



UNIVERSITY OF
CHICHESTER

Biodiversity Action Plan 2023-2028



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1. World and UK Overview

Biological diversity, now commonly termed biodiversity, is defined as “the existence of a wide variety of plant and animal species living in their natural environment”. The importance of biodiversity cannot be overstated as nature provides the basics for life, clean water, clean air and food.

Emphasis on the need to conserve biodiversity was initiated 30 years ago at The United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil in 1992. This conference became known as the Rio, or the Earth Summit and produced the Convention on Biological Diversity (CBD) which advocated the establishment of national policies that would identify and conserve existing biodiversity.

However, due to centuries of industrialisation, the intensification of agriculture and extraction of natural resources, the UK is now one of the most nature-depleted countries in the world. Large areas of habitats have been lost with 99.7% of fens, 97% of species-rich grasslands, 80% of lowland heathlands, up to 70% of ancient woodlands and up to 85% of saltmarshes destroyed or degraded.

The impacts on species have also been severe, with a quarter of mammals in England and almost a fifth of UK plants threatened with extinction. A third of British pollinator species have also declined.

Demands on the land are set to increase with a growing population requiring more water to drink, food to eat and places to live. In March 2022, the government set out new proposals to halt the decline in species abundance by 2030. It also committed to designate and protect 30% of UK land by 2030, and use Local Nature Recovery Strategies (a measure in the Environment Bill) to help drive action locally.

The biodiversity crisis joins the climate crisis as an existential risk to our survival, but as discussed in the Environment Agency’s report *Working with Nature* published in July 2022, “the solution is not to retreat but to work together to build a nature-positive response”.

2. The importance of biodiversity on University campuses

The Further and Higher Education (FHE) sectors have an important part to play in conserving our natural heritage. According to figures from HESA in 2020/21, about 12,036 hectares of land belong to Higher Education institutions in the UK and just over half of this area (6903 hectares) is designated as grounds. It goes without saying therefore, that if all HE institutions conserve and enhance biodiversity, this will make a massive difference to plants, animals and ecosystems.

FHE institutions also have a responsibility for educating the next generation of leaders about the importance of biodiversity and wider sustainability issues. This was recognised at the Rio+20 conference in 2012, where institutions across the world were encouraged to integrate sustainable development across disciplines and progress with related research. Biodiversity initiatives are a crucial way to engage students and staff in sustainable development and provide a visible example of best practice.

In 2006, the Environmental Association for Universities and Colleges (EAUC) identified nine benefits for universities that have an active biodiversity agenda, which still hold true today:

- Improved reputation and image for environmental sustainability
- Potential to develop partnerships between staff and students
- Opportunities for incorporating sustainability and biodiversity in education and the curriculum
- Campus contribution to healthy living and wellbeing
- Enhanced volunteering opportunities for students
- Greater support from local authorities for planning and new development
- Cost savings in maintenance
- Legislative compliance
- Wider benefits in terms of flood reduction and carbon reduction.

This list of benefits further highlights how managing biodiversity on campus has far more wide-reaching effects beyond those of preserving wildlife. In addition to enhancing the diversity of habitats and species, an attractive natural environment can contribute to human physical and mental well-being. Engaging staff and students in biodiversity projects on campus can encourage a sense of ownership and belonging and provide opportunities for partnerships with the local community. From a financial perspective, managing land for biodiversity rather than intensive horticulture, can result in considerable cost savings. The Biodiversity Action Plan (BAP) is an ideal opportunity for the campus to become both an interactive learning environment for students and a superb teaching resource. Biodiversity initiatives can also play an important role in emphasising broader environmental and sustainability issues and will enhance environmental awareness and personal responsibility amongst graduates. The opportunities for voluntary work experience provided by student groups and societies can be invaluable and often contribute to securing paid employment following graduation.

3. Background to Biodiversity at the University of Chichester

In 2010, the University of Chichester published its first Environmental and Sustainable Development Strategy 2010-2013, in which the commitment to “maintain and improve diversity within the University’s estate” was stated. The first Biodiversity Action Plan produced by the University (UOC BAP), was published in April 2011 to help to achieve this aim and to contribute to the UK and Sussex local BAP. Since then, this commitment has continued through subsequent Environment and Sustainable Development plans and is now a key strategic theme in the University’s Strategic Plan 2018 to 2025 and the Estate Strategy 2018 to 2025. Both committing to “develop attractive and environmentally sustainable campuses”. In addition, the University’s new Sustainability Strategy 2023 to 2025 aligns to the United Nations Sustainable Development Goals (Figure 1) to ensure

progress is made in all areas pertinent to the University's activities. Biodiversity is integral to the success of many of these goals, including specifically;

- SDG 2 Zero Hunger
- SDG 3 Good Health and Wellbeing
- SDG 11 Sustainable Cities and Communities
- SDG 13 Climate Action
- SDG 14 Life Below Water
- SDG 15 Life On Land

Relevant aspects of these goals have been considered in the generation of this plan.

Figure 1 United Nations Sustainable Development Goals



This fifth, UOC BAP, is published to record the achievements of the past three years (2020 to 2022) and to provide actions for the next five years (2023 to 2028).

The BAP seeks to fulfil the following objectives:

1. To raise awareness of biodiversity on campus and the need to maintain and enhance it.
2. To maintain and enhance biodiversity on campus through the implementation of the campus action plans.
3. To engage students and staff in biodiversity projects and initiatives that will enhance their University experience.
4. To incorporate biodiversity actions and monitoring into the curriculum.

4. Past biodiversity initiatives at The University of Chichester

Google maps of both campuses, Bishop Otter (BOC) and Bognor Regis (BRC) (Figures 1 and 2) show both contain many green areas and open spaces. These maps were produced in August 2018, before the construction of the Technology Park at BRC.

Figure 1 Google map of BOC

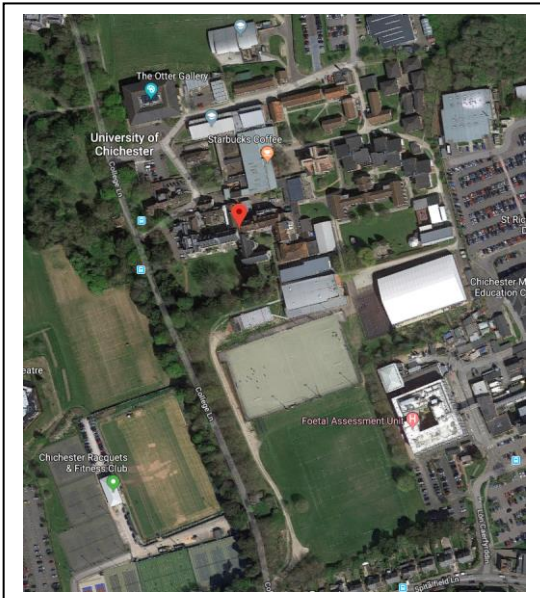


Figure 2 Google map of BRC



Since the first BAP was produced by the University in 2010, many actions to conserve habitats and species have focussed on ongoing maintenance of these areas. The following table (Table 1) details progress to the specific actions highlighted in the previous biodiversity plan 2020 to 2022.

Table 1 Progress to the specific actions highlighted in the previous biodiversity plan 2020 to 2022.

Both campuses

| Objective | Action | Outcome | Progress |
|-------------------------------|--|--|---|
| Conserve and enhance habitats | Map land use on each campus including commuting routes such as hedgerows, feeding and breeding areas for wildlife, compost areas, orchard and nut tree areas, old tree trunks and basking sites for invertebrates. Map quantity and location of bird and bat boxes, bug hotels, bird feeders and water. baths etc. | Habitat provision identified for maintenance and improvement | Maps produced for each campus. These have identified a lack of bat boxes, bug hotels, water baths and bird feeders on BOC. On BRC, bird feeders, bug hotels and water baths were identified as lacking. |
| Conserve and enhance habitats | Increase the numbers of bird and bat boxes, bug hotels, bird feeders and water baths etc. where necessary. Add hedgehog houses and feeding stations. | Deficiencies in habitat provision corrected. | Bird feeders have been placed outside The Dome at BRC. One hedgehog house/feeding station has been placed on BOC. Due to the known presence of hedgehogs on BRC, two hedgehog houses have been placed on this campus. |
| Conserve and enhance habitats | Plant saplings obtained from the Woodland Trust. Encourage staff and students to help with planting. | Increased tree cover to encourage wildlife. | Over 400 hawthorn, blackthorn, hazel, oak, silver birch and rowan saplings planted on both campuses in December 2020. Twenty five students and staff were involved in the planting. |
| Conserve and enhance habitats | Install a water butt on each building where feasible. Use this water for garden watering, external cleaning, refilling ponds and bird baths during times of drought. | Conservation of water | No water butts have been installed. |

| Objective | Action | Outcome | Progress |
|--|---|---|---|
| Conserve and enhance habitats | Achieve BREEAM excellent for new builds and very good for refurbishments obtaining maximum points for diversity where feasible. | Increased biodiversity on campuses during new builds and refurbishments | No BREEAM assessments took place between 2020 and 2022. |
| Provision of more space for wildlife | Using the biodiversity maps generated for each campus determine areas for mixed fruit trees, nut trees, native broad leaf trees such as oaks, beeches, birches and maples and nectar rich plants. | Increased habitats for fauna and flora. | A black walnut tree was planted at BRC in December 2020. Saplings planted on both campuses in December 2020 included hazel, oak and silver birch. |
| Provision of more space for wildlife | Ensure lighting is wildlife sensitive using advice from Hampshire bat survey | Bats not dissuaded from using areas due to lighting | Outside lighting uses motion sensors on a short time frame to reduce light pollution. |
| Provision of more space for wildlife | Ensure compost and undergrowth is left under trees. Leave old tree trunks and basking areas. | Natural foraging areas for bats, hedgehogs and other wildlife created | Green waste is left under trees to compost and many log piles have been created on both campuses. |
| Provision of more space for wildlife | Plant insect friendly plants such as honeysuckle and lavender ensuring they are native species. | Food supply for insects and wildlife created | Lavender maintained at BRC. |
| Provision of more space for wildlife | Continue to avoid insecticide and herbicide use. | No damage to the ecosystem. Food supply for wildlife maintained | Herbicide and insecticide usage has been avoided. A salt and vinegar mixture was trialed as a herbicide, but was unsuccessful. |
| Update information on wildlife populations and species on campus | Conduct a bat survey using bat detectors | Information and provision of habitat suitable for bats on the campuses. | Bat surveys to be conducted in August/September 2022. |
| Update information on wildlife populations and species on campus | Conduct a bird survey possibly as part of the RSPB Big Bird Watch | Information and provision of environment suitable for birds found on the campuses | Wildlife spotting introduced as a Jump activity in June 2022. |

| Objective | Action | Outcome | Progress |
|---|---|--|--|
| Encourage all users of the campus areas to respect all habitats and biodiversity. | Achieve Hedgehog Friendly Campus accreditation | Staff and students work together to increase hedgehog populations. | Bronze accreditation achieved 2020. Silver accreditation achieved 2021. Gold accreditation achieved 2022. |
| Encourage all users of the campus areas to respect all habitats and biodiversity. | Promote Green Campus Group to staff and students via newsletter, tweets, social media etc. | University community works together to conserve and increase biodiversity. | Green Campus Group continues to be active meeting on a quarterly basis. Group promoted during staff and student inductions and Estate Management newsletter. |
| Encourage all users of the campus areas to respect all habitats and biodiversity. | Communicate biodiversity events/news to staff and students to highlight biodiversity issues. | University community works together to conserve and increase biodiversity. | Green Newsletters circulated November 2021 and February 2022. Biodiversity items included in other Estate Management newsletters. Biodiversity achievements displayed on banners on the waste compounds on both campuses. Artwork for the banners produced by an MA art student. |
| Incorporate biodiversity actions and monitoring into the curriculum. | Work with academic staff to develop initiatives to include biodiversity in curriculum areas such as data analysis, marketing etc. | Students develop biodiversity awareness through their studies. | Business school students involved in projects to encourage more students to become involved in sustainability activities including Hedgehog Friendly Campus and Jump, Semester 2 2022. Event Management students produced the Spring Fair 2020, 2021 and 2023 and the Jump Awards 2020, 2021, 2022 and 2023. |

Bishop Otter campus

| Objective | Action | Outcome | Progress |
|---|--|---|---|
| Provision of more space for wildlife | Create pond area on campus to encourage insects and amphibians | Creation of food supply for bats and amphibian area. | Pond area in University House courtyard maintained. |
| Encourage all users of the campus areas to respect all habitats and biodiversity. | Continue to encourage the growing of vegetables by students and staff by the provision of allotment space. | Biodiversity of plants on campus increased. Food miles decreased. | Allotment area not maintained due to works on the sports dome. |
| Conserve and enhance habitats | Consider using water from the boreholes to irrigate playing fields | Conservation of water | Project to review the feasibility of installing pumps to enable water to be used from the boreholes was re-initiated July 2022. |

Bognor Regis campus

| Objective | Action | Outcome | Progress |
|---|--|---|---|
| Provision of more space for wildlife | Review status of actions to encourage bats at the Tech Park produced from the bat survey July 2015 | Increased roosting provision for bats | Linear hedgerows created along north campus boundary and increased along Tech Park entrance. |
| Provision of more space for wildlife | Aim to decrease surplus artificial light at night from the Tech Park | Increased roosting provision for bats | Artificial light controlled by short span sensors. |
| Provision of more space for wildlife | Ensure pond is well maintained and topped up with water. | Creation of food supply for bats and amphibian area. | Pond water level maintained. Ramp for wildlife to get out of the pond installed in November 2021. |
| Provision of more space for wildlife | Trial salt and vinegar as a natural herbicide | Preservation of the ecosystem | Salt and vinegar trial unsuccessful as herbicide. |
| Encourage all users of the campus areas to respect all habitats and biodiversity. | Consider the provision of allotment space for staff and students to encourage the growing of vegetables on campus. | Biodiversity of plants on campus increased. Food miles decreased. | No progress made due to ongoing campus developments. |
| Conserve and enhance habitats | Maintain the green roof on the LRC building | Biodiversity and building aesthetics enhanced | Ongoing |

In 2007, a group of University staff interested in biodiversity, formed the Green Campus Group. This group, which now also includes student members, continues to monitor, advise, suggest and take practical steps to help to contribute to the University's ecosystem, working with the estate management team. The primary duty of the Green Campus Group is to ensure that environmental and sustainable development issues remain prominent in all University activities. The Group considers conservation in terms of global as well as a local scale. Since its inception, the group has considered inter alia, ponds, bird boxes, bat boxes, bee keeping, allotments, Fairtrade, sustainable travel, solar energy, the design of new buildings on campus and the maintenance and planting of trees.

The Green Campus Group's actions over the past three years have included the installation of hedgehog houses on both campuses and bird feeders on the Bognor Regis campus. The group has also operated as the working group for Hedgehog Friendly Campus.

Since 2011, the Green Campus Group has been involved in the annual Spring Fair to help raise funds for purchase of new trees, seeds, plants and equipment. Since 2015, the group has worked with second year event management students to organise the fair. The students have taken on the role of event managers producing the fair on behalf of the Green Campus Group, as part of their assessed course work. This has helped to engage students in sustainability and incorporate sustainability in the curriculum. Due to Covid, the Spring Fairs in 2020 and 2021 were produced as on-line events.

The University has continued to engage new students in sustainability and biodiversity initiatives through the annual Freshers' Fair. In 2020, approximately 150 plants were given away to promote our biodiversity ethos, Fairtrade products were promoted and students encouraged to get involved with Hedgehog Friendly Campus initiatives (Figure 3).

Figure 3 Student engagement in sustainability and biodiversity at Freshers' Fair 2020

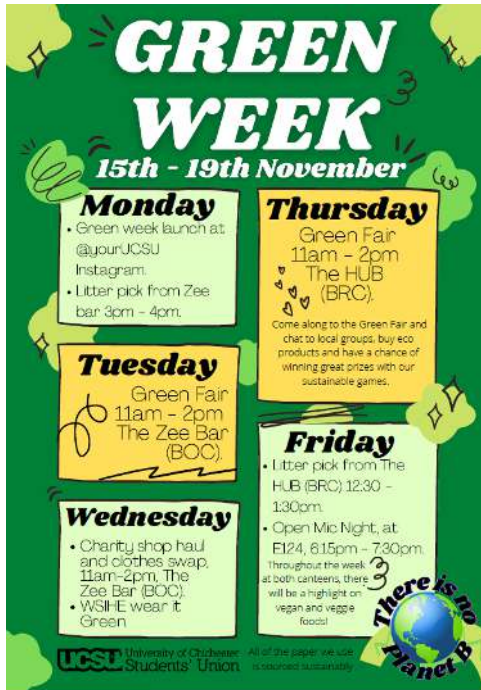


At the Freshers' Fair in 2021, sustainability and biodiversity were promoted by the newly formed Students' Union Environmental Society.

Biodiversity was also an integral part of Green Week organised by the Students' Union in November 2021. Events and activities designed to engage both students and staff included the promotion of Fairtrade and Fairtrade products in Otters restaurants, meat free menu options, an energy quiz, sustainable fashion stalls and green fairs at both campuses involving

local community groups and of course the giving away of 150 plants! The week finished with an open mic event, where all were invited to air their views on sustainability and a vigil for the planet.

Figure 4 Green Week events



GREEN WEEK
15th - 19th November

Monday

- Green week launch at @yourUCSU Instagram.
- Litter pick from Zee bar 3pm - 4pm.

Tuesday

Green Fair 11am - 2pm
The Zee Bar (BOC)

Wednesday

- Charity shop haul and clothes swap, 11am-2pm, The Zee Bar (BOC).
- WSH-E wear it Green

Thursday

Green Fair 11am - 2pm
The HUB (BRC).

Come along to the Green Fair and chat to local groups, buy eco products and have a chance of winning great prizes with our sustainable games.

Friday

- Litter pick from The HUB (BRC) 12.30 - 1.30pm.
- Open Mic Night, at E124, 6.15pm - 7.30pm.

Throughout the week at both canteens, there will be a highlight on vegan and veggie food!

UCSU University of Chichester Students' Union

All of this paper is from 100% recycled sustainable

There is no Planet B

5. Current Status of Biodiversity on the University's campuses

A list of species seen on campus grounds has been compiled from sightings by members of staff and students across both campuses since 2011. These records help to identify species, inform and update the biodiversity plans. In order to encourage the reporting of wildlife, activities have been added to the university's sustainability and wellbeing scheme, Jump. These include submitting biodiversity photos and reporting sightings on campus. These sightings will be used to update the biodiversity maps.

A number of ecological surveys on newts and other natural species, including bats, were carried out in 2015, before the construction of the Technology Park in 2017.

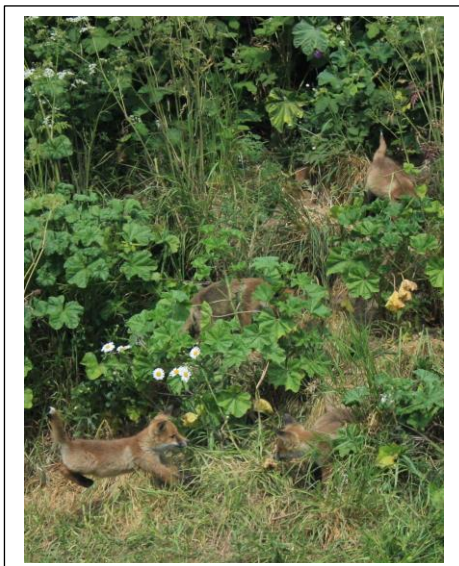
Bat activity in the Technology Park area was found to be relatively low and dominated by common pipistrelle (*Pipistrellus pipistrellus*). Both common and soprano pipistrelle (*Pipistrellus pygmaeus*) were recorded over the site. In addition, a small number of calls characteristic of Nauthusius pipistrelle (*Pipistrellus nathusii*) were recorded and a single *Myotis* call. Commuting routes of bats were also identified along with social behaviour and foraging in the trees and gardens. Recommendations to enhance the habitat highlighted were included in the campus action plans. Further bat surveys are scheduled for September/October 2022.

The reptile survey at our Bognor Regis campus identified a low population of slow worm and common lizard to be present. Additional enhancements to improve the site post construction, including the creation of hibernacula and the implementation of a vegetation management scheme to benefit reptiles were highlighted. These have been included in the action plans.

In the past few years some trees were lost due to disease, landscaping, construction works and environmental conditions, including extreme high winds. More recently ash dieback has necessitated the removal of many trees. The University's policy of replacing all trees lost, has continued. This policy was boosted with the acquisition of 420 saplings from the Woodland Trust planted in December 2020. These saplings comprised a mixture of hawthorn, hazel, rowan, blackthorn, silver birch and common oak to attract wildlife.

A family of foxes have taken residence on BOC. These have been captured on camera by many members of staff and students frolicking in the grounds. During the dry summer of 2022, staff have formed a rota to ensure the foxes and other wildlife have access to water.

Figure 5 Fox cubs playing on campus May 2022 (photos courtesy of Helena Preston)



In March 2020, the University joined the Hedgehog Friendly Campus scheme and committed to make our campuses places where hedgehogs can thrive. Since then many hedgehog tracking activities have taken place with both student and staff volunteers. Hedgehog prints have been found in two locations on BRC and a number of sightings have been made, with some captured on camera by our security staff.

Figure 6 Hedgehog footprints at BRC



Figure 7 Hedgehogs at BRC (photo courtesy of Steve Lynn)



Tracking of hedgehogs with tunnels on BOC has so far been unsuccessful, although a hedgehog has been caught on camera in a different part of campus (Figure 8).

Figure 8 Hedgehog caught on camera at BOC (photo courtesy of James Stiller)



In order to create more habitats for wildlife and encourage wild species of flora to grow, a number of areas have been left to grow wild on the campuses. This has created great habitats for insects such as the blue damsel fly (figure 9), various bee species (figure 10) and peacock butterflies (Figure 11). As a result of the creation of these areas, a bee identification walk has been produced for BOC. Twelve students took part in the walk in May 2022 identifying many bee species including a white-tailed bee and honey bee (pictured below), a buff tailed bumble bee

(pictured on the front cover), a red mason bee, a red-tailed worker bee and a hairy footed flower bee.

*Figure 9 Blue Damsel Fly
(photo courtesy of Alison Brown)*



*Figure 11 Peacock butterfly caterpillars
(photo courtesy of Brooke Rooney)*



*Figure 10 White tailed bee and honey bee
(photo courtesy of Emily B)*



This information and information from the other sources mentioned earlier, has been used to form the species action plans (SAP) (Section 6.1).

6. Future Actions

Previous BAPs produced by the University have included ongoing actions for all species and habitats, with particular attention being paid to species identified from past sightings and those identified as ecologically important. In this BAP, those listed as UK BAP Priority species are also highlighted. The original species action plans (SAPs) reproduced in the sections below, have been used to produce fewer SMART targets to maintain and enhance biodiversity on our campuses. These SMART targets form the basis of the Action Plans 2023 to 2028 (Section 6.2). Progress to these targets will be monitored and reviewed by the Green Campus Group and the Sustainability, Environment and Energy Management group (SEEM). In order to maintain and improve biodiversity on our campuses it is vital that we engage with all users of them. This prerequisite is included as a specific action in the plan.

The University is about to undergo a period of expansion, with the building and refurbishment of student accommodation on both campuses. Specific targets have also been incorporated in the action plan to ensure any developments enhance biodiversity on the campuses.

6.1 Species action plans

Birds

| Species | Ongoing action to enhance existing habitats | UK BAP Priority List species? |
|---|--|-------------------------------|
| Wood Pigeons (<i>Columba palumbus</i>) | Conserve existing habitats and food sources. Increase the number of invertebrates across the campuses as a food source. | No |
| Blackbirds (<i>Turdus merula</i>) | Conserve existing habitats and food sources. Provide marsh or boggy environments for the mud linings of Blackbird's nests. | No |
| Chiffchaffs (<i>Phylloscopus collybita</i>) | Conserve existing habitats. Conserve and grow trees that will reach a height of over 5 metres (circa 16 feet) tall. | No |
| Falcons (<i>Falco</i>). BOC only | Conserve existing habitats and food sources. Increase the number and species of birds (prey) across the campuses. | No |
| House Martins (<i>Delichon urbica</i>) | Conserve existing habitats and food sources. Permit the species to build nests on buildings. | No |
| Magpies (<i>Pica pica</i>) | Conserve open grassland and hedgerows as feeding and breeding areas. | No |
| Mistle Thrush (<i>Turdus viscivorus</i>) | Conserve Broad leaf trees as preferred habitats for this species. | No |
| Pheasants (<i>Phasianus colchicus</i>) | Conserve existing habitats and food sources. Provide sources of water and maintain woody areas. | No |
| Robins, (<i>Erithacus rubecula</i>) | Conserve existing habitats and food sources. Increase the number of bird feeders across the campuses. Provide food on bird tables especially during harsh winters. | No |
| Tree-creepers (<i>Certhia familiaris</i>) | Continue support for the Green Campus bird box initiative. | No |

| | | |
|--|--|----------------------|
| Wagtails (<i>Motacilla</i>) | Conserve existing habitats and food sources. Increase the number of invertebrates across the campuses. | Yes – yellow wagtail |
| Woodpeckers (<i>Picus</i>) | Conserve existing habitats and food sources. Grow tall trees. Maintain environmentally friendly grounds to ensure a plentiful supply of ants and insects as a food source. | No |
| Seagulls (<i>Larus</i>) | Conserve the existing habitats. Treat the species as part of the ecosystem. Flocks may become prey for Falcons. | No |
| Jay (<i>Garrulus glandarius</i>) | Conserve and grow trees, continue to provide wooded areas and Oak trees for acorns as a source of food. | No |
| Black headed seagulls (<i>Chroicocephalus ridibundus</i>) | Encourage insects as a food source. | No |
| Herring Gull (<i>Larus argentatus</i>) | Although these birds are scavengers they should be treated as part of the eco system, their numbers are declining. | Yes |
| Nuthatches (<i>Sitta europaea</i>) | Conserve and grow trees that will reach a height of over 5 metres (circa 16 feet) tall. | No |
| Tits (<i>Paridae</i>) Blue tits, great tits, coal tits, long tailed tits | Conserve and grow trees, some varieties of this bird will feed successfully in conifer trees. | No |
| Sparrow (<i>Passer domesticus</i>) | Although these birds are scavengers they should be treated as part of the eco system. Their numbers are declining. The birds will also feed on insects in flight. | Yes |
| Wren (<i>Troglodytes troglodytes</i>) | Conserve and grow trees, encourage insects as a food source | No |
| Goldcrest (<i>Regulus regulus</i>) | Conserve and grow existing Pine trees. Encourage flocks of other small birds to visit the campus grounds. Encourage insects as a food source. | No |
| Redstart (<i>Phoenicurus phoenicurus</i>) | This species of bird is on the Amber List of birds requiring conservation measures, their preferred habitats include oaks, hedgerows, streams, parkland and coastal scrub all conditions available on the Bognor Regis Campus. | No |
| Crow (<i>Corvus corone</i>) | Although these birds will attack other bird's chicks and eggs they should be treated as part of the eco system. | No |
| Pigeon (<i>Columbidae</i>) | Conserve the existing habitats. Treat the species as part of the ecosystem. Flocks may become prey for Falcons. | No |
| Collared dove (<i>Streptopelia decaocto</i>) | Conserve existing habitats. Eats weed seeds and occasionally invertebrates and shoots. | |
| Green finch (<i>Carduelis chloris</i>) | Conserve and grow trees including fruit trees as a source of food. | No |
| Blackcap (<i>Sylvia atricapilla</i>) | Conserve and grow trees including fruit trees as a source of food. | No |
| Redwing (<i>Turdus iliacus</i>) | Conserve and grow trees including fruit trees as a source of food. | No |
| Goldfinch (<i>Carduelis carduelis</i>) | Conserve and grow trees | No |
| Ducks (<i>Anas</i>) BRC only | Conserve habitats. Maintain open areas for the ducks to have easy access to wetlands. | No |

Mammals

| Species | Ongoing action to enhance existing habitats | UK BAP Priority List species? |
|--|---|--|
| Grey squirrels (<i>Sciurus carolinensis</i>) | Conserve existing habitats and food sources. Plant nut trees as a food source and habitat. | No |
| Deer (<i>Cervidae</i>) BOC only | Conserve the existing habitats. | No |
| Badgers (<i>Meles meles</i>) | Conserve the existing habitats. | No |
| Bats (<i>Chiroptera</i>) | Conserve the existing habitats. Plant more specimens to attract moths. Aim to decrease surplus artificial light at night. | Yes - Barbastelle Bat, Bechstein's Bat, Noctule, Soprano Pipistrelle, Brown Longeared Bat Greater Horseshoe Bat, Lesser Horseshoe Bat |
| Hedgehogs (<i>Erinaceous europaeus</i>) | Conserve existing habitats. Increase the existing population. Provide more habitats including compost areas and hedgerows. Increase the food supply through environmentally friendly grounds maintenance including log pile generation. | Yes |
| Rabbits (<i>Leporidae</i>) | Conserve the existing habitats. Treat the species as part of the ecosystem as they will be a food source for a number of predators. | No |
| Foxes (<i>Vulpes vulpes</i>) | Conserve the existing habitats. Treat the species as part of the ecosystem | No |
| Dormice (<i>Muscardinus avellanarius</i>) | Conserve and grow trees including fruit trees with flowering plants as a source of food. | Yes |
| Shrews (<i>Sorex araneus</i>) | Encourage insects as a food source. | No |
| Domesticated Cats (<i>Felis catus</i>) | Conserve the areas used by these animals. Maintain the ecosystems of the campuses to attract more biodiversity. | No |

Amphibians

| Species | Ongoing action to enhance existing habitats | UK BAP Priority List species? |
|--|---|-------------------------------|
| Common frogs (<i>Rana temporaria</i>) | Conserve the existing habitats. Aim to increase the numbers of herptiles across the campuses. Provide more marsh boggy areas and ponds. | No |
| Common toads (<i>Bufo bufo</i>) | | Yes |
| Smooth newts (<i>Lissotriton vulgaris</i>) | | No |

Invertebrates

Invertebrates are the most numerous and diverse species on earth, making up at least 65% of all species on the planet. They include insects, spiders, snails, woodlice, worms, millipedes and centipedes, false scorpions, mites and earthworms. They perform a range of vital functions within ecosystems such as pollination and decomposition, and are also essential prey for many bird, mammal and amphibian species. Invertebrates can be encouraged by the provision of an array of microhabitats including ponds, compost heaps, rockeries, flower borders and shrubberies.

| Species | Ongoing action to enhance existing habitats | UK BAP Priority List species? |
|--|---|-------------------------------|
| Slow Worms (<i>Anguis fragilis</i>) | Conserve existing habitats. | Yes |
| Aphids and all insects | Conserve existing habitats and food sources. Regard the insects as part of the ecosystem. | |
| Moths | Plant moth 'friendly' trees and shrubs. | Specific species |
| Stag-beetles (<i>Lucanus cervus</i>). | Conserve existing habitats and food sources. Allow wood to decay on soil. Allow fruit to decay on soil. | Yes |
| Spiders (<i>Araneae</i>) | Conserve existing habitats and food sources. Construct wood piles. Increase the number of insects on the campuses as a food source. Provide water sources. | No |
| Fig Wasps (<i>Agaonidae</i>). | Conserve the existing fig trees on the campuses as a food source and as habitats. When choosing figs to plant use species that are not self-fertile to attract fig wasps. | No |
| Ladybirds (<i>Coccinellidae</i>) | Conserve existing habitats and food sources. | No |
| Bees (<i>Apis</i>) | Conserve existing habitats. Increase habitats and food sources. | No |
| Brimstone) Butterflies (<i>Gonepteryx rhamni</i>) | Conserve existing habitats and food sources. Increase the number and diversity of nectar rich plants across the campuses. Encourage the growth of thistles. | No |
| Orange Tip Butterflies (<i>Anthocharis cardamines</i>) | Conserve existing habitats and food sources. Allow bluebells (<i>Hyacinthoides</i>) and dandelions (<i>Taraxacum officinale</i>) to naturalise and spread. | No |

| | | |
|---|--|-----------------------------|
| Tortoiseshell Butterflies (<i>Aglais urticae</i>) | Conserve the existing habitats. Allow nettles, weeds and brambles to grow as food sources. Allow hibernation within buildings on the campuses. | No |
| Worms | Conserve the existing habitats. Improve the condition of the soil. | |
| Ants | Conserve the existing habitats. Maintain areas, trees and the ecosystem using environmentally friendly methods. | |
| Cricket (s) (<i>Gryllus</i>) | Conserve the existing habitat that includes grass and bare earth patches. | Yes Mole and Field Crickets |

6.2 Overall Action Plan

An action plan, containing combined SMART actions to protect and increase both species and habitat biodiversity, has been created for both campuses. Additionally, separate plans have been produced for each campus to take into account the differing natural and created habitats and species inhabiting them. This will ensure the ongoing actions identified in the SAPs are achieved. Progress towards these objectives will be reviewed at least annually by the Green Campus Group and SEEM. The main achievements will be highlighted in the annual sustainability statistics to be included on the University's website.

Both campuses

| Objective | Action | Outcome | Target year | Resources required | Responsibility |
|-------------------------------|---|--|-------------|---|---|
| Conserve and enhance habitats | Continue to use land use maps of each campus to identify and preserve commuting routes such as hedgerows, feeding and breeding areas for wildlife, compost areas, orchard and nut tree areas, old tree trunks and basking sites for invertebrates. Continue to map quantity and location of bird and bat boxes, bug hotels, bird feeders and water baths etc. | Habitat provision identified for maintenance and improvement | Ongoing | Map updates produced by Estate Surveyor | Environment and Sustainability Co-ordinator |
| Conserve and enhance habitats | Continue to increase the numbers of bird and bat boxes, bug hotels, hedgehog houses, bird feeders and water baths etc. where necessary. Add hedgehog feeding stations. | Deficiencies in habitat provision corrected. | Ongoing | Funding for bat boxes etc. to be sought through Jump prize money. | Environment and Sustainability Co-ordinator |

| Objective | Action | Outcome | Target year | Resources required | Responsibility |
|--------------------------------------|---|---|---|---|---|
| Conserve and enhance habitats | Install a water butt on each building where feasible. Use this water for garden watering, external cleaning, refilling ponds and bird baths during times of drought. | Conservation of water | 2025 | Funding for water butts. | Environment and Sustainability Co-ordinator and Estate Management |
| Conserve and enhance habitats | Achieve BREEAM excellent for new builds and very good for refurbishments obtaining maximum points for biodiversity, where feasible. | Increased biodiversity on campuses during new builds and refurbishments | Ongoing | | Estate Management |
| Provision of more space for wildlife | Using the biodiversity maps generated for each campus determine areas for mixed fruit trees, nut trees, native broad leaf trees such as oaks, beeches, birches and maples and nectar rich plants. | Increased habitats for fauna and flora. | Areas chosen 2025 Areas planted 2026 | Funding may be required for trees and plants. | Estate Management |
| Provision of more space for wildlife | Continue to ensure compost and undergrowth is left under trees. Continue to leave old tree trunks and basking areas. | Natural foraging areas for bats, hedgehogs and other wildlife created. | Ongoing | | Grounds team |
| Provision of more space for wildlife | Plant insect friendly plants such as honeysuckle and lavender ensuring they are native species. | Food supply for insects and wildlife created | 2024 | | Grounds team |

| Objective | Action | Outcome | Target year | Resources required | Responsibility |
|--|---|---|---|---------------------------|---|
| Provision of more space for wildlife | Continue to avoid insecticide and herbicide use. | No damage to the ecosystem. Food supply for wildlife maintained. | Ongoing | | Grounds team |
| Provision of more space for wildlife | Investigate the use of rodenticides outside of buildings and seek alternatives or remove, where possible. | No harm to wildlife. | 2024 | | Environment and Sustainability Co-ordinator and Estate Management |
| Provision of more space for wildlife | Install swift boxes or bricks and nesting boxes for swallows and house martins in new builds or existing buildings, where feasible. | Creation of habitats for migrating birds. | Review of existing buildings 2024 New builds as developments proceed | | Estate Management |
| Provision of more space for wildlife | Install solitary bee houses on campus. | Creation of habitats for bees. Increased pollination of plants | 2024 | | Environment and Sustainability Co-ordinator and Estate Management |
| Update information on wildlife populations and species on campus | Conduct a bat survey using bat detectors | Information and provision of habitat suitable for bats on the campuses. | 2024 | | Estate Surveyor and Environment and Sustainability Co-ordinator |

| Objective | Action | Outcome | Target year | Resources required | Responsibility |
|---|---|---|--|---------------------------|---|
| Update information on wildlife populations and species on campus | Conduct a bird survey possibly as part of the RSPB Big Bird Watch | Information and provision of environment suitable for birds found on the campuses. | 2024 | | Environment and Sustainability Co-ordinator |
| Update information on wildlife populations and species on campus | Continue to include wildlife spotting as a Jump activity. Add information to the biodiversity maps. | Information and provision of environment suitable for wildlife found on the campuses. | Ongoing | | Environment and Sustainability Co-ordinator |
| Encourage all users of the campus areas to respect all habitats and biodiversity. | Achieve Hedgehog Friendly Campus Platinum accreditation | Staff and students work together to increase hedgehog populations. | 2024 | | Environment and Sustainability Co-ordinator |
| Encourage all users of the campus areas to respect all habitats and biodiversity. | Promote Green Campus Group to staff and students via newsletter, social media etc. | University community works together to conserve and increase biodiversity. | Ongoing | | Environment and Sustainability Co-ordinator |
| Encourage all users of the campus areas to respect all habitats and biodiversity. | Communicate biodiversity events/news to staff and students to highlight biodiversity issues, through green newsletters, estate management newsletter etc. | University community works together to conserve and increase biodiversity. | Ongoing Green newsletters to be produced annually in October and February | | Environment and Sustainability Co-ordinator |

| Objective | Action | Outcome | Target year | Resources required | Responsibility |
|--|---|--|--|---|---|
| Encourage all users of the campus areas to respect all habitats and biodiversity | Work with the Students' Union to produce Green Week. | University community works together to conserve and increase biodiversity. | Ongoing annual event | Collaboration with the Students' Union | Environment and Sustainability Co-ordinator |
| Encourage all users of the campus areas to respect all habitats and biodiversity | Revamp the Jump scheme to ensure more student involvement and continue to include biodiversity actions. | Students develop biodiversity awareness through involvement in Jump. | 2023 | Continued funding for the Jump scheme | Environment and Sustainability Co-ordinator |
| Encourage all users of the campus areas to respect all habitats and biodiversity | Set up a web cam to view birds nesting and their chicks and other wildlife. Investigate the feasibility of streaming the images on screens on campus. | University community works together to conserve and increase biodiversity. | 2024 | Finding for web cams. Support from IT to install and stream images. | Environment and Sustainability Co-ordinator and IT services |
| Incorporate biodiversity actions and monitoring into the curriculum. | Continue to work with academic staff to develop initiatives to include biodiversity in curriculum areas such as data analysis, marketing, event production etc. | Students develop biodiversity awareness through their studies. | Ongoing Event management students to produce the Spring fair and Jump Awards annually. | Collaboration with academic staff | Environment and Sustainability Co-ordinator |
| Incorporate biodiversity actions and monitoring into the curriculum. | Offer placement options to students to carry out biodiversity projects such as a tree carbon sequestration project. | Students develop biodiversity awareness through their studies. | 2023 | Collaboration with placement staff | Environment and Sustainability Co-ordinator |

Bishop Otter campus

| Objective | Action | Outcome | Target year | Resources required | Responsibility |
|---|--|---|--------------------|--|-----------------------|
| Conserve and enhance habitats | Continue project to use water from the boreholes to irrigate playing fields | Conservation of water | 2023 | Funding for irrigation and pumping equipment | Estate Management |
| Provision of more space for wildlife | Create pond area on campus to encourage insects and amphibians | Creation of food supply for bats and amphibian area. | 2024 | Funding for a pond | Estate Management |
| Encourage all users of the campus areas to respect all habitats and biodiversity. | Continue to encourage the growing of vegetables by students and staff by the provision of allotment space. | Biodiversity of plants on campus increased. Food miles decreased. | Ongoing | Continued provision of space. | Estate Management |

Bognor Regis campus

| Objective | Action | Outcome | Target year | Resources required | Responsibility |
|---|--|---|------------------------------------|--|---|
| Conserve and enhance habitats | Maintain the green roof on the LRC building | Biodiversity and building aesthetics enhanced | Ongoing | | Estate Management |
| Conserve and enhance habitats | Work with Bognor in Bloom and other community groups to create areas for fauna and flora on and off campus. | Habitats on campus and in local area conserved and enhanced | Start 2022 | Co-operation of local community groups | Environmental Co-ordinator |
| Provision of more space for wildlife | Aim to decrease surplus artificial light at night from the Tech Park and other new builds | Increased roosting provision for bats | 2023 and new builds as appropriate | | Energy Officer as part of reducing utility costs. |
| Provision of more space for wildlife | Ensure pond is well maintained and topped up with water. | Creation of food supply for bats and amphibian area. | Ongoing | | Environmental Co-ordinator |
| Provision of more space for wildlife | Install a hedgerow on campus along the new fence created by the Bognor Road developments. | Increased tree cover to encourage wildlife. | 2023 | Hedgerow saplings to be obtained possibly from The Woodland Trust or similar scheme. | Environmental Co-ordinator |
| Encourage all users of the campus areas to respect all habitats and biodiversity. | Consider the provision of allotment space for staff and students to encourage the growing of vegetables on campus. | Biodiversity of plants on campus increased. Food miles decreased. | 2025 | Designated space for allotments | Estate Management |

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