

SUSTAINABLE DEVELOPMENT TEAM: PROJECT BROCHURE

The NTU Sustainable Development Team (previously Environment Team) works on a variety of projects in order to drive sustainable improvements and excellence across the University and beyond. We do this by engaging in a wide variety of projects and this paper sets out a summary of those projects that have taken place, or are currently being worked on in January 2018.

Visit our website <https://www4.ntu.ac.uk/sustainability/index.html> for further information.

Projects are grouped by similar themes. Basic summary information is given for each project, and the relevant UN Sustainable Development Goals (SDG) shown in the top right hand corner of each project's box.

The UN Sustainable Development Goals are:



Visit <https://sustainabledevelopment.un.org/sdgs> for further information on the UN Sustainable Development Goals.

COMPLIANCE

EMS



What: The University has held the internationally recognised ISO 14001 certification since 2012, recognising the hard work of people across NTU to ensure our environmental management is amongst the strongest in the UK Higher Education sector. Since December 2017, we hold ISO 14001:2015.

Why: The accreditation makes us confident that we have the Environmental Management Systems needed to reach our big energy, waste and biodiversity targets.

How: The Sustainable Development Team work year round to ensure all our systems and operations are in place. This includes auditing and site checks, documentation updates, meetings, and delivering training.

Benchmarking



What: The Sustainable Development Team work to submit data for both mandatory and voluntary national and international benchmarks. Examples include the national People and Planet University League, and the international and voluntary UI Green Metric. NTU has also held Fairtrade status since 2008, and the Sustainable Development Team re-apply to continue to hold this every two years.

Why: To recognise the good work the Sustainable Development Team undertake, and compare our performance to other universities in the sector nationally and internationally. Taking part in benchmarking activities also aids transparency and accountability for environmental performance. Some data entries are legal requirements.

How: Most benchmarks are published annually, with data collection in the months prior to this. Some also require audits. This can also involve ensuring the NTU Sustainability webpages are kept up to date with relevant information.

When:

People and Planet University League (previously 'Green League') - since 2007

Fairtrade Status—since 2008

LiFE Index—first submitted 2013, annually since 2015

UI Green Metric—since 2014

SUSTAINABLE CONSTRUCTION

Sustainable Construction



What: As part of the Carbon Reduction Strategy for the NTU Estate, the Sustainable Development Team work to achieve at least BREEAM Excellent for all new builds and BREEAM Very Good for major building refurbishments.

Why: To reduce carbon emissions and operating costs of the built estate.

How: Work with external contractors, meetings, site visits, ecology licenses, installation of renewable technology projects e.g. photovoltaics (PV), combined heat and power (CHP).

Find out more about City Site (Map 1), Clifton Campus (Map 2) and Brackenhurst Campus (Map 3) construction projects on the following pages.

Confetti Creative Quarter: NTU's 4th Campus

What: Following the acquisition of the Confetti Media Group in July 2015, NTU will transform the former factory building on Parliament Street into a new iconic Digital Media Hub. The caves and artefacts discovered during construction have helped rewrite the history of medieval Nottingham, and provide information about the way the area was used over 700 years ago. This will further expand Confetti's existing education provision and facilities, featuring state-of-the-art studios, classrooms, a contemporary café, Learning Resource Centre and a rooftop terrace.

The Sustainable Development Team are supporting the Project Team on achieving BREEAM Excellent on this construction project.

Map 1: City Site

City Site: Greening the City

What: Creating a network of green spaces to transform an urban campus into a more green campus.

Why: Students and staff were asked in 2014 what is important about the area in which you study and work—we were told they would like more green space and gardens. The creation of more green space will also help enhance the biodiversity of the University estate.

When: Two sites have already been transformed: Boots Roof Garden—offering a new space for students and staff to relax, and made of recycled and sustainable materials as far as possible throughout. Green roofs are a great way to improve building efficiency, reduce flood risk and provide a tranquil environment. The Dryden Corner redevelopment has transformed a dark and unloved plot of land into a bright and airy space, with seating made from sustainably-sourced wood, and a relaxing water feature.

Greening the City: Dryden Corner

Completed Summer 2015

The redevelopment of this previously dark and unloved plot of land into a bright and airy space to stop for a break, features a relaxing water feature, and plenty of seating made from sustainably-sourced wood.



University Hall

Aiming for BREEAM Very Good (refurbishment)

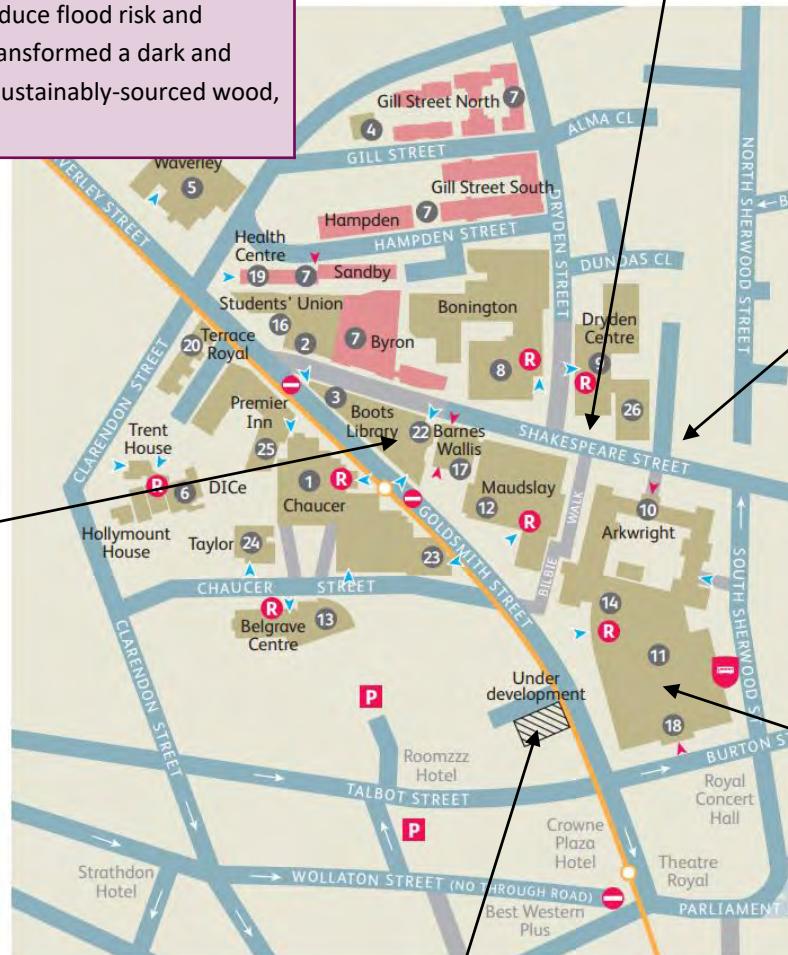
Due for completion Summer 2018

This listed Wesleyan Chapel will be transformed into a graduation venue, due for completion in Summer 2018. At the front of the chapel, a new foyer will be created, and the chapel will be opened up with the replacement of solid screens with glass. The venue will also have NTU's first green wall.

Greening the City: Boots Roof Garden

Completed September 2015

The green roof, made using recycled and sustainable materials as far as possible throughout, helps to improve the building's efficiency, reduce flood risk in the city centre, and provides a tranquil garden for people and wildlife. The garden includes a range of plants to attract a variety of species.



Newton and Arkwright Buildings

Refurbishment completed 2009

Home to a pair of Peregrine Falcons, which have successfully nested and raised 32 chicks over the last 7 years. Their day-to-day activity can be viewed via [NTU's popular falcon webcam](#).

The buildings also have one of the region's largest green roofs, with 13 different varieties of sedum covering approximately 2500m². This provides not only a better view from the second floor up, but plays an important role in attracting a wide range of insect and bird species to the city centre.



23 Goldsmith Street Aiming for BREEAM Excellent

September 2017 – December 2018

The stacked floorplan of this new open and flexible office space is designed to maximise natural light.

Map 2: Clifton Campus

Clifton Campus Redevelopment

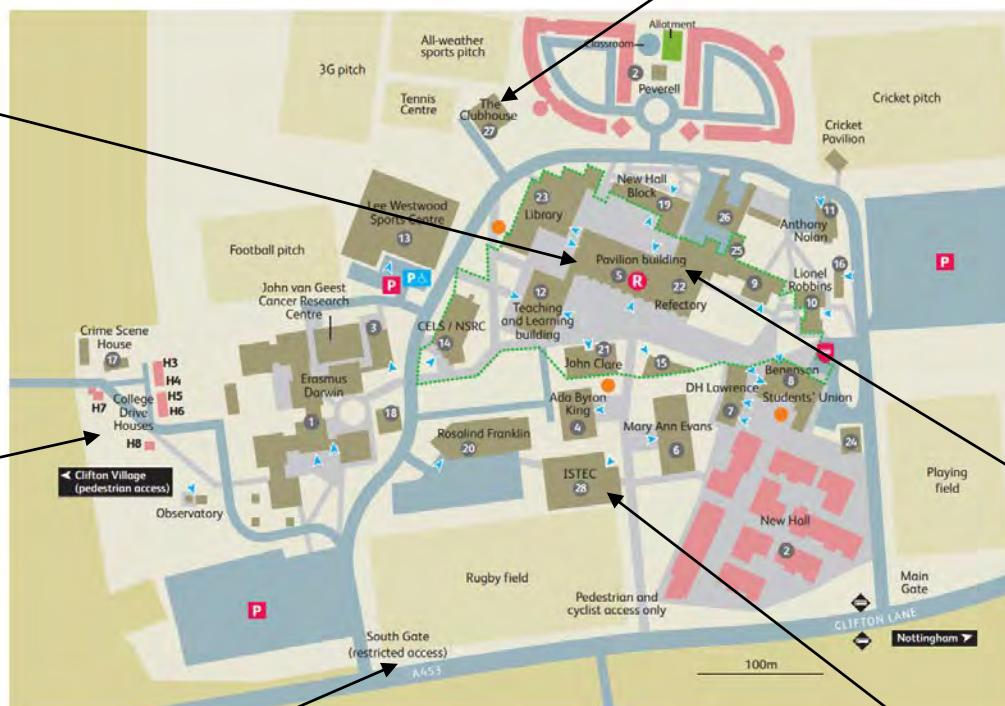
What: The Clifton Campus has been extensively redeveloped over the last few years, providing the opportunity for many new sustainable buildings, including NTU's first carbon negative building. The landscape has also been improved, with many new trees and plants planted.

Clifton Campus has also held a Green Flag Award since 2012.

Heart of the Campus Redevelopment Project BREEAM Excellent

Summer 2014 – Autumn 2015

Two new buildings, the Pavilion (BREEAM Excellent) and the Teaching and Learning Block (BREEAM Excellent), are now situated in the centre of the campus. The Pavilion is NTU's first **carbon negative building**, and has an Energy Performance Certificate of A+. Landscaping works completed include Lee Westwood Sports Centre and Clubhouse links, Refectory Garden and Pavilion Garden – all prioritising pedestrians and biodiversity. A **Green Zone** – a smoke-free and traffic-free area – has also been created in the centre of the campus.



Clifton Clubhouse BREEAM Excellent (pending)

Completed Autumn 2015

Part of the Clifton Sports Village, the clubhouse is a new facility that is used to serve nearby sports pitches, including changing facilities and social areas. The clubhouse has PV installations on the roof. A wildflower meadow has been planted within the vicinity of the building as part of a campus wide planting scheme comprising approximately 1 million perennial bulbs.

Clifton Nature Trail

Completed 2013

Nine information boards have been installed to guide students, staff and the public around the trail – boards are filled with information about the Campus and its surroundings including biodiversity, history and community activities carried out on campus.

Refectory Refurbishment BREEAM Very Good (pending)

Completed Autumn 2015

The refurbishment of the existing Clifton Campus Refectory includes new roof insulation and covering, and new windows and doors, resulting in less heat lost. The new lantern light also gives increased levels of natural light.

A453 Widening & Tree planting

Completed Summer 2015

As part of the works to widen the A453, the campus was encroached by the new part of the road. This resulted in the loss of the ancient hedgerow and trees that previously lined the campus boundary. Compensation planting took place in March 2014, comprising entirely of British native species, providing an effective screen from noise and visual pollution, and increasing the quantity and diversity of habitat available.

ISTeC BREEAM Excellent (pending)

Completed August 2017

The Interdisciplinary STEM (Science, Technology, Engineering and Mathematics) Teaching and Engagement Centre (ISTeC) contains two floors of state-of-the-art laboratories, will support the University's schools, colleges and community outreach activities, and provide a platform for engagement with industry and for wider collaborations.

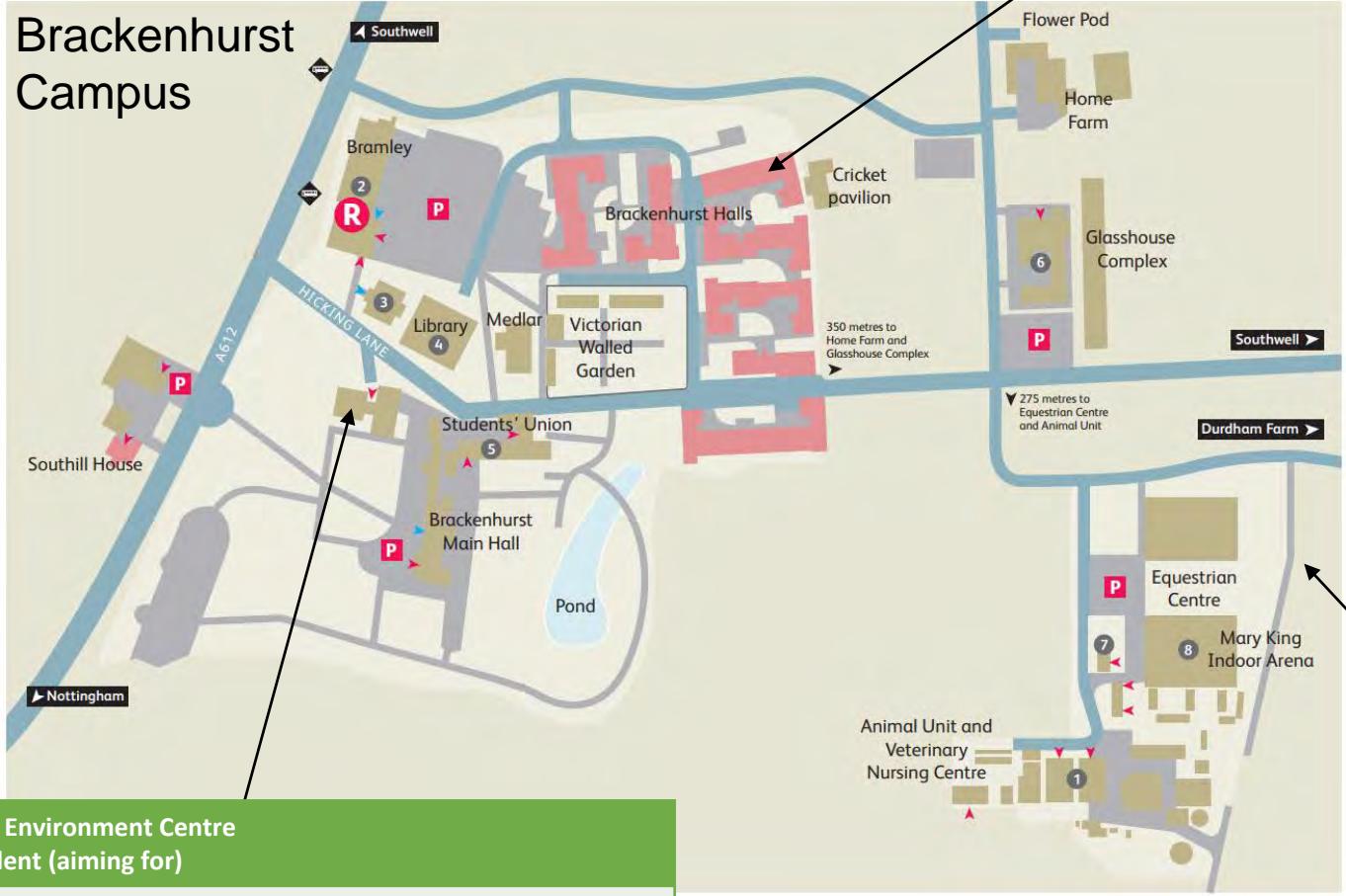
Map 3: Brackenhurst Campus

Brackenhurst Development: Creating an exemplar sustainable countryside campus

What: Developing the Brackenhurst Campus to be an exemplar of a sustainable countryside campus. This includes multiple construction and refurbishment projects, each providing an opportunity to build highly sustainable buildings, as well as developing the wider landscaping and ecology, recognising the importance of both the indoor and outdoor campus spaces.

Construction projects include: Reception and Environment Centre, Poultry Unit, Brackenhurst Accommodation, each aiming for BREEAM Excellent. Alongside these construction projects, we have developed an **Ecology Development Plan**, to allow a strategic way of managing habitat mitigation and enhancement throughout the campus development. In addition, we have developed a **Wider Landscaping Project**, consisting of 12 projects for greener space to be implemented around the campus over the next 5 years (until 2022). This recognises both the importance of indoor and outdoor spaces at the campus, particularly fitting for a campus where many environmental courses are taught.

Brackenhurst Campus has also held a Green Flag Award since 2012.



Brackenhurst Residence
 BREEAM Excellent (aiming for)
 July 2017 - 2020

Poultry Unit
 BREEAM Excellent (pending)
 February 2018 completion
 An agricultural research building, aiming for EPC A, with the BREEAM to be complete by February 2018.

Reception and Environment Centre
 BREEAM Excellent (aiming for)
 September 2016 – June 2019
 This build will provide a new hub and attraction for users and visitors to the campus with a café and agriculture museum providing a focal point for visits.

ENGAGEMENT PROJECTS

NTU Markets



What: A monthly market, held during term time at Clifton Campus, showcasing local business and producers, and includes food, clothing and gifts. The market was originally held at the City Campus, but has now moved permanently to the Clifton Campus to allow students there access to a wider range of local produce than otherwise easily accessible. The market is open to all, and each month there is also an engagement stall present, where NTU's Sustainable Development Team or other departments can promote or run activities.



When: Started in 2014.

British Heart Foundation (BHF)



What: An end of academic year donation reuse scheme. Students can drop off their unwanted items in BHF bins to be reused by local BHF shops. The scheme operates in partnership with BHF, University of Nottingham, Nottinghamshire Council and University Partnerships Programme (UPP).

Why: The previous NTU 'Big Clear Out' project had become unsustainable due to its own success. This new project helps to divert the high volumes of unwanted student-owned items at the end of the academic year, and to support the national charity on a local level.

How: Students can place any unwanted items (e.g. clothing, books, shoes, DVDs, CDs, clean kitchen items, accessories, small working electrical items) in the BHF collection bags, then place in the nearest BHF bank dotted around Nottingham City Centre and UPP managed halls of residence.

When: Started 2015

Foodshare



What: An allotment at Clifton Campus, with the produce donated to local charities. Since the project began, NTU student and staff volunteers have grown over 30 different types of produce, including beans, lettuces and tomatoes. The site has a polytunnel, is watered from water collected in water butts, and includes an outdoor classroom. The project won the Community Award in the National UPP Awards in 2015.

Why: The project aims to produce locally grown, seasonal and fresh produce for those that will benefit the most from it, reduce the food bills and miles of charities, and to promote the mental and physical health benefits of being outdoors.

How: Volunteers meet once a week (Wednesdays 1-3pm) with a professional gardener to harvest produce and assist in gardening activities.

When: Started in 2014.



Reusable Cups



What: Branded reusable cups are sold in NTU Taste Outlets for £3.50, with 50% off your first drink. Further uses of the NTU cup in Taste Outlets receive a 20p discount. In the first 8 months, 1116 cups were sold.

Why: To decrease disposable cup waste, which cannot be recycled. The UK throws away 7 million coffee cups a day.

When: Launched April 2017.



University shutdowns



What: For University closure days at Christmas and Easter, we run a campaign to advise staff and students what can and cannot be turned off, advising students to defrost freezers in their halls, and raising awareness of the University's Pulse and NTU Anywhere facilities.

Why: No students are in residence and no staff at work during the University closure days. These campaigns are thus aimed at minimising energy wastage when the University's energy consumption should be minimal.

How: Communications are sent out via the Internal Communications Team, social media, and direct communications to Green Impact teams. Part of the criteria in the Green Impact Workbook also relates to the shutdowns, further embedding the messages.

When: Annually at Christmas and Easter.

Staff inductions



What: The Sustainable Development Team deliver environmental inductions to new staff members.

Why: To allow new members of staff to gain an understanding of where sustainability is embedded at NTU, understand what responsibilities they hold as a staff member, and ways to get involved in sustainability at NTU.

How: Face-to-face inductions are delivered which all new staff members are invited to.

When: Inductions are held at least termly.

Annual Engagement Events



What: A series of events throughout the academic year to engage students and staff. These include events, activities and promotions during Welcome Week, Climate Action Day, Green Week, and Fairtrade Fortnight.

Why: To engage students and staff with sustainable issues. These events are also used to promote the University's bike hire scheme, our environmental credentials and gauge students' opinions regarding environmental impacts, which can shape future campaigns. Activities help to develop transferable skills and promote positive behaviour change.

How: The Sustainable Development Team work with Green Academy and Global Lounge to organise relevant activities, and raise awareness of opportunities and facilities across the University.

When: Annual events throughout the academic year.

Green Impact



What: Green Impact is an engagement tool for staff in academic and professional services departments to help minimise their environmental impact, following a 'Plan, Do, Check' process.

Why: To raise awareness amongst staff of their environmental impact and to develop interventions to minimise these. The Green Impact is also a measure used in external benchmarks as evidence of staff engagement.

How: Staff work through an online workbook aiming to achieve either a Bronze, Silver or Gold award. Alternatively, staff can complete a Project, which may be focussed in one area for more impact. Staff receive support from the Sustainable Development Team, in addition to launch and mid-term workshops. Student volunteers participate in a 1 day IEMA accredited event to audit the Green Impact teams. We are also looking at this becoming a HEAR accredited activity, to be added to their degree certificates when they graduate. At the end of the academic year, there is an award ceremony with all the staff. The scheme is run through the NUS.

When: Initiated 2010.



TRANSPORT

Campus Travel Plans



What: Each campus has a Travel Plan, forming the central transport strategy for each campus.

Why: The campus travel plans are required for planning and BREEAM.

How: We compile details of all the transport projects that we have. This requires liaison with numerous University departments and within the Sustainable Development Team. From all the compiled information, we make a plan with SMART targets. We already have Travel Plans for City, Clifton, Brackenhurst and Confetti Campuses, which are reviewed regularly. As part of the Travel Plans, we undertake audits and surveys, report on Scope 3 emissions, promote active transports, and address minimizing sole-occupancy vehicles.

When: All campuses now have completed Travel Plans.

Clifton Campus Service & Delivery Plan



What: The Sustainable Development Team are creating the Clifton Campus Service and Delivery Plan, to understand better all vehicular movements on the campus.

Why: This, in conjunction with the Clifton Campus Travel Plan, will be used to better inform decisions made on restricting all moving drop off and delivery points on the Clifton Campus.

When: Spring 2017 – Spring 2018

Clifton Cycle Infrastructure & Cycle Plan Development



What: An analysis of the existing cycling infrastructure and statistical analysis of demand based on travel survey data, to assist in planning for future projected demand for cycle spaces.

Why: This project looks at what and how cycling infrastructure at Clifton Campus is being used, both for indoor and outdoor cycle spaces. The future demand is projected based on numerous sources, such as other NTU campuses and user surveys. Cycling infrastructure is also a BREEAM requirement for the new developments at the campus. A new cycling hub will be built at the campus, due to be built during Summer 2018. This will have 30-40 spaces, CCTV and swipe card access. The hub will be integrated into the wider Clifton landscaping work, including amendments to junctions to the campus to make them safer and improve cycling access.

When: Cycle hub to be built Summer 2018.

FORS and CLOCS



What: Fleet Operation Recognition Systems (FORS) and Construction Logistics and Community Safety (CLOCS) are voluntary accreditation schemes that promote best practice for commercial vehicle operators, and road safety in the construction logistics industry respectively. The Sustainable Development Team are looking at whether this can be mandated for all relevant tenders.

Why: These are driven by the Considerate Constructors Scheme which NTU are Client Partners of to promote road safety and help to ensure all road users are kept safe as a result of NTU's commercial vehicle operators for both construction and other business. The FORS scheme also promotes best practice encompassing all aspects of safety, efficiency, and environmental protection.

When: Currently a feasibility study.

ULEV Policy and Development



What: A policy about Ultra Low Emissions Vehicles for each campus. Negotiations are underway to provide match funding for a ULEV hub.

Why: Three out of NTU's four campuses have ULEV charging facilities, and there are spaces for ULEV cars (5 spaces at Brackenhurst, 6 at Clifton, 3 at City). Users have to apply for a card in order to be able to park in the ULEV spaces.



Brackenhurst Advanced Highways Signs



What: The Sustainable Development Team are involved in putting new road signs up to help signpost the Brackenhurst Campus.

Why: There is a lack of proper signage to the campus.

How: The Sustainable Development Team worked with other teams within Estates and Resources to approve the scheme and funding, and with the Local Transport Authority to introduce the new signing scheme.



CityCard Cycles Partnership



What: In addition to Push Forward and Ucycle, Nottingham City Council have provided 2 docks of up to 10 bikes at the Clifton and City campuses. Users can hire bikes for £1 a day, and leave at any of the other docks dotted around Nottingham city.

Why: Increase the number of cyclists in Nottingham

When: Started in 2013, and further rejuvenated in September 2017.



Ucycle and Push Forward



What: The Sustainable Development Team manage the Ucycle bike hire scheme and the Push Forward workshop facility. Students and staff can hire a bike for £35 per year (or £20 per term). With the hire bike, University members get a free D-lock, free lights, access to secure cycle storage across three of our campuses, a free winter maintenance session and maintenance advice throughout the year. There are 200 bikes available to hire to staff and students, and over 300 spaces in secure compounds for cycle storage. University members can also make use of the Bike Workshop for free advice and affordable maintenance support.

Push Forward is a facility based at the NTU City Site comprising a workshop, and the base for Ucycle, which allows NTU staff and students to hire a bike at low cost, or have repairs done on their existing bikes.

Why: The scheme aims to increase and support those who cycle to the university.

When: The Ucycle hire scheme initiated in 2009 as a partnership between Sustrans, Nottingham Trent University, University of Nottingham and the Nottinghamshire NHS Teaching Hospital Trust to improve cycling infrastructure and aiming to get more people to cycle to universities and places of work. After the funding for the initial project expired, the scheme was taken in house by NTU in 2014 to continue to provide for NTU staff and students.



OTHER PROJECTS

Fairphones



What: A project to investigate replacing staff work landline and mobile phones with Fairphones (ethical smartphones).

Why: Staff mobile phones are replaced every 2 years. This uses a lot of resources to create the new phones, and in particular, smart phones typically make use of several conflict minerals in their production. Switching to Fairphones—smartphones free from conflict minerals and which use Fairtrade minerals, would be more ethical. Providing all staff with a Fairphone would also allow greater hot-desking capabilities, than the current mix between staff with only landlines, and those with both a landline and a work mobile phone.

When: Currently a feasibility project.

Living Labs



What: A Framework for collaborative partnerships that create real world sustainability benefits through research and teaching.

Why: The initiatives allow the opportunity to draw together work in the Estates Department with teaching and research, resulting in better teaching and real-world outcomes. Projects may also connect with the local community.

When: Currently a feasibility project.

Carbon Woodland



What: Creating woodlands at Brackenhurst Campus

Why: This is part of a project to help the university continue to reduce its carbon footprint, whilst also creating habitat corridors.

How: Thousands of trees have already been planted, with many more planned. 2500 native trees were planted during one week by a team of volunteers. The trees will provide a habitat for wildlife, shelter for wildlife on campus, offer research opportunities for students, reduce flood risk and slow the rain flow into nearby watercourses. The trees will be counted and data submitted to the Woodland Carbon Code, a voluntary standard which provides UK woodland projects with validation that



their projects are reducing carbon dioxide. This project is funded by Natural England and the Woodland Trust.

When: Planting of Stage 1 in March 2017, Stage 2 in February 2018, with the potential for further planting in 2019.

Bees



What: Bee hives are present on the roof of the Chaucer Building at the City Site. Cameras will be placed on the hives which will be live streamed online on a dedicated webpage. Further bee hives are present at Brackenhurst Campus, and bee hives owned by the School of Science and Technology are also present at Clifton Campus for research purposes.

Why: These beehives will add to Nottingham's network of pollinators.

When: Installed 2017.



Falcons



What: A live nest box camera on a peregrine falcon nest. The nest is situated on a ledge on Level 9 of Newton on City Campus.

Why: Peregrine falcons are a protected species, and the falcon cam provides the opportunity for a wider audience to learn more about these birds. The falcons were discovered nesting on the Newton ledge prior to refurbishment, when a nest box was provided, to allow the falcons to continue to breed undisturbed.

How: We work with the Nottinghamshire Wildlife Trust to ring the falcons each year and provide support with answering any questions received, either internally or externally. We have a [live video feed](#) on our website which we promote during the breeding season and through to the chicks fully fledging. Notts TV also stream the falcon cam and many local schools decide to stream the footage.

When: 32 chicks have fledged successfully from the nest in the last 7 years.

