

THE UNIVERSITY OF SUSSEX
JULY 2021



BIODIVERSITY STRATEGY & DRAFT BIODIVERSITY POLICY

US

UNIVERSITY
OF SUSSEX

OUR BIODIVERSITY STRATEGY

Vision: The most biodiverse campus in the United Kingdom.

Objectives

1. Achieve a biodiversity net gain¹; and
2. Increase the percentage of the University of Sussex campus set aside for nature.

Aims

We will achieve the above objectives through the following actions:

- a) Undertake a mapping exercise to categorise the campus into four categories of land management, including passive rewilding by August 2021. These four categories are listed (at Annex A of this document).
- b) Use the above mapping data to establish the precise percentage of campus land that is currently set aside for nature and then consult on options to increase this percentage to either 30%, 40%, 50% or more. This consultation will form part of a Big Biodiversity Conversation in January 2022.
- c) Use the findings from the Big Biodiversity Conversation to set SMART (Specific, Measurable, Attainable, Relevant, Timed) annual targets for achieving the objectives within this strategy.

- d) Achieve these SMART targets of increasing biodiversity and setting aside more land for nature by:
 - i. Actioning a series of practical biodiversity projects, as selected through the Big Biodiversity Conversation (these may include but will not be restricted to the list of potential projects set out at Annex B of this document);
 - ii. Implementing the good practice principles set out in the draft biodiversity policy (at Annex C of this document) that will also be consulted on during the Big Biodiversity Conversation; and
 - iii. Identifying new areas for reduced mowing, low management and passive rewilding that we will then agree with our Grounds Maintenance Team in Sussex Estates and Facilities.

Please note that this biodiversity strategy interlinks with other areas of the Sussex Sustainability Strategy. For example, our water conservation and **net zero carbon work**. Therefore, additional actions that promote biodiversity in relation to these areas can also be found in relevant companion policies and the overarching **Sustainable Sussex Strategy Document** and **Action Plan**.

Finally, a glossary of biodiversity related terms is provided (at Annex D of this document) to improve understanding of the proposals set out within our biodiversity strategy and draft biodiversity policy.



¹ Biodiversity net gain refers to an increase in the amount or quality of biodiversity in a defined area over time

OUR CATEGORIES OF LAND MANAGEMENT INTENSITY

The following categories of land management intensity have been proposed by leading academics in the field of biodiversity. They will be used to map the current usage of areas of the estate in relation to biodiversity.



A. Amenity management

Land managed as required for human use, while aligning with relevant biodiversity principles, such as minimising carbon, pesticide and synthetic fertiliser use and seeking biodiversity net gain, e.g. leaving islands and paths of longer grass to provide nature corridors through amenity grassland.

B. Reduced mowing areas

Areas within the current amenity lawn area that are marked for reduced mowing (maximum 3 times per year, compared to a typical 8 times for amenity areas).



C. Low management areas (Flower-rich Downland and hay meadow)

Areas that are mown once a year in late summer to promote biodiversity. When funds allow, these areas should be rotavated and seeded with a hay meadow mix. Paths and patches can also be mown in to provide access to areas for sitting and to demonstrate deliberate management. Ponds that are only cleaned once a year should also be included in this category.

D. Passive rewilding

Non-intervention zones, where nature is allowed to develop freely, should be established across campus. These zones should include woodlands (other than for health and safety reasons), and woodland boundaries (e.g. 20m deep) to allow scrub and woodland expansion. Grassland sites around the periphery of campus would also be suitable. Some patches should also be established in the centre of campus to promote engagement. Ponds that are unmanaged, such as the Dew Pond are included in this category, as are green roofs, which are left to develop on their own.

OUR LIST OF INDICATIVE PROJECTS FOR CONSULTATION DURING THE BIG BIODIVERSITY CONVERSATION

We will use our Big Biodiversity Conversation to consult with students and staff on: a) how best to achieve a net gain in biodiversity and b) agreeing a target for setting aside a minimum percentage of land for nature from the following options:

- I. 30% of campus set aside for nature;
- II. 40% of campus set aside for nature; or
- III. 50% of campus or more set aside for nature.

Once we have held the consultation we will achieve our agreed goals via an excellent biodiversity policy and a suite of agreed projects and actions (including certain changes in land use on campus).

The following list of potential projects have already been proposed by staff and students. They are likely to be discussed alongside other ideas that we solicit during the Big Biodiversity Conversation with the most popular, pragmatic and achievable options being selected to be championed as projects under the leadership of the new Provost, Rachel Mills.

The proposed projects for discussion are split into three categories:

- A) Land habitats and management
- B) Water management and habitats
- C) Student and staff engagement

Please note that this list is not supposed to be exhaustive, nor is inclusion of the idea at this stage intended to be taken as an endorsement of its suitability for implementation.



CATEGORY A: LAND HABITATS AND MANAGEMENT

Action	Current situation	Argument for its Implementation
Leave the current Roots Allotment fence standing, in order to create an undisturbed natural area when Roots move to new Northfield site.	The Roots Allotment is currently located behind Park Village on the west of campus and is due to move to a new site near Northfield when the West Slope development starts.	The current Roots site enjoys a high level of plant, bird and insect diversity, as well as visits from hedgehogs and other animals. If left in place, the site could develop on its own into a wildlife haven with minimal management needed. This biodiverse area could then be used for research and fieldwork.
Implement sheep grazing on west slope.	No grazing taking place on campus.	Sheep grazing was the traditional management of the South Downs. This traditional management system created the conditions for the chalk grassland habitat to develop, and is a good way to maintain chalk grassland.
Continue to plant more pollinator-friendly native plants and wildflowers in ornamental flower beds and wildflower areas.	The current SEF ground management plan already prioritises biodiversity and social insect support, with the wildflower mix selected by the Laboratory of Apiculture and Social Insects (LASI).	Research suggests that native plant species are more beneficial for native pollinator species. Planting non-native species can reduce biodiversity.
Convert east slope banks to butterfly banks, with wildflower species that support butterflies and bees such as horseshoe vetch, kidney vetch, bird's foot trefoil, rock rose.	The Banks created by the East Slope development are planted with shrubs, with some seeded wildflower areas between the East Slope accommodation buildings. Some banks created by the East Slope development are also allowed to develop plant cover naturally.	Native wildflower species are beneficial for locally important insects and can assist with the stabilisation of the banks.
Install bee hotels and hoverfly lagoons on campus to enable bees and hoverflies to breed.	There are already several bee hotels across campus in wildflower areas.	This initiative could create additional habitats for pollinator species and increase pollination on campus (benefiting wildflower areas).
Install 'hedgehog houses' and other measures for a hedgehog-friendly campus.	An ongoing group of staff and students started work in this area in 2020.	Hedgehogs numbers have halved since 2000. They are especially threatened in urban areas.
Leave damaged/diseased trees in place (once made safe); and where trees have to be felled, create log piles.	There are standing dead wood trees by Bramber House and Falmer House. Habitat piles are also present in some wooded areas. Further dead wood trees are also retained in quieter areas where safe.	Dead wood trees can support the many species that live on/in dead wood. They can increase the variety of habitats on campus and encourage biodiversity.
Create tussocky grassland for harvest mice.	Much of the grassland on campus was mown for amenity in previous years, prior to the no-mow-May initiative in May 2021.	Harvest mice are common in southern and eastern England but nationally rarer.
Use some tenanted land in Falmer Village for research around biodiversity and carbon sequestration.	Some of this land is currently tenanted for different uses.	Make use of space to understand how we can manage land as part of net zero efforts.

CATEGORY A: LAND HABITATS AND MANAGEMENT (CONTINUED)

Action	Current situation	Argument for its Implementation
Plant an orchard of old Sussex varieties of fruit trees.	Non-food trees are present across our campus.	Fruit trees can provide pesticide-free, zero-food-miles fruit for students and staff to pick.
A pesticide, peat and synthetic fertiliser free campus.	Pesticides are used at the University as a last resort in weed control and in accordance with legislative requirements. Pesticides form part of Integrated Pest Management Plan.	Reducing pesticide use can support a reduction in water pollution and protect pollinators. Peatlands are the world's largest on land carbon store. When peat compost is extracted for gardening it releases carbon into the atmosphere.
Create living walls on campus.	To be confirmed.	Living walls not only increase the biodiversity of an urban space with plants, they offer vital nesting space, shelter and food for birds and insects.

CATEGORY B: WATER MANAGEMENT AND HABITATS

Action	Current situation	Argument for its Implementation
Create more ponds.	There is a dew pond behind the Attenborough Centre for Creative Arts and several small ponds, such as between Arts A and B.	Introducing more ponds would increase variety of habitats on campus and create sinks for surface water run-off.
Additional water management on campus to avoid flooding and increase movement of water into groundwater.	To be confirmed.	Groundwater management can help to: avoid flooding, improve water quality, support water habitats on campus and, increase the recharge of groundwater.
Convert the concrete 'moats' in Falmer House courtyard and the Meeting House to rain-fed water gardens featuring native wildflowers.	Being investigated by SEF in conjunction with key biodiversity academics.	Foster an increased range of habitats on campus.

CATEGORY C: STUDENT AND STAFF ENGAGEMENT

Action	Current situation	Argument for its Implementation
Provide additional allotment and/or farming spaces for students and staff to grow food locally (in addition to 'Roots').	Important new NUS linked projects and funding in this area that could be tapped into.	There are social benefits of cooperative food production (community, wellbeing, and recreation). Allotments are also shown to support biodiversity.
Introduce more self-guided walks around campus including biodiversity hotspots with signage.	The woodland boundary walk around campus perimeter is included in some sports activities.	Spending time in nature is good for health and wellbeing. Signage and interaction with biodiversity hotspots increase knowledge of biodiversity.
Establish a national campus biodiversity monitoring competition to determine success.	The University has been involved in the City Nature Challenge for 2 years. A Sussex or university specific competition could potentially follow the same model using the iNaturalist app to identify species.	To engage staff and students in measuring biodiversity.
Create materials for a bio recording platform via student projects.	There is already several biodiversity focussed student societies and staff involved in this area.	Bio recording helps to develop datasets on the biodiversity present on campus. This can both inform nature management and increase education about campus biodiversity and why it is important.
Create a therapeutic physic memorial garden.	A potential site has been identified near to the life sciences building.	There are wellbeing benefits of therapeutic gardening, which can also be done in a way that supports biodiversity.

OUR DRAFT BIODIVERSITY POLICY

The following draft policy and document will be consulted on as part of the Big Biodiversity Conversation from January 2022

INTRODUCTION

This draft biodiversity policy outlines key principles for excellent biodiverse campus management that can result in net biodiversity gain. The policy will be further developed through a consultation with students and staff, called the **Big Biodiversity Conversation**, from January 2022. The outputs of this consultation will also include the selection of a target for setting aside a percentage of land for nature and additional actions proposed by students and staff to increase biodiversity.

BACKGROUND

The biodiversity crisis refers to the current unprecedented level of biodiversity loss that is occurring as a result of human activity, such as habitat loss through agriculture and urban development. In response to this crisis, we want to protect and enhance the biodiversity of our campus. Our work on biodiversity will go above and beyond the UK government's 2020 commitment to manage 30% of UK land for nature by 2030.

Our campus is uniquely located within the South Downs National Park. This means that we enjoy a range of natural areas on and around our campus, such as wildflower meadow and woodland at our west boundary with Stanmer Park. However, this also means that we must be aware of the impact that our operations have on the biodiversity found in these natural areas.

Currently around 25%² of our campus is already set aside for nature and 20% of the campus is managed as amenity grassland. We have seeded over ten wildflower areas around campus that not only look colourful and attractive, but also support pollinators. We also have several low management meadow and bank areas, such as behind the Attenborough Centre for Creative Arts where up to 40 wildflower species have been recorded.

The Grounds Management Team have also carried out extensive enhancements to chalk grasslands on our campus, such as the creation of a chalk grassland site on the west slope of the campus in 2018. Our work to support and raise awareness of pollinators by growing pollinator-friendly plants in our wildflower areas and meadows, as well as building 'bee hotels', has led to us winning a **Bees' Needs** Champions award (for the third year running) in 2020.

See the **Grounds Management Plan** to read more about the Grounds Management Teams' ongoing work with grassland and woodland, as well as the management policies and practices that have resulted in us winning a prestigious **Green Flag award**, for well-managed green spaces, for the fourth year running.



² A more concise figure will be provided following the commencement of a detailed mapping exercise by August 2021.

MISSION STATEMENT

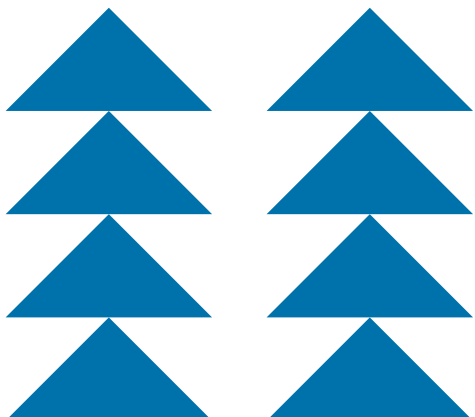
Our biodiversity policy is to achieve a net gain in biodiversity by:

- A. Increasing the percentage of land set aside for nature
- B. Implementing various priority biodiversity projects; and
- C. Adopting the following good practice principles to guide campus management

OUR GOOD PRACTICE BIODIVERSITY PRINCIPLES

We will promote an increase in biodiversity by adhering to the following principles. We will:

1. **Comply with relevant UK, European, and international legislation and statutory codes of practice**, such as the Wildlife & Countryside Act (1981); Natural Environment and Rural Communities Act (2006); Conservation of Habitat & Species Regulations (2010); and other legislation relevant to the university's location within a National Park.
2. **Plan for Net Gain:** The annual campus grounds management plan will strive for a net increase in biodiversity each year in response to the ongoing biodiversity crisis.
3. **Plant Native Species:** All planting and seeding on campus will, within reason, be native species that are from regional/national sources, as native species have been found to be more beneficial to our pollinators.
4. **Aim to be a pesticide, peat and synthetic fertiliser free campus:** We will aim to become pesticide free, where possible, and use zero peat or synthetic fertiliser, with exceptions to meet Health and Safety legislation.
5. **Be a Zero Green Waste campus:** Take green waste offsite to make into compost or mulch. Leave grass cuttings on mowed area to allow nutrients to return to the soil. Leave dead wood standing on site for its habitat provision and organic matter benefits.
6. **Manage surface water to the benefit of biodiversity and water quality:** Use sustainable drainage systems to create more opportunities for groundwater recharge and protection of water quality, as well as creation of water habitats.
7. **Use water conscious planting practices:** Select plants that do not have high water requirements, planting in shade, using mulch, and minimal watering of plants.
8. **Support nationally important chalk grassland habitat:** Continue support for chalk grassland habitats across the campus, such as chalk banks and the West Slope chalk grassland area.
9. **Involve students and staff in increasing biodiversity:** Engage students, staff, and other interested parties, including members of the public, in direct action to increase biodiversity on our campus and raise awareness of the importance of protecting and enhancing biodiversity.



GLOSSARY OF BIODIVERSITY TERMS

Amenity grassland is an area of grass, or lawn, that is managed for use by people, such as for walking, sitting on and playing sports. It is usually closely mown and managed to avoid the growth of other plants that reduce its value for recreation.

Bee hotels are structures with many holes, which solitary bees can nest in. They are often used in gardens and urban areas to create habitat for bee nesting that would naturally be found in standing dead wood in more natural areas.

Biodiversity is the variety within and between species in a defined area.

Biodiversity net gain is an increase in the amount or quality of biodiversity in a defined area over time. A net gain approach means if part of the area is developed or removed, any lost biodiversity must be offset by increasing biodiversity elsewhere to the same or higher amount and quality.

Chalk grassland is a species rich ecosystem known for its abundance of wildflowers and grasses, threatened by land use change in the UK.

Ecosystems are communities of interacting plants, animals, and their physical environment.

Habitats are places where an animal or plant lives, which provides them with food, shelter, and water.

Hoverfly lagoon are artificial bodies of water that can be used by hoverflies as a breeding site, they can be made from buckets or open topped vessels.

Managed for nature means areas of land that are managed in a way that increases biodiversity and encourages natural processes, such as pollination.

Native species are those that have historically occurred naturally in a given area or habitat.

Passive rewilding is a process-led approach to land management that involves allowing nature to take its own course with minimal management.

Pesticides are substances used to kill harmful or unwanted organisms. They are considered key contributors to water pollution as well as posing a risk to non-target species.

Peat is a natural resource made of partially decomposed organic matter in wet acidic bogs, called peatlands. It is the world's largest on land carbon store as well as being a valuable ecosystem. It is the focus of campaigns around peat-free gardening by organisations such as the Royal Horticultural Society due to the rate at which it is being lost and the carbon emissions implications of this.

Pollination is the transfer of pollen from one plant to another of the same species.

Pollinators are the agent species, mainly insects, that carry out pollination. Common examples are bees, butterflies, hoverflies, and moths.

Rewilding is a minimal management approach that allows nature to take its own course. This may take a passive form, such as removing all management from an area, or a more active approach, such as introducing species that were historically present in a habitat.

Set aside for nature refers to areas of land that are left and not managed, to allow nature to decide how the habitat develops over time. This may be through passive rewilding.

Sustainable Drainage Systems are water management systems based on principles that make urban drainage more compatible with natural water processes.

Synthetic Fertiliser are fertilisers that are made from inorganic compounds, such as those derived from products from the petrol industry. They are considered key contributors to water pollution.