

**Environment (Wales) Act 2016 Part 1 – Section 6
The Biodiversity and Resilience of Ecosystems Duty
Report 2019**

Prifysgol Bangor University

1. Introduction and Context

Prifysgol Bangor University is a Higher Education Institution delivering undergraduate- and postgraduate-level education as well as undertaking world-leading research across a range of disciplines.

The University has around 10,000 students and 2,000 members of staff, and offers courses spanning the Arts, Humanities and Sciences through over 300 undergraduate and over 100 postgraduate taught programmes. In addition to traditional teaching, the University also undertakes outreach work, extensive research, scientific consultancy, numerous off-site activities, fieldwork, and all the operational professional services supporting these activities.

The University estate covers more than 880 hectares of land, primarily within the county of Gwynedd, with additional locations in Menai Bridge and Wrexham.

Sites within Bangor, Menai Bridge and Wrexham are the predominantly given over to the University's buildings, with some areas of parkland, trees and other planted areas. In addition to these built/developed areas, the University land holdings also include;

- Treborth Botanic Garden, covering approximately 29.3 hectares, located to the south-west of Bangor City, between the Menai Suspension Bridge and Britannia Bridge.
- Henfaes Research Centre, Henfaes Ffridd and the Centre for Hill and Upland Management, covering a combined total of approximately 267.5 hectares, located in the vicinity of Abergwyngregyn, Gwynedd and Llanfairfechan, Conwy.
The land which makes up Henfaes Ffridd and the Centre for Hill and Upland Management are located within the boundary of Snowdonia National Park.
- The University also holds grazing rights over 495 hectares of land located between Abergwyngregyn, Gwynedd and Llanfairfechan, Conwy. This land is located on the Carneddau mountain range.

While Universities are included as “public authorities” within the context of the Environment (Wales) Act, they are not included as “public bodies” in relation to the Wellbeing of Future Generations (Wales) Act. As such Bangor University is not subject to the requirements of the Wellbeing Act, although we have been utilising the Act, including the Five Ways of Working and the Wellbeing Goals, as a guiding framework for embedding sustainability within the organisation.

The enhancement of biodiversity is a key element of Bangor University's mission to be the sustainable University. The importance of sustainability is recognised as one of the strategic enablers of success within our current [Strategic Plan](#).

The University has a [Biodiversity Policy](#) and [Action Plan](#), which defines our priority areas for biodiversity action and sets targets for enhancing biodiversity and ensuring biodiversity is included in decision making related to estate management.

The key objectives within the Biodiversity Policy & Action Plan include;

- Compliance with legal and other obligations
- Protect & Enhance biodiversity of the University estate
- Avoid use of environmentally harmful substances, materials and processes
- Use native planting and develop suitable habitats for native wildlife
- Include biodiversity within decisions regarding investment, procurement, planning & design, new construction, servicing & maintenance
- Create new green space and ensure ecological connectivity
- Use biodiversity to promote health & Wellbeing
- Minimise and mitigate negative impacts of University operation on the environment
- Raise awareness of biodiversity conservation internally & externally
- Develop links with relevant external organisations
- Monitor biodiversity of the estate through species and habitat surveys
- Establish a Biodiversity Working Group to coordinate biodiversity action on campus

These documents have been in the process of being reviewed and updated over the past year, with new versions due to be finalised in 2020.

The University also monitors and manages biodiversity as a part of its ISO14011:2015 accredited [Environmental Management System](#). In line with the requirements of the ISO14001:2015 standard, this means that the ultimate responsibility for delivery of objectives and targets, including those related to biodiversity, rests with the Vice Chancellor and University Executive.

There are currently three targets within the Environmental Management System concerned with biodiversity;

- a) Promote biodiversity conservation and improvement across the University estate
- b) Increase unimproved grassland/wildflower meadow areas across the University estate
- c) Create a University Biodiversity Action Plan

As part of the Environmental Management System, progress on biodiversity is reported annually to the Sustainability Task Group as part of the Annual Environment Report and Annual Management Review. This is then reported to the Vice Chancellor and Executive by the group Chair.

2. Highlights, Key Outcomes & Issues

- The University has a large land holding which supports extensive biodiversity which we are working proactively to protect and enhance as follows:
- Establishment of the Campus Environmental Performance Team including a Biodiversity Coordinator
- Ongoing Biodiversity targets within our ISO14001:2015 accredited Environmental Management System
- Biodiversity as a key theme within the University's Environment Policy and Sustainability Statement
- Annual reporting on environmental performance, including on biodiversity

- Trialling alternative approaches to weed management
- Expanding wildflower coverage and trialling reduced-mowing regimes
- On-site composting and reuse of all biomass arising from grounds maintenance
- Minimal issues with invasive plants, occurrences are well managed
- Year-round programme of biodiversity & ecosystem themed events for students, staff & public
- Biodiversity surveys conducted by staff, students & volunteers
- Conducting world-leading research on topics related to enhancing biodiversity and creating resilient ecosystems

Further work is needed to ensure biodiversity considerations are embedded in all processes and decision making

Data collection, particularly quantitative data, is an area in need of improvement

Key enabling factors:

- Excellent communication with students, staff and the general public through multiple channels
- Dedicated expert staff in multiple teams, including the Biodiversity Coordinator, Treborth Botanic Garden, Henfaes Research Centre and the Grounds and Gardens team, in addition to academic staff working in the fields of biodiversity, conservation and ecology
- Strong working partnerships with local and national organisations including; RSPB, Plantlife, COFNOD, Wildlife Trusts, BTO, North Wales Mammal Group
- Significant support from volunteers

Noted barriers;

- The University, like many other organisations, has faced challenges that means we were not able to be as ambitious as we would like to be in an ideal world
- There is a need to balance potentially conflicting demands on space across the University estate, including between the importance of green spaces and the demand for car parking

3. Action Report

Embedding Biodiversity Action

The University has a designated Biodiversity Coordinator as part of the Campus Environmental Performance Team. The Campus Environmental Performance Team manage and implement the Environmental Management System and drive environmental improvements across the University, with the Biodiversity Coordinator taking the lead on biodiversity related actions.

Promoting and enhancing biodiversity is one of ten priority areas within the University's [Environment Policy](#). Biodiversity and healthy ecosystems also fall within the Environmental work stream of the 2019-2025 [Sustainability Statement](#), the guiding document for the University's new Sustainability Strategy Group. The Sustainability Strategy Group will be the high-level lead on sustainable development at Bangor and ensure all work streams within their remit, including Biodiversity, are embedded within University operations and decision making.

As previously discussed, biodiversity has formed a part of the University's environmental performance reporting for many years and will continue to be a key theme of our commitment of continual improvement in environmental management.

Awareness, Training & Involvement

Treborth Botanic Garden is the window to the University's biodiversity commitment and activities. Staff and volunteers at the Garden have an extensive, [year-round programme of events](#), including seminars and engagement activities that are open to the general public as well as University students and staff.

During 2019, Treborth Botanic Garden hosted a large number of events related to biodiversity, ecology and conservation. These included expert talks on the importance and protection of specific species, seminars explaining biodiversity and conservation related research at Bangor University and events encouraging people to enjoy and connect with nature to support their own health & wellbeing. Recent events have included guided wildlife walks and seasonal nature walks, wildlife surveying taster days, The Great Garden Bird Watch, Wild Science days, wildflower meadow days and involvement in the [Festival of Discovery](#).

Examples of other biodiversity/ecology/conservation events;

- Bluebell ecology – considerations for the re-establishment of bluebell populations (February 2018)
- Why mosses matter: conservation of the miniature forest (April 2018)
- ROOTS – Reconnect, Re-wild, Recharge (July 2018)
- The Wonder of Waxcaps: An Introduction to the conservation importance, ecological interest and beauty of waxcap fungi (September 2018)
- Bee backpacks – Pollinator Research at Bangor University (November 2018)
- The Creators & Makers of Bodnant Garden (January 2019)
- A World of Hepaticas by John Massey VMH (March 2019)
- Lichens and Mosses Identification Course (June 2019)
- Gardening for Wellbeing course (July 2019)
- Getting to Know Plants course (July 2019)
- The Botany of Christmas (December 2019)

In addition to talks and events aimed at engaging people with the natural world, Treborth Botanic Garden also provides a range of training and skill building workshops for students, staff and the general public. These workshops have included;

- Identification of Fungi
- Habitat surveys
- Invertebrate identification and surveying
- Wildlife gardening & composting
- Creating hibernacula
- Tree & bulb planting
- Creating wildflower meadows
- Plant propagation
- Gardening for Climate Change

The expert staff from Treborth Botanic Garden also provide training and updates on biodiversity issues to University staff and students as required.

Volunteering is strongly supported at Treborth Botanic, with two volunteering days every week. Volunteering days are open to the general public as well as University students and staff, promoting knowledge of biodiversity as well as the health and wellbeing benefits of involvement with and enjoyment of nature.

Bangor University's students' Union places great emphasis on [volunteering](#) and currently there are six student societies and four volunteering groups within the University which are actively

involved in biodiversity and conservation work, both on the University estate and in the wider community.

[Further details of volunteering at Bangor University can be found on our website.](#)

Section 7 Special Species and Habitats

Biodiversity surveys of University sites are undertaken by Biodiversity staff and volunteers (students, staff & general public). Regular surveys include;

- Macromoths (400 species recorded over 30 years of survey data)
- Unimproved grassland surveys (annually)
- Orchid surveys (annually)
- Red Squirrel monitoring (monthly)
- Wildlife pond water monitoring for aquatic flora and fauna
- Dormouse activity monitoring

Details of sighted species can be found on the [Treborth Botanic Garden "Wildlife" webpage.](#)

Red Squirrel (*Sciurus vulgaris*)

There is a documented population of red squirrels at Treborth Botanic Garden. The University has a strong working partnership with the [Red Squirrel Trust Wales](#) for the conservation of red squirrels (and pine martens) on University land and to promote their expansion in north Wales. Being located just on the Gwynedd side of the Menai Bridge, connecting Anglesey to mainland Wales, Treborth is considered to be an important buffer zone for the established red squirrel population on Anglesey.

Brown hare (*Lepus europaeus*)

Previously recorded on site but not recently reported.

West European Hedgehog (*Erinaceus europaeus*)

Sightings of hedgehogs on University land were once common, however only a small number of sightings have been reported recently. A number of "hedgehog houses" have been installed around Treborth Botanic Garden as part of efforts to support and protect the species and hopefully encourage an expansion of their numbers.

Bats including;

- Noctule Bat (*Nyctalus noctula*) - Regularly detected
- Common Pipistrelle (*Pipistrellus pipistrellus*) - Uncertain status due to easy confusion with other species, several confirmed recent detections
- Soprano pipistrelle (*Pipistrellus pygmaeus*) - Uncertain status due to easy confusion with other species, several confirmed recent detections
- Brown long-eared Bat (*Plecotus auritus*) - A few recorded detections

Bat boxes and tiles have been installed in many buildings across the University estate, to support and protect local bat populations. As part of the development of the St Mary's Student Village a house-style building was constructed specifically for the benefit of bats detected in the area during the ecological survey.

Otter (*Lutra lutra*)

Reported sightings of otter along shores of the Menai Straits have been on the increase, including records of otter spraint. In order to protect the sighted otters and encourage their continued use of the area, the shoreline area is being left deliberately undisturbed.

Polecat (*Mustela putorius*)

Individuals were recorded from live-trapping in 2005, with some individuals also recorded as casualties of vehicles between 2005-2010. Sightings are still reported, but are not regular. Areas of lowland woodland habitat and old boundary walls are being protected at Treborth Botanic Garden specifically for the purposes of protecting and encouraging polecats. Conservation efforts for polecats also fall within the remit of the University's partnership with Red Squirrel Trust Wales.

Lesser-spotted Woodpecker (*Dendrocopus minor subsp. Comminutus*)
Occasionally sighted visiting species.

Slow-worm (*Anguis fragilis*)

Slow-worms have been recorded on University land. Treborth Botanic Garden have installed Hibernacula specifically for slow-worms to seek shelter and safe hibernation.

Wild cotoneaster (*Cotoneaster cambricus*)

Wild cotoneaster is the rarest plant in Britain. Although not located on University land, Treborth Botanic Garden are working in partnership with National Botanic Garden of Wales, Millennium Seed Bank and Chester Zoo on a project to conserve the Wild Cotoneaster on the Great Orme in Llandudno.

Management of Protected Sites (Henfaes Research Centre and surrounding area)

The University owns two parcels of land, constituting approximately 221.5 hectares, which within the boundary of Snowdonia National Park; Henfaes Ffridd and the Centre for Hill and Upland Management (previously described in section 1, Introduction & Context).

The Centre for Hill and Upland Management includes the sessile oak woodland statutory conservation feature within the Coedydd Aber Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR) and Special Area of Conservation (SAC). The feature is the largest contiguous extent of this habitat type along the north Wales coast.

In total, 94.5 hectares of University owned land falls within the Coedydd Aber SSSI/SAC and 87.5 hectares within the National Nature Reserve.

The Woodland canopy comprises sessile oak (*Quercus petraea*) and downy birch (*Betula pubescens*) with transitions to ash (*Fraxinus excelsior*) woodland and extensive areas of alder (*Alnus glutinosa*) woodland along the valley floor. A rich lower-plant flora exists within the woodland, including the rare mosses *Fissidens rufulus* and *Philonotis rigida*, and the lichens *Degelia plumbea* and *Lobaria amplissima*. The lichen assemblage is one of the most interesting in north Wales, with over a hundred species recorded.

The woodland breeding bird assemblage is also an SSSI/NNR feature within the site. The site also contains a number of Scheduled Ancient Monuments.

Henfaes Ffridd in Llanfairfechan is an enclosed grazing ffridd, containing unimproved and semi-improved acid grassland, with smaller areas of agriculturally improved grassland. Much of the site is designated a Scheduled Ancient Monument comprising a Romano-British field system.

Henfaes Research Centre at Abergwyngregyn is a lowland site comprising a number of experimental plots containing broadleaf tree species, arable crop species trials, plus additional areas of agriculturally improved and semi-improved grassland fields with hedgerow boundaries. The extensive broadleaf component and management regime supports extensive small mammal populations. The site is adjacent to the Lafan Sands SSSI / Conwy Bay SAC to the north (the second

most important site for wading birds in Wales), with Morfa Aber (west) and Morfa Madryn (east) Local Nature Reserves. The latter has a significant Lapwing population and the coastal fields are managed sympathetically with this in mind.

The sites have been managed in accordance with the requirements of the higher-level agri-environment schemes, *Tir Gofal* (2000-2013) and *Glastir* (Entry & Advanced schemes from 2014-present). The sites contain a number of habitats and species itemised under the Section 42 list of habitats and species of principal importance in Wales. Land managed under the Glastir scheme includes 96.26 hectares of grazed pasture, 3.2 hectares of hay-meadow, 42.35 hectares of woodland light grazing, 3.58 hectares of woodland stock exclusion and 17.77 hectares of woodland pasture.

There is also 9.23 hectares of grassland managed for Choughs, 4.58 hectares for adult Curlew and 11.35 hectares of Ring Ouzel.

Grazing rights for 1850 sheep are also held on the Aber and Llanfairfechan Common which comprises part of the Carneddau SSSI/SAC. Following legal advice, the Aber & Llanfairfechan Graziers Association formed a limited company (of which the University is shareholder) to implement a grazing plan supported initially by the Snowdonia National Park and latterly through the Natural Resources Wales to restore and maintain sensitive habitats on 2,800 hectares of the SAC and common land. This is subject to a Section 15 agreement under the Countryside Act 1968 and the graziers participate in a Glastir Commons agreement.

Management of Protected Sites (Treborth Botanic Garden)

Treborth Botanic Garden is located along the Menai Straits, between the Menai Suspension Bridge and Britannia Bridge. The Garden is comprised of a range of habitat types and land under a range of special designations.

The woodlands at Treborth Botanic Garden cover approximately 16 hectares, at altitudes ranging from High Water Mark to 40 metres above sea level. The site is notable for the extent of shoreline (1.5km) directly fringed with high canopy forest, an uncommon landscape feature in Wales.

Approximately one third of the botanic garden woodland is a Site of Special Scientific Interest (SSSI), with just over one hectare is regarded as Ancient Woodland comprising mature oak (*Quercus petraea*) and ash (*Fraxinus excelsior*). This area of woodland appears on the first edition (1837) of the Ordnance Survey maps of the area and contains a moderately rich woodland flora including early purple orchid (*Orchis mascula*), wild spindle (*Euonymus europaeus*), primrose (*Primula vulgaris*), sweet woodruff (*Galium odoratum*), dog's mercury (*Mercurialis perennis*), wood anemone (*Anemone vulgaris*), bluebell (*Hyacinthoides non-scripta*), great wood-rush (*Luzula sylvatica*) and soft shield fern (*Polystichum setiferum*). From a conservation point of view, this ancient woodland is without doubt the most natural and valuable woodland feature on the Treborth Botanic Garden site.

The remainder of the SSSI is situated in close proximity to the Menai Strait on steeply sloping ground. Canopy trees are diverse and include native species, such as oak, and introduced species including beech (*Fagus sylvatica*) and turkey oak (*Quercus cerris*). Additional native species of interest include whitebeam (*Sorbus sp.*) and elm (*Ulmus glabra*). Towards high-tide level there are colonies of carnivorous butterwort (*Pinguicula vulgaris*) and a large number of ferns such as the soft shield fern, and Bryophytes are abundant, including *Hookeria lucens*.

The University and staff at the Botanic Garden manage the SSSI at Treborth work in partnership with Natural Resources Wales.

Beyond the SSSI there are another 7 hectares of woodland within the boundary of the Botanic garden, representing at least 6 distinct plant communities. The most southerly element is a distinct stand of mature ash growing on a limestone outcrop at the western end of the cultivated garden comprising mature trees several of which are estimated to be 175 years old. The multi-trunked nature of some trees creates crotches which accommodate a specialised invertebrate fauna including a notably scarce beetle, *Prionocyphon longicornis*. The field layer includes a valuable transplant population of herb paris (*Paris quadrifolia*) which forms part of the botanic garden's conservation collection.

Over 400 species of macro fungi have been recorded in the woodlands including at least 10 locally scarce species. A large number of invertebrate can be found within the woodland with over 400 species of moths recorded, including indicators of old growth oak forest such as Brussels lace (*Cleorodes lichenaria*), nationally scarce species such as blomer's rivulet (*Discoloxia blomeri*) and a small population of white-letter hairstreak butterfly (*Strymonidia w-album*). Purple hairstreak butterflies (*Quercusia quercus*) can be seen in the oak canopy during July and August and a rare picture wing fly (*Paraclusia tigrina*) occurs on rotting beech trunks – this insect is a Red Data Book species occurring in less than 10 sites in the UK. Two Nationally Notable (Category B) species of water beetles occur in a spring in the woodland 80m east of the Britannia Bridge Up to 6 pairs of grey heron (*Ardea cinerea*) breed annually in Strait-side trees and shelduck (*Tadorna tadorna*) breed annually along the wooded bank of the Strait. The overall breeding bird list for the woodlands stands at 33 species.

Landscape & Habitat Management (Pesticides, Herbicides & Planting)

In recent years, the Property and Campus Services' Grounds & Gardens team have been trialling alternative approaches to managing weeds in an effort to reduce the use of glyphosate weed killer. This has included the use of acetic acid and weed burners as well as alternative management regimes which do not rely on weed removal. Alternative management approaches include reduced mowing, both in terms of frequency and extent, to allow areas to become more wild, encouraging and supporting a greater range of plant and animal biodiversity. At Treborth Botanic Garden, herbicides are no longer used for the purposes of keeping paths clear of weeds. Whilst the use of herbicides on paths continues at other sites, it is possible that the University could institute a policy against this practice in future.

Further management changes have included the removal of some lawned areas and replacement with herbaceous planting or wildflowers. This approach provides more varied habitats which support a greater number and variety of animal species, and also reduces the use of fossil fuels to power mowing machinery.

There are a number of areas on campus that have been converted from grassed lawn to wildflower meadows. Perennial wildflower meadows at Treborth Botanic Garden contain in excess of 150 species of wildflower. Green hay from the Botanic Garden is available for use across campus for the expansion of wildflower meadow areas.

The wildflower area outside the Environment Centre Wales building on Deiniol Road also contains "insect hotels" to support and encourage insects, and associated signs to inform students, staff and the public about the importance of wildflowers and supporting insects as part of a healthy functioning ecosystem. The wildflower area is also known to support a large variety of fungi, bees, flies, beetles, spiders, moths, butterflies, reptiles, amphibians, small mammals, bats and birds. People are encourage to make use of these outdoor areas for breaks, having lunch or even as meeting spaces, to help support good mental and physical wellbeing.

There are plans to further increase wildflower coverage in coming years. The Grounds and Garden team are taking an experimental approach to introducing new wildflower areas, to determine both the most suitable locations and the best seed mixes.

Other areas have specifically designed mowing regimes to help support and encourage certain plant species. In 2019, bee orchids were identified in a grassed area on campus – a management and mowing schedule has been developed to help protect the bee orchids whilst also keeping the surrounding grass area neat. This involves identifying areas where the bee orchids are growing and mowing around these areas during the times that the orchids are sending up stems, flowering and going to seed.

There are plans to develop signage for areas where mowing is being altered and/or reduced, to inform people that the changes are being implemented for the benefit of biodiversity. Without this kind of communication it is possible that changes to mowing could be misinterpreted as cost-cutting or reduction in service rather than as a deliberate strategy.

Tree planting is an ongoing activity at Bangor University. This includes an orchard of 140 native Welsh apple trees which has recently been planted on our Ffriddoedd site. The trees will provide habitat for a range of wildlife and support and encourage pollinating insects. In addition, the orchard is hoped to encourage students and staff to get outside and enjoy nature and think about healthy eating and where our food comes from.

There is a further [orchard of rare and special native Welsh fruit trees](#), including apple trees, cherry trees and plum trees, at Treborth Botanic Garden. As an educational facility, Treborth Botanic Garden established the orchard to teach people about native Welsh fruit trees.

Treborth Botanic Garden is also planting new hedgerows to serve as wildlife corridors, connecting habitat areas. This work has been funded through the Landfill Disposals Tax Communities Scheme.

The Bangor University Grounds & Gardens team do not use any pesticides on University sites, for the benefit of biodiversity and the environment.

Non-native Species

The University's main involvement with the management of non-native species has been in the control and removal of Japanese Knotweed (*Fallopia japonica*). There have been four instances of Japanese Knotweed being identified on the University estate in recent years. Of these, two occurrences are confirmed as having been fully eradicated and one site seems to have been eradicated although monitoring is ongoing to ensure no resurgence occurs. In the remaining site, management and removal is ongoing.

In addition, Treborth Botanical Garden also has issues with the non-native plants Rhododendron (*Rhododendron ponticum*) and Cherry laurel (*Prunus laurocerasus*) in their area of woodland along the Menai Straits. Due to the steep nature of the bank where these are located, there are practical and safety issues with their removal.

Resource Management

Previously, all biological matter arising from Grounds & Gardens maintenance on University sites was sent to landfill in skips. This is no longer the case and all such arisings are now retained on site. Grass clippings and plant cuttings are composted on-site with the resulting compost being repurposed on site by the Grounds & Gardens team and at the student garden run and managed by the student volunteering project "[Headway Healing Garden](#)". Wood material suitable for chipping is chipped and utilised on-site. Remaining material from grounds maintenance is burnt.

The University holds two exemption permits for aerobic composting, spreading of waste on non-agricultural land and burning of waste (untreated wood and vegetation), issued by Natural Resources Wales.

Where limbs fall or are removed from trees, the Grounds & Gardens team work to ensure that these are left at the base of the tree from which they originated for a time before being removed for composting, chipping or burning. This allows any wildlife resident within the limb to migrate out and not being unintentionally displaced by immediate removal of the limb.

Evidence, Research and Knowledge Sharing

Bangor University has a reputation as a world-leader in the field of research. Within our Schools of Natural Sciences and Ocean Sciences there is significant focus on research into the importance of biodiversity within Wales and globally, as well as into best approaches to maintain and enhance biodiversity and ecosystems.

[We have recently undertaken an initial assessment of how research projects at the University support the delivery of the UN Sustainable Development Goals. So far this has identified at least 39 individual research projects (receiving more than £2.87 million worth of research funding) on issues relating to biodiversity and ecosystems, that have been conducted within the past 2 years.] Additionally, between 2017 and 2019, researchers at Bangor University have contributed to more than 1200 scientific publications on the subject of biodiversity and ecosystem services, disseminating new knowledge internationally. This includes publications in highly renowned journals such as Nature and Science.

Ecological surveys and Planning consent

As previously discussed, the University undertakes a large range of biodiversity surveys across its sites, strongly supported by volunteers. These surveys include macromoth surveys, unimproved grassland surveys, orchid surveys, red squirrel monitoring, pond surveys, dormouse monitoring.

Bangor University does not remove trees as a matter of course, only in emergency cases where a tree poses a significant risk. Additionally, when tree cutting is required, this is only undertaken out of nesting seasons, unless in an absolute emergency. Tree management, including removal and cutting, is always supported by a detailed ecological survey to confirm no birds, bats or other wildlife are residing in the tree.

When the University undertakes major construction projects these are always supported by a full ecological survey. The ecological survey for the development of the St Mary's Student Village identified a large number of bats residing in buildings on the site. As a result of this, all new buildings constructed on the site had bat roosting boxes installed and a building in the style of a house was constructed on the site specifically for the purposes of bat roosting.

As part of the development of the Pontio Arts & Innovation Centre, a full Biodiversity Action Plan was created for the site and surrounding area in addition to a full ecological survey.

N.B. both these projects were undertaken prior to the introduction of the Section 6 obligations but illustrate our approach to biodiversity in large developments beyond compliance.

4. Review of S6 duty

In line with our ISO14001:2015 Environmental Management System, Bangor University produces an Annual Environment Report in October each year, covering environmental performance over the previous academic year (August-July). To align with our standard reporting cycle, a more

comprehensive review of our Section 6 duty will be undertaken at the end of the 2019/2020 academic year to be published along with our Annual Environment Report.

Prior to the publication of our 2019/2020 Annual Environment Report and Section 6 duty review, the University will also have finalised its new Biodiversity Policy & Action Plan which will detail how the University will continue to enhance biodiversity and ecosystems, in line with our duty under the Environment (Wales) Act. The new Biodiversity Policy & Action Plan will further support efforts to embed the consideration of biodiversity within University planning and decision making processes.

The coming year will also see the University develop a new vision for the management and development of its estate. This is clearly a great opportunity to further embed the consideration and awareness of biodiversity and ecosystems within the University's strategic planning and decision making processes. This will be achieved through close working with in-house experts and learning from best practice and examples of others as required.

Further action will be taken within Bangor University to ensure we are fully meeting our s6 duty. This will include more work to engage with staff and students across all parts of the University to raise awareness of biodiversity, its importance, our duties under Section 6 of the Environment (Wales) Act and the University's commitments and policies on enhancing biodiversity.

The University would like to thank everyone who has contributed to the compilation of this report, particularly staff from:

- Campus Environmental Performance Team
- Grounds & Gardens team
- Henfaes Research Centre
- Property & Campus Services
- The Sustainability Lab
- Treborth Botanic Garden