Date created: October 2025 Reviewed by: Sustainability Committee





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Birmingham City University (BCU) commissioned FPCR to undertake a series of ecology surveys to inform the preparation of this Biodiversity Action Plan (BAP) in partnership with staff and students. This BAP is intended for implementation across our estate and provides a series of principles and actions to help retain, protect and enhance biodiversity present at our campuses. The BAP will run for a 10-year period, with an intermediate report produced, further confirming Birmingham as the UK's Nature City.

At BCU, we are committed to maximising biodiversity at each of our campuses through habitat creation and management that is focused on enhancing the natural resources we have to offer. BCU acknowledges that there are challenges to improving biodiversity in urban spaces like those available across our estate. However, we recognise these spaces provide a multitude of functional roles including recreational greenspace, creating an attractive environment for students and staff while also delivering ecosystem services such as carbon storage, soil retention and pollination. Through the implementation of informed principles and actions, this BAP seeks to improve the functional roles that BCU greenspaces offer, by enhancing the biodiversity resources that our sites support.

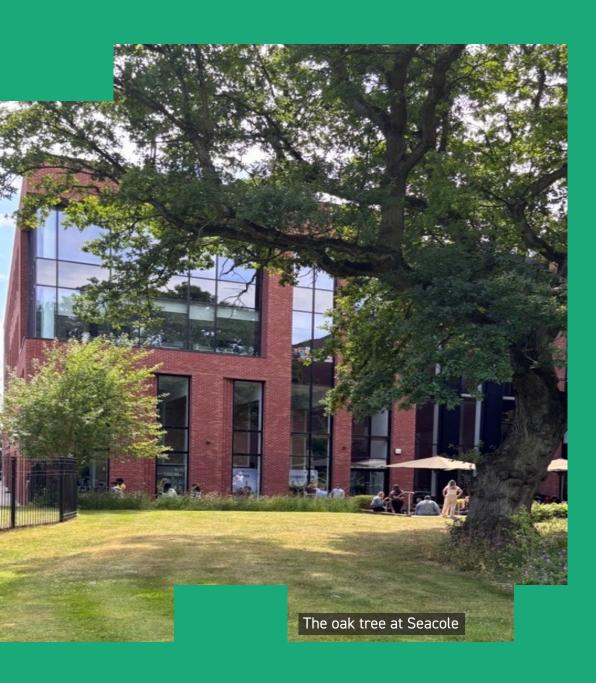
To inform the BAP, a series of ecological surveys have been completed by FPCR, including a phase 1 habitat survey, preliminary bat roost assessments, a breeding bird survey, automated bat detector surveys and invertebrate surveys including those for macro-moths and butterflies. The results of these surveys have been assessed and presented in an ecological report prepared by FPCR that can be read in conjunction with this BAP and is available on our biodiversity webpage.

The BAP supports the wider sustainability aims of BCU's Environmental Plan and the commitment to improving environmental performance annually as part of the ISO 14001:2015 accredited Environmental Management System. The BAP will also act as a core enabler for the University's Strategy 2030, which commits to increasing biodiversity by over 5% by the year 2030.

Biodiversity Action Plan vision

BCU is committed to maximising opportunities for biodiversity, greenspace and ecosystem services across our estate. We want to blur the lines between green and grey spaces on our campuses and encourage engagement with the urban green spaces we support.





What does success look like?

An assessment will be completed at the end of the 10-year BAP period using Defra's Biodiversity Metric, confirming that the BAP actions have led to a net gain in biodiversity across the BCU estate from 62.65 to 75.60 biodiversity units.

Sustainable Development Goals

Birmingham City University is committed to supporting the United Nations' 17 Sustainable Development Goals (SDGs). The Biodiversity Action Plan (BAP) offers strategic direction for the University to achieve several of these goals, with particular impact on Life Below Water (SDG 14) and Life on Land (SDG 15).

By enhancing habitats, managing green infrastructure, and reducing pollution and runoff, the BAP supports healthier freshwater systems that benefit marine life (SDG 14). At the same time, its focus on protecting, restoring, and monitoring terrestrial habitats, promoting native planting, and increasing biodiversity aligns closely with SDG 15's aim to halt biodiversity loss and sustain healthy ecosystems. The BAP also supports Sustainable Cities and Communities (SDG 11) through the creation and improvement of habitats in an urban environment.





What is biodiversity?

Biodiversity, or biological diversity, encompasses the full range of life on Earth. It includes the variety of species, the genetic differences within those species, and the ecosystems they form. This spans everything from visible organisms like mammals and trees to microscopic life such as bacteria and fungi. According to the Convention on Biological Diversity (CBD), biodiversity reflects the complexity of nature and is essential to maintaining healthy, functioning ecosystems.

Every living organism is part of a broader **ecological community**, interacting with others in shared environments. These ecosystems include not only natural landscapes like oceans, forests, wetlands, and deserts, but also **human-made settings** such as cities and urban parks. Even in built environments, biodiversity plays a crucial role — supporting pollinators, purifying air and water, and contributing to mental and physical wellbeing. Recognising the value of biodiversity in all spaces helps us better protect and enhance the natural world around us.

The Natural History Museum summarises biodiversity perfectly <u>in this informational video.</u>





Figure 1: Benefits from the Sea Source: NatureScot's Ecosystem Wheels



Figure 2: Benefits from the Nature Source: NatureScot's Ecosystem Wheels

The importance of biodiversity

Thriving biodiversity — both locally and globally — is fundamental to the health and wellbeing of all life on Earth, including human populations. Nature underpins our survival by supplying essential resources such as clean air, safe water, and nutritious food. It also provides the raw materials for medicine, construction, and industrial processes. We depend on intricate natural systems for vital functions like soil formation, crop pollination, and climate regulation. In addition to physical resources, time spent in nature — whether in gardens, parks, or wild landscapes—offers proven benefits for mental health, wellbeing, and personal development.

These wide-ranging advantages are known as **ecosystem services** and are grouped into four key categories:

- Provisioning services tangible goods like food, timber, fibre, water, and fuel.
- Regulating services processes that help control climate, manage floods, and purify air and water.
- Cultural services non-material benefits derived from education and spiritual values that positively influence people's health and wellbeing.
- Supporting services fundamental ecological processes like nutrient cycling, soil formation, and habitat creation, which enable all other services to function.

NatureScot's Ecosystem Wheels illustrate the many interconnected benefits we gain from our land and sea environments. See figure 1 and 2.

Health and wellbeing

Nature significantly supports both mental and physical health. Reports by the Mental Health Foundation (2021) and the National Academy for Social Prescribing (2022–24) highlight benefits including reduced stress, blood pressure, and risk of chronic illnesses, as well as improved wellbeing and resilience. Nature-based interventions such as NHS "nature prescriptions", RSPB Nature Prescriptions, and NatureScot's Green Health Partnerships are demonstrating real impact. Evidence from the National Academy for Social Prescribing shows these schemes improve health and therefore reduce GP visits, A&E attendance, and hospital admissions.

The importance of biodiversity

Student experience and opinion

SOS UK's Student Perspectives on Nature and University Action (2023) found that 86% of students in further and higher education believe their institutions should take action to support nature, and 64% want more access to natural spaces. Yet 19% lack nearby access to green spaces. Awareness of current initiatives remains low. A 2024 SOS UK report on pesticide use revealed students' concerns about the impact on wellbeing and biodiversity, with many preferring more wild planting. This supports a shift in campus maintenance to promote mental health and connection with nature.

Social justice

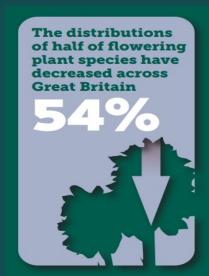
Enhancing access to nature is a social equity issue. Wildlife and Countryside Link (2023) found that one in three households in England lack nature within a 15-minute walk. Marginalised communities, particularly Black people in England, are disproportionately affected, with 37% of black people having no access to outdoor space at home, compared to 10% of white people (Confronting Injustice: Racism and the Environmental Emergency, 2022). Increasing campus biodiversity and accessibility can help address these disparities and foster inclusivity.

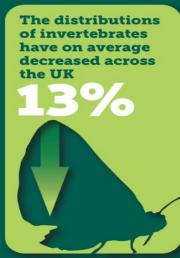


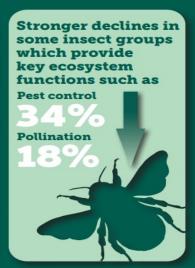
UK biodiversity loss

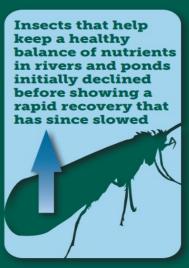
The State of Nature Partnership's 2023 State of Nature Report highlighted stark findings on the state of biodiversity in the UK, showing that wildlife in this country continues to decline (figure 3). The following include some key figures drawn from the report that highlight the scale of biodiversity loss in the United Kingdom since 1970:

- The abundance of species studied has declined by an average of 19%.
- Nearly one in six species (16%) assessed are at risk of extinction in Great Britain.
- Invertebrates such as insects, spiders, and millipedes have been found on average in 13% fewer places now.
- More than half of flowering plants (54%) and bryophyte [a group of plants that includes mosses, liverworts and hornworts] (59%) have decreased in their distribution across Great Britain.
- Pollinators such as bees, hoverflies, and moths have decreased on average by 18%.













7 reasons for biodiversity loss

Changes in land and sea use

Changing land and sea use is a major cause of biodiversity loss in the UK and Ireland. The biggest pressures come from agricultural expansion and urban growth. Agriculture occupies 69% of land in the UK (UK Government 2024), much of it is intensively managed, which harms biodiversity. Urban areas often consist of tarmac, concrete, and low-diversity amenity grassland, offering limited value for nature.

Climate change

Climate change is disrupting ecosystems, impacting species across land, sea, and air. Atlantic puffins struggle as warming seas reduce key prey like sand eels, while mountain ringlet butterflies lose habitat as temperatures rise. Common frogs face mismatched breeding cues, and North Sea cod populations decline due to altered spawning conditions. Pollinators like bees are affected by shifting flowering times and extreme weather. These changes illustrate how climate change is reshaping biodiversity and threatening ecological balance.

Pollution

Pollution comes in many forms — air, water, soil, noise, and light — and affects biodiversity both directly and indirectly. Wildlife may be harmed by litter, chemicals, pesticides, or nutrient runoff, leading to oxygen depletion in bodies of water and mass fish die-offs. Microplastics and chemical exposure can also disrupt reproduction and health in many species.



Invasive species

Species introduced intentionally, accidentally, or due to climate shifts can become invasive. For example, **Himalayan Balsam**, a plant species that was once prevalent at BCU outcompetes native native plants, and the **Asian hornet**, newly arrived in the UK due to warmer conditions, threatens pollinators. Apps have been created to report sightings and support early removal efforts.



Exploitation of organisms

Humans overuse nature for products and services—from deforestation for paper to unsustainable meat and fish consumption. This includes the use of animals in research, and materials like leather and wool in textiles. Overexploitation threatens species and destabilises ecosystems.



Lack of value placed on nature

Modern systems like capitalism and urbanisation often overlook nature's worth. Institutional decisions—like choosing cheaper, less sustainable options—reflect this undervaluation. Actions like frequent mowing or unnecessary replacements reinforce choices that ignore biodiversity benefits.



Disconnection from and lack of access to nature

The UK is among the most nature-depleted countries globally. Limited access to biodiverse green space, combined with digital lifestyles and social inequality, has led to disconnection from nature. 22% of adults in England hadn't visited natural spaces in the past two weeks (Natural England 2024), and marginalised groups face even greater barriers. This disconnection may reduce how much people value and protect nature.

This Biodiversity Action Plan sets out six key principles to address the main drivers for biodiversity loss, and these can be accessed from page 34.

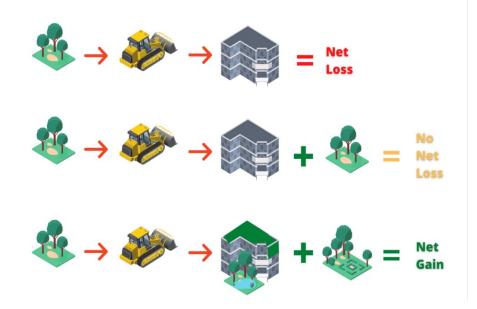


Legal obligations and policy context

Legal obligation

As a public body as defined by DEFRA, BCU have a legal obligation under Section 40 of the Natural Environment and Rural Communities Act (NERC) 2006 'in exercising its functions, to have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'. In addition to the NERC Act 2006, any developments will also have obligations for a minimum of 10% biodiversity net gain, though legislation under the Environment Act 2021.

This BAP has been produced in part to contribute to these obligations, however the aspirations of BCU go beyond legal requirements as we strive to be a responsible landowner by implementing high standards for our commitment to conserving and enhancing biodiversity. Consequently, the principles and actions set out with this BAP seek to go above and beyond our responsibility to conserve biodiversity under the NERC Act by providing measures to enhance site wide biodiversity wherever possible.



Birmingham and UK policy context

BCU recognises that there is limited greenspace across the estate, however, that space can still play an important role in enhancing and conserving biodiversity. Where possible, this BAP therefore also aims to contribute to the aims of national, regional and local biodiversity policy objectives and nature restoration initiatives. The principles and actions set out within this BAP have been informed by the following policy documents:

- National Planning Policy Framework
- The Environment Act 2021
- Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services

- · The Birmingham City Development Plan
- The Birmingham and the Black County Biodiversity Action Plan
- · Birmingham, City of Nature Plan
- West Midlands National Park

Once developed, the Local Nature Recovery Strategy relevant to Birmingham will also be used to inform the BAP. Contained in the Environment Act 2021, this new, England-wide system of spatial strategies will establish priorities and map proposals for specific actions to drive nature's recovery and provide wider environmental benefits. The strategies will provide the foundation of a national Nature Recovery Network and help the public, private and voluntary sectors work more effectively together for nature's recovery, enabling collective effort to be focussed where it will have most benefit.

International context

In 2022, during COP15, global leaders agreed on the **Global Biodiversity Framework (GBF)** — also known as the **Biodiversity Plan for Life** on Earth. This landmark agreement outlines four long-term goals to be achieved by **2050**:

- · Significantly expand and restore natural ecosystems to protect biodiversity.
- Ensure sustainable use of biodiversity to support human wellbeing and prosperity.
- Fairly share the benefits of genetic resources, with a focus on Indigenous peoples and local communities.
- Secure \$700 billion annually, primarily from wealthier to less-developed nations, to fund biodiversity protection and restoration.

Alongside these 2050 goals, the GBF also sets out 23 interim targets for 2030, including:

- Conserving and managing at least 30% of the world's land and oceans a target widely known as "30 by 30".
- Restoring 30% of degraded ecosystems, including terrestrial, inland water, and marine areas.
- Halting the net loss of the world's most intact ecosystems, bringing it down to zero.

These targets are intended to drive urgent action over the next decade to reverse nature loss and create a more sustainable future for all life on Earth.



In recognising the importance of flourishing biodiversity to the health and wellbeing of all living beings, the international "Nature Positive" goal has been created. Nature Positive is a global societal goal to halt and reverse nature loss by 2030 on a 2020 baseline and achieve full recovery by 2050. In short, it means ensuring there is more nature in the world in 2030 than in 2020, and continued recovery after that.

Delivering the Nature Positive goal requires measurable net-positive biodiversity outcomes through improvement in the abundance, diversity, integrity and resilience of species, ecosystems and natural processes. The Nature Positive goal is designed to drive society to deliver a measurable and absolute improvement in the state of nature against a defined baseline, which will in turn improve nature's ability to contribute to human wellbeing. The definition was first published in 2020, and is summarised in the following image:

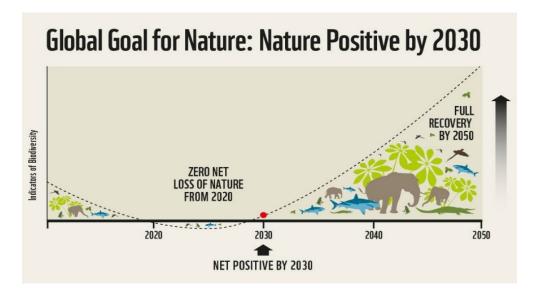


Figure 4: Nature Positive by 2030 Source: Nature Positive







3CU background

BCU has undergone significant changes over the past 10 years, including the closure of campuses and the opening of other sites. There are two main campuses (City Centre and City South) as well as various satellite sites, including the School of Jewellery, St Paul's Square and the School of Art. BCU also has sports facilities including the Alexander Stadium, The Pavilion and Doug Ellis Sports Centre. This BAP relates to all of these sites.

The University has recently approved a new investment plan and masterplans for the City Centre and City South Campuses. On the City Centre Campus, the STEAMhouse site has been built, and a temporary car park (Plot A) has been installed. Another area (Plot C) is under review for development, at present, this area is a wildlife meadow. On our City South Campus, an area is under review for future academic and residential development.

BCU aims to protect and, where possible, enhance biodiversity across the estate, promoting its benefits to students, staff and visitors. BCU's Gardening Team are enthusiastic about improving biodiversity on campus, and are already planting native bulbs, plants and trees, installing bird boxes, log piles, creating food growing sites and wild meadows. There are several green and brown roofs, and a rooftop beehive was installed in 2019.

Site overview

BCU manage several sites across Birmingham. To facilitate the establishment of area-specific actions, two broad campus areas have been identified.

The City Centre Campus includes Curzon Building, Joseph Priestley Building, Parkside Building, Royal Birmingham Conservatoire, Benjamin Zephaniah Building, Plot A, Plot C, STEAMhouse, Heneage Street and University Locks. For the purpose of this BAP, the following satellite sites are also included within the City Centre Campus sites: School of Art, School of Jewellery, St. Paul's Square, Doug Ellis Sports Centre, Alexander Stadium and The Pavilion.

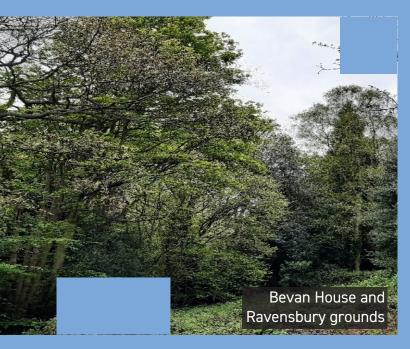
The City South Campus includes Seacole Building and its surrounding grounds, Bevan House, Ravensbury and 12 Harborne Road.

The two campuses each have a distinct character, with the City Centre Campus being of an urban nature while the City South Campus has a more suburban character.

In the main, sites under BCU control within the City Centre Campus have more limited extents of green spaces with the exception of The Pavilion (though the priority for management of open space at this site has a focus on its use as a sports facility). Aims for the City Centre Campus will primarily focus on providing bat and bird boxes in appropriate locations and expanding the quantity of pollinator-friendly planting. At The Pavilion, recommendations will be made to increase tree planting and introduce native mixed-scrub into the sports field's margins.

At the City South Campus, there are opportunities for creating a range of new habitats and features to maximise the biodiversity of the sites. These will include measures for specific faunal species and new planting to enhance existing habitats. Recommendations for sensitive habitat management will also be implemented.





Summary of existing baseline information — City South Campus habitats

The City South Campus comprises a large proportion of semi-natural and recreational green space surrounding the buildings, which is characterised by low-intensity management. Mature trees and gardens characterise the wider area and direct habitat links exist between campus grounds and prominent wildlife corridors to the south.

Seacole grounds

As shown in the images on this page, this area supports a range of habitats including amenity grasslands, wildflower banks, broadleaved woodlands, dense native scrub, a wildlife pond, ornamental scrub and mixed woodlands in addition to the hardstanding and buildings.

Bevan House and Ravensbury

Dominated by mixed, mature plantation woodlands, the grounds here have a suburban feel. Also present are areas of grassland (both amenity and more semi-natural), ornamental shrubs, native scrub and the memorial gardens in the south. An ornamental pond is also present in the north.

Harborne Road

This part of the campus is dominated by built environments but also includes some areas of amenity grassland and some semi-mature to mature trees.

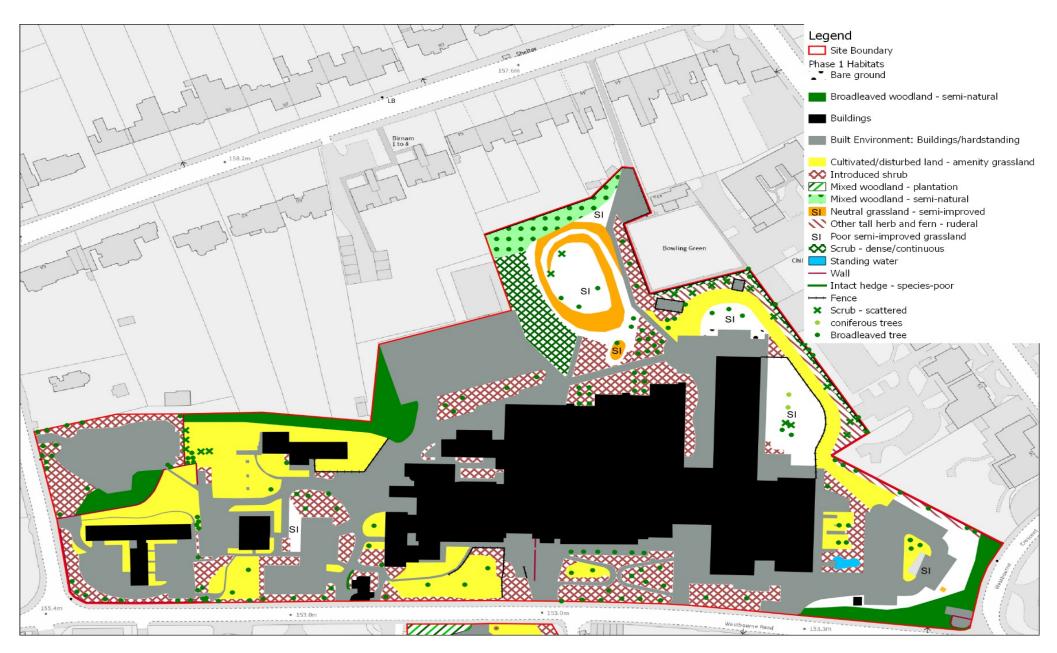


Figure 5: Seacole habitat map.



Figure 6: Bevan House and Ravensbury habitat map.

Summary of existing baseline information — City South Campus fauna

Bird surveys

City South Campus supports a range of common and widespread bird species typical of its suburban nature, including robin, song thrush, dunnock blackbird, blue tit, and chiffchaff.

Automated bat detector surveys

Several buildings and mature trees on the campus supported potential roosting features for bats. The bat detectors placed on site recorded a number of species including pipistrelle (both common and soprano), noctule, serotine, brown long-eared and myotis bat.

Moth and butterfly surveys

Three moth species were recorded from a moth trap placed on the roof of Seacole Building including a dark arches, a heart and dart and a coronet. No moths were recorded from the trap placed in the gardens of Ravensbury House and no butterflies were recorded during a transect of the ground around the Seacole Building and the gardens of Bevan and Ravensbury House.

Other species

The wildlife pond at the Seacole Building was assessed as being of 'average suitability' for great crested newts indicating the potential presence of this, and potentially other, amphibian species. Badgers are known to be present on the campus.









Summary of existing baseline information — City Centre Campus habitats

The majority of the City Centre Campus comprises of buildings and hardstanding with a combination of man-made habitats, including roof gardens, planting beds and planters, and discrete parcels of species-poor grassland. The Digbeth Branch Canal passes through the campus at its eastern extent.

Central cluster of buildings

The central group of buildings that form the main area of our City Centre Campus support a number of habitats, including brown and green roofs, amenity grassland, ornamental planting, two beehives, a wildflower meadow, hedges and a number of trees and flower planters.

City Centre satellite sites

The School of Art, St Paul's Square and School of Jewellery all support limited habitats which are generally restricted to scattered scrub and ornamental planting.

The Pavilion

The Pavilion comprises a large area of managed amenity grassland surrounded by semi-natural habitats and ornamental planting, all of which is subject to low intensity management for the promotion of biodiversity. Broadleaved woodland at the south and south-west boundary support mature tree standards, such as poplar (historically surrounding the site on all sides), sycamore, silver birch and occasional weeping willow.

Alexander Stadium and Doug Ellis Sports Centre

Other than the buildings that dominate this site, it supports areas of amenity grassland and ornamental shrub.

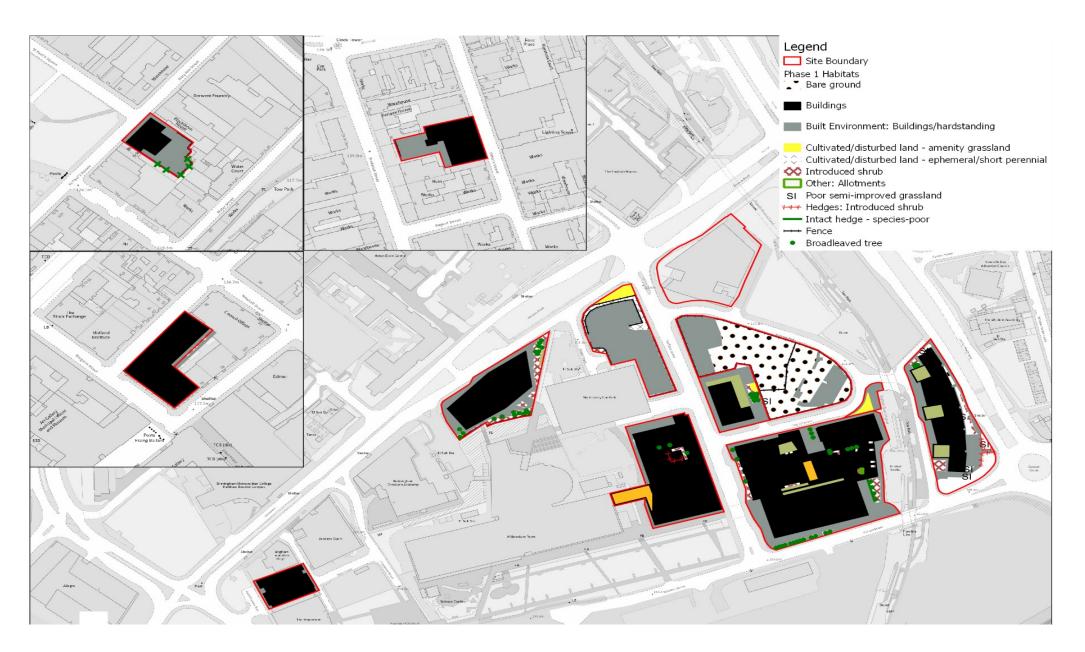


Figure 7: City Centre Campus habitat map.



Figure8: The Pavilion and Doug Ellis habitat map.

Summary of existing baseline information — City Centre Campus fauna

Bird surveys

Species using the City Centre Campus were characteristic of the urban nature of the sites and included blue tit, goldfinch, greenfinch, magpie and wren. More notable species included swift, lesser black-backed gull, herring gull and starling. Confirmed breeding of blue tit was observed at this campus (using one of the nest boxes).

Automated bat detector surveys

Bats were confirmed to be present at the City Centre Campus with common pipistrelle echolocations picked up by the automated bat detectors placed at Curzon Building and at the School of Art. University Locks and the School of Art both supported features suitable for roosting bats as did a range of mature trees at The Pavilion.

Moth and butterfly surveys

Six moth species were recorded from a moth trap placed on the roof of Parkside Building including a dot moth, white satin moth, smoky wainscot, Hebrew character, heart & dart and a common wainscot. Four species of butterfly were recorded during a transect around The Pavilion including a red admiral, speckled wood, small white and a meadow brown.

Other species

Honeybees are present at the Parkside Building beehives. The presence of the canals in both the city centre and adjacent to The Pavilion increase the potential for the campus to support a range of wildlife, aiding in species dispersal in and out of the area and connecting the campus to other areas of green space in the local vicinity.





Ecosystem services

As part of the review into BCU's nature conservation value, assessments have been completed using Defra's Biodiversity Metric 4.0, the NATURE tool and iTree assessments. The summary results of these are presented below and provide an insight into how the nature conservation value of campus habitats can be quantified.

Defra Biodiversity Metric 4.0

As part of the Environment Act, Natural England and Defra have developed a metric which assesses the habitats present on a site and their condition and ascribes a numerical value to each. This is in line with international initiatives to move towards a Natural Capital Approach when reviewing the biodiversity value of sites. The biodiversity value figure can then be used to assign an overall value of the habitat present on a site, measured in biodiversity units. The primary function of this metric is to assist in predicting the effects of development proposals on biodiversity by measuring pre- and post-development values and comparing the two figures to determine what change can be predicted. This tool, however, can also function to measure biodiversity change over time. It has been used in the production of this BAP to provide a baseline Biodiversity Unit figure for the BCU estate, which can be used to measure how successful the implementation of this action plan is by periodically assessing the value of on-site habitats post BAP implementation.

The current baseline value of the site calculated using the 4.0 metric is 62.65 Biodiversity Units.

The NATURE tool

The NATURE tool is a way to assess the impact of land-use and management changes on natural capital performance. It allows for the assessment of up to 17 ecosystem services plus physical and mental health benefits, through a scoring system indicating the direction and magnitude of project impacts.

The tool is similar to the Biodiversity Metric in that its main function is to assess the impacts on natural capital from proposed developments. However, BCU has engaged as an early user of this emerging tool to help assess the tool's value in measuring the effects of long-term land management on ecosystem services. The tool has been used to generate a baseline set of values for each of the ecosystem services explored, and a reassessment will show how changes to the way BCU manages its land has a positive impact on ecosystem services. Analysis has demonstrated that the greatest opportunities for improvement are with the accessibility of habitats.

iTree assessment

The BCU estate contains 1,130 trees, covering 1.508 hectares. The most common species are sycamore (*Acer pseudoplatanus*), field maple (*Acer campestre*), and Canadian poplar (*Populus* × *canadensis*).

A 2021 iTree Eco assessment by the U.S. Forest Service examined BCU's urban forest structure, function, and value to inform better environmental management. Urban forests typically have higher species diversity than natural areas; 9% of BCU's trees are native to Europe, with 62% from Europe and Asia.

Tree benefits often scale with leaf surface area. BCU's 1.508-hectare canopy produces 17.1 hectares of leaf area. Dominant species by leaf area are sycamore, Canadian poplar, and common lime (*Tilia* × *europaea*).

Urban trees improve air quality by cooling temperatures, filtering pollutants, and reducing energy use. BCU trees remove an estimated 96.07 kg of pollutants $(O_3, CO, NO_2, PM2.5, SO_2)$ annually.

Trees also sequester and store carbon. BCU's urban forest sequesters about 6.422 metric tons of carbon per year, valued at £1.62 million, and stores approximately 244 metric tons (£61.7 million). Sycamore stores 87.6% of total carbon, while Canadian poplar sequesters 69.4% of annual carbon gains.

Trees in BCU iTree generate around 17.12 metric tons of oxygen each year. They also reduce surface water runoff by an estimated 289 cubic meters annually through rainfall interception and enhanced soil infiltration.

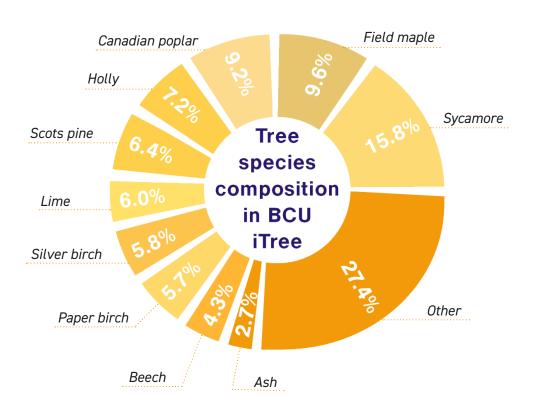


Figure 9: Tree species composition in BCU iTree



Biodiversity Action Plan format and approach

This BAP will provide a framework for protecting and enhancing our existing ecological resources and to create new opportunities for biodiversity. While biodiversity will be the guiding principle behind the BAP, we want to ensure that we maximise the additional ecosystem services that campus habitats support, including carbon storage, health and wellbeing benefits and reducing air pollution.

The BAP provides a summary of the ecological features present across the estate, which has been informed by the more detailed description and assessment in the ecological report, which can be viewed on our website. An assessment of the ecosystem services that BCU greenspaces provide is also included.

The BAP sets out the fundamental principles that will help achieve the vision. For each principle, the BAP then explores objectives and specific actions to be implemented across the estate over the next ten years. These will include measures such as habitat creation, sensitive habitat management of existing resources, provision of features for wildlife (such as bird and bat boxes) and measures to include students and staff in the BAP delivery. This will include both estate wide actions and those relevant to the two broad areas identified, the City Centre and City South campuses.

In the action plans, the following key is used to show what areas each action relates to:

- EW = Estate wide
- CC = City Centre Campus
- CS = City South Campus
- LC = Local Community

The teams responsible for each action are also outlined in the action plans:

- SMT = Senior Management Team
- GT = Gardening Team
- ST = Sustainability Team
- PT = Projects Team
- EngT = Engineering Team
- SU = Students' Union
- VOL = BCU Volunteering
- BK = Beekeeper
- HFC = Hedgehog Friendly Campus Working Group
- RIB Rooted in Birmingham
- GG Growth Garden

Finally, this document outlines how success will be measured, and how the BAP will be monitored and reported on.



Principle 1: Protect and enhance existing ecological resources

The ecological surveys have demonstrated that the BCU estate supports a range of habitats and ecological features including:

- Woodland
- · Neutral grassland
- Ponds
- Mature trees
- Beehives
- Breeding birds
- Roosting bats
- Badger sett

The retention and protection of all habitats and ecological features of recognised biodiversity value will form a central principle of this BAP. All established habitats will be retained and brought under favourable habitat management (if not already).

Maintaining and enhancing what already exists will be an important consideration for any future development. During the design phase of any future construction projects the mitigation hierarchy will be followed; this prioritises the retention of habitats wherever possible, before considering mitigation or compensation options.

The Gardening Team are continuously implementing more wildlife friendly practices to enhance habitats and there are opportunities to build on this. Existing habitats will be enhanced through measures such as additional planting and the introduction of new species, favourable and sensitive management of existing habitats, and the incorporation of new habitat features to improve heterogeneity (diversity) and structural variation.

The BAP will seek to create a more informal character of amenity spaces around the estate where possible, bringing biodiversity into the heart of our campuses and helping to connect students and staff with wildlife.





Principle 1 action plan: Protect and enhance existing ecological resources

Objective	Action	Campus			Responsibility	Timescale
		EW	CC	CS		
New developments will take into account established habitats and retain them wherever possible. This includes woodland, scrub, mature trees and ponds.	Create and continuously update habitat maps of all University owned sites to ensure that new development proposals are able to identify habitats for retention and protection at an early stage.	•			ET/PT	Ongoing
	Maintain a database of all mature trees on site, including the species, age, height and other relevant characteristics for determining the value of individual trees.	•			ET/GT/ PT	Ongoing
	Ensure the above databases are consulted early in the design stage of any new developments to ensure they are retained and protected.	•			PT	Ongoing
Enhance existing habitats through favourable management.	Adopt the management prescriptions detailed in appendix B of the Ecological Report prepared for the site, including the wildflower species, planting and aftercare recommendations.	•			GT	Ongoing
	Introduce additional herbaceous planting within structural formal landscaping planting areas around the site to create additional pollinator food sources. Planting should encourage a range of colourful native flowers to establish within areas of formal landscaping, with management reduced to allow plants to 'spill' over borders.	•			GT	Ongoing
	Improve the biodiversity of amenity and formal greenspaces by introducing native species-rich wildflower seeds including species tolerant of regular disturbance and mowing. Relax mowing where possible.	•			GT	Ongoing
	Introduce yellow-rattle seed into informally managed grassy margins at The Pavilion to reduce the competitiveness of grasses and facilitate the success of future sowing of a 100% wildflower seed mix within the margins to improve botanical diversity.		•		GT	2024/25
	Existing bird boxes placed on immature trees at the Royal Birmingham Conservatoire will be moved to more suitable locations on buildings or mature trees.		•		GT	2024/25
	Enhance planters along the canal at city centre to encourage wildlife into the city by introducing native species rich planting as a 'wildflower highway.'		•		GT	2025/26
	Engage with the Canal and River's Trust to enhance canals near to the campus.		•		SMT/ET	2026/27
	Redesign the existing pond at Seacole grounds, so that it is more beneficial for native pond and wetland wildlife, and it has improved links with its context.			•	GT	2023/24 - 2024/25
Eradicate schedule 9 non-native invasive species across the campuses.	Initiate a programme of regular treatment of Himalayan balsam present at Bevan House and Ravensbury focused on hand-pulling. Treatment will be undertaken for a minimum 5-year period or until monitoring has proven that the eradication programme has been successful.			•	GT	Ongoing
Improve connectivity of habitats on campus to offsite habitats.	Investigate opportunities to promote joint habitat enhancement initiatives with neighbours and nearby development projects, to improve connectivity of urban habitats both with campus grounds and across the urban landscape surrounding BCU sites.	•			ET/SMT	Ongoing



Principle 2: Create new habitat for wildlife across the estate

A variety of opportunities are available for BCU to introduce new habitat features across the estate to further enhance ecological value. Each campus offers unique opportunities and constraints for habitat creation, which have been considered within this BAP.

Although the City Centre Campus is limited in available greenspace due to its urbanised context, there are opportunities to create habitats in innovative ways, including space-saving measures such as climbing plants, additional planters, and rooftop planting. These green infrastructure solutions can also play a vital role in adapting to climate change by providing localised cooling, reducing the urban heat island effect, and helping to manage stormwater runoff.

At the City South Campus, similar solutions can be incorporated into the larger areas of amenity grassland. For example, planters can be used to establish wildflower areas while maintaining the recreational function of open spaces. Faunal opportunities, such as bird and bat boxes, can also be introduced. In addition to enhancing biodiversity, these features contribute to climate resilience by intercepting rainfall, slowing surface runoff, and improving evapotranspiration, which can help moderate extreme temperatures and reduce the risk of flash flooding.

Habitat creation will focus on maximising biodiversity across campuses, but the provision of wider ecosystem services will also be central to design. In particular, the role of green habitats in climate change adaptation—such as cooling through shade and evapotranspiration, and supporting water management—will be actively considered. The importance of greenspaces in connecting students and staff with nature also remains a key priority.

The Gardening Team has already begun introducing habitat enhancements across the University, including log piles, insect hotels, hedgehog houses, and bird boxes. This BAP will build on that work by developing a broader range of new habitats and features. These will be designed to maximise available space while ensuring that the University's greenspaces continue to deliver critical ecosystem services and climate resilience alongside improved biodiversity.





Principle 2 action plan: Create new habitat for wildlife across the estate

Objective	Action	Campus			Responsibility	Timescale
		EW	CC	CS		
Create new opportunities for faunal species using	Install a range of bat boxes across the campuses on suitable buildings and mature trees. These should include a variety of boxes including smaller day roosting features suitable for small numbers of bats and larger maternity roosting features. Predator proof boxes should be used throughout.	•			GT/FT/ EngT	2025/26 onwards
targeted species- specific measures	Erect a swift tower in the north of the Seacole Building grounds to create optimal nesting opportunities.			•	GT/EngT/SMT	2026/27
and/or habitat features.	Investigate opportunities to create nesting features for urban raptor species such as a kestrel and/or sparrowhawk nest box at City South and a peregrine nesting platform at City Centre.	٠			GT/FT/ EngT	2027/28
	Install more nest boxes for common bird species present on campus including robin, blackbird, wren and tit species	•			GT/EngT/SMT	2026/27
	Implement a 'hedgehog highway' across the campuses by ensuring fencing and boundary treatments do not impair hedgehog movement. This will be achieved by cutting small holes at the bases of the majority of boundary treatments to facilitate movement, unless boundary treatment is adjacent to busy roads.	•			GT/ET	2025/26
	Introduce hedgehog boxes at various locations around the campus including, but not limited to, within the Bevan House and Ravensbury woodland, along the western boundary of The Pavilion playing fields and at the Seacole grounds.	•			GT	2023/24
Introduce additional planting to create opportunities for maximising site wide botanical diversity.	Investigate opportunities to introduce planters between the rows of solar panels on appropriate roofs to implement a 'bio-solar' principle that maximises space to contribute to energy efficiency and biodiversity. These should be seeded with a low-maintenance, low growing wildflower seed mix.	•			ET/GT/EngT	2026/27
	Introduce raised wildflower planters within areas of amenity grassland to maximise diversity within these formal spaces without sacrificing significant areas for recreational use. These should be designed to maximise opportunities for planting while also incorporating features for fauna such as incorporated insect houses along the bases of the planter.	•			GT	2025/26- 2026/27
	Maximise botanical diversity by growing upwards. Trellis or wiring will be installed on suitable walls around the campus and climbing plants planted either in pots or in the soil at the edge of buildings to create 'green wall' effects. Flowering native species should be prioritised or, where they are deemed unlikely to survive, heavily horticultural varieties should be used to maximise food sources for pollinators.	•			GT/EngT/ET	2027/28 onwards
	A 'raised lawn' feature should be created with wildflower borders. This should comprise a large, raised bed sown with a flowering lawn seed mix to create additional greenspace opportunities for staff and students in the city centre, while allowing the creation of separate raised borders for additional wildflower planting. This could be built at the back of Joseph Priestly Building and the Curzon Building terrace.		•		SMT/PT/GT	2027/28 onwards
	Any opportunities for additional tree planting should generally prioritise native species, but other factors such as location and resilience should also be considered, meaning a non-native species may be more favourable. The Trees & Design Action Group's Tree Species Selection for Green Infrastructure: A Guide for Specifiers will be used to aid decision making.	•			GT	Ongoing



Principle 3: Engage students and staff with biodiversity and greenspace resources

BCU recognises the important role that access to greenspace can play in contributing to the mental health and wellbeing of students, staff and other users of our campuses. Therefore, while the primary focus of this BAP will be to enhance our campuses for biodiversity, we are committed to ensure that site enhancement works remain accessible to campus users and that adequate greenspaces are provided for recreational uses.

The BAP recognises that the more BCU staff and students can engage in and enjoy biodiverse greenspaces, the more likely these places are to be encouraged and protected long-term. BCU has partnered with the Birmingham Botanical Gardens, connecting students and staff with the gardens and curriculum opportunities such as design events and growing. The BAP will therefore seek to provide formal amenity areas in close proximity to more informally managed areas of botanically rich planting. Furthermore, we will seek to use flowering lawn seed mixes with existing and newly created amenity grassland areas to maximise biodiversity opportunities and create more attractive spaces.

BCU also recognises the potential for educational opportunities to be created through the implementation of this BAP and its various principles and actions. The BAP will seek to provide educational resources for students and staff including interpretation boards containing information about species mixes and management; opportunities for engagement in the management of habitats; and opportunities to assist with ongoing surveying and monitoring. Anyone interested in any of the engagement opportunities should contact the BCU Sustainability Team.

BCU will also continue to provide open communication and opportunities for feedback on the progress of this BAP and the development of future BAPs. This will include feedback questionnaires and consultation events.

Principle 3 actions seek to foster a greater level of connection between students/ staff at our predominantly urban campuses with wildlife. The actions will also seek to demonstrate that meaningful benefits to biodiversity can be achieved even in highly urban locations and show how this can contribute positively to how students and staff experience the campuses.





Principle 3 action plan: Engage students and staff with biodiversity and greenspace resources

Objective	Action	Campus		IS	Responsibility	Timescale
		EW	СС	cs		
Provide opportunities for student and staff education	Install interpretation boards across the campus at locations with biodiverse planting or in areas with relaxed management such as relaxed mowing and yellow rattle sowing at The Pavilion, relaxed mowing at the peripheries of Seacole grounds, new wildflower/herb planting within formal planting, clusters of bat boxes, insect houses and at new raised wildflower planters.	•			ST / GT	Ongoing
on urban greenspace	Provide training opportunities on faunal species surveying (e.g., for hedgehogs, moths and butterflies) to facilitate students and staff assisting with ongoing monitoring.	•			ST	Ongoing
and biodiversity, including as	During the annual Go Green Week and other suitable times of year, stage events that showcase the habitat creation and enhancement measures to students and staff and/or that increase their knowledge of biodiversity.	•			ST / SU	Ongoing
part of the curriculum.	Explore opportunities to include campus biodiversity and beehives within the curriculum of appropriate courses through the introduction of focused modules or projects, e.g., looking at ways to maximise urban biodiversity with good design.	•			ST	2030/31
	Provide formal opportunities for landscape design students to be involved in campus biodiversity in a 'living labs' programme scheme, to contribute to the development of new ways to connect students and staff with biodiversity.	•			ST	2034/35
Encourage opportunities for students	Investigate opportunities to create additional outdoor seating within grasslands at Seacole grounds. These should include custom-built recycled/reused raised planters with wildflower planting and attached benches to maximise opportunities for planting, recreational usage and connecting students with biodiverse greenspace.			•	SMT / GT / RIB	2025/26
and staff to interact with campus greenspaces.	Use the biodiversity webpage, Sustainability Team social media and other BCU channels to provide regular updates on the implementation of the BAP, to help engage students and staff in the ongoing changes.	•			ST	Ongoing
	Incorporate biodiversity into teaching through Parkside's Growth Garden, demonstrating nature based solutions to modern day sustainability challenges.		•		GG	Ongoing
	Through the Rooted in Brum scheme, engage students and the local community in the benefits of gardening.			•	RIB	2025/26
	Investigate opportunities to introduce wildlife cameras within bird boxes and /use an online platform for these to be watched.	•			ST	2034/35
Provide practical	Maintain food growing sites around campuses.	•			GT / ST / VOL / RIB / GG	Ongoing
opportunities for students, staff and the local community to engage with and enhance greenspaces.	Investigate opportunities to initiate a food growing volunteer group, whereby students and/or staff can use campus planters to grow fruit, vegetables and herbs. Collaborate with the BCU-approved catering company and University Gardening Club to facilitate community food support and the supply of growing your own produce for BCU catering services.	•			ST / GT / SU / RIB	2027/28
	Provide opportunities for students and staff to engage with beekeeping at the hives located at the City Centre Campus. This should be overseen by an experienced beekeeper who can disseminate knowledge on how to keep bees.		•		BK / ST / GT / EngT / SU	2025/26
	Through BCU Volunteering, provide opportunities for students to enhance biodiversity on campus and in the local community.	•			VOL	Ongoing
	Investigate opportunities to engage the local community through assisting with surveying and monitoring.	•			HFC / ST / VOL / ST	2028/29

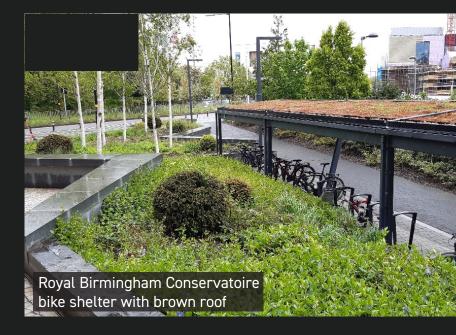


Principle 4: Incorporate biodiversity within new developments

BCU are committed to providing an excellent standard of facilities for students and staff in their work and studies. In some cases, this will be achieved through the provision of new buildings, and BCU recognise the opportunities for this to deliver additional habitat creation. With all future development schemes across BCU campuses, we will seek to ensure that biodiversity is a key element in the design process so that existing resources are protected and new opportunities for biodiversity are created.

BCU will ensure this by following evolving national planning policy requirements for biodiversity, such as the Environment Act 2021 which requires all new developments to demonstrate a measurable minimum 10% biodiversity net gain. This will be measured using an appropriate metric such as the latest version of the Defra Biodiversity Metric. BCU will strive to go beyond the 10% minimum wherever possible, through on-site solutions, integrating biodiversity within the design of buildings (i.e. green roofs or green walls) and as a last resort, seeking off-site solutions.

Any new areas of landscaping or open space delivered through ongoing site improvement works will seek to maximise biodiversity, and opportunities for students and staff to engage with this, by using innovative design principles. Designs should seek to bring recreational areas in close proximity to areas of planting and botanically rich habitats.





Principle 4 action plan: Incorporate biodiversity within new developments

Objective	Action	Campus			Responsibility	Timescale
		EW	СС	CS		
Establish the principle that biodiversity and greenspace will become an essential component of future developments.	Include a biodiversity design code within the BCU Sustainable Building Standard, including principles for ensuring biodiversity is considered early in the design stage of proposals.	•			ST / PT	2026/27
	Require all new developments to achieve a minimum 10% biodiversity net gain when measured using the Defra biodiversity metric 4.0. A feasibility assessment will be undertaken at the outset of all new developments to determine if a higher net gain target can be implemented, in order to exceed the 10% national minimum set out within the Environment Act.	•			PT	Ongoing
	Wherever possible, all new developments should either feature a biodiverse green roof or a green wall to help maximise opportunities for urban biodiversity. Brown roofs will only be used where biodiverse green roofs are not feasible in the building design.	•			PT	Ongoing
	Ensure all new developments include integrated bird, bat and/or insect boxes suitable for their location.	•			PT	Ongoing
	Where scrub habitat is lost during building development, it should be re-planted or re-established within a 2 km radius from the site.	•			PT	Ongoing
Maximise space to allow for sustainable development that also incorporates biodiversity.	Integrate a 'biosolar' policy for new developments into existing documentation that specifies creating planters for wildflowers between rows of solar panels where feasible.	•			ST / PT	2027/28
	Any landscaping works undertaken on campus should prioritise native species where appropriate and an informal character of planting, following the BAP principles and actions through the design and implementation stage.	•			ST / PT	Ongoing



Principle 5: Promote sustainable practices in the management of greenspaces

BCU wants to ensure that it fosters a responsible approach to the management of greenspace resources across the estate. BCU are committed to pursuing meaningful changes to estate management practices to ensure they can be delivered in a responsible and sustainable way. Principle 5 actions will help to ensure that we reduce our environmental impacts through the implementation of this and future BAPs, while being mindful of avoiding practices that could contribute to greenwashing.

One example of how BCU can be more sustainable is by being responsible with our usage of compost in the management of formal and informal greenspaces. Many commercially available composts contain peat, and its usage can contribute significantly to carbon emissions as peat is a natural carbon store. Damaged peatlands contribute about 10% of greenhouse gas emissions from the land use sector (IUCN), with CO2 emissions from drained peatlands estimated at 1.3 gigatonnes of CO_2 annually. Through the implementation of this BAP, BCU will commit to the use of peat-free composts only and will seek solutions to produce compost on site.

In addition, with the UK moving towards switching to electric vehicles, BCU will seek to phase out the use of vehicles and tools which use petrol or diesel, seeking to replace them with electric alternatives.

BCU will also seek to cease the use of fertilisers and pesticides across the campuses, using them only when absolutely necessary. Both can contribute to eutrophication and pollution of waterways (such as canals in Birmingham), affecting plant and animal health, particularly of more sensitive species groups such as amphibians, fish and aquatic plants. Pest control measures will also be considered.



Principle 5 action plan: Promote sustainable practices in the management of greenspaces

Objective	Action		ampu	IS	Responsibility	Timescale
		EW	CC	CS		
Improve the sustainability of compost use throughout grounds maintenance works.	No peat-containing composts to be used in grounds maintenance and management works or in the development of new landscaped areas	•			GT / PT	Ongoing
	Replace existing standing composters at The Pavilion with new, concrete based units.		•		GT	2028/29
	Install additional compost bays and investigate other composting methods such as rotating composters.	•			GT	2029/30
	Collect leaf mulch gathered during autumn grounds maintenance and use this within standing composters to create a seed mulch ideal for use on campus.	•			GT	Ongoing
Phase out use of fossil fuels in the use of grounds maintenance.	All new tools and vehicles purchased to replace retired equipment must be electric/battery powered if there are suitable options available.	•			GT	Ongoing
	Seek to use sustainable measures to charge batteries of equipment (e.g., solar panel chargers at the Gardening Teams' workbase).	•			EngT / ST /GT	2030/31
Ensure that management practices reduce any impacts to biodiversity.	Minimise the use of all fertiliser and pesticides across the estate, employing them only where necessary.	•			GT	Ongoing
	Pest control measures are only taken where they will not cause detriment to management of biodiversity resources.	•			FT	Ongoing
	Where feasible, seek to create all new planters, seating and other outdoor habitat features/furniture using upcycled local materials to reduce the environmental impacts associated with their production.	•			GT	Ongoing



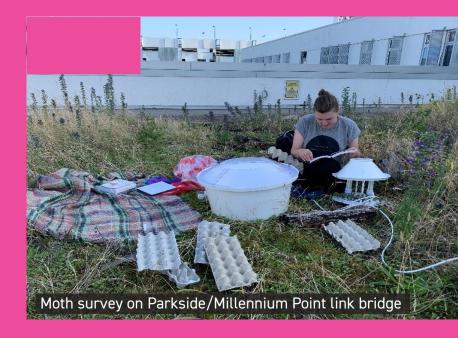
Principle 6: Continue to establish the ecological baseline and implement regular monitoring

The collection of ecological data has formed an essential component in the production of this BAP. It is vital for this BAP, and future iterations, to be guided by an accurate baseline comprising as much ecological data as possible, to ensure that recommendations for maximising biodiversity can be tailored to the existing ecological interest, as well as the evolving biodiversity identified through ongoing monitoring.

The preliminary ecological appraisal, preliminary bat roost assessment, moth/butterfly surveys, automated bat detector surveys, iTree assessments and breeding bird surveys that have informed this BAP provide an initial overview of the biodiversity present across the estate. Opportunities exist for further surveys to be completed to develop the ecological baseline. These include, but are not limited to, amphibian surveys, reptile surveys, hedgehog surveys, badger surveys and additional invertebrate surveys.

Monitoring surveys will also provide a key measure of success for a range of the principles and actions detailed above. A programme of ecological surveys will be implemented to monitor the biodiversity our estate supports and how it responds to the changes that will be introduced by the BAP.

In accordance with Principle 3, this programme of baseline surveying and monitoring will seek to involve a broad range of people including students and staff.





Principle 6 action plan: Continue to establish the ecological baseline and implement regular monitoring

Objective	Action	Campus			Responsibility	Timescale
		EW	CC	CS		
Continue to establish the ecological baseline for the sites.	Undertake presence/absence and, if present, population surveys for reptiles within suitable habitats across the campuses (i.e. at The Pavilion, Seacole, Bevan and Ravensbury).				ST / GT	2025/26 Then Biennially
	Undertake amphibian surveys of ponds at the City South campus.			•	ST / GT	2025/26 Then Biennially
	Undertake additional breeding bird surveys.	•			ST / GT	2025/26 Then Biennially
	Undertake badger monitoring surveys.	•			ST /G T	2025/26 Then Biennially
	Undertake annual hedgehog monitoring surveys.				GT / ET/ HFC / VOL	2025/26 Then Biennially
Implement a monitoring strategy to measure the success of the BAP initiatives and to continually update the ecological baseline for the site.	Implement a faunal species monitoring strategy whereby species / species group-specific surveys are updated ahead of the production of the BAP interim report and of future BAPs.				ST	2029/30 & 2034/35
	Implement a monitoring strategy for habitats across the campuses to ensure the ecological baseline remains up-to-date for future BAPs.				ST	2029/30 & 2034/35
	Undertake an end of BAP biodiversity net gain, iTree and NATURE tool assessment to measure how the implementation of the actions within this BAP will change the coverage of greenspace across the campus.	•			ST	2034/35
	Sites added to the BCU portfolio will have habitat and condition assessment surveys undertaken, to contribute to the development of habitat maps and biodiversity net gain baseline calculations. A survey report will be developed detailing the key findings, which will be added to the main ecological survey report as an appendix.	•			ST / PT	Ongoing
Initiate a student and staff feedback scheme.	Initiate an interim and end of BAP consultation to allow students and staff to feedback on how the implementation of the BAP has affected their experience of the campuses. This will also allow students and staff to contribute to the principles and actions taken forward into future BAPs.	•			ST	2029/30 & 2034/35

Monitoring, reporting and governance

This BAP has been designed to provide a foundation upon which future BAPs can build upon. Biodiversity is by its very nature subject to constant change and so the long-term strategy for maximising the biodiversity of our estates will be an evolving process that will promote the continued implementation of successful actions, adapt those that do not succeed and seek new opportunities presented by the success of measures in this BAP.

Ecological assessments comprising of habitat and faunal species surveys will be completed throughout the 10 years of the BAP to produce intermediate reports, including biennial DEFRA metric habitat surveys, which will monitor the success of the implementation of actions and provide additional actions where necessary. Following the completion of the 10-year BAP period, a further full ecological assessment will be completed, including habitat and faunal surveys, as well as iTree and NATURE tool assessments. This assessment will be used to determine the success of the BAP and inform a successor BAP produced for an appropriate timeframe, the length of which will be determined by the results of the monitoring surveys and updated assessment.

BCU are then committed to this becoming a repeat process, allowing us to constantly strive to achieve the best possible outcomes for biodiversity, sustainability and ecosystem services across our estate.

The Environmental Officer will have oversight of ongoing monitoring and management of the BAP, liaising with key colleagues such as the Gardening Team and Projects Team to ensure actions are implemented.

Regular updates on progress of the BAP will be reported through the Sustainability Committee. Progress will also be included and tracked in the annual Environmental Report, which is presented to the Board of Governors.





