the completion of the Trunk Road Estate Biodiversity Action Plan we have continued to deliver positive actions for biodiversity through our Green Corridors initiative.



Our work to date has included a range of projects to:

- Safeguard designated sites, and species and habitats of principal importance to nature conservation.
- Restore and improve existing habitats such as creating native wildflower verges to better support biodiversity.
- Create new habitats of higher biodiversity value such as planting native tree and shrub species to improve woodland coverage and connectivity.
- Improve road crossing opportunities for wildlife and reduce road mortalities.
- Control invasive non-native species.

How We Operate

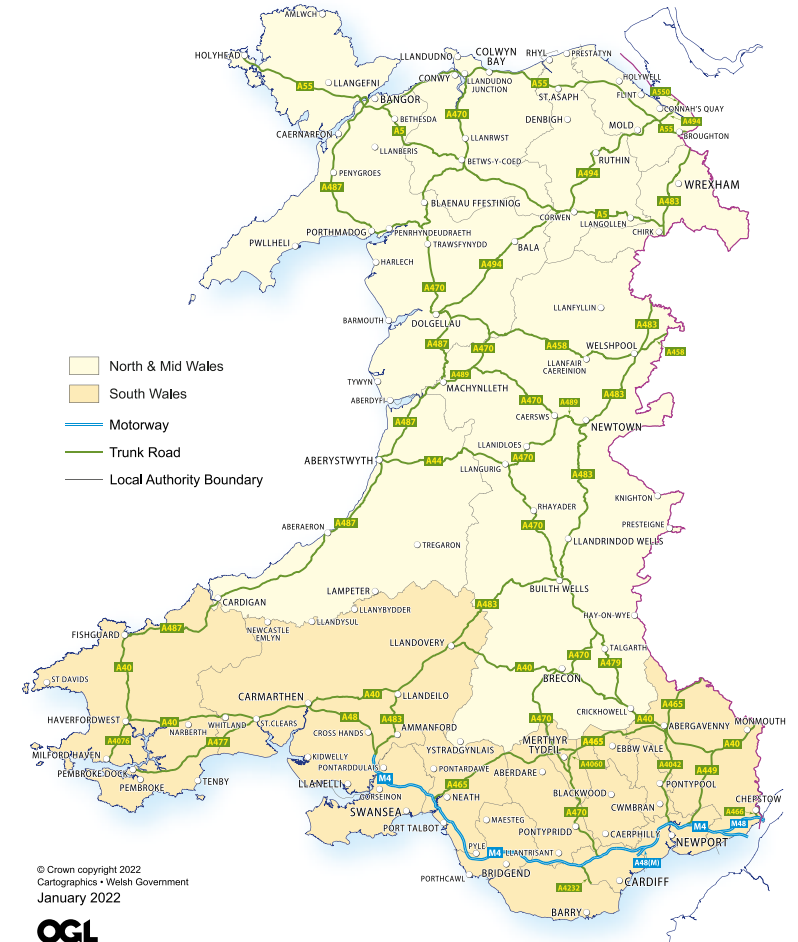
The Welsh Government are the Highway Authority for the Strategic Road Network in Wales, developing policies and standards for its operation, maintenance and improvement and planning forward programmes of work to maintain and improve its safety and serviceability. Improvements can involve relatively minor changes to road layout and asset renewal through to major schemes such as the construction of new roads.

The day-to-day operation, maintenance and minor improvement of the network is carried out on behalf of Welsh Government by two public sector Agents. The South Wales Trunk Road Agent and the North and Mid Wales Trunk Road Agent perform this function using their public and private sector supply chains.

Large improvements of the network are commissioned directly by Welsh Government using private sector consultants and contractors.

We work collaboratively wherever possible; consulting and co-delivering with a range of partners, including private landowners, local authorities and nature conservation organisations.

WALES TRUNK ROAD AGENTS



Biodiversity on the Strategic Road Network

The current and potential biodiversity value of, and impacts from, the Network can be considered in several categories:

The biodiversity value of the Soft Estate

The Strategic Road Network Soft Estate currently extends to approximately 3,100 hectares across the whole of Wales, passing through and interacting with a wide variety of landscapes and habitats. Much of the Soft Estate comprises narrow strips of grassland, hedgerows, scrub, or woodland close to the carriageway, however there are also more extensive areas of land within large interchanges, or where acquired for environmental impact mitigation, compensation, or as a result of severance. [Increasingly, the current and potential value of the Soft Estate to wildlife is being recognised and management changes are being made to maximise this value.](#)

The biodiversity value of hard engineered structures

Structures on the Strategic Road Network are known to support nesting birds and roosting bats, including rare lesser horseshoe bats that roost in some of our bridges. The suitability of structures for wildlife can be incidental or designed.

The value of the Strategic Road Network within the wider context of Wales' ecological networks

On a landscape scale the Network can form both barriers and connections for biodiversity. The linear nature of the Strategic Road Network means it can provide connections for wildlife as well as humans. The linear sections of woodland, scrub, grassland and water features that make up the Soft Estate can connect otherwise dispersed pockets of similar habitats in the wider landscape, creating a corridor for species to move and spread.



This characteristic has benefits for biodiversity and climate change adaptation, but also carries the risk of facilitating the spread of invasive non-native species and pathogens. One notable example of a pathogen with a significant recent impact is *Hymenoscyphus fraxineus* that causes Ash Die-back.

The road corridor can also act as a barrier to wildlife, fragmenting habitats and funnelling watercourses through structures that prevent the passage of aquatic organisms as well as worsen flooding events. Increasingly, well designed culverts and bridges are helping to maintain and restore permeability of road corridors for a range of species, helping them to move safely beneath the traffic and physical barriers. There is limited evidence to suggest our existing wildlife crossing structures over roads are effective, however “green bridges” have been found to support safe passage of wildlife across busy roads.

The zone of influence of the Network

The operation of vehicles on the Strategic Road Network generates pollutants which negatively impact biodiversity. A variety of measures are utilised on the Network to limit, contain and eliminate pollutants. Measures to decarbonise Wales will begin to reduce the levels of some airborne pollution. However, a range of solutions is still required to further minimise the impacts of traffic on surrounding biodiversity.

The maintenance and improvement of the Strategic Road Network involves the use of significant levels of energy and raw materials. The design and procurement choices made by, and on behalf of Welsh Government have indirect impacts on biodiversity through the supply chain for those commodities.

In some cases these impacts may be greater than those resulting directly from the works on the Network. The tests that new road schemes must satisfy under the recommendations of the [Roads Review Panel](#) will strengthen the consideration of climate change and environmental impact in design choices on new road improvement projects, both direct and indirect. The Strategic Road Network is also subject to Welsh Government’s procurement policies, that can be found on [GOV.WALES](#).



Llwybr Newydd i Natur

What is our Nature Recovery Action Plan

Welsh Government is committed to reversing the decline in biodiversity and delivering positive enhancement measures through our work. Llwybr Newydd i Natur sets out how we will contribute to this commitment through the operation, management and improvement of the Strategic Road Network in Wales. The Plan sets out our ambitions and priorities for improving the biodiversity value of the Network and the actions we will take to achieve them.

Llwybr Newydd i Natur presents the overarching goals we have set and the actions we will take to achieve those goals. Welsh Government will maintain a live action tracker to capture this work in collaboration with our stakeholders as our plan is refined, targets set and focussed actions implemented.

Who will use Llwybr Newydd i Natur and how

Llwybr Newydd i Natur will be published and maintained by the Welsh Government Transport Strategic Road Network Division, but will capture the collaborative work we do with our stakeholders, including:

- Welsh Government Transport Strategic Road Network Division.
- Other Welsh Government departments, via the Biodiversity Taskforce which works across multiple departments.
- The Trunk Road Agents and Strategic Road Network management and improvement supply chain, including consultants, contractors and local partner authorities.
- Transport for Wales and strategic highway and other linear infrastructure authorities.

- Local authority and community council partners.
- Natural Resources Wales.
- Relevant third parties including wildlife conservation organisations, community and volunteer groups, research bodies and educational establishments.

Llwybr Newydd i Natur will primarily be used at a strategic level for communicating our approach, both internally and externally; and as a reference to guide the actions of all involved in managing and improving the Strategic Road Network, from strategic management through to operatives on the ground. It will hold us accountable to our customers and stakeholders in our performance for managing biodiversity on our Network.

Our Ambition

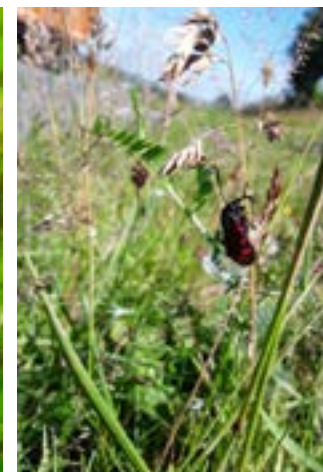
Through our actions in operating, improving and maintaining the Strategic Road Network we will demonstrate both; our continual improvement in managing for biodiversity and climate change resilience and our contribution to reversing the decline in biodiversity overall.

Our Commitments

In line with the Environment (Wales) Act Section 6 enhanced biodiversity duty, our future work must deliver a net benefit for biodiversity by maintaining and enhancing biodiversity and ecosystem resilience. We will seek to address historic and ongoing negative effects that roads can have on biodiversity and ecosystem resilience, and go beyond mitigating impacts to maximise the biodiversity value of our estate and its resilience to future change. We will review and update our aims, priorities and actions regularly to ensure our work remains directed by current information, legislation, policy and guidance.

Through the actions detailed in Llwybr Newydd am Natur, we will take steps to:

- 1.** Embed biodiversity and ecosystem resilience considerations in all decision making in the operation, maintenance and improvement of the Strategic Road Network and use our influence to encourage other organisations to do the same.
- 2.** Better understand and reduce the indirect impacts of our procurement activities on biodiversity and ecosystem resilience in Wales and globally.
- 3.** Improve monitoring and reporting of Soft Estate biodiversity to better inform management decisions and finance for biodiversity enhancement.
- 4.** Use nature-based solutions to build climate change resilience in the Strategic Road Network's infrastructure, mitigate climate change and deliver a range of ecosystem services and benefits.
- 5.** Deliver habitat creation and regeneration measures to increase connectivity and contribute to Wales' ecological networks on a landscape scale, as well as protect and support designated sites and Environment (Wales) Act Section 7 priority habitats and species.
- 6.** Embed a presumption against the loss and degradation of irreplaceable and Section 7 priority habitats, including non-priority habitats that support Section 7 priority species.
- 7.** Ensure appropriate mitigation is provided and meaningful compensation and enhancement is delivered where losses cannot be avoided.
- 8.** Avoid the fragmentation of populations from road improvement projects and improve wildlife connectivity where severed by existing roads.
- 9.** Minimise wildlife mortality on roads (for example, badgers, otters, bats, amphibians and birds).
- 10.** Develop alternative methods of weed control to minimise and eventually eliminate our use of herbicides.
- 11.** Minimise new and historic pollution, including litter, chemical, particulates, light and noise pollution of air, water and land.
- 12.** Improve our detection, monitoring and control of invasive non-native species and pathogens.



Our Priorities

To meet our ambition and commitments, we will apply the following five priorities to our work.

1. To mainstream improving biodiversity and climate change resilience in our decision making and actions.

From land and contract management to physically constructing new roads, everyone involved in the management of the Strategic Road Network can have an impact on both the estate and the surrounding landscape through the decisions they make and actions they take. For nature to recover and thrive, everyone must understand that impact and seek to make changes for the better. We will ensure that all involved in management of the Strategic Road Network understand how their work impacts on the natural environment and what is required of them under Welsh Government legislation and policy.

2. To improve our understanding of the biodiversity value of the Strategic Road Network and identify opportunities for improvement actions.

We must understand the historical and existing condition of our estate and the wider landscape it interacts with so that the measures we design to protect and enhance it are effective and resilient over the longer term. We will work collaboratively to ensure we have a robust, accurate and consistent approach to assessing our baseline conditions and both the potential and actual impacts of the measures we deliver.

3. To ensure that any unavoidable impacts we have on biodiversity are properly assessed and that the mitigation and enhancements we provide are effective and resilient.

To ensure that interventions made for the benefit of biodiversity are appropriate and effective, it is vital to conduct thorough and robust impact assessments at the outset of a project and evaluation throughout the project's lifecycle. Early consideration of how negative impacts on biodiversity can be avoided and what benefits can be gained is essential for achieving the best outcomes. The establishment of some key habitats can take several decades so the considerations and commitments also need to extend well beyond the period of direct intervention, or the construction phase of improvement projects.

4. To have an ambitious programme of biodiversity improvement actions and measures delivered across our network annually.

We will continually strive to expand and improve our work to support biodiversity on the Strategic Road Network and in the landscapes it passes through. Biodiversity improvements are already delivered across the Network estate and as part of new infrastructure projects. However, there are ongoing pressures on the Network estate that can result in the loss and degradation of habitats of biodiversity value. We will seek to minimise these negative impacts as we improve our ways of working and efforts to tackle the nature emergency.

5. To work with others and be accountable.

We will work collaboratively and transparently towards our biodiversity and climate change, mitigation and resilience goals. The biodiversity crisis is a global threat and is intertwined with other health and social concerns, none of which can be solved individually. Equally, for the Strategic Road Network to achieve the maximum potential benefit for biodiversity, works cannot focus purely on the Soft Estate but must consider the wider landscape.

Close collaboration with a broad range of stakeholders is vital to achieving our goals.

We will:

- Work with our neighbours to achieve connected ecological networks.
- Work with and support local communities and environmental bodies to achieve functional, multipurpose solutions and manage our assets to the achieve the best outcomes.
- Work with and support educational and research establishments to improve our understanding and knowledge base.
- Work with regulators and the environmental sector to be accountable and aligned with others.

Our Action Plan

The Nature Recovery Action Plan below presents the goals we have set and the actions that we will take to achieve them. A live action tracker will be maintained to capture the development and implementation of these actions.



Nature Recovery Action Plan for the Strategic Road Network

	Goals	Actions	Aligned to Priorities	Start	Complete by
A	Build a better understanding and knowledge of biodiversity and ecosystem resilience within Welsh Government's Strategic Road Network Division and our supply chain.	Develop and deliver appropriate biodiversity and ecosystem resilience awareness training aimed at all levels of decision makers within Welsh Government's Strategic Road Network Division.	1	2022	2024
		Develop a centralised training and resource hub for use by Welsh Government staff as a single point to find biodiversity and ecosystem resilience information, mitigation and enhancement.	1, 3	2023	2024
		Establish a linear infrastructure ecologists community of practise forum to facilitate knowledge sharing and cooperation across the industry.	1, 2, 3, 4, 5	2023	2024
		Facilitate capacity building measures for environmental professionals in the Highways industry to include requirements in our supply chain to support training, apprenticeship schemes, professional development, and working with educational and research institutions.	1, 3, 5	2023	Ongoing
B	Define a Strategic Road Network-specific approach to biodiversity and ecosystem resilience assessment and enhancement in Wales, which applies legislative and policy requirements for our work.	Collaboratively produce guidance documents which provide methods, measures and targets for those involved in the operation, maintenance and improvement of the Strategic Road Network to implement this approach consistently.	2, 3, 4	2023	2024
		Develop tools for data collection and measuring change in biodiversity and ecosystem resilience value to support implementation of this approach.	2, 3, 5	2023	2025
		Develop a database mapping system populated with our own data and other information on the wider landscape from Welsh Government and other sources.	2, 3, 4, 5	2023	2024
		Produce new guidance setting out expectations for developments neighbouring the Strategic Road Network to assess, protect and enhance biodiverse habitats on the Soft Estate, using the Welsh Government Strategic Road Network Division's role as consultee on planning decisions to push for better outcomes for biodiversity.	1, 5	2023	2024

Nature Recovery Action Plan for the Strategic Road Network (continued)

	Goals	Actions	Aligned to Priorities	Start	Complete by
C	Review and revise or supplement road maintenance and design guidance and standards, as well as Welsh Government contracts and project scopes to embed and promote biodiversity and ecosystem resilience considerations into all elements of the operation, maintenance and improvement of the Strategic Road Network	Review and revise or supplement relevant guidance and standards, primarily the Trunk Road Maintenance Manual and Welsh Transport Appraisal Guidance (WelTAG) to mandate the setting of ambitious targets for maintaining and enhancing biodiversity at the outset of all maintenance and improvement projects.	1, 2, 3, 5	2022	2025
Review and revise Welsh Government contracts and project plans and scopes to include appropriate measures and targets for biodiversity and ecosystem resilience maintenance and enhancement as part of delivery.		1, 3, 4, 5	2023	2025	
Establish a review cycle for all relevant documents to ensure they are kept up to date.		2, 3	2023	2025	
Explore the mechanisms for longer term funding of biodiversity measures beyond the normal project lifecycle.		3, 4, 5	2023	Ongoing	
Develop our auditing process for biodiversity to consistently monitor impacts, mitigation and enhancement measures across all areas of work.		1, 2, 4, 5	2023	Ongoing	
Review how Welsh Government recognise improved outcomes for biodiversity through environmental certification programmes and whether changes could drive improvements.		1, 2, 3, 4, 5	2023	2024	

Nature Recovery Action Plan for the Strategic Road Network (continued)

	Goals	Actions	Aligned to Priorities	Start	Complete by
D	Maintain an ambitious, evidence-based programme of works to enhance biodiversity and ecosystem resilience.	Establish appropriate forums to engage with a range of stakeholders in the continual development and implementation of Llwybr Newydd am Natur.	1, 2, 3, 4, 5	2023	2024
		Use the data collection, measuring and mapping tools developed under Action B to methodically identify opportunities for achieving meaningful biodiversity and ecosystem resilience enhancements through interventions in, and adjacent to the Strategic Road Network estate.	2, 3, 4, 5	2024	Ongoing
		Embed the principle of achieving the best management of biodiversity assets including mechanisms to facilitate actions beyond our estate and allow management by third parties such as local authorities, community groups or conservation non-governmental organisations, where appropriate.	1, 3, 4, 5	2024	Ongoing
E	Report on our work transparently, improve our approach and celebrate our successes.	Develop a robust internal and external reporting strategy on the approach set out in Action B, which is aligned across the Welsh Government and the wider conservation sector.	1, 3, 4, 5	2024	Ongoing
		Develop an effective communication plan so that Welsh Government celebrates its work for biodiversity, and shares both good practice and lessons learned with all relevant parties.	1, 5	2023	Ongoing