

BIODIVERSITY ACTION PLAN 2025-2030



QUEEN'S
UNIVERSITY
BELFAST

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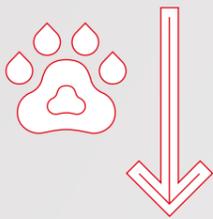
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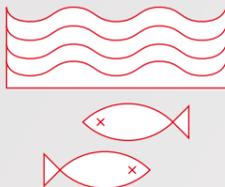
INTRODUCTION

BIODIVERSITY LOSS KEY STATISTICS



19%

Average decline of species
in the UK since 1970



16%

of all UK species and **12%**
of species in NI currently
face extinction

Queen's University Belfast, as a global leader in education and research and a major civic institution in Belfast, recognises its impact and responsibility toward the natural environment.

Aligned with our Strategy 2030 commitment to embedding the Sustainable Development Goals and our Net Zero 2040 target, this plan represents our commitment to addressing the biodiversity crisis as a core part of sustainability leadership.

The UK, including Northern Ireland, faces severe biodiversity loss, with species declining by 19% on average since 1970, and 16% of UK species threatened with extinction. In Northern

Ireland specifically, 12% of assessed species are at risk of extinction, and the abundance of farmland birds has fallen by 43% since 1996, with the region being one of the most nature-depleted in the world.

This Plan aims to create a healthy and sustainable campus environment, enhance biodiversity, promote ecological awareness, support teaching and research, integrate biodiversity into university operations and planning and contribute to the Sustainable Development Goals (SDG's).

This plan sits alongside the Net Zero Plan as a key enabling document for our Strategy 2030 sustainability commitments.

Specifically, this plan will:

01:

Set out queen's vision, principles and objectives

02:

Define the context and challenges facing diversity

03:

Outline how we will embed biodiversity into operations, design and culture

04:

Detail how success will be measured and governed

OUR VISION AND GUIDING PRINCIPLES

Our vision is to create a thriving, resilient, and biodiverse university that supports nature, enriches learning, and inspires our community to value and protect the natural world – both on campus and beyond.

To realise our vision our approach will be guided by the following four principles, which reflect our commitment to stewardship, collaboration, and continuous improvement.



Tree planting with staff, students and local community, Malone Playing Fields.

01 GOVERNANCE AND EVIDENCE

Legal and Ethical Stewardship: We will meet or exceed all biodiversity legislation and relevant codes of practice, ensuring that our management of land, habitats, and species is responsible, transparent, and compliant. This includes the proactive and ethical management of invasive species.

Evidence-Based Decision Making: We will collect, maintain, and apply high-quality biodiversity data to inform planning, operations, and long-term management. Decisions will be underpinned by sound science, ensuring that our actions are effective and measurable.

02 SUSTAINABLE OPERATIONS AND PARTNERSHIPS

Sustainable Land and Grounds Management: We will adopt and uphold best ecological practices across all University operations, embedding biodiversity considerations into the design, maintenance, and development of our estate.

Collaborative Environmental Partnerships: We will work closely with authorities, community organisations, conservation bodies, and other stakeholders to deliver outcomes that enhance biodiversity within and beyond our campus boundaries.

03 ENGAGEMENT AND LEARNING

Engagement and Awareness: We will foster a culture that values nature and biodiversity by raising awareness and promoting active participation across our University community.

Integration with Learning and Research: We will embed biodiversity into teaching, research, and experiential learning, inspiring students and staff to become future environmental leaders and stewards of the natural world.

04 BROADER ENVIRONMENTAL INFLUENCE

Responsible Influence Beyond Campus: We will consider the environmental and ecological impact of our decisions, partnerships, and procurement practices, striving to minimise harm to biodiversity beyond the University estate and contribute positively to wider ecological systems.

SETTING THE SCENE: THE BIODIVERSITY CONTEXT

Green Flag Awards,
Bangor Walled Garden

WHAT IS BIODIVERSITY?

Biodiversity is the variety of life on earth – animals, plants, fungi and microorganisms – which make up our natural world. These species and organisms work together in ecosystems, like an intricate web, to maintain balance and support life.

Species comprising biodiversity have an intrinsic value, as well as providing a range of vital benefits to humans:

- Pollination
- Soil Health
- Climate Regulation
- Water purification
- Flood Prevention
- Wellbeing and Mental Health
- Medicinal Properties

BIODIVERSITY LOSS

As society has developed, expanded and intensified so has human's negative impacts on biodiversity. This has included rapid ecosystem change and biodiversity loss. While the Earth has always experienced changes and extinctions, today they are occurring at an unprecedented rate.

Of 2,508 species in Northern Ireland that have been assessed using IUCN Regional Red List criteria, 12% have been classified as threatened with extinction from Ireland as a whole (State of Nature Report: Northern Ireland, 2023).

KEY DRIVERS OF BIODIVERSITY LOSS:

- Habitat loss and fragmentation due to agriculture and urban expansion.
- Unsustainable resource use through harvesting, logging, fishing and mining.
- Invasive species that cause harm to new environments.
- Pollution from sewage, industrial and agriculture pollutants.
- Global climate change resulting in long term changes to temperature and weather patterns.

The University contributes to these drivers of biodiversity loss through both direct operations as well as indirectly. This plan aims to halt and reverse biodiversity loss associated with the University's activities, ensuring the protection of biodiversity and all associated benefits.



NORTHERN IRELAND AND THE GLOBAL BIODIVERSITY FRAMEWORK:

Northern Ireland is party to a new set of international biodiversity targets under the Convention on Biological Diversity (CBD): the Global Biodiversity Framework. It sets out a global mission to halt and reverse the loss of nature by 2030 and achieve recovery by 2050. To support the delivery of this, each UK country has committed to developing and implementing national biodiversity strategies.

ENVIRONMENTAL IMPROVEMENT PLAN

As part of the Environmental Act 2021, the United Kingdom has set out the ambition to restore natural habitats and increase biodiversity, ultimately halting the decline in species by 2030. The Act required the creation of an Environmental Improvement Plan (EIP) and a Nature Recovery Strategy.

Northern Ireland's Environmental Improvement Plan was published in 2024 providing coherent and effective set of interventions that will significantly improve our natural environment.

"Of 2,508 species in Northern Ireland that have been assessed using IUCN Regional Red List criteria, 12% have been classified as threatened with extinction from Ireland as a whole." State of Nature Report: Northern Ireland, 2023.

STRATEGIC ENVIRONMENTAL OUTCOMES:

- Excellent air, water and land quality
- Health and accessible environment and landscapes
- Thriving, resilient and connected nature and wildlife
- Sustainable production and consumption on land and at sea
- Zero waste and highly developed circular economy
- Net zero greenhouse gas emissions and improved climate resilience and adaptability

NATURE RECOVERY STRATEGY

Work is currently ongoing to create a Nature Recovery Strategy. The Nature Recovery Strategy will translate global biodiversity targets to a local level, and in doing so set out proposals to conserve biodiversity in Northern Ireland, as required under the Wildlife and Natural Environment (Northern Ireland) Act 2011.

Queen's University Belfast is committed to ensuring compliance with the Wildlife and Natural Environment Act 2011 and the future Nature Recovery Strategy.



No mow biodiversity zone, Ashby Hill

BIODIVERSITY AT QUEEN'S UNIVERSITY BELFAST

The majority of Queen's University's campus is located within the heart of South Belfast, with three satellite locations: Portaferry Marine Lab, AMIC Advanced Manufacturing Innovation Centre and Momentum One Zero. As such, the estate supports a wide variety of habitats and ecological diversity.

Allotment, Physical Education Centre

HEDGEROWS

Located across Queen's campus with a mixture of mature and immature hedgerow found within the Main Site, Riddel Hall, Chlorine Gardens and Elms Accommodation. Increasingly, a focus has been placed on using native species with high biodiversity – such as hawthorn and blackthorn. These hedgerows provide a food source and home for birds, bats and insects.

AMENITY GRASSLANDS

Highly maintained and currently offer little biodiversity value. However, they are a valuable space for physical and mental well-being. This includes sports pitches found at Malone Playing Fields and large areas of amenity space within the Main Site.

NO-MOW AMENITY GRASSLAND

Formed across seven areas throughout our campus. these areas of grassland are not mowed between 1 May to the 31 August. This results in an increase in early season floral abundance and richness, which in turn supports a greater abundance and/or richness of insects.

FORMAL GARDENS

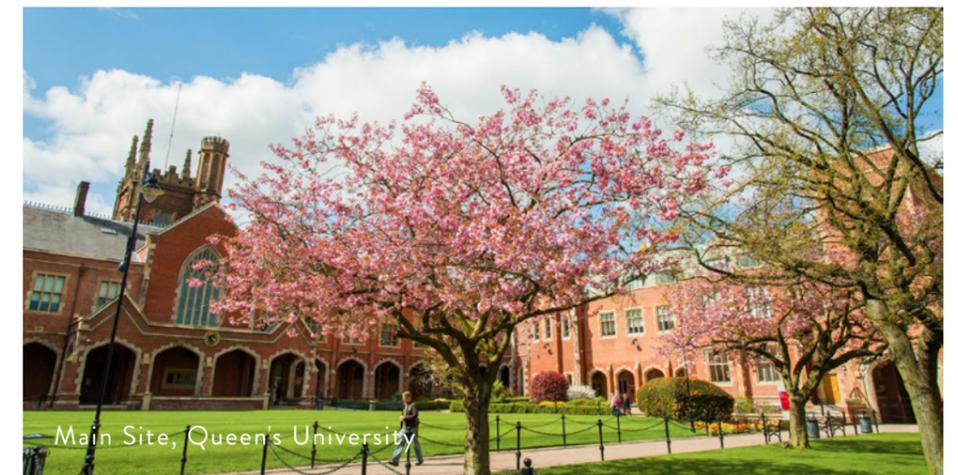
Located within the Main Site and the Vice-Chancellor's garden. They are comprised of heavily maintained lawns, ornamental shrubbery, exotic and native trees. These areas provide valuable aesthetic, social and wellbeing space which is enjoyed by both our university community and the general public. The range of flowering plants, shrubs and trees provide opportunities for pollinating insects.

COMMUNITY GARDENS

Formed across the campus providing staff, students and local residents with the opportunity to enhance biodiversity, grow their own food and a host of wellbeing opportunities. Community gardens are located along University Square, the Physical Education Centre, David Kerr Building and the Elms Allotment.

HARD SURFACES

Hard surfaces are common across the campus due to operational requirements. A range of initiatives have been put in place to enhance these spaces. This includes the addition of swift bricks, planters, permeable paving, grass crete, living and blue roofs.



Main Site, Queen's University

Case Study: Enhancing Biodiversity at Riddel Hall

Riddel Hall is home to a Conference Centre and Queen's Business School. It is composed of a Grade II listed building, a modern student hub powered by geothermal technology, manicured lawns, woodland, no mow areas and formal planting. This multi-purpose estate hosts large-scale conferences, weddings and academic events. Queen's University have been implementing a range of initiatives which aim to enhance the biodiversity of this space.



Native Planting: With the formation of the new Student Hub building, a significant amount of wildlife hedgerow was placed within the site. This is in addition to a range of native trees, ranging in age, being located on-site.



No Mow: In 2021, 633m² of manicured lawn was converted to a 'no mow' area, with cutting only taking place in April and September.



Bulb Planting: Over 5,000 bulbs have been planted within the site, providing vital early pollinating species for our insects.



Swift Bricks: The presence of swifts within South Belfast informed the design of the new Student Hub, which incorporates a range of swift bricks and an integrated calling system to support nesting and species attraction.



Monitoring: A range of citizen science surveys are undertaken across the University, including in Riddel Hall. This includes plant, insect and hedgehog surveys.



Living Roof: The new Student Hub building is finished with a sedum roof, mitigating against urban heat, greenhouse gas emissions and reduced energy consumption.



OUR IMPACT AND INTERACTION WITH BIODIVERSITY AT QUEEN'S

BIODIVERSITY CONSIDERATIONS IN ESTATES DEVELOPMENT

Since 2019, the University Main Site has been accredited with the International Green Flag Awards – showcasing our commitment to good environmental practice. Actions have included:

- Peat free compost used
- 80% species sourced from the RSPB approved species list
- Switch from petrol to electric machinery
- Minimisation of chemicals
- Climate change adaption strategies implemented

NET ZERO DESIGN GUIDE

How we build or make significant changes to our existing estate is managed through our capital projects and estates maintenance program. Queen's Net Zero Design Guide provides a road map to ensuring ecological stewardship is built into major changes to our estate, whether through new developments or major refurbishments.

The Queen's Net Zero Design Guide establishes minimum biodiversity requirement for capital works projects across the Estate. It requires all project stakeholders to consider the environmental implications of their decisions when developing capital works projects. The guidance predominantly targets large and complex projects but should be considered for all capital works activities.

SPECIALIST EXPERTISE WITHIN DESIGN TEAMS

The appointment of an ecologist and, typically, a landscape architect will form part of the core design team in most large and complex projects. These professionals bear significant responsibility for assessing site-specific ecological conditions and proposing viable measures to enhance biodiversity, considering site constraints. In addition, they (in collaboration with the university) should engage with external stakeholders to identify synergies to further promote biodiversity beyond the immediate site boundaries.

PILOT INITIATIVES APPROACHES

Project delivery includes the piloting of innovative biodiversity measures, with outcomes documented to evaluate effectiveness. These pilot initiatives contribute to the University's broader sustainability agenda, serving as 'living labs' that generate insights and best practices. Lessons learned inform future capital works, accelerating the integration of sustainable design approaches across the estate. Examples to date include the integration of green roofs, blue roofs and swift boxes.



Environmental Engagement

Fostering a culture that values the natural environment is a core principle of this biodiversity plan. By ensuring that campus spaces are both accessible and engaging, and integrated into teaching and research activities, we can strengthen appreciation for biodiversity and encourage responsible stewardship.

The University provides, and will continue to provide, a wide range of opportunities for staff, students, and local residents to actively participate in biodiversity initiatives, from volunteering in community gardens to taking part in campus-wide environmental projects, and contributing to campus-based research projects.

Tree Planting Initiatives

Since 2021, the University has been a partner with Belfast City Council on the Million Trees for Belfast Initiative. Over a four-year period, more than 1,264 trees were planted in appropriate locations across campus. The trees include a mixture of saplings and mature specimens, as well as wildlife hedgerow species.

Saplings are grown and nurtured through a partnership project with local residents, Belfast City Council and Conservation Volunteers, using a Queen's brownfield site to grow over 4,000 saplings from acorns collected in the park.

Development of Community Gardens

Staff and students within Queen's have created their own nature hot spots throughout Queen's campus. This has resulted in concrete courtyards and mowed lawns being converted into nature hubs that support a wide variety of species. A total of 8 hot spot areas have been created by staff.

The most recent community garden to form in 2024 is in the Physical Education Centre (PEC). With the support of Senior Management within the PEC, and through their successful Green Fund application, staff created a thriving outdoor space. The allotment and garden provides a hub for wildlife, and for staff, with many viewing it as a wellbeing initiative.

Planting for Pollinator Schemes

In 2019 the University signed up to be supporters of the All-Ireland Pollinator Plan. As a result, key activities were undertaken:

- Creation of seven no mow areas which are not cut between May and August.
- 80% new plants approved via the RSPB/RHS plant list to ensure the campus is full of pollinating plants.
- Wildlife hedgerows planted in appropriate areas throughout the campus, containing a minimum of 5 different native species.
- Two orchids in DKB and Elms provide a vital pollinating source for solitary bees.

Minimising Off-campus Biodiversity Impacts

Our impact extends beyond the physical campus, through the resources we use, the partnerships we form, and the choices we make. By recognising and managing these wider influences, Queen's seeks to protect and enhance biodiversity well beyond its own boundaries. These impacts may include land use changes, resource extraction, and environmental pollution.

Procurement and Ecological Considerations

Queen's is actively working to embed ecological considerations into our purchasing decisions. For example, our in-house catering team, Campus Food and Drink, promotes sustainability through the Sustainable Food Policy, which supports the local economy, prioritises responsibly sourced food (including Fairtrade and Marine Stewardship Council-accredited products), and encourages ethical practices that benefit communities and the environment.

By continuing to integrate environmental considerations into procurement, operational planning, and other institutional practices, the University aims to minimise negative impacts on biodiversity beyond our estate, helping to ensure that our wider activities support the protection and enhancement of nature.

PLAN OBJECTIVES

This section sets out three key objectives that the University seeks to achieve in order to enhance biodiversity across its estate:



01

OBJECTIVE: INCREASE AND MAINTAIN BIOLOGICAL DIVERSITY THROUGHOUT OUR CAMPUS

Fostering a culture that values the natural environment is a core principle of this biodiversity plan. By ensuring that campus spaces are both accessible and engaging, and integrated into teaching and research activities, we can strengthen appreciation for biodiversity and encourage responsible stewardship.

APPROACH:

- Conduct a campus wide biodiversity audit.
- Informed by the audit, development of targets for biodiversity and development of a management plan for existing habitats.
- Become signatories to a Nature Positive University.
- Continue to identify additional areas for ‘wilding’ and native species planting.
- Maintain green spaces to actively support biodiversity.
- Minimise negative impacts of campus operations on biodiversity.
- Continue to manage and monitor invasive species.
- Invest in ongoing good environmental practices.
- Include biodiversity considerations in estate master-planning, prioritise existing habitats and avoid development on greenfield site, aligning with the Net Zero Design Guide.
- Increase the use of nature-based solutions to mitigate the impact of our changing climate.
- Promote biophilic and regenerative design using the Net Zero Design Guide standards on Major Projects.

02

OBJECTIVE:
**FOSTER UNDERSTANDING AND APPRECIATION OF
 BIODIVERSITY THROUGHOUT THE UNIVERSITY COMMUNITY**

Queen's can inspire future generations to value and protect nature by integrating biodiversity into teaching, research, operations, and daily life.

APPROACH:

- Promote the use and enjoyment of campus green spaces.
- Highlight the wellbeing benefits of biodiversity.
- Contribute to Belfast City Council's Open Spaces Strategy (BOSS) and the Million Trees for Belfast Initiative.
- Engage with charities and community groups to support biodiversity initiatives.
- Integrate biodiversity into the University's Living Labs Framework
- Provide volunteering and citizen science programme opportunities focused on biodiversity.

03

OBJECTIVE:
**REDUCE HARM TO BIODIVERSITY BEYOND OUR ESTATE
 AND CAMPUS OPERATIONS**

Queen's influence extends beyond its physical boundaries. Many pressures driving biodiversity loss stem from supply chains and resource use. Queen's can model responsible practice through its purchasing choices.

APPROACH:

- Understand the biodiversity impacts of University activities beyond the campus.
- Apply circular economy principles to purchasing decisions to reduce external biodiversity impacts.
- Incorporate biodiversity considerations into purchasing decisions where appropriate.
- Review investment policies to determine where further environmental and biodiversity considerations could be integrated.



MEASURING SUCCESS, GOVERNANCE AND REPORTING

To realise the objectives set out in this plan, it is vital we know what success looks like. We have identified the measures that need taken in order to track our progress and achieve long term success.

HOW WE WILL MEASURE SUCCESS



01.

Define the existing habitats and natural assets across Queen's University Belfast estate by September 2026 and adopt this as our baseline.

02.

Make a pledge to become a Nature Positive University, including committing to setting SMART targets to increase our baseline position by December 2026.

03.

Enhance and integrate biodiversity into capital works projects and develop a university approach to 'best practice' through the application of our Sustainable Design Guide.

04.

Implementation of annual Living Lab projects aligned with the plan to facilitate staff and student input and integration with research and learning.

Governance and Reporting

Progress against this Plan will be reported to the Sustainability Committee. The Plan will be reviewed annually. Significant changes will be brought to the Sustainability Committee for approval. Progress will also be reported via:

- Annual Sustainability Report
- SDG THE Impact Ratings (SDG 14 & 15)
- Queen's Annual Report
- Online web pages



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