

Aberystwyth University

Biodiversity and Resilience of Ecosystems

Progress Report 2022

**Environment (Wales) Act 2016 Part 1 - Section 6**

**The Biodiversity and Resilience of Ecosystems Duty Report 2022**

**Aberystwyth University**

**Introduction and Context**

The Environment (Wales) Act 2016, considers Aberystwyth University a Group two organisation as we own, occupy and manage our own buildings and lands.

Aberystwyth University was founded in 1872. It was the first university institution to be established in Wales. Originally based on the sea front in the Old College. Our largest campus is now situated on Penglais Hill, which is core area of educational activity, with other campuses at Llanbadarn and Gogerddan, where our Institute of Biological Environmental and Rural Sciences is based alongside AberInnovation.

The Penglais campus has a prominent position in the town on Penglais Hill, with views over the coast and Cambrian Mountains. The site stretches over 32 hectares of varied landscape, with areas set aside specifically for nature conservation and user enjoyment.

The Penglais campus and gardens forms one of the most important modern landscaping schemes in Wales and is listed on CADW as an Historic Park and Garden: “registered for its exceptional historic interest as one of the most important modern landscaping schemes in Wales. The sophisticated layout, including the landscaping, is sensitive to the character of the site, and the planting, which is unusually choice and varied, both enhances the buildings and helps to integrate the sites. One section of the Penglais campus was designed by the well-known landscape architect Brenda Colvin (1897-1981) and is one of the very few of her schemes to have survived.”

On the north side of the A487 road there is a woodland garden established in the grounds, which originally accompanied the Edwardian principal's house. To the south of the road extensive landscaping was undertaken by Brenda Colvin in the late 1960s when the new University Campus moved up the hill from its earlier site in the town.

The University also has campuses in Gogerddan, where our Institute of Biological Environmental and Rural Sciences is based alongside AberInnovation, and Llanbadarn, offering a range of teaching and research activities as well as significant farm and woodland areas.

These varied landscapes offer students, staff and members of the public a perfect setting for spending time in green space, bring nature into their everyday life benefiting both mental and physical wellbeing.

**Highlights and Key Outcomes**

* In 2020, a Landscape Management and Conservation Plan for Penglais Campus has been developed to conserve heritage landscape features and promote biodiversity, including wildlife areas and wildflower meadow areas.
* The University achieved Hedgehog Friendly campus Silver Award in 2021-2022.
* The University has achieved the Green Flag Award for its Penglais and Llanbadarn Campuses, recognising its impressive features to promote biodiversity.
* A tree planting project has been approved and is in planning stages for circa 90,000 predominantly native broadleaf trees, biodiversity enhancement species mix, to be planted on various parcels of land at Rhydyronen, Morfa Mawr and Frongoch.
* As part of the construction of Fferm Penglais solar development, a number of biodiversity enhancement activities have been incorporated into the works.

**Improvement Opportunities**

The initial Biodiversity Action Plan of 2017 and 2019 progress report were predominantly focussed on Penglais Campus, going forward we intend to widen the scope of the action plan to include all University owned land, including the agricultural and research estate and develop action plans more specific to these areas and activity.

The University campuses and wider agricultural estate have been subject to sporadic monitoring of biodiversity by research projects and volunteer groups in the past (e.g. bird & butterfly survey from 2014 grazing research project, bioblitz etc). To further develop our enhancement activity, we plan to take a more systematic and collaborative approach. This will include developing a plan to regularly monitor the biodiversity of the University’s estate, including farmland, to enable us to better protect existing species, improve management of existing habitats or to create additional habitats for priority species.

**Objective 1: Engage and support participation and understanding to embed biodiversity throughout decision making at all levels.**

* **Embed biodiversity action across the organisation’s functions**
* **Raise awareness across the organisation**

**Progress against objective:**

The University Council sets the strategic direction of the institution, one of the core objectives of Strategic Plan 2018-2023 is our “Contribution to Society”. The University recognises that the quality of the environment is an integral part of the university’s operation and a prime responsibility of management at every level.

The Aberystwyth University Sustainability Policy includes commitments to protect and enhance biological diversity on sites that the University manages or owns and conduct our activities in an environmentally responsible manner. All our employees and students are required to work with due consideration for the environment; and require contractors who work for us to accept the same standards of care for the environment as the university itself. [Sustainability-Policy-2020-V4.2.pdf (aber.ac.uk)](https://www.aber.ac.uk/en/media/departmental/governance/policies/Sustainability-Policy-2020-V4.2.pdf)

Pro Vice Chancellor Professor Neil Glasser leads on sustainability improvement within the University.

The University facilitates a grounds advisory working group consisting of staff members and external local experts to assist with the management, improvement and monitoring of our grounds and a Biodiversity working group has been established which also includes staff who manage the University’s farmland.

University staff work closely with the Aberystwyth Conservation Volunteers with various environmental projects.

University grounds and materials are accessed and utilised for environment and biodiversity awareness and teaching for students and staff from numerous departments including countryside management.

Campus Grounds Working Group established in 2018 (and relaunched as the University Grounds Advisory Group in 2019) with a variety of internal and external stakeholders to help improve staff and student awareness and engagement with biodiversity issues. This group includes representation from the students Union as well as key AU departments such as IBERS.

A wellbeing map [Wellbeing-Map-eng.pdf (aber.ac.uk)](https://www.aber.ac.uk/en/media/departmental/oldstudentsupport/pdf/Wellbeing-Map-eng.pdf) has been produced which includes information on wildflower areas, bat & bird box locations, the community garden, rare trees & suggested walking trails, along with a more detailed campus walks guide which is available to download here: [Campus Walks Leaflet.indd (aber.ac.uk)](https://www.aber.ac.uk/en/media/departmental/sportscentre/newsite/13997-Walking-Leaflet-(2).compressed.pdf)

**Objective 2: Safeguard species and habitats of principal importance and improve their management**

* **Safeguard special species and habitats listed on** [**the section 7 biodiversity lists**](https://www.biodiversitywales.org.uk/Environment-Wales-Act/#accordion138)
* **Contribute to the management of protected sites and species, including Local Wildlife Sites/Sites of Importance for Nature Conservation (SINCs)**

**Progress against objective:**

A consultant was appointed in March 2020 to produce a Landscape Management and Conservation Plan for Penglais Campus to conserve heritage landscape features and promote biodiversity, including protection and enhancement of wildlife areas and wildflower meadow areas.

The University achieved Hedgehog Friendly Campus Silver award in 2021-22 [Hedgehog Friendly Campus Awards 2021-22 - The British Hedgehog Preservation Society (britishhedgehogs.org.uk)](https://www.britishhedgehogs.org.uk/hedgehog-friendly-campus-awards-2021-22/). This programme, run by The British Hedgehog Preservation Society, supports campuses to protect hedgehogs from hazards, replace and enhance habitats and raise awareness within the community, utilising teams of volunteer Hedgehog Ambassadors tackle problems on campus, like cutting out poisons, picking up litter and installing hedgehog highways.

The Pwllpeira‌‌n Upland Research‌‌ Centre is located in the heart of the Cambrian Mountains, immediately adjacent to the Elenydd Special Area of Conservation. The University’s Pwllpeiran site includes a significant area of unimproved peat bog. This is an important research resource as it has had very little human intervention over the years beyond minimal livestock grazing. Keystone species for this type of ecosystem are Sphagnum mosses. The importance of Sphagnum lies in its ability to retain water and act as a filter, helping to reduce peat erosion and improve water quality. Sphagnum can hold up to 20 times its dry weight in water. Sphagnum moss not only plays an important role in water regulation, it is also involved in the process of carbon storage, and so helps in combating climate change. This is why we include the story of these common but under-rated plants in our outreach work with schools. The Pwllpeiran site supports a vast array of Sphagnum species and also a high abundance of feather mosses, liverworts and lichens, with a total of 65 species recorded during a single site survey. [Tyn-Bryn.pdf (aber.ac.uk)](https://www.aber.ac.uk/en/media/departmental/ibers/pwllpeiran/ongoingresearch/Tyn-Bryn.pdf)

**Objective 3: Increase the resilience of our natural environment by restoring degraded habitats and habitat creation**

* **Create or contribute to Resilient Ecological Networks**

**Progress against objective:**

The University is involved in a number of practical Research projects aimed at restoring degraded habitats or creating new ones, such as the peatland restoration project [About Us | GHG Removal by Accelerated Peat Formation (ggrpeat.org)](https://www.ggrpeat.org/about), marine habitat research project [Ecostructure - Tools for ecologically-sensitive coastal and marine infrastructure (aber.ac.uk)](https://ecostructureproject.aber.ac.uk/) , and heritage orchards project [How scientists are helping save ancient Welsh apples and pears - Aberystwyth University](https://www.aber.ac.uk/en/news/archive/2020/01/title-228267-en.html).

Biodiversity enhancements and habitat creation have also been included in recent new build projects such as the solar farm project and the major refurbishment project at Old College.

The solar farm development will be accompanied by a number of biodiversity enhancements including planting of new species-rich hedgerow along the southern boundary of the Site, improved management of existing hedgerows, establishment of field headland and margins, habitat enhancement for reptiles, including creation of hibernacula and grass snake egg laying heaps, provision of bat and bird boxes on mature trees in boundary hedgerows and woodland.

Shallow soakaway features which will enhance biodiversity on site will manage surface water. Ditches and swale corridors are proposed that will convey surface water to detention basins that will largely be dry but fill up with water in the heavier rain fall events. Notwithstanding, the basins will feature broadleaved herbaceous planting including sneezewort, meadowsweet and purple loosestrife which will contribute to enhancing onsite biodiversity.

The opportunities for ecological enhancement at the Old College redevelopment project are limited given the site context, the urban location and lack of any semi-natural habitats.

However, the following elements of ecological protection and enhancement will be included: the installation of swift boxes on the new roof, the restoration of a historical masonry bird box on the Marine Parade side of Old College, the installation of subterranean bee-boxes on the small area of grass on the west front and the rear porch roof is to have two dedicated bat access tiles to replace slate roof tiles, allowing bats to gain access to the roof sub-space between the tiles and roof liner which will be of a type suitable for use in bat roosts.

A tree planting project, predominantly funded through the Glastir Woodland Creation scheme, is currently in planning stages. Approximately 90,000 predominantly native broadleaf trees will be planted under this scheme to provide new woodland habitats for wildlife and sequester carbon.

The University have created or restored 18 areas of wildflowers on Penglais campus, these are a mix of native and non-native species but the vast majority are native species. We have also tried to add native bulbs where possible to add to the food source for pollinators in spring and encourage biodiversity.

**Objective 4: Tackle key pressures on species and habitats**

* **Address key pressures**
* **Use biodiverse and native nature based solutions wherever possible**

**Progress against objective:**

The grounds management team have implemented the following measures to protect and enhance biodiversity.

* Introduced rules of not using a flail to cut hedges outside the permissible window of 1st March and 31st August or cut any trees during the bird nesting period unless the tree is of imminent risk to people.
* Ornamental hedges are trimmed by hand only after they have been inspected for nesting birds.
* The wildflower areas are only cut once a year in the autumn and some areas on the edges of the shelter belts or campus are only occasionally cut and some not at all.
* The University are obliged to manage the trees near to people and property with regards to safety, however where possible, they try to leave standing or fallen deadwood, log piles, piles of brash and areas of brambles.
* A tree management survey is undertaken which identifies high priority trees requiring maintenance, such as removing ivy growth to assist with inspecting the tree condition.
* Ponds maintenance is only carried out inside the permissive window for amphibians and any trees that have to be felled in Penglais woods are left on the ground overnight in case there are bats hiding inside any hollows in the tree.
* The University have become peat free and are phasing out our old fertilisers so that we only buy organic fertilisers in the future.
* Grass cutting is carried out by mulching the grass whenever possible so that the need to deal with waste grass and consequent effluent is minimised or eliminated.
* Pruning’s are put through a woodchipper and used around new plantings as a mulch to reduce the need to weed and water.
* Water butts have been installed on campus to collect rainwater use to water new plantings.

Aberystwyth University was the first University to be granted 'Plastic Free University Certificate', awarded by the marine conservation charity Surfers Against Sewage, the award highlights the University’s commitment to helping reduce plastic pollution in the marine environment.

**Objective 5: Improve our evidence, understanding and monitoring**

* **Improve the use of evidence in decision making**
* **Share evidence accessibly**

**Progress against objective:**

* A bioblitz was carried out in 2013, involving staff, students and general public, the results of which are freely accessible online.
* The Landscape Management and Conservation Plan, updated in March 2021, included habitat survey for the Penglais Campus and the University farms also keep records on areas of woodland, lengths of hedgerows and field margins.
* Section 7 priority species that have been sighted on the University estate or farmland and priority habitats that are known to be present within the University owned estate and farmland are listed in Appendix 1.

**Objective 6: Put in place a framework of governance and support for delivery**

* **Ensure governance for biodiversity within your organisation**
* **Provide capacity for biodiversity & Support biodiversity action through funding and/or partnerships**

**Progress against objective:**

* the University has a Pro Vice-Chancellor with sustainability responsibility, which ensures that key sustainability considerations in decision making is included at the University Executive.
* Biodiversity performance is reported annually to the Universities Executive team.
* Biodiversity Working Group established to bring together key land management stakeholders and develop plans for biodiversity protection and enhancement.
* Aberystwyth University Sustainability Policy statement details a number of environmental commitments including to requirement to enhance biological diversity on sites that the University manages or owns and requiring all our employees and students, commercial partners and contractors to work with due consideration for the environment.
* Long Term Landscape Management and Conservation Report for the Penglais campus was updated in March 2021 and is heavily focussed on biodiversity preservation and enhancement.
* We have begun working with Ceredigion Local Nature partnership to share knowledge and facilitate links to wider community projects, environmental organisations and other landowners.
* Volunteering: staff and students participate in Aberystwyth Conservation Volunteers [Aberystwyth Conservation Volunteers - ACV | Facebook](https://www.facebook.com/aberystwythconservation/), Aberystwyth Bee Conservation Society [Aberystwyth Bee Conservation Society - Home | Facebook](https://www.facebook.com/AberBeeConservationSociety/) and the Penglais Community Garden [Home | Penglais Community Garden (aberystwyth.wixsite.com)](https://aberystwyth.wixsite.com/penglaisgarden).

**Review of s6 duty**

The objectives included in our initial Biodiversity Action Plan in 2017 and our 2019 progress report were not fully aligned with the NRAP objectives. This 2022 progress report has been aligned to the NRAP objectives and our Biodiversity action plan will be updated, to be in alignment with the NRAP objectives.

***Appendix 1: Section 7 Priority Species recorded as sighted on the University’s Estate and farmland***

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***Section 7 Priority Habitats present in the University’s Estate and farmland***

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