

Landscape and Biodiversity Action Plan

2020-2026



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FOREWARD BY CHRIS ABBOTT, DIRECTOR OF ESTATES & FACILITIES

The quality of our external space is just as important as the quality of our buildings and interiors. Through this plan, and its integration into wider University practices, the green areas that link our buildings will be considered with the same level of care and design as the buildings themselves.

We will demonstrate how people and nature can coexist in close proximity. UWE Bristol is first and foremost a place of learning, but a university education is about more than the formal curriculum. Our vision is to develop high quality external spaces and green infrastructure where people and nature can happily coexist in a connected, inclusive and thriving multifunctional network fitting for a modern and progressive University like UWE.

We will therefore continue to develop and maintain our green areas in ways that support a wide diversity of nature and wildlife, and invest in a rich and diverse range of external engagement and teaching spaces from tranquil reflective garden areas, social seating, activity spaces, as well as areas where events can be held in all weathers.

Through this plan, and paying due regard to nature as a key stakeholder in campus development, we will maximise the value of our outside spaces for people and the natural world. In a fitting response to the University's declaration of an ecological emergency the estate will be developed and managed in line with the [Building with Nature](#) standard.

FOREWARD BY PROF. JAMES LONGHURST, AVC ENVIRONMENT & SUSTAINABILITY

In February 2020 UWE Bristol declared a climate and ecological emergency. One part of the University's response is to ensure that we manage the estate in a manner which supports and enhances biodiversity. The beauty of the natural world enriches the soul and soothes the mind but it also does much more. The ecosystems of the world provide the life support system upon which we all depend providing oxygen, fresh water and food. The University estate contributes to all of these important elements with meadow, woodland and water habitats for wildlife, beautiful floral displays, mature specimen trees, a relaxing environment for students and staff and the unique Beeline planting with its interpretation boards and invites to pick seasonal produce.

This document sets out the means by which the university will manage its estate and through it we will see the three campuses progressively become ecologically richer, diverse and beautiful. We will increasingly provide teaching and learning and informal opportunities for students to understand the causes and consequences of the ecological emergency and opportunities for action. We will see the estate used as a learning laboratory for students studying ecology, conservation and related disciplines as the native species and various habitats provide a rich array of educational opportunity. We will also work with our city

region partners such as the Natural History Consortium, West of England Nature Partnership and Avon Wildlife Trust to raise awareness and to take action to enhance biodiversity.

Biodiversity matters to UWE Bristol's staff and students and this plan sets out the intended actions to manage our estate for wildlife and to respond to the ecological emergency.

CONTEXT

The Convention on Biological Diversity (CBD)'s post-2020 global biodiversity framework sets out a mission to halt decline by 2030 and a vision to fully integrate and imbed biodiversity into all aspects of society by 2050. These goals and targets built into the framework are designed to be implemented by activity at a national level, supported by government-led actions at regional level, including the updating of biodiversity action plans at all levels.

The original UK Biodiversity Action Plan (BAP) published in 1994 contained lists of UK priority species and habitats. Last updated in 2007, they remain an important and valuable resource used to draw up statutory lists of habitats and species. Section 41 of the Natural Environment and Rural Communities Act 2006 requires the Secretary of State to publish and maintain these lists, which are regarded by Natural England to be of "principal importance" for the purposes of conserving biodiversity in England.

Recent reports including the 2019 State of Nature¹ report outline the decline of biodiversity throughout the U.K. Some of the key drivers noted in the State of Nature report are highlighted as crosscutting themes within this action plan.

It is to be expected that Government-led actions will be implemented which support the post 2020 global framework and these will give further direction at a subnational and regional level.

Both South Gloucestershire Council² and Bristol City Council³ have produced Biodiversity Action plans focussing on the challenges of biodiversity loss in their specific regions. UWE Bristol is local to both areas across our campuses, and as such it is important to be aware of the objectives and to take some guidance from both documents.

¹ <https://nbn.org.uk/wp-content/uploads/2019/09/State-of-Nature-2019-UK-full-report.pdf>

² <https://www.southglos.gov.uk/documents/Biodiversity-Action-Plan-2016-26.pdf>

³ <https://www.bristol.gov.uk/documents/20182/35052/BBAP.pdf/9074afdf-8f21-4296-b457-bc50830f0efc>

AIMS OF THE UWE BRISTOL LANDSCAPE & BIODIVERSITY ACTION PLAN

UWE Bristol is committed to improving the wellbeing of people, place and planet. We will provide an ecologically diverse estate with strategically connected and harmonious green spaces for people and nature to flourish. Our vision is to demonstrably enhance the biodiversity value of our land and to connect our estate with wider regional and national nature recovery initiatives.

This document sets out our approach to managing the external estate to these ends. The plan has the following aims:

- Provide a strategic overview and guidance for biodiversity protection and enhancement across the whole of the UWE Bristol estate, promoting the benefits for wildlife and people.
- To highlight the priority habitats, present on UWE Bristol land and the priority species, identified as potential or current receptors, which are of specific value across Bristol and South Gloucestershire.
- To identify the threats and opportunities with respect to priority species and habitats at national and local levels. To provide objectives, actions and targets designed to increase habitat and species diversity.
- To encourage a UWE Bristol wide approach to biodiversity conservation and to strive to promote biodiversity as an essential element to design, planning and project work throughout all Estates and Facilities operations.
- To facilitate education and engagement in biodiversity issues amongst staff, students and local communities.
- To provide an estate which supports the health and wellbeing of staff, students and visitors through opportunities to use and to engage with the natural world in a life enhancing way.
- To provide an estate rich in educational opportunity, that is relevant to many aspects of the curriculum and to university life in general, and that is accessible to all.
- To integrate biodiversity priorities into university campus landscape maintenance strategy and to serve as an example of best practice of grounds maintenance within the higher education sector. To this end, all grounds maintenance and development decisions are to be informed by Biodiversity action plan.



A more detailed document is held by the Grounds Manager covering the full range of habitat and species actions for the duration of this plan. This is available on request by emailing sustainability@uwe.ac.uk.

OBJECTIVES

Habitat Management

WOODLANDS AND TREES

A healthy, balanced, diverse and resilient tree population. We will identify new potential areas for tree planting across all campuses to promote continued tree cover, resilience and strong succession into the future, with due consideration to tree specimen choice for human and wildlife sustenance and in light of climate change.

We will propose and promote the creation of new University woodland areas or joint ventures for UWE to support, to increase woodland cover onsite and/or in the wider landscape.

HEDGEROWS

We will continue to make improvements to the quality and quantity of native hedgerows across all main UWE Bristol sites. Species will be selected to provide food and shelter for animals throughout the year, with a well maintained, ecologically beneficial hedgerow population.

GRASSLANDS

We will improve the species content of all non-amenity grassland by appropriate site specific management plans and achieve grassland equivalent in value to a UK BAP priority habitat. We will raise awareness of the different grassland management schemes through signage around campus and continue to create mown paths through grass swards, with increased placement of benches for viewing and relaxation.

MARGIN AND EDGE HABITATS

We will increase the number of margin habitats across all UWE sites by lowering the cutting frequency, allowing for an increase in plant species present in margins. Margins will be protected as valuable habitat locations.

PONDS, STREAMS AND SUSTAINABLE URBAN DRAINAGE SYSTEM

We will ensure a healthy, regularly maintained and diverse network of waterways across all campuses, which are acknowledged as crucial habitats for a wide variety of wildlife species. All ponds and waterways will be managed via individual bespoke management plans befitting their location and ecological function. It is essential to the integrity of UWE estates management that all current ponds are maintained and managed to allow them to fulfil

their Biodiversity potential. They are potential receptors for a vast number of plant and animal species and should be valued and cherished for the asset they are.

ORNAMENTAL PLANTING

We are committed to an annual increase in the amount of high performing pollinator plants across all UWE campuses and to the use of the campus as a tool for teaching site users about the availability, diversity and importance of planting on a local scale. We will build on our sustainable approach to plant production and usage across the site and will work to increase the numbers of staff or students engaged in our external realm. We aim to increase number of honey bees and hives on campus, and to scope out the possibility of introducing bees to Hillside Gardens, Glenside and Bower Ashton campus. In addition, we will develop a methodology for support for wide scale introduction of plants back into office space, via adoption schemes or plant sharing forums.

BUILDINGS AND HARD LANDSCAPING

We will design our campus buildings to make the most of opportunities to support and enhance biodiversity. Existing buildings will be considered in terms of their ability to support green infrastructure and new buildings will incorporate some green infrastructure as standard practice. Improved sense of arrival to buildings will showcase UWE Bristol's desire to embrace biodiversity and quality green infrastructure across its campuses.

SPECIES MANAGEMENT

We will comply with all legislation with regards to protected species and encourage, where possible, the introduction of these species to UWE land. See Appendix 2 for further detail.

BIRDS

We will increase the diversity of bird species across all UWE land via continued species-specific measures and work to conduct regular wild bird index surveys – including developing and implementing of a monitoring programme for house sparrows. Contemporaneously we will increase the recorded presence of birds.

MAMMALS

We will work to increase the presence of mammals across all UWE Bristol campuses through enforcing protected status of certain species (i.e. badgers, bats), appropriately managing spaces to offer wildlife corridors and nesting opportunities, and continue to bring forward initiatives aligned with the Hedgehog Friendly Campus Organisation, aiming to achieve Gold award.

AMPHIBIANS AND REPTILES

We will manage our existing ponds and create new ponds during campus development in order to offer habitat to increase numbers of amphibians and reptiles on site.

INVERTEBRATES

We will continue with our pollinator strategy, increasing the number of micro-habitats to encourage pollinators, predators and parasitoids. In addition we will increase populations of invertebrates across all habitats. We will also further restrict chemicals usage on landscape and soft surfaces across the estate and review pest control practices.

CROSS CUTTING THEMES

CLIMATE CHANGE

The best available local information is contained in a recently published report for Bristol City Council which identifies three headline impacts of a changing climate.

- Winter precipitation rate is projected to increase by up to 48%
- Sea level on Bristol's coastline is projected to increase by up to +72cm
- Summer maximum temperature is projected to increase by over +9°C. By 2080, summer precipitation rate in Bristol is projected to decrease by up to 68%.

Climate change and the potential development of urban microclimates across the region within the foreseeable future needs to drive landscape horticulture activity on campus. Climate change adaptation is already resulting in more drought tolerant planting being considered in landscaping projects, with the added benefit of reducing water consumption.

Species resilience is an important factor when considering plant choice. Adaptability, sensitivity to heat, drought, storms and high winds are all considered, along with referring to tree lifespans and their relative age when climate extremes may be active. Species choices are already being made on campus based around these criteria as well and the possible increase in prevalence of certain pest and diseases making the future of some species uncertain.

Green infrastructure also needs to be considered as a combative measure to climate change, be this through increase in canopy planting in open spaces or preparing buildings for the onset of extreme heat through the use of planting as supportive design tools.

LAND USE FRAGMENTATION

The biggest threat of fragmentation across our campuses is the University's capital development programme so, when new buildings are being planned, we will consider ways of maintaining and improving connectivity and movement for species through our land with

hedgerow and wildlife corridor creation. Will also ensure we maintain connectivity with our local environment and natural neighbours.

POLLUTION AND RESOURCE USE

We will continue with the transition to sustainable horticulture techniques within the grounds team, embracing technology and training as necessary. For example, we will find opportunities to reduce plastics usage, avoid peat based growing media, continue to electrify previously petrochemical-fuelled equipment, and continue reducing chemicals used in weed and pest control.

PROJECTS

The following projects will help to deliver actions and improvements identified within the Habitat and species action plans as well as contribute to other cross cutting themes mentioned in this section.

UWE BEELINE There will be continued development of the Beeline to encompass Glenside and City campuses, with additional sections and increased community involvement. Beeline spaces should consist of 4 individual elements - a) edible pollinators b) fruit trees for foraging c) wildflower meadow (native or near native) and d) seating or engagement space.

Some of the existing Beeline spaces currently only exhibit some of these elements so we will progress towards all Beeline points including all four elements if possible.

BIODIVERSITY IMPACT ASSESSMENT This project will attempt to provide practicable, unrestrictive recommendations that allow the campus to meet the need of its users via development, servicing and maintenance etc, while limiting or mitigating the impact these works have on the quality and biodiversity of our campus grounds.

UWE BRISTOL POLLINATOR STRATEGY Following consultation with Buglife and as part of our involvement with the Greater Bristol pollinator strategy steering group, UWE Bristol is committed to producing a pollinator strategy to ensure that the university is doing everything possible to encourage pollinators onto our campuses.

COMMUNITY AND INCLUSIVITY

The University will offer the green spaces that link our buildings the same level of design as the buildings themselves. Through the delivery of this plan and wider campus development, our students, staff and the wider community will be provided with high quality green infrastructure that benefits people and nature.

We will promote engagement on biodiversity matters on campus and seek feedback to any decisions that impact heavily on the environment: to this end, UWE Bristol has a useful effective and consistent number of partnerships focused on biodiversity protection and enhancement. UWE Bristol grounds will be increasingly used for external teaching and as a living lab for student projects and learning outcomes.

EDUCATION AND AWARENESS

Being an educational institution, it is right and proper that we take any available opportunity to educate and to increase awareness of biodiversity and its impact. Our goal, aimed at anyone who has any interaction with our site - be it through study, work or even occasional visits, should leave with a better understanding of how essential it is that biodiversity is protected and furthermore, how it can be managed and enhanced for the benefit of all. This will be achieved through a number of ways both via estates and facilities initiatives and through integration into the academic programme.

ENGAGEMENT AND COMMUNICATION

We will use a variety of inclusive methods to engage our community. As well as offering regular facilitated community garden sessions alongside the Students' Union for practical involvement in horticulture, in order to maximise accessibility and inclusivity we will make use of web resources, blogs and emails, campus signage and stakeholder engagement sessions.

LOCAL COMMUNITY AND PARTNERSHIPS

We will identify links to neighbouring communities and offer engagement opportunities for interested parties to be involved in the campus grounds. Additionally, through development of partnerships, we will actively seek out means to influence landscape improvements and nature recovery across the wider region.

We will continue to support annual initiatives such as the City Nature Challenge and the Bristol Festival of Nature.

NATURE CONNECTIVITY AND WELLBEING

One of the biggest issues surrounding human health and wellbeing is the general disconnect that people are feeling with nature due to impacts of urbanisation and increased pressures of a modern lifestyle. As people arrive to live or work on our campuses, we have an opportunity through education and estate management techniques, to help to build that connection with nature and, for those for whom it is already strong, to nurture and support it.

As well as continuing the development of the external environment in ways that bring nature close to people as described in this plan, we aim to articulate, strengthen and

celebrate these links through accreditation to the Building with Nature (<https://www.buildingwithnature.org.uk/about>) standard.

SIGNIFICANCE

We will develop “character areas” defined by location use and value, to help inform decisions around such elements as user and visitor experience, visual and identity style, marketing and communications, commercial opportunity and conservation strategy.

By considering the significance of individual place, we are able to better understand how any change will impact upon all aspects of it. The statement of significance will attach a value to a heritage or landscape asset.

We will produce bespoke landscape maintenance and development programmes based on these character areas and agree protected status for UWE Significant Sites, allowing for development and management to continue unhindered by the threat of change of land use or potential building development.

PEOPLE AND BIODIVERSITY

To maximise the nature connectivity benefits to our community, we will continue to improve our external engagement spaces with comfortable and social seating solutions in close proximity to nature via the UWE Beeline edible and pollinator-friendly plantings. We will develop a series of self-guided walks around the campus grounds, improve wildlife/biodiversity related promotional signage and continue to find creative ways to draw people out into the campus grounds.

Our vision is to have high quality external spaces and green infrastructure where people and nature can happily coexist - a scaled-down demonstration of the same sustainable coexistence needed on a global scale.

REPORTING AND DATA COLLECTION

The measures within this plan will be embedded into institutional practice through ongoing cross-disciplinary collaboration with relevant staff and external parties over its duration. We will look for ways to involve students in its implementation and ongoing monitoring: to assist with this, we will develop simple site sampling tools which will help to provide the necessary data. We anticipate that sometimes this may enhance curricular practice and learning through the provision of educationally useful resources. Annual biodiversity statements summarising progress towards the objectives set out in this plan will be produced and regular reports will also be compiled and made available to interested parties and via institutional governance processes.

PERFORMANCE INDICATORS

We will monitor and report on the following indicators –

Indicator	Explanatory note	Reporting frequency
Increase in Beeline assessment points by 10% annually across all campuses	Beeline spaces should consist of 4 individual elements - a) edible pollinators b) fruit trees for foraging c) wildflower meadow (native or near native) and d) seating or engagement space. Some of the existing Beeline spaces currently only exhibit some of these. Each Beeline location will be assessed per element.	Quarterly
Increase in the number of staff or students engaging with the external environment, as facilitated by UWE Grounds team	To include recorded numbers taking part in Community garden sessions, Hedgehog friendly campus actions, Beeline clinics or other Grounds facilitated events or sessions. It will also take account of any student projects that focus on the external realm and with whom the Grounds Team have provided support.	Quarterly
Develop, launch and embed the Small Project Landscape Assessment Tool (SPLAT)	An assessment tool to enable UWE Grounds team to provide all estates project and maintenance managers with potential impacts/opportunities surrounding Green Infrastructure, Biodiversity and Horticultural features. It chiefly concerns small projects or maintenance works in the external realm but also internal works where an impact on the environment may be unintentionally felt.	Quarterly
Tree losses and gains. All losses accounted for and 20% of the total number of trees planted annually to be development or succession planting (additions to population)	All trees lost to disease, adverse weather, project impact or vandalism will be replaced. This is achieved through the upkeep of a losses and gains register managed by the Grounds Team. We will aim plant an additional 20% in order to ensure that succession planting is taking place and that realistic population expansion takes place.	Annually
Plant production numbers show a 10% increase in plants produced from seed, cuttings and division. All using peat free mediums.	Existing baselines exist from 2018/19 season as growing opportunities for 2019/2020 and 2020/2021 seasons have been disrupted	Annually
Number of designated “UWE Habitat” locations showing annual increase. Launch this initiative and then increase number of locations by 10% annually.	UWE Grounds team will develop bespoke “Habitat” signage. This will be used to ensure significant habitats across all campuses are identified, enhanced and protected. An electronic log will also be developed and maintained as assets within digital campus information.	Annually
Hedgehog Friendly Campus – report on progress towards getting Gold accreditation and once achieved on the actions required maintain this standard across all campuses during duration of plan.	Various objectives are required in order to achieve this accreditation. These are managed by the Hedgehog Friendly Campus working group, comprising of UWE staff, students and Student Union staff.	Annually

<p>Report on number of Landscape and Biodiversity Plan actions completed or showing positive progress. An annual objective of increasing the number of objectives showing positive progress and final objective of progress towards all actions by end point of the plan.</p>	<p>By applying a RAG system to the plan as a whole we can report on and monitor the progress towards the individual actions that constitute the main body of this action plan.</p>	<p>Annually</p>
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APPENDIX 1 - UWE BRISTOL LAND USE, MANAGEMENT AND CAMPUS DIVERSITY

Spread over three campuses, all just a short bus ride from one another, each site offers something unique in terms of amenities and green spaces. Over the last five years, we've invested £300 million into our state-of-the-art facilities, creating the most effective and empowering setting for our students and people to discover their potential.

[Frenchay](#)

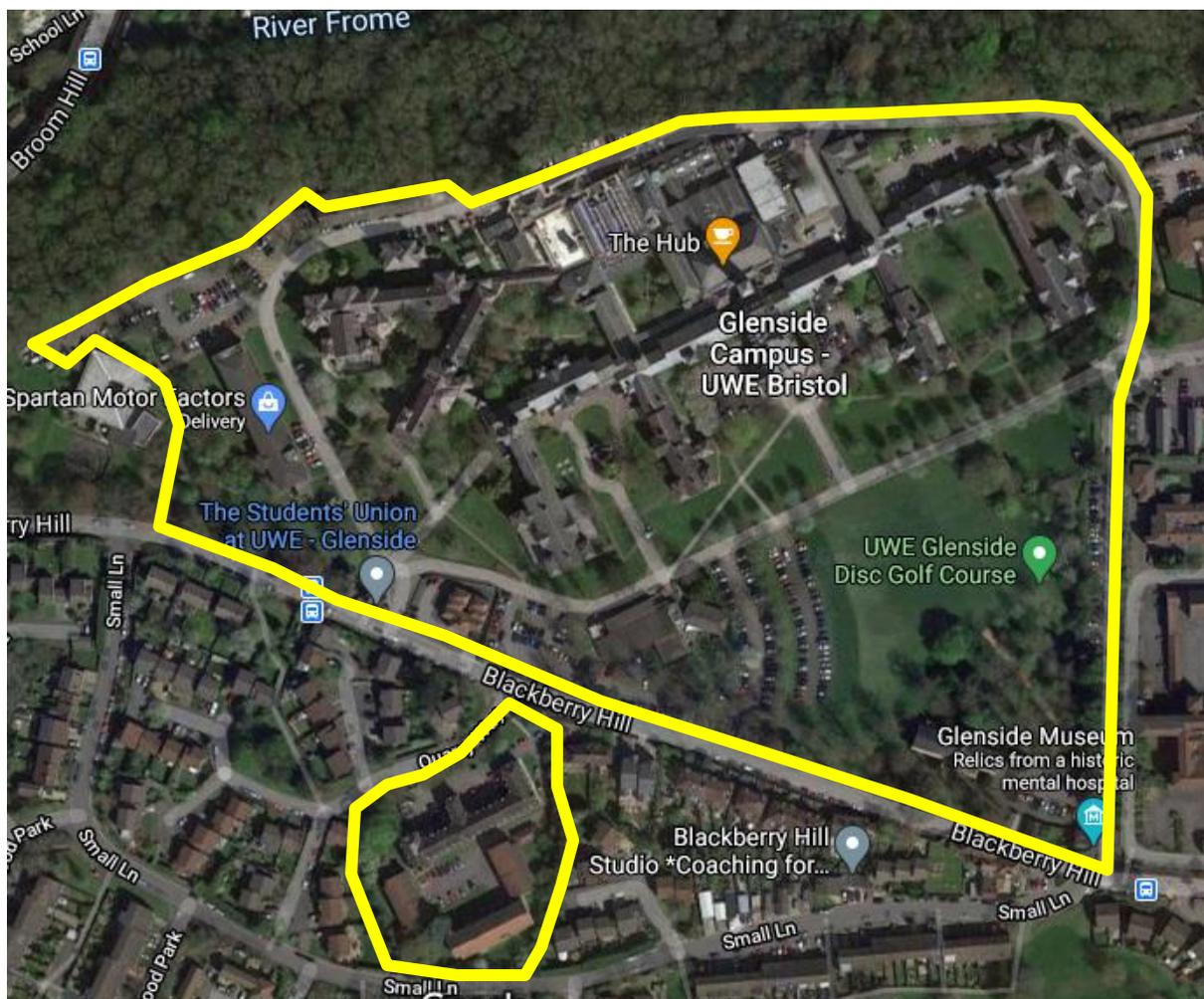


Frenchay campus is 633287 m2 and made up of a variety of habitats including Amenity Grassland, Meadow Grass, Margins, Hedgerows, Woodlands, Orchards, Specimen trees, Ponds and Waterways and the Built Environment. It is enhanced by a mixture of ornamental, edible and native planting. The building footprint on Frenchay campus was most recently measured to account for 102349m2.

The Grounds are separated into eight sections for the purposes of grounds maintenance and development and these sections are further split into “character areas”: external subsections are used to define the usage and the significance of the external realm.

Frenchay campus is maintained and developed by the UWE Grounds team, who sit within the Sustainability team of the Estates and Facilities department.

Glenside



Glenside campus is primarily the hub for UWE Bristol’s Health and Social Care students and, alongside the Hollies, provides accommodation, student union, cafes and bars, modern

practical teaching units and plenty of green open space. It sits within a conservation area and as such permission is required from the council for any significant changes to the external realm and all trees are afforded protection both above and below ground. It comprises of an area 96904m² and is home to a wide variety beautifully established mature trees, as well as plenty of amenity and meadow grass, ornamental planting and a tranquil rose garden. The heritage listed building comprises 20047m² of the estate. The external areas of Glenside campus are maintained by a small Grounds team based permanently on site.

City Campus (Bower Ashton)



At 28768m² Bower Ashton campus is the smallest of the Campuses incorporated under the action plan and it also sits within a conservation area. The building area currently accounts for 8469m² and it is the creative centre of the university. The majority of the remaining portion of the estate comprises of woodland habitat and amenity grassland. Some amenity

Conservation areas exist to manage and protect the special architectural and historic interest of a place - in other words, the features that make it unique (Historic England). In the case of both Glenside and Bower Ashton the Landscape is a significant factor when looking to define their unique character and as such must be protected by the custodians of the estate.

grass has recently been converted to a meadow grass management programme in order to improve grassland diversity.

APPENDIX 2 PROTECTED ANIMAL SPECIES

Objective	Protected Animal species
Desired Outcome	Comply with legislation and encourage, where possible, introduction of these species to UWE land.
Current Management	<p>The following Animal species are classified as protected species through legislation and as such require a specific mention within this management plan:</p> <p>Bats, Horseshoe (all species) Rhinolophidae Bats, Typical (all species) Vespertilionidae Butterfly, Large Blue <i>Maculinea arion</i> Cat, Wild <i>Felis silvestris</i> Dormouse, <i>Muscardinus avellanarius</i> Lizard, Sand <i>Lacerta agilis</i> Newt, Great Crested (or Warty) <i>Triturus cristatus</i> Snake, Smooth <i>Coronella austriaca</i> Toad, Natterjack <i>Bufo calamita</i>.</p> <p>We have no specific management plan in place for these species currently although our habitat management plan must ensure we are having no negative impact on these species.</p>
Threats / Risks	Poorly trained staff, removal of habitat, poisons, and campus development requirements.

Goal 13.1	Protected Animals		
Action Steps	Timeframe	Responsibility	
1. Produce high quality identification chart for all species and display in grounds briefing room	Short	Grounds Manager	
2. Survey and document specifically for presence of any of these Animals on any UWE land	Medium	Grounds Manager	
3. Determine the commitment of UWE estate development project team to Biodiversity development with respect to Protected	Medium	Sustainability Manager	

Species on UWE land and lobby for long term commitment.		
4. Initiate formal training session on identification and legislation surrounding protected Animal species	Short	Grounds Manager

5.7 Plants

Objective 14	Invasive Species
Desired Outcome	All invasive species are managed in accordance with perceived harm/benefit to the environment within the confines of existing legislation.
Current Management	Regular site inspections ensure any species controlled via legislation are managed appropriately. Grounds team are provided with weed identification sheets to help with ad hoc surveys.
Threats / Risks	Lack of knowledge, poor management, importation, legislation.

An invasive species is defined as an organism (plant, animal, fungus, or bacterium) that is not native and has negative effects on our economy, our environment or our health. Invasive plants and animals are the second greatest threat to biodiversity after habitat loss.

Five weeds are classified under the Weeds Act 1959:

- a. common ragwort (*Senecio jacobaea*)
- b. spear thistle (*Cirsium vulgare*)
- c. creeping or field thistle (*Cirsium arvense*)
- d. broad-leaved dock (*Rumex obtusifolius*)
- e. curled dock (*Rumex Crispus*).

Some of these plants can constitute significant conservation benefits but must be managed to prevent them from spreading onto agricultural land.

Goal 14.1	Invasive plant management	
Action Steps	Timeframe	Responsibility
1. Develop a recording system to identify any of the plants classified under the Weeds Act present on any University campus.	Medium	Grounds Manager

2. Grounds staff to be trained in identification of invasive weeds and the necessary reporting and controlling procedures.	Short	Grounds Manager
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Objective 15	Pest and disease management
Desired Outcome	Be in a position to identify and react to any new pests and diseases that occur on our managed land. To reduce the number and effects of pests and diseases that we are currently aware of in a sustainable manner.
Current Management	Our current Grounds management systems are put in place to minimise our use of herbicides to as little as possible; regular contact is made with manufacturers to identify the products with the least environmental impact. We fully support the use of alternative pest control method such as Integrated pest management procedures.
Threats / Risks	Poor knowledge, poor disposal techniques, local land management practices, politics.

Threats to plant health have increased with the globalisation of trade and increased travel opportunities generally, with a marked increase in the volume and diversity of plants, seeds, soil, and plant products entering the England. The university has a responsibility to ensure that the sites are monitored for the presence of any of the pests or diseases listed in Annex 1 of this document and that we are able to respond to their presence appropriately to prevent any negatives effects on biodiversity.

Goal 15.1	Reduction of pest and diseases present on UWE Flora	
Action Steps	Timeframe	Responsibility
1. Develop a system of recording pests and diseases listed in annex 1 that are identified on UWE land	Medium	Grounds Manager
2. Ensure ground team are trained in reporting of pests and diseases located on UWE flora	Medium	Grounds Manager
3. Ensure some specialised grounds staff are trained in identification, control and disposal methods of listed pests and diseases	Short	Grounds Manager
4. Develop system for recording how pests and diseases plant material are disposed of when required	Short	Grounds Manager

5. Promote and train staff more thoroughly on integrated pest management procedures.	Short	Grounds Manager
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5.8 Protected Plant Species

Objective 16	Protected Plant Species
Desired Outcome	All protected species to be managed as required by legislation.
Current Management	Protected plant species are not interfered with.
Threats / Risks	Unauthorised removal, cut down or treated as weeds by poorly trained staff.

The following Plant species are classified as protected species through legislation and as such require a specific mention in this management plan:

- a. **Dock**, Shore *Rumex rupestris*
- b. **Fern**, Killarney *Trichomanes speciosum*
- c. **Gentian**, Early *Gentianella anglica*
- d. **Lady's–slipper** *Cypripedium calceolus*
- e. **Marshwort**, Creeping *Apium repens*
- f. **Naiad**, slender *Najas flexilis*
- g. **Orchid**, Fen *Liparis loeselii*
- h. **Plantain**, Floating–leaved water *Luronium natans*
- i. **Saxifrage**, Yellow Marsh *Saxifraga hirculus*

Goal 16.1	Protected plants	
Action Steps	Timeframe	Responsibility
1. Produce high quality identification chart for all species and display in grounds briefing room	Short	Grounds Manager
2. Survey and document specifically for presence of any of these plants on any UWE land	Short	Grounds Manager
3. Initiate formal training session on identification and legislation surrounding protected plant species	Short	Grounds Manager

APPENDIX 3 CONTRIBUTION TO THE SUSTAINABILITY COMMITMENTS IN STRATEGY 2030: TRANSFORMING FUTURES

Transforming Futures Sustainability Commitments	How this plan impacts on these
Be carbon neutral as an organisation, with net-zero emissions of greenhouse gases by 2030.	<ul style="list-style-type: none"> Nominal carbon sequestering via on estate tree planting Non-peat compost utilised Landscape partnerships to be explored for natural climate solutions
Work through the ISO 14001 standard to set clear targets and plans to reduce water and energy use, cut waste generation including food waste, and support biodiversity.	<ul style="list-style-type: none"> Supports biodiversity: responds to UWE declaration of ecological emergency Detailed plan for managing estate in harmony with nature Water reduction: adapting to drought tolerant species Water reduction: explore use of rainwater harvesting for grounds use ISO14001 processes will be used as a framework to embed standards and to monitor progress
As signatories to the UK Plastics Pact, eliminate all but essential single-use plastic and meet the 2025 targets for recycling and reuse.	<ul style="list-style-type: none"> Reuse of plastic plant pots via Beeline clinics Can plant deliveries be in returnable pots?
Establish all our campuses as clean air and smoke-free zone.	<ul style="list-style-type: none"> Inclusion of appropriate planting in air quality “hotspots” may absorb pollution and thereby improve air quality
Invest in and secure year-on-year improvement in travel sustainability for staff, students and visitors.	<ul style="list-style-type: none"> N/A
Work with our students to explicitly address climate change and environmental challenges through our teaching, learning and curriculum.	<ul style="list-style-type: none"> Support for student study projects and placements within the external estate as a “living lab” Ongoing support for extra-curricular activities within community garden
Support research that addresses issues relating to climate change, environmental challenges and biodiversity.	<ul style="list-style-type: none"> Support for student research projects and placements within the external estate as a “living lab”