



Environment (Wales) Act 2016: Part 1 – Section 6
The Biodiversity and Resilience of Ecosystems Duty

Biodiversity Report and Plan September 2025

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This document is also available in Welsh

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1. Introduction And Strategic Context

1.1. Our Commitment to a Resilient Wales

- 1.1.1. North Wales Fire and Rescue Service (“NWFRS”, “the Service”) is fundamentally committed to protecting the communities, heritage, and unique natural environment of North Wales. This commitment is integral to the Service’s core mission of “Making North Wales a safer place to live, work and visit”. The health and resilience of our ecosystems - from the mountains of Eryri to our coastlines and urban green spaces - are inextricably linked to the safety and well-being of the people we serve. Healthy ecosystems provide essential services, including clean air and water, flood mitigation, and support for livelihoods, which are all critical components of community resilience.
- 1.1.2. This document serves as the Service’s statutory Biodiversity and Ecosystem Resilience Report for the period 2022-2025. It transparently details the progress made since the publication of the 2022 report and sets a clear, ambitious, and integrated path forward through a new Action Plan for 2025-2028. It demonstrates how the Service is embedding environmental stewardship into every facet of its operations, from strategic estate management to frontline emergency response.

1.2. Legislative and Policy Drivers for Action

- 1.2.1. The Service’s actions are guided by a robust and evolving legislative framework in Wales, which places a clear responsibility on public bodies to lead in environmental protection.
- 1.2.2. The Environment (Wales) Act 2016 establishes the primary statutory driver for this report. Part 1, Section 6 of the Act places a duty on all public authorities to “seek to maintain and enhance biodiversity so far as is consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems”. This duty requires the Service to embed consideration for biodiversity not only in direct land management but also in all policies, plans, programmes, and day-to-day activities.
- 1.2.3. This duty is reinforced by the Well-being of Future Generations (Wales) Act 2015, which sets out a national vision for a sustainable Wales. This report directly contributes to the “Resilient Wales” goal: a nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems. Furthermore, the development and implementation of the actions within this plan are guided by the Act’s five ways of working: ensuring a long-term perspective, focusing on prevention, integrating biodiversity with other objectives, collaborating with partners, and involving stakeholders in the process.

- 1.2.4. The legislative and political context has continued to mature since 2022. The Senedd has declared a nature emergency, and a recent Audit Wales report has highlighted that many public authorities have not demonstrated sufficient priority in complying with their biodiversity duties.
- 1.2.5. In response, the Welsh Government introduced the Environment (Principles, Governance and Biodiversity Targets) (Wales) Bill in June 2025. This landmark legislation significantly strengthens the existing framework. It establishes a new independent oversight body, the Office of Environmental Governance Wales (OEGW), to ensure public authorities comply with environmental law.
- 1.2.6. Crucially, it also introduces a clear “environmental objective” for Wales, which includes “contributing to halting and reversing the decline in biodiversity”. This shift from a duty to “maintain and enhance” to an active responsibility to “halt and reverse” decline raises the standard for compliance and public expectation. This 2025 report is therefore designed not only to meet existing duties but to proactively align the Service with this more ambitious and urgent national agenda.

1.3. An Integrated Environmental Strategy

- 1.3.1. Recognising that environmental challenges are interconnected, the Service has moved beyond treating biodiversity as a standalone issue. The Environmental Strategy 2023-2030 provides the overarching framework that integrates biodiversity considerations across all areas of environmental performance. This strategy acknowledges that the Service’s most significant impacts and opportunities lie within its core functions: how it powers its buildings, fuels its vehicles, and manages its resources.
- 1.3.2. This Biodiversity Report and Action Plan is therefore a central component of this wider strategy, supported by a suite of dedicated implementation plans that serve as primary delivery mechanisms for biodiversity co-benefits. These include:
- Power Decarbonisation Plan
 - Heating Decarbonisation Plan
 - Fleet Decarbonisation Plan
 - Waste Reduction Plan
 - Residual Carbon Emissions Plan
- 1.3.3. By implementing these plans, the Service is not only reducing its carbon footprint but also tackling key pressures on habitats and species. This integrated approach ensures that biodiversity is embedded in major capital and operational decisions, fulfilling the principles of the Well-being of Future Generations Act and delivering a more effective and holistic response to the climate and nature emergencies.



2. Review of Progress (2022-2025)

2.1. Delivering on Our 2022 Commitments

2.1.1. This section provides a transparent account of the actions undertaken by the Service between November 2022 and November 2025 to meet the commitments set out in the previous Biodiversity Report and Action Plan. The table below summarises progress against each action:

Table 1: Progress Against 2022-2025 Biodiversity Action Plan

NRAP Objective	Action from 2022 Plan	Summary of Progress (2022-2025)	Outcome / Evidence
1. Engage and Support	Develop policy to replace the Sustainable Development Action Plan (SDAP).	A comprehensive Environmental Strategy 2023-2030 and five supporting decarbonisation and waste reduction plans have been developed, consulted on, and formally adopted.	Published Environmental Strategy and associated plans.
2. Safeguard Species & Habitats	Undertake new-build or major refurbishment works to BREEAM certification where feasible.	The principle of sustainable development, including protecting ecological features, continues to guide all capital works.	All relevant projects are assessed against BREEAM or equivalent sustainability standards.

3. Increase Resilience & Restore Habitats	Implement the Grounds Maintenance and Biodiversity Enhancement Contract (commenced April 2020).	The contract has been fully operational, delivering a reduced cutting regime at designated sites to promote pollinator habitats.	Contract management records; photographic evidence of habitat changes at eight fire stations.
4. Tackle Key Pressures	A risk assessment to the Service's Ash Trees from Ash die-back to take place by the end of 2023.	The risk assessment was completed as planned. Findings have been analysed and a management plan is being implemented.	Internal risk assessment report and management plan.
	End the use of long-chain (C6 and C8) fluorosurfactant firefighting foams.	A programme for the phase-out and certified disposal of existing stocks is underway, with procurement of fluorine-free alternatives in progress.	Procurement records and disposal plans.
	Continue ongoing work around Wildfire and Arson Prevention.	The Wildfires lead and Arson Reduction Team have continued extensive partnership work with landowners, NRW, and Police to reduce wildfires.	Partnership meeting records; public engagement campaign materials (e.g., Llantysilio).
5. Improve Evidence	Maintain and update the Biodiversity Inventory of the NWFRS estate.	The inventory, including a photographic log from 2021, is maintained by the Facilities Management Department and updated as projects are completed.	Digital inventory and photographic records.
	All trees to be recorded in a Tree Inventory (ongoing).	A comprehensive inventory of all trees across the 47-site estate has been completed, recording species, location, and condition.	Completed Tree Inventory database.
6. Governance	Present reports prepared under the Environment (Wales) Act 2016 to the Fire and Rescue Authority for approval.	This report and its associated action plan will be presented to the North Wales Fire and Rescue Authority for formal approval prior to publication.	Authority meeting agendas and minutes.

2.2. Case Studies in Biodiversity Enhancement

- 2.2.1. Beyond the strategic actions, the Service has delivered several tangible projects on the ground that enhance local biodiversity and engage communities:
- 2.2.2. **Grounds Maintenance and Habitat Creation:** In line with the Grounds Maintenance and Biodiversity Enhancement Contract, the grass cutting regime was significantly reduced at eight fire stations: Abergele, Chirk, Conwy, Flint, Harlech, Llanfairfechan, Prestatyn, and Rhosneigr. By shifting from fortnightly cuts to a simple spring and autumn cut, these areas have been allowed to grow throughout the spring and summer, providing a vital habitat and food source for pollinators and other insects.
- 2.2.3. **Protecting Species:** In partnership with the North Wales Wildlife Trust, we installed clusters of swift nesting boxes at Colwyn Bay and Llanfairfechan fire stations in December 2023. By offering a protected space for breeding, nesting boxes contribute to the conservation of swifts, who are loyal to their nesting sites and return to the same locations year after year. Swifts are colony nesters, so installing multiple nest boxes close together can encourage the formation or expansion of colonies, making them more resilient.
- 2.2.4. **Community and Partnership Engagement:** As well as ongoing partnership work through the North Wales Resilience Forum, the Service has supported pan-Wales collaborative initiatives, most notably Operation Dawns Glaw and the associated #WildfireWise campaign. These multi-agency efforts, involving partners like Natural Resources Wales, police forces, and local authorities, ensure a consistent and efficient approach, delivering tailored safety messages to the public to prevent accidental fires and providing technical guidance to landowners on safe land management.



2.3. Embedding Biodiversity in Core Service Functions

- 2.3.1. The Service's most significant contributions to biodiversity in this reporting period have been achieved by integrating environmental considerations into large-scale strategic and operational changes. The decarbonisation of the Service is now the primary driver of positive biodiversity co-benefits, demonstrating a mature and holistic approach to environmental management.
- 2.3.2. The Service's Fleet Decarbonisation Plan is aimed at tackling one of its largest sources of emissions. A successful test of Hydrotreated Vegetable Oil (HVO) has been completed, and a station-based trial is now underway with a view to a full rollout. Critically, the procurement policy for HVO specifies that it must be derived entirely from waste biomass, with no palm oil content, to ensure it creates no "land use additionality". This conscious decision prevents the Service's fuel demand from contributing to the conversion of natural habitats into agricultural land for biofuel crops, a major driver of biodiversity loss globally.
- 2.3.3. The Power Decarbonisation Plan prioritises the installation of Solar Photovoltaic (PV) systems on the rooftops of fire stations and other buildings. The Service aims to install solar panels at the majority of its sites. By generating renewable energy on the existing built footprint of its 47 properties, the Service reduces its reliance on grid electricity and mitigates the pressure to develop large-scale solar farms on greenfield sites, thereby preserving land for nature and agriculture.
- 2.3.4. The Waste Reduction Plan sets a target to eliminate single-use plastic items such as cups and cutlery from all sites by 2025. This action directly reduces a key source of plastic pollution that can harm terrestrial and aquatic ecosystems. The broader strategy of moving up the waste hierarchy—prioritising prevention, reuse, and recycling—minimises the volume of waste sent to landfill, reducing the associated habitat loss and pollution from landfill sites.
- 2.3.5. The Service has committed to ending the use of long-chain fluorosurfactant firefighting foams. These substances, often known as "forever chemicals," are highly persistent in the environment and can bioaccumulate in wildlife, causing significant ecological harm. Phasing out these foams and replacing them with fluorine-free alternatives is a critical preventative action to protect the water quality and ecosystem health of North Wales.
- 2.3.6. The work of the Service's dedicated Wildfires lead officer and the Arson Reduction Team represents a primary biodiversity protection function. Through proactive engagement with farmers on the Heather and Grass Burning Code and multi-agency partnerships to tackle deliberate fire-setting, the Service is directly protecting thousands of hectares of irreplaceable habitat from catastrophic damage each year. This preventative work is one of the most effective contributions the Service makes to safeguarding the resilience of ecosystems across North Wales.

2.4. Building Our Evidence Base

- 2.4.1. To ensure future actions are targeted and effective, the Service has completed two foundational evidence-gathering projects outlined in the 2022 plan.
- 2.4.2. Tree Inventory: A comprehensive inventory of trees across the entire NWFRS estate is now complete. This inventory provides a detailed baseline of the number, species, location, and general condition of the Service's tree stock. This data is essential for developing a strategic approach to tree management, identifying opportunities for new planting, and calculating the carbon sequestration value of the estate's green infrastructure.
- 2.4.3. Ash Die-back Assessment: As planned, a risk assessment of all Ash trees on the estate was completed by the end of 2023 to evaluate the impact of Ash die-back disease (*Hymenoscyphus fraxineus*). The assessment identified trees that pose a potential risk to property or people and has informed the development of a specific management plan. This plan will guide the safe removal of dangerous trees and, crucially, ensure that they are replaced with suitable native species to maintain canopy cover and habitat connectivity.





3. Biodiversity Action Plan (2025-2028)

3.1. Our Ambition for Nature Recovery

- 3.1.1. This Action Plan sets out the Service's specific, measurable, and time-bound commitments for the next three years. It builds upon the progress and learning from the previous period and accelerates action in line with the heightened urgency of the nature emergency. The plan is structured around the six core objectives of the Welsh Government's Nature Recovery Action Plan (NRAP). It also aligns with the national ambition to protect and effectively manage at least 30% of Wales's land and sea for nature by 2030 ("30 by 30"), demonstrating how the Service's estate can contribute to this collective goal.
- 3.1.2. A key principle of this plan is the integration of biodiversity with wider environmental objectives. Many of the actions outlined below will not only enhance habitats and support species but will also contribute to the Service's decarbonisation and climate adaptation goals.

3.2. Actions to Meet the Nature Recovery Action Plan (NRAP) Objectives

- 3.2.1. The following table details the specific actions the Service will undertake between 2025 and 2028 to deliver on its biodiversity duty and contribute to the NRAP objectives.

Table 2: Biodiversity and Ecosystem Resilience Action Plan 2025-2028

NRAP Objective	Action from 2022 Plan	Summary of Progress (2022-2025)	Outcome / Evidence
1. Engage and support participation	Develop and roll out a mandatory environmental awareness e-learning module for senior staff.	To embed a baseline understanding of the Section 6 duty and the importance of biodiversity across the entire workforce, fostering a culture of environmental responsibility.	75% of designated staff complete the module by March 2027.
	Launch a staff-led "Biodiversity Champions" network.	To empower enthusiastic staff to lead on local initiatives, promote awareness, and provide feedback from the ground up, fostering greater involvement.	At least one champion appointed in each of the three geographical areas (West, Central, East).
2. Safeguard species and habitats	Implement the Ash Die-back Management Plan.	To safely manage the risks from diseased trees while ensuring a net gain in canopy cover through a strategic replacement planting programme using diverse, native species.	All high-risk trees managed by end of 2026; 100% of removed trees replaced on a 2-for-1 basis by 2028.
	Formalise policy for ecological surveys at sensitive sites.	To ensure that any works near designated sites or areas of known ecological value (e.g., Great Crested Newt habitat near St Asaph HQ) are preceded by appropriate ecological assessment to prevent harm.	Policy integrated into standard operating procedures for all capital and maintenance works by April 2026.

3. Increase resilience and restore habitats	Launch a "Greening Our Stations" programme.	To convert a significant portion of low-value amenity grassland into habitats that support biodiversity and sequester carbon, directly contributing to NRAP and decarbonisation goals.	Minimum 15% of mown grassland across suitable sites converted to wildflower meadows or used for native tree planting by March 2028.
	Install new biodiversity features across the estate.	To provide targeted support for specific species by creating nesting, roosting, and hibernation sites across a wide geographical spread of Service properties.	A minimum of 10 new features (e.g., bird boxes, bat boxes, insect hotels, log piles) installed by March 2028.
4. Tackle key pressures	Complete the phase-out of long-chain fluorosurfactant firefighting foams.	To eliminate a significant source of persistent environmental pollution from Service operations, protecting water quality and ecosystem health.	100% of legacy foam stocks are replaced and disposed of via certified waste streams by March 2027.
	Enhance partnership work on wildfire prevention.	To continue protecting large-scale habitats from fire damage through targeted education and engagement with landowners and the public.	Regular attendance by the Service at North Wales Resilience Forum Environmental Risk Group Meetings within the report period.
5. Improve evidence	Conduct an estate-wide survey for Invasive Non-Native Species (INNS).	To build on the existing Japanese Knotweed control programme by identifying and mapping other high-risk INNS to inform a comprehensive management plan.	Survey completed and INNS management plan produced by March 2028.

6. Governance and support	Adopt a "Biodiversity Net Gain" (BNG) principle for all new capital projects.	To move beyond mitigating harm to ensuring that all major new developments leave biodiversity in a measurably better state than before, aligning with best practice.	BNG requirement included in all relevant tender documentation for capital projects initiated from April 2026 onwards.
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4. Governance, Monitoring, and Future Outlook

4.1. Measuring Our Impact

4.1.1. To ensure the successful delivery of the 2025-2028 Action Plan and to demonstrate accountability, the Service will implement a robust monitoring framework. This framework will track progress against the Key Performance Indicators (KPIs) detailed in Table 2, shifting the focus from simply completing tasks to measuring tangible outcomes for biodiversity. Key metrics will include:

- Hectares of habitat restored or created through the "Greening Our Stations" programme.
- Number and type of new biodiversity features installed.
- Percentage of staff who have completed the mandatory environmental awareness training.
- Number of capital projects where the Biodiversity Net Gain principle has been applied.

4.1.2. This data-led approach will allow the Service to assess the effectiveness of its interventions, adapt its strategy where necessary, and provide clear evidence of its contribution to nature recovery in Wales. This directly addresses the need, identified by Audit Wales, for public bodies to have effective measures to understand their progress towards environmental objectives.



4.2. Accountability and Reporting

- 4.2.1. The governance structure for delivering this plan will ensure clear lines of responsibility and oversight. The day-to-day delivery of biodiversity actions is administered through the Environmental and Energy Conservation Section of the Facilities Management Department, in conjunction with the Environment and Climate Change Manager. Overall accountability rests with the Assistant Chief Fire Officer responsible for the Environment portfolio.
- 4.2.2. The Service will publish its next statutory Biodiversity and Ecosystem Resilience Report before the end of 2028, in accordance with the three-year reporting cycle mandated by the Environment (Wales) Act 2016.

4.3. A Continuing Commitment to a Nature-Rich Wales

- 4.3.1. North Wales Fire and Rescue Service recognises that its duty to protect the environment is a continuous journey, not a short-term project. The climate and nature emergencies demand sustained, ambitious, and integrated action from all sectors of society. This report and action plan represent a significant step forward in the Service's commitment, embedding biodiversity into the heart of its strategic planning and daily operations.