



UNIVERSITY OF
LIVERPOOL

BIODIVERSITY PLAN

2025-2031

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INTRODUCTION

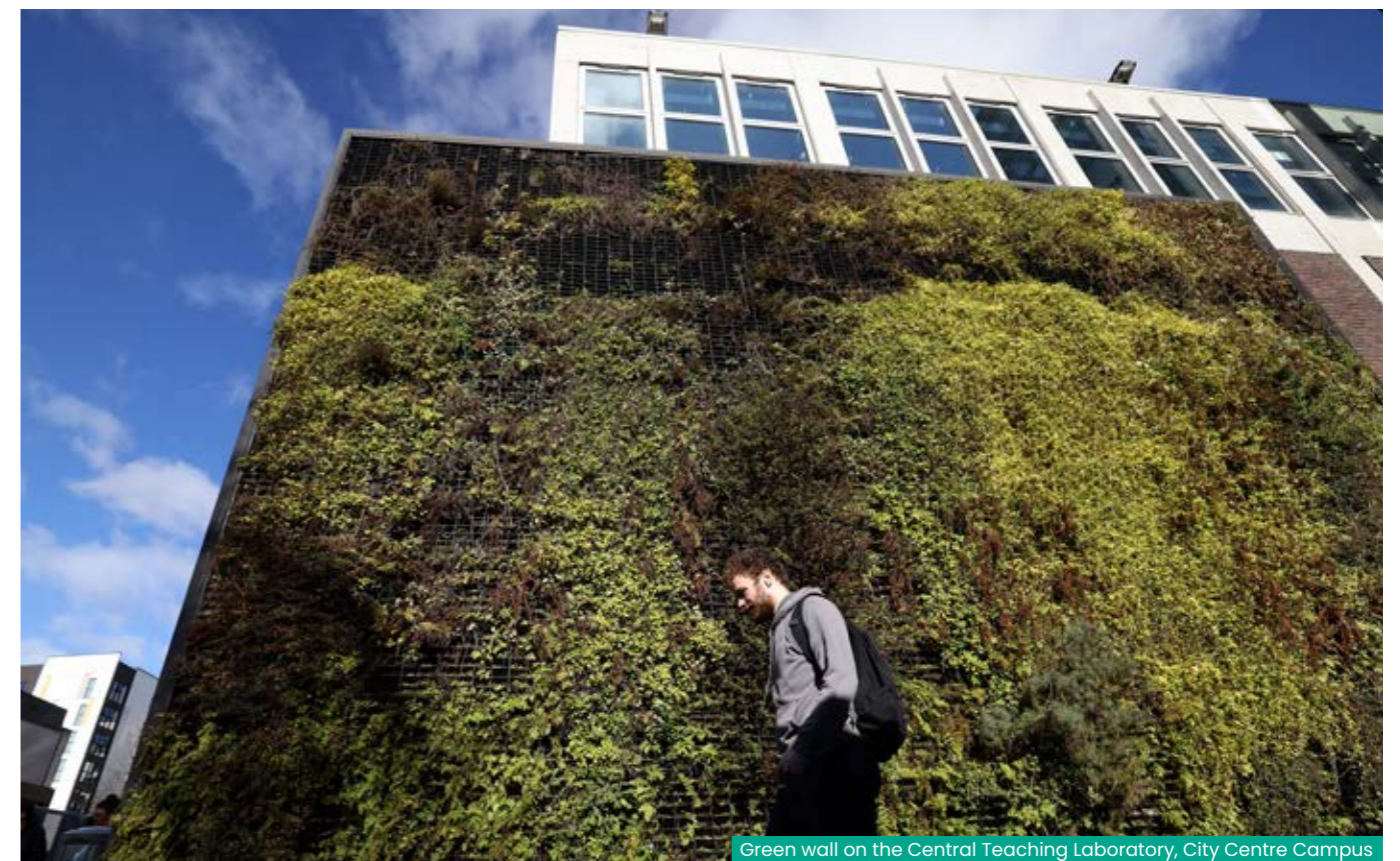
Humanity has had far-reaching impacts on biological diversity (biodiversity) leading to the sixth mass extinction of species on planet earth and an ecological crisis.

Wildlife populations have fallen by 69% since 1970¹, over 25% of species are currently threatened with extinction and natural ecosystems (interacting communities of living organisms and their physical environment) have declined by 47% since their earliest estimated states².

As a global leader in both research and education, and a major employer and anchor institution in the Liverpool City Region, the University of Liverpool recognises it has a significant impact on the natural world as well as having the influence and capacity to have a positive impact both locally and globally. As such, the University has committed to “Promote biodiversity across the University estate and throughout our value chain” as part of our Environmental Policy. Building on this commitment, this plan sets out 3 core principles which will guide the University’s response to the biodiversity crisis both within our estate and beyond:

- We will increase biodiversity throughout our estate, supporting greater genetic, species and ecosystem diversity.
- We will embed, within our university culture, an appreciation of the inherent value for biodiversity and the environmental, social and economic benefits of nature rich environments.
- We will reduce harm to biodiversity beyond our estate and campus operations by influencing our supply chain and investment activities to identify and reduce harmful practices.

This document sits alongside our Climate Plan as a key enabling document to the Sustainability Strategy and the vision and commitments of our strategic framework, Liverpool 2031. It sets out the context the University operates in and our approach to addressing biodiversity loss and the ecological crisis.



Green wall on the Central Teaching Laboratory, City Centre Campus

1 www.livingplanet.panda.org/en-GB/

2 www.ipbes.net/global-assessment

Biodiversity and Humanity's Impact

Biodiversity is the variety of life on earth, including plants and animals and the natural ecosystems that support them.

Nature and biodiversity make an invaluable contribution to human life through:

- Regulating the climate – essential life supporting services through regulating water and air quality and crop pollination.
- Providing material – goods and services produced by nature and used by humans such as food and timber.
- Providing non-material benefits – the spiritual inspiration and cultural opportunities nature provides such as through recreation and tourism.

Beyond these contributions to human life, the many species comprising biodiversity also have intrinsic value (value for their own sake) and are the product of an evolutionary heritage spanning billions of years.

Humans interact with nature in a multitude of ways but as societies have developed and expanded so has their negative impacts on biodiversity. There are 5 key direct drivers for the loss of biodiversity:

- Our most profound impacts are from sea and land use change, primarily to support agriculture but also urban expansion.
- Over exploitation of natural resources, such as through harvesting, logging and fishing.
- Climate change, long term shifts in temperatures and weather patterns, for which greenhouse gas emissions from human activity is a major contributor.
- Pollution, such as from urban and rural waste or pollutants from industrial or agricultural processes.
- Invasive species, non-indigenous species that cause harm to a new environment.

The University contributes to these drivers of biodiversity loss through both our direct operations as well as indirectly through our supply chain and investments, and recognises it has a role to play in halting and reversing the decline in biodiversity and leveraging the benefits of nature for our university community and beyond.

Policy and Legal Context

As a member of the United Nations Convention on Biological Diversity, the United Kingdom is a signatory of the Kunming[1]Montreal Global Biodiversity Framework, which sets out a pathway to reach the global vision of a world living in harmony with nature by 2050. The University of Liverpool is committed to leveraging our role as a leader in research to help tackle the global ecological crisis.

As part of the Environment 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. These changes, updating Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 which places a legal responsibility on public authorities in England to conserve biodiversity, will be driven by legally binding environmental targets and changes to planning laws requiring mandatory biodiversity net gain (BNG) in developments. The act also requires the production of Local Nature Recovery Strategies (LNRS) to support the restoration and enhancement of nature, species conservation strategies and protected site strategies. The University of Liverpool is committed to ensuring compliance with BNG and supporting the aims of the LNRS in both the Liverpool City Region and Chester and Cheshire West.

The Wildlife and Countryside Act 1981 sets out legal protections for specific species and habitats present on the estate and we are in close proximity to several nationally and internationally designated wildlife sites including, the Dee Estuary; a Ramsar site³, SAC⁴, SPA⁵ and SSSI⁶. As such, we must ensure that our activities do not harm, kill or destroy any priority habitats or species, and capital projects and operations do not interfere with designated wildlife sites.



3 A designated wetland of international importance under the Ramsar Convention

4 Special Area of Conservation under the EU directive on the Conservation of Natural Habitats and Wild Fauna and Flora

5 Special Protected Area, a protected habitat for birds

6 Site of Specific Scientific Interest

BIODIVERSITY ON THE UNIVERSITY ESTATE

The University of Liverpool's estate is extremely diverse, comprising a city centre campus in the heart of urban Liverpool, sub-urban satellite locations in the south of the city, the Leahurst Campus; a large veterinary teaching campus with 2 working farms, and Ness Botanic Gardens on the Wirral. As such, the estate supports a wide variety of habitats (natural home or environment of an animal, plant or other organism) and ecological diversity.

Priority Habitats Across the Estate

The University of Liverpool's estate is extremely diverse, comprising a city centre campus in the heart of urban Liverpool, sub-urban satellite locations in the south of the city, the Leahurst Campus, a large veterinary teaching campus with 2 working farms and Ness Botanic Gardens on the Wirral. As such, the estate supports a wide variety of green spaces and habitats (natural home or environment of an animal, plant or other organism) and ecological diversity which present different requirements, benefits, opportunities and risks.

Priority Habitats and Species

The University estate is home to many priority habitats and species deemed to be of principal importance for the purpose of conserving biodiversity under the NERC Act 2006 and Wildlife and Countryside Act 1981, providing a legal obligation to consider the impact of our operations on these areas.

Woodlands: There are extensive areas of semi-natural and plantation woodland across the University estate including broadleaved woodland in Leahurst, Wood Park and Ness Heath Farms which qualify as priority habitats. Woodlands provide an important habitat for protected species such as badgers and hedgehogs and support a variety of invertebrates, lichens and fungi.

Hedgerows: There are numerous areas of extensive mature and immature hedgerows throughout the University estate, including on the City Centre Campus and Ness Botanic Gardens. Over a number of years both Woodpark and Ness Heath Farms have installed large areas of hedgerows to separate fields, with a more recent focus on planting native species with high biodiversity value such as hawthorn and blackthorn, many of which will qualify as priority habitats. These hedgerows provide a vital food source for nesting and migrating birds, bats and insects, including seed eating species such as goldfinch.

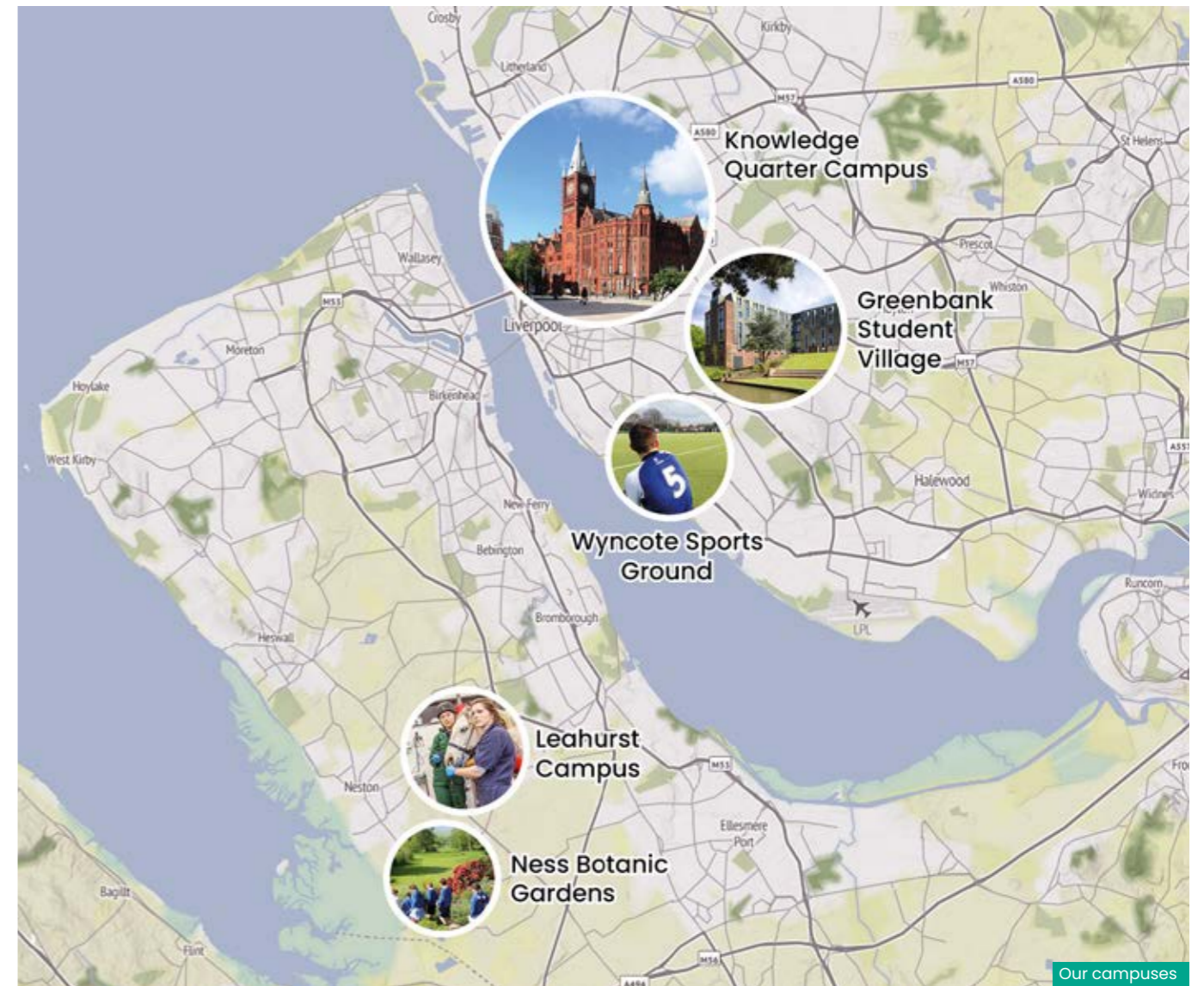
Ponds: There are ponds located at Ness Botanic Gardens, Wyncote Sports Ground, Leahurst Campus, Woodpark and Ness Heath Farms. Several of these ponds are designated as priority habitats and offer significant opportunities for migrating invertebrates and amphibians including great crested newts and common toads. The farm areas have also collaborated with the local council in improving the biodiversity value of several ponds.

Amenity Spaces

An element of our green spaces provides important amenity and health and well-being value to staff, students and the general public. While many of these areas offer significant opportunities to integrate biodiversity planting schemes, any activity would require careful planning to ensure the amenity value of these spaces is not compromised.

Amenity grasslands: There are numerous areas of grasslands across the University estates used for a variety of different purposes including sports fields at the Wyncote Sports Campus and large areas of amenity space at Greenbank Halls of residents, both located in the South of the city. These areas are highly maintained and currently offer little biodiversity value, but offer valuable space for physical and mental well-being.

Formal gardens: Abercromby Square located on the city centre campus and large areas of Ness Botanic Gardens are comprised of heavily maintained lawns, ornamental shrubbery and exotic trees. These areas provide valuable aesthetic, social and wellbeing space which is enjoyed by both our University community and the general public. The heavy maintenance of these areas mean they provide limited biodiversity value, though the range of flowering plants and shrubs provide some opportunities for native pollinators such as solitary bees.



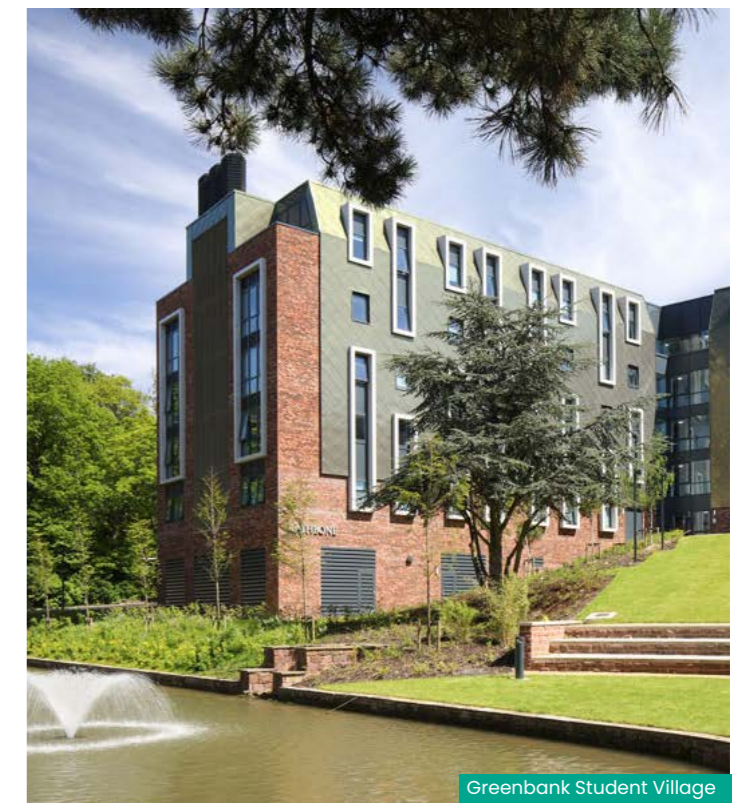
Our campuses

Functional Spaces

Areas of the estate designed for the use of teaching, research and commercial use interact with biodiversity in a variety of ways, impacting on how these spaces are used and carrying some risk of pollution incidents which must be carefully managed.

Arable land: The University operates 2 working farms, Ness Heath and Woodpark, located on the Wirral near the Leahurst Campus. They are non-intensive with mixed livestock including cattle, sheep and pigs. The farms are valuable teaching resources for the University's Veterinary school but do present a risk to biodiversity and careful management of milk products, silage, slurry and fertilizers are required to avoid pollution incidents, particularly around water courses

Hardstanding: Much of the estate is comprised of large areas of hard surfaces and buildings which offer little in biodiversity. Some buildings do provide nesting and roosting for birds and bats and where these are interfered with during campus developments alternative habitats are created in-line with planning requirements. Areas of hardstanding are particularly prominent in the City Centre Campus and the University recognises this is the area of our estate most isolated from the benefits biodiverse spaces provide. Staff, students and local population working, studying and living in and around the City Centre Campus would particularly benefit from an increase in green and blues spaces.



Greenbank Student Village

NESS BOTANIC GARDENS

Ness Botanic Gardens is a grade II listed botanic garden which plays an important role in the local community with over 7,000 members. The gardens were gifted to the University in 1948 under a Conditional Trust, including the condition they remain open to the public.

As such, the gardens operate differently to other areas of the University estate and offer different opportunities and challenges to addressing biodiversity. As a member of Botanic Gardens Convention International (BCGI), the gardens have a particular focus on the research, education and conservation aspects of their plant collections.

The plant collection, consisting of more than 10,000 items, includes 3 National Plant Collections⁹ (*Sorbus*, *Betula* and *Alnus*) containing examples of endangered native species and plants threatened with extinction, such as *Betula murrayana* of which there are less than 10 individuals remaining. The collection has a high level of national and international significance and offers significant potential for conservation of endangered species both in and out of their natural environments, to propagate plants to be used throughout the University estate and as a location for plant research.

Data about the collection is recorded using a records management system which includes wildlife data. The garden features and habitats at Ness include wildflower meadows, orchards, ponds, scrub and woodlands which support many protected species such as bats, great crested newts, and badgers. Invasive plant species have also been identified including giant hogweed, Japanese knotweed and Himalayan balsam.

⁹ www.plantheritage.org.uk/national-plant-collections/what-are-the-national-collections/



Betula murrayana, critically endangered part of the *Betula* collection at Ness Botanic Gardens



Ness Botanic Gardens



Sorbus devoniensis, part of the native *Sorbus* collection at Ness Botanic Gardens at Ness Botanic Gardens

UNIVERSITY OPERATIONS AND ACTIVITIES

The University impacts nature and biodiversity in a variety of ways, with the potential for both positive and negative impacts. This plan, and the aforementioned principles, focus on 3 major areas in which the University impacts biodiversity, which can be broadly summarised as our estate operations, the University culture and our impacts beyond our estate through our supply chain and investments.

1. University Estate Operations

How we manage our estate has a huge impact on the biodiversity present throughout our campuses. As such, much of this work falls under the People and Campus Services (PCS) department, which is responsible for the development and maintenance of the estate.

How we build or make significant changes to our existing estate is managed through our capital projects and estate strategy. Ensuring ecological stewardship is built into major changes to our estate, whether through new developments or major refurbishments, is essential for minimising our impacts brought about through changing use of land under our control. Furthermore, careful consideration and strategic planning can help capitalise on the regulating, material and non-material benefits of nature such as using trees to regulate air quality, reusing biomass harvested on campus and creating accessible natural spaces.

Ensuring a nature rich estate is not only about the provision of biodiverse spaces, but also about how they are maintained and managed. The practices of our Grounds Maintenance Team and managers in key areas such as the farms and

Ness Botanic Gardens play a key role in maintaining and enhancing the biodiversity of the estate and beyond, avoiding pollution through the responsible use of resources such as herbicides, pesticides and silage and maintaining our existing natural assets in a sustainable way.

Campus development and maintenance activities are supported by our ISO 14001:2015 accredited Environmental Management System, which manages the environmental procedures across our estate.

2. University Culture

The University is a research-intensive educational institution with significant influence and a responsibility to represent over 5,000 members of staff and over 28,000 students. Developing a culture which values biodiversity through ensuring spaces are accessible, used for research and teaching and enjoyed by students, staff and the local community, will be crucial to the success of this plan.

The University takes an active role in engaging with the Liverpool Guild of Students in exploring volunteering opportunities which have the potential to



Leahurst Veterinary Campus

benefit our local green spaces. We also take an active role in engaging with the local community to educate on the benefits of nature, such as presenting workshops and open days with local schools at Ness Botanic Gardens.

3. Supply Chain and Investments

Where our food and other material comes from has an impact on biodiversity. How our suppliers manage sea and land use change, their exploitation of natural resources and the mitigation of pollution have a significant impact on biodiversity beyond our campus. Catering is a key area where we are already taking action, such as only purchasing fish from sustainable sources certified by the Marine Stewardship Council and only purchasing teas and coffees from suppliers with Fairtrade or Rainforest Alliance accreditation. Furthermore, purchasing decisions regarding construction materials, such as timber and cement, grounds keeping supplies and other consumables, take into account impacts on biodiversity through the tendering process. Further embedding ecological stewardship into purchasing decisions and processes will enable us to minimise the negative, and capitalise on the positive impacts, of our supply chain.

Beyond our supply chain, we must also look at the impact of our investments on the natural world. The University operates an ethical investment policy which adheres to the principles from the United Nations Global Compact¹⁰. Key to this will also be gaining a better understanding of our investment's impacts on nature.

¹⁰ www.unglobalcompact.org/

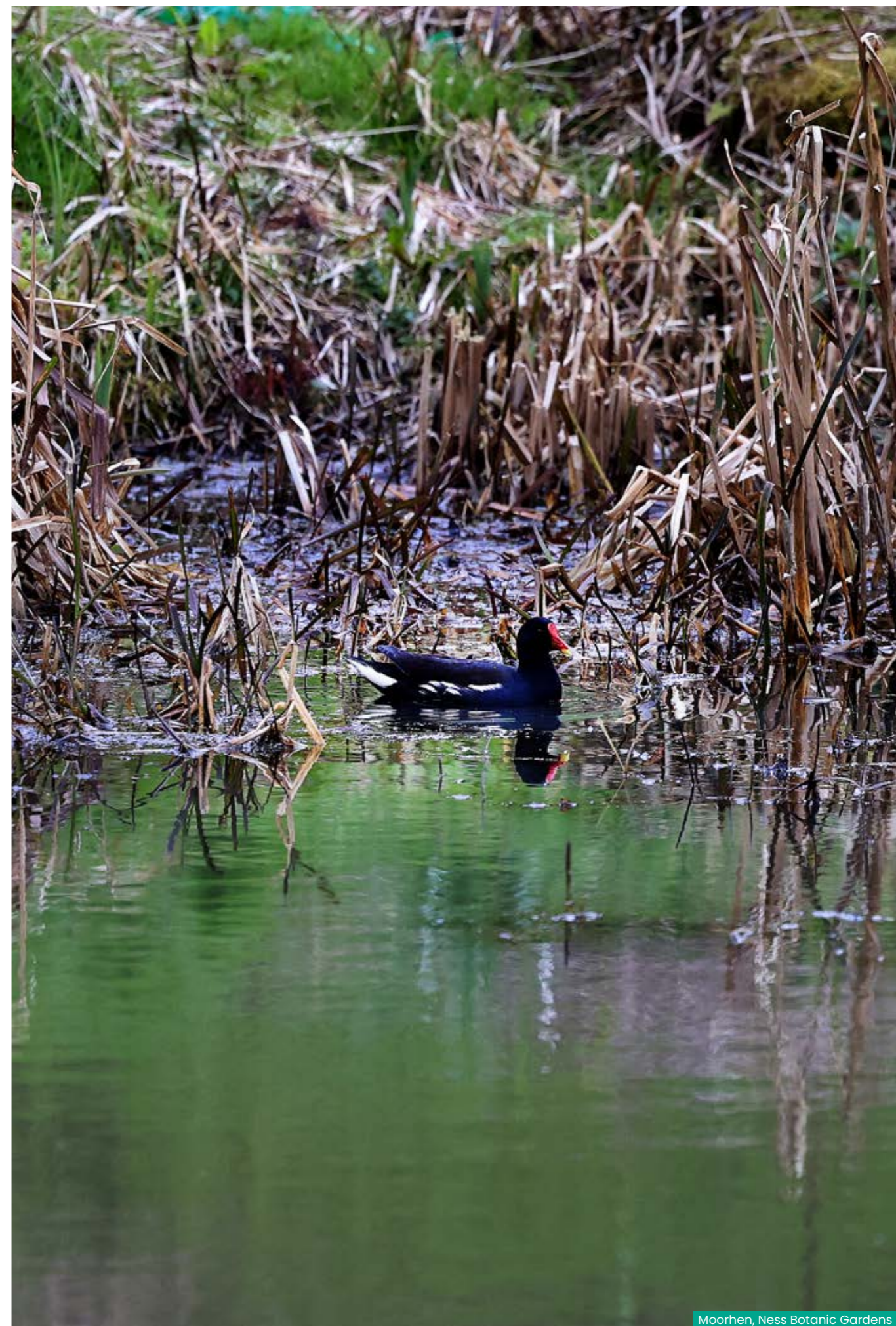
HEDGEHOG FRIENDLY CAMPUS

Recognising the hedgehog as native species vulnerable to extinction, we have been a member of the Hedgehog Friendly Campus Scheme since 2019, achieving Gold Accreditation in 2022.

The scheme, coordinated by a group of staff and students' volunteers, has completed a number of practical and awareness-raising activities designed to provide long term improvement for the threatened species. The project has seen the rescue and rehabilitation of injured hedgehogs found on the estate and been an excellent engagement and educational tool with the local community, including completing hedgehog surveys with schools and nurseries.



Sydney Jones Library Garden, City Centre Campus



Moorhen, Ness Botanic Gardens

PRINCIPLES AND COMMITMENTS

We have developed three overarching principles, influenced by the objectives of the Kunming–Montreal Global Biodiversity Framework, which will guide our response to the ecological crisis, through increasing biological diversity, ecological services, and human wellbeing benefits across and beyond our estate.

PRINCIPLE 1:

We will increase biodiversity throughout our estate, supporting greater genetic, species and ecosystem diversity.

Incorporate biodiversity into Estate Strategy 2031+ and master planning:

- Improve our understanding of existing habitats and green spaces across the estate.
- Ensure biodiversity is considered in estate master-planning, prioritising existing habitats.
- Identify the presence of and develop a strategy for the removal of invasive plant species.

Incorporate biodiversity into campus design principles to:

- Ensure compliance with mandatory Biodiversity Net Gain.
- Embed ecological stewardship into capital projects.
- Increase the use of nature-based solutions to regulate the climate.

Integrate ecological stewardship into campus operations to:

- Ensure our green spaces are maintained to promote biodiversity.
- Minimise the negative impacts of our operations on biodiversity.
- Embed circular economy principles into estate management operations to support the regeneration, renewability and rehabilitation of nature.

PRINCIPLE 2:

We will embed, within our university culture, an appreciation of the inherent value for biodiversity and the and social and economic benefits of nature.

Engage with staff and students to promote availability and benefits of green and blue spaces:

- Promote the social and physical and mental health wellbeing benefits of natural spaces.
- Promote use of our green spaces.

Engage with local organisations to promote a positive impact on biodiversity throughout the Liverpool City Region and wider local area.

- Contribute to the development of Liverpool City Region's Local Nature Recovery Strategy.
- Explore opportunities to partner with organisations to promote biodiversity locally.

Explore opportunities to utilise green space for the benefits of research and the formal, and informal curriculum:

- Integrate biodiversity into the University's approach to Living Labs.
- Promote biodiversity volunteering projects through work with the Liverpool Guild of Students.

PRINCIPLE 3:

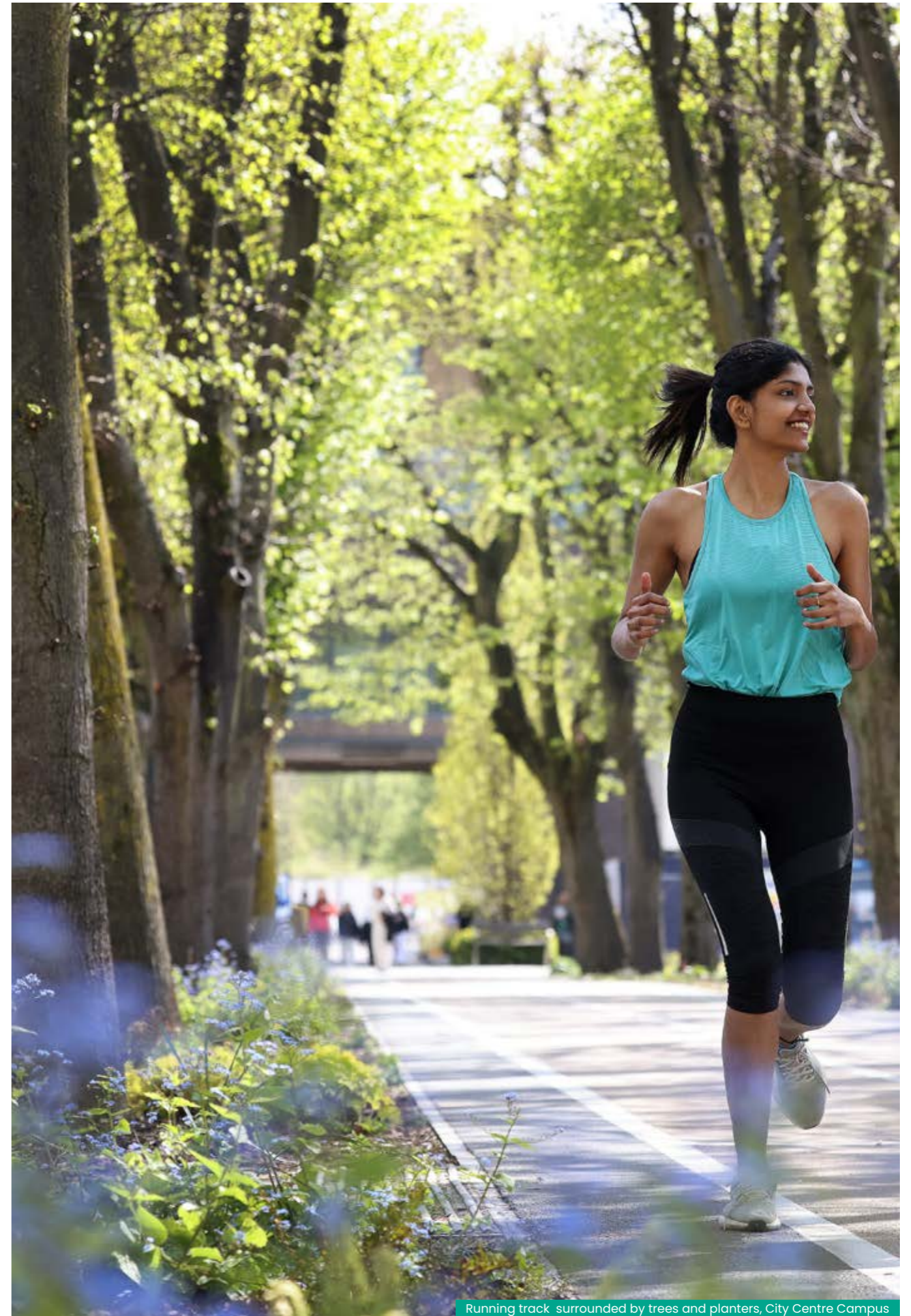
We will reduce harm to biodiversity beyond our estate and campus operations by influencing our supply chain and investment activities to identify and reduce harmful practices.

We will review our supply chain operations to reduce harm to biodiversity beyond our estate:

- Integrate the impact on biodiversity into purchasing decisions.
- Review our catering offer to minimise harm to biodiversity from food sold on campus.

We will review our investment decisions to better understand and respond to their impacts on biodiversity:

- Review our Ethical Investment Policy considering our impacts on biodiversity.



Running track surrounded by trees and planters, City Centre Campus

SUCCESS MEASURES

To realise the priorities and commitments set out in this plan, it is vital we know what success looks like. We have identified 5 measures to track our progress, which will allow us to continually revisit, refocus and optimise our approach to achieve long term strategic success:

1 Define the existing habitats and natural assets across the University of Liverpool estate by July 2026 and adopt this as the baseline position.

2 Make a pledge as a Nature Positive University, including committing to setting S.M.A.R.T. targets to increase our baseline position by July 2027.

3 Biodiversity net gain of at least 10% linked to all estate developments.

4 Record attendance at biodiversity events at the University estate and increase by 10% over the duration of the plan, to 2031.

5 Biodiversity to be incorporated in all competitive tenders related to capital projects by January 2027.

GOVERNANCE AND REPORTING

The success of this plan relies on embedding the principles across all aspects of the University's operations through tangible actions which are monitored regularly. We are committed to implementing the principles in a consistent, transparent and agile manner and have provided a list of initial actions as an appendix to this document, along with specific deadlines and responsibilities.

The Biodiversity Working Group will bring together colleagues with operational responsibilities, academic expertise and student representation, via Liverpool Guild of Students. The group will meet on a quarterly basis to review actions and will report progress to the University's Sustainability Committee.

With substantial actions sitting within People and Campus Services (PCS), close monitoring will be managed internally to ensure that estates-based actions are supported and implemented. Capture and monitoring of nature-related procedures will be included through the Environmental Management System and integrated into major works throughout the RIBA design stages.

The monitoring and reporting of the University's performance in terms of biodiversity requires understanding of the existing situation across the estate and within our operations. As such, many of the initial actions that have been identified in the appendix relate to baselining our current position. As the plan progresses additional actions and targets will be developed and added to the Sustainability Strategy Delivery Plan, taking into account our existing position, the University's ambitions and the financial and/or staffing implications of any proposed updates.

Progress against this plan will also be reported externally via:

- In our annual Sustainable Development Goals report, against SDG 14 'Life on Land' and SDG 15 'Life Below Water'.
- In the annual THE Impact Rankings against SDG 14 'Life on Land' and SDG 15 'Life Below Water'.
- Within the sustainability section of the University's annual financial statements.
- We will report annually on progress in our sustainability reports.

This Biodiversity Plan will be reviewed in 2030-31. Any substantive updates required before that point will be reviewed and agreed by the Biodiversity Working Group, and any amendments sent to the Sustainability Committee for approval.



Abercromby Square, City Centre Campus


CONTACT US

sustainability@liverpool.ac.uk

www.liverpool.ac.uk/sustainability

 @LivUniSustain

 /LivUniSustainability

 @livunisustainability

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THE ORIGINAL

REDBRICK