

The Biodiversity Trail has been devised to help students, staff and visitors enjoy a route around the Streatham Campus that can help demonstrate the impact of some of the sustainable practices. It can start/finish at any point around the route.

Map key

Field above Car Park B

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Taddiforde Valley (Higher Hoopern)

2

Pine Tree Belt Car Park A-B to
Harrison Building

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Harrison Heather Banking

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Laver Pond

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Lower Hoopern Valley and
Hatherly Labs Banking

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Reed Pond and Reed Hall Gardens

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Tours and walks

Guided tours of the grounds led by our knowledgeable and experienced staff are available throughout the year. There are also a number of self-guided walks to enjoy around campus including the Sculpture walk and the Evolution walk. For further information and to book please visit www.exeter.ac.uk  'guided garden tours'




Visiting the campus

The D and H buses stop at the Streatham Campus. Limited parking is available on campus. For further information on parking and directions to the campus please visit: www.exeter.ac.uk

 **'directions'**

The campus is moderately hilly and may not be suitable for people with limited mobility.

There are many cafés and restaurants on campus for you to enjoy during your visit. Please see our website for a full list of places to eat and drink – www.exeter.ac.uk  **'eat and shop'**



The grounds of the University of Exeter are recognised as one of the most beautiful campuses in the United Kingdom. Its Streatham Campus contains a range of plants and trees, some of which date back to the 19th Century when the grounds of Reed Hall were laid out by the Veitch family of Nurserymen.

The Streatham Campus is a registered Botanic Garden and both the Streatham and St Luke's campuses display examples of the National Collection Azara (a South American semi-evergreen shrub).

The management of the campus incorporates a balance between formal horticulture and sustainable practices that can support and promote biodiversity, for example:

- Reduced mowing regimes around the margins of amenity open space.
- Introducing and expanding areas for naturalised bulbs and wildflower planting.
- Balancing native and non-native in revised campus planting schemes.
- Introducing bug hotels and insect palaces to suitable locations throughout the campus.
- Introducing bird and bat boxes to suitable locations on campus.
- Creating woodland piles from materials generated from tree works on campus.
- Reducing chemical weed control in planted areas through use of bark mulch and mulch generated from recycled green waste on campus.
- Investment in sympathetic watercourse management increasing water flow/aeration, decreasing silt, organic matter and shading.

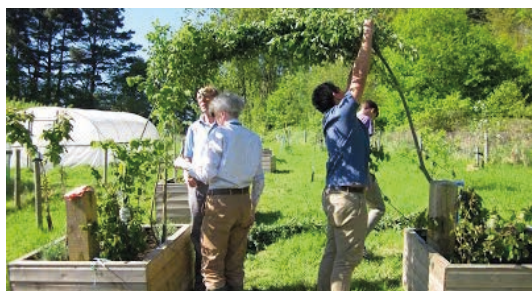


The Streatham Campus has successfully achieved a Green Flag Award for a number of years and is ranked among the best parks and green spaces in the country, confirming our grounds are well-maintained, well-managed and have excellent facilities.

Guidance for visitors

- Please remember that the grounds and roads on the University are private and you visit at your own risk
- Children must be supervised at all times
- Please keep to paths, do not disturb the wildlife or pick flowers and do not cause damage to property, trees plants or lawns
- We do not allow barbecues, fires or camping
- No skateboarding, roller-skating, aggressive cycling or any other activities which cause damage or annoyance
- Please listen to any additional advice given by the University staff
- Access may be restricted or permissions withdrawn at any time
- Dogs must be kept on a lead at all times
- Dog owners are required to clean up after their dog

1 Field above Car Park B



The field is surrounded on one side by a Devon Bank of native hedgerow species and on a second side by woodland. The site also has a licence from the Environment Agency to recycle green waste, used as a mulch and soil improver on campus.

A further area of the field has been developed as the Exeter Community Garden an initiative involving staff, students and local residents to grow produce sustainably and in a way that promotes biodiversity. It contains raised production beds, an orchard and a bee hive.

2 Taddiforde Valley (Higher Hoopern)



A pathway runs both sides of this valley which contains a man-made watercourse and series of ponds crossed by bridges. The feature was created during the 1960s and has matured over the years to create diverse habitats.

At one end of the valley Magnolias have been planted with bulbs underneath, producing early Spring colour. At the other end is a large pond which is sympathetically managed, with fallen branches left to be used as roosting points for birds. Habitat piles have also been left in the wooded areas to provide wildlife with sources of food, shelter and hibernation sites.

Amphibians such as toads and newts utilise the habitats provided. There are also records of the site being used by dormice, hedgehogs and water voles – priority species in the local Biodiversity Action Plan.



The watercourses themselves support plant species such as watercress, pond sedge, lesser water parsnip and lesser reed mace. Insect life includes the Golden-Ringed Dragonfly and the Beautiful Demoiselle along with a range of water bugs and beetles.

Ducks, egrets, herons and moorhens also frequent the ponds, some nesting in the margins.

**3 Pine Tree Belt
Car Park A-B to
Harrison Building**



The mixed Pine, Oak and Blackthorn belt is a hotspot for a range of mammal species, some of which benefit from a profusion of sloe berries and brambles/blackberries. The mammals range in size from small mice and voles up to larger animals such as foxes and badgers.

The site is also popular with butterfly species such as Red Admiral, Peacock, Small Tortoiseshell, Gatekeeper, Meadow Brown and many hoverflies and wild bees.

These are sustained by the presence of native wildflowers, pollen and nectar in the grass meadow areas between the belts of trees.

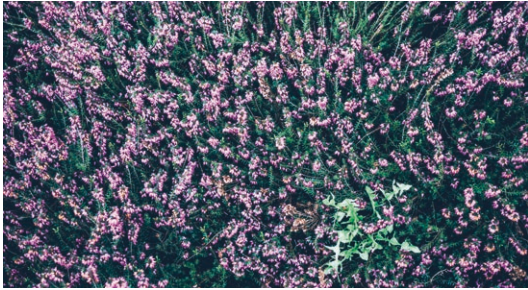
In the early Spring, when blackthorn/brambles are in flower, they are visited by early emerging solitary bees and bumblebees. Deep inside the flower you may also be able to spot tiny pollen beetles.

A steep bank to the rear of the Harrison Building has minimal management intervention, which helps encourage rough grass and scrub species which support an excellent diversity of insects including wasps, social bees, grasshoppers, crickets, earwigs, spiders, woodlice, beetles and flies.

The habitat and range of mammals and insect species also attracts a range of birds that visit and nest on campus eg, Blue Tit, Coal Tit, Great Tit, Robin, Chaffinch and Wren.

The area contains a Wild Conifer Collection, part of an international research project being undertaken by the Royal Botanic Garden, Edinburgh (RBGE) using trees germinating from seeds collected from the wild.

4 Harrison Heather Banking



The flight of steps from the car parks down the side of Harrison and Laver Building also has several steep areas that receive low management input and support habitats similar to the Pine tree belt.

At the bottom of the steps along the front of the Harrison Building is a large bank of heather and heath (ling) interspersed with shrubs such as Buddleia.

The variety of heathers and heath mean they flower almost constantly throughout most of the year. This helps attract up to five of our 24 UK species of bumblebee, solitary bees and honey bees. In addition, leaf beetles and a range of flies exploit the habitat.

5 Laver Pond



This is another man made water-course which is complemented by planting along its banks. The pond is fed from the top of

the campus and links under the road with the Plantation watercourse that terminates at the bottom of Stocker Road.

In terms of landscape design, these features were introduced to try and ensure that, as the campus and University expanded, the buildings could sit-in rather than dominate the landscape. The effectiveness of this design can be judged through the recent addition of the Living Systems Institute research building adjacent to the pond. Protection of existing landscape and consideration of biodiversity in new landscaping, eg, inclusion of wildflower planting, blends the building into the campus as a complement to its innovative cantilever design.

The wetland habitat includes exotic planting and more native plants such as bulrush, flag irises and pond lillies. Gunnera adds impressive scale.



The pond is home to water boatmen, back-swimmers, pond skaters, water hoglice and dragonflies (including the Southern Hawker and Red Darter Dragonflies, and several species of damselflies).

Woodpeckers, such as the Great Spotted Woodpecker and Tree-Creepers, have also been recorded on this site.

6 Plantation



Running parallel to Stocker Road this naturalised area contains a high proportion of exotic plants including Bamboo, Camellia, Rhododendron, Azara and Podocarpus as well as a fern collection.

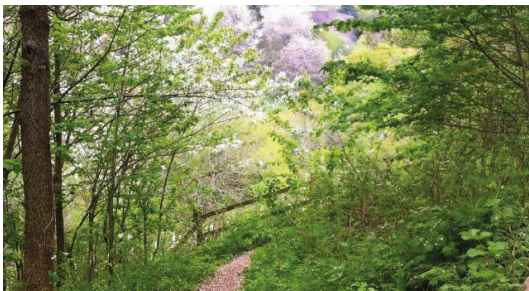
There are also examples of several species of Eucalyptus which exude an aromatic resin with a characteristic astringent odour.

The watercourse that runs through the Plantation is home to several invertebrates such as damselflies,

dragonflies, water beetles and water bugs. It also provides habitats for amphibians, small mammals and a wide variety of bird species, which can regularly be heard calling and singing, adding to the atmosphere of the area.

Close to the pond at the bottom of the site, a bug hotel has been created from recycled materials. This provides a potential home for invertebrates such as worms, spiders, woodlice, millipedes, centipedes, earwigs and overwintering insects such as ladybirds.

7 Lower Hoopern Valley and Hatherly Labs Banking



Opposite Hatherly Labs in the field and valley owned by the University known as the Lower Hoopern Valley is a County Wildlife Site which the University manages with input from the Devon Wildlife Trust. It is dissected by a natural watercourse,

which eventually flows into the River Exe. It has a public right of way linking Prince of Wales Road with the cycle path on the opposite side of the valley. It also has native woodland planted in partnership with the Woodland Trust to celebrate the Queen's Diamond Jubilee.

The valley supports several species of bats and raptors such as peregrine and buzzard. There are also records of otter sightings in this valley. Wildlife cameras have recorded foxes and badgers.

The banking at the front of Hatherly supports a healthy population of delicate *Spiranthes spiralis* orchid. Typically this flowers in late Summer and grass cutting ceases when the first flowers appear.

8 Queen's Building/ Washington Singer



From Prince of Wales Road, adjacent to the Old Library towards Queen's Building, you will pass Poole Gate. On one side of the road is the original Old Botanic Garden with exotic species such as *Acea* and the Californian Nutmeg.

On the other side of the road are native Birch trees and a wildflower meadow leading to pond areas created outside the Forum.

Turning left and heading towards Washington Singer, the wildflower roof is evident on top of the Mood Disorder Centre. This innovative approach to sustainable design creates a habitat for a range of pollen and nectar dependent species. It also links to honey bee studies undertaken by the Psychology department.



The banking at the nearby Washington Singer, one of the original buildings on campus, is naturalised with purple crocus. These were planted by the local Round Table to help encourage funds raised to eradicate Polio. The purple colour is used to signify vaccination in some parts of the world.

The lawn also contains a mixture of cherry tree varieties established as an orchard, through donations to the campus grounds. Both the cherries and crocus produce early season flowers and create a welcome at one of the principle entrance points to the University.

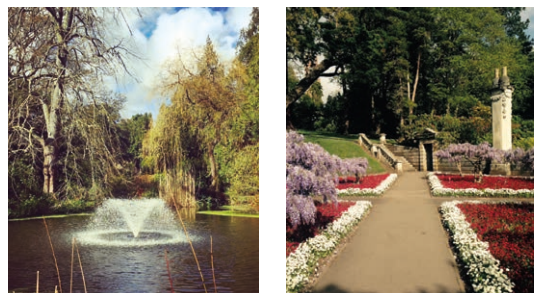
On the opposite side of The Queen's Drive lies Reed Arboretum. This is part of a listed historic landscape, associated with the grounds and gardens of Reed Hall. An investment of £70,000 by East Indian Merchantman, Richard Thornton West, laid out the original grounds in the middle of the 19th Century. The commission was to the Exeter based Veitch family of nurserymen who collected plants from around the world. The Arboretum still contains many of the original specimens such as Pines, Monkey Puzzle and several exotic species of Oak. Some retain

their labels but growth over the years mean they are no longer at ground level. They continue to provide roosting and nesting points for birds and bats.

Reed Hall itself was the first building to be donated to the University. In the 1920s, it was known as Streatham Hall but changed its name in recognition of the donation made by W H Reed, Alderman/ Mayor of Exeter.

The plants in the Reed Garden and Arboretum provide the nucleus for all the current botanical collections.

9 Reed Pond and Reed Hall Gardens



Reed pond is a brick and clay puddled pond that was created in the mid-19th Century as part of the original garden design. In common with contemporary landscape features, it contains an island and stocked ornamental fish as well as wildfowl.



Project work with students and staff has involved thinning out trees, removing silt and organic matter, replacing fountains and pumps, and replanting the island. Monitoring of the impact of these works, through sampling, suggests that the works have a positive impact on the range and numbers of invertebrates utilising the pond as a habitat.

Insects recorded included dragonflies, water beetles, pond skaters, mayflies, alderflies and caddisflies. The pond has also been visited by kingfishers, possibly feeding on sticklebacks, frogs and young immature fish. Mallards, coots and moorhen regularly visit and nest, and palmate newts also live in the fringes of the pond.

Behind the pond is another bug hotel constructed from recycled materials. Close by you can find the stump of the tallest tree on campus (*Mitasequoia giganteum*), felled as a combination of several weather impacts and *Armillaria*

fungus causing it to decline and become unstable. The bank around the stump sustains wildflowers and bulbs, including Snakes Head Fritillaries. Cowslips have also established on several of the bankings around Reed Hall.

Investments have been made to sustain veteran trees in the Arboretum area. An air spade has been purchased to decompact around the root systems of old trees. Mulch, generated from green waste on campus, is added to help moisture retention. Mycohyzal fungi has been trialled to help nutrient uptake in some trees.

Summary

This trail is by no means comprehensive but is designed to provide a representative flavour of the estate management techniques that can help sustain a variety of ecosystems. It also tries to convey the type and range of biodiversity that this supports.



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