



Nottingham Trent
University

Clifton Campus

Landscape Management Plan

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Author: JM

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Section 1: Introduction and Background

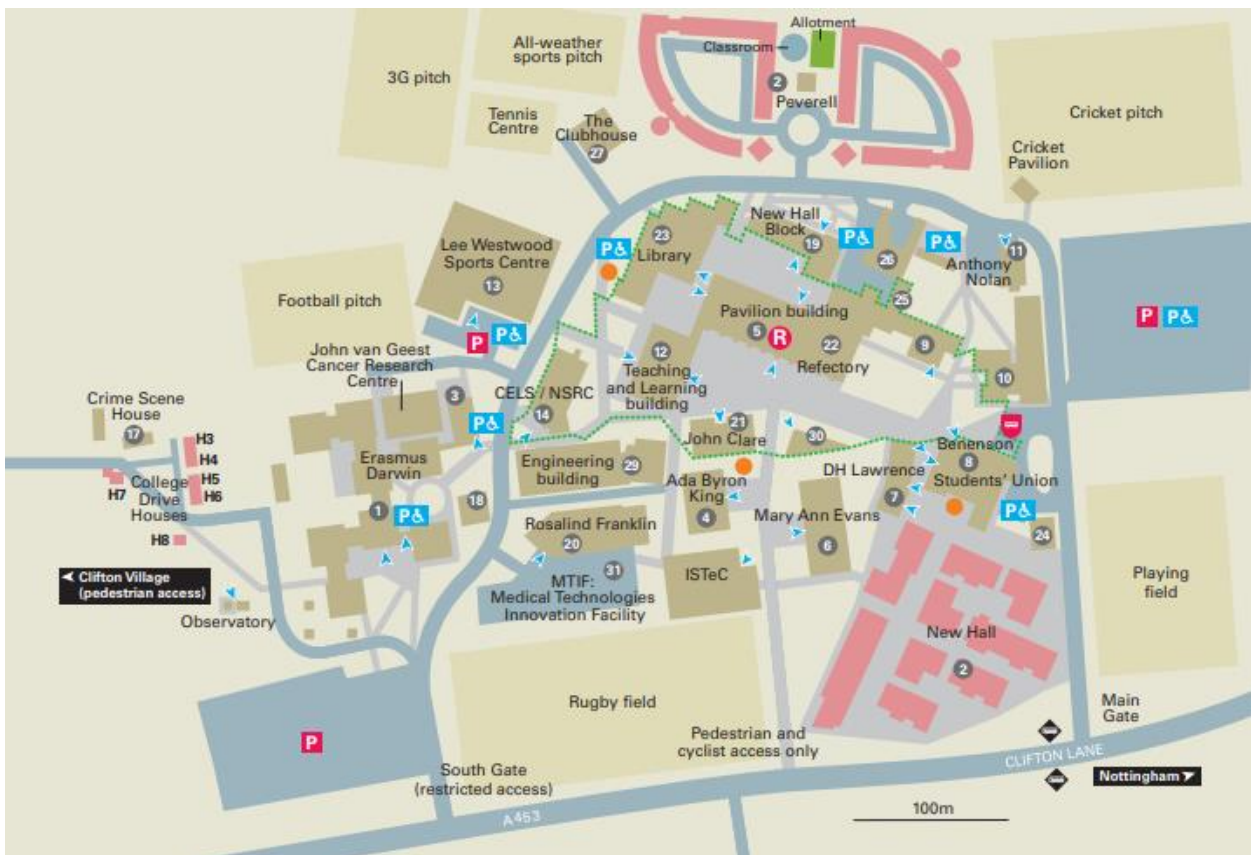
1. Introduction and Background

1.1. Location

Clifton Campus is a 32-hectare site on the south bank of the River Trent, situated approximately four miles southwest of Nottingham City Centre on the A453, Clifton Lane.

The site fronts onto Clifton Lane, from which the site is accessed by bus, bike, car or on foot. The Campus is served by the award-winning Go2 Uni4 bus service, which provides access from Nottingham. Buses to Clifton Campus leave Nottingham Trent University (NTU) City site every 7-10 minutes Monday to Friday during term time. During the University holidays, the campus is still accessible via the South Notts 1 bus service which stops just outside of campus on the A453.

Access to Clifton Campus can also be gained via the Nottingham Express Transit (NET) Tram, further details can be found in **Section 5.6**.



2023 Plan of Clifton Campus

1.2. Current Use

Clifton Campus is home to the School of Arts and Humanities, the School of Science and Technology and the Nottingham Institute of Education.

Clifton hosts lecture theatres, General Purpose Teaching Rooms (GPTs), laboratories, IT suites, a library and a sports centre providing all the specialist equipment necessary to support the wide range of courses offered to ~8,000 students. A health centre, two halls of residence, a student's union, sports pitches, shops and cafes provide all the facilities to make Clifton an independent Campus.

Redevelopment of the campus began in the summer of 2014 starting with the 'Heart of Campus'. Two new buildings, the Pavilion and the Teaching and Learning Building, are now situated in the centre of campus. Development has continued since, including the ISTECH, Engineering, MTIF and Health and Allied Professions buildings, more details of each can be found below.

A strong emphasis on high-quality landscaping remains a priority for the variety of land users on the campus. This is supported by the Clifton Campus NTU Landscape Strategy which was finalised and approved in November 2018. It sets objectives to provide a high-quality landscaped setting of distinct character strengthened by green infrastructure for interconnected pedestrian routes and spaces. This includes a landscape framework which allows for the expansion of built facilities and services for the variety of university courses.

Under the Sustainable Construction Policy for the estate, all new builds are required to achieve a minimum BREEAM Excellent rating and all major refurbishment projects are assessed for environmental performance and certified using the RICS SKA Rating.

NTU is a proud Client Partner of the Considerate Constructors Scheme (CCS). We are an active member of the Scheme, to improve the image of construction. Not only by minimising the negative impacts associated with construction activities, but by working collaboratively to promote excellence in site appearance, respecting the community, protecting the environment, securing everyone's safety, and valuing our workforce.

1.3. Recent and Proposed Development

1.3.1. Clifton 'Heart of Campus' Regeneration (2014-16)

Since 2016, The Pavilion and Teaching and Learning building form the Heart of Campus.

Landscaping works completed as part of this development link the Lee Westwood Sports Centre and The Clubhouse to the Refectory and Pavilion gardens, all prioritising pedestrians and biodiversity.

As part of the Heart of Campus redevelopment, a new 'Green Zone' was introduced. This area in the centre of campus is free from smoking, unauthorised traffic and parked bicycles, contributing to the peaceful atmosphere of the campus.



Aerial view of the Pavilion, Learning and Teaching Building and the Plaza, the Heart of Campus

1.3.2. A453 Widening (2015)

Works to widen Clifton Lane (A453) were completed in the summer of 2015. As part of the work, the campus was encroached upon by the new part of the road. This resulted in the loss of the ancient hedgerow as well as trees that previously lined the campus boundary.



A453 compensation planting

Compensation planting along the length of the eastern boundary of the campus took place in March 2014. This planting, comprising entirely of British native species, was designed to provide an effective screen for the campus from visual and noise pollution, retaining its peaceful and secluded atmosphere, whilst also taking the opportunity to increase the quantity and diversity of habitat available.

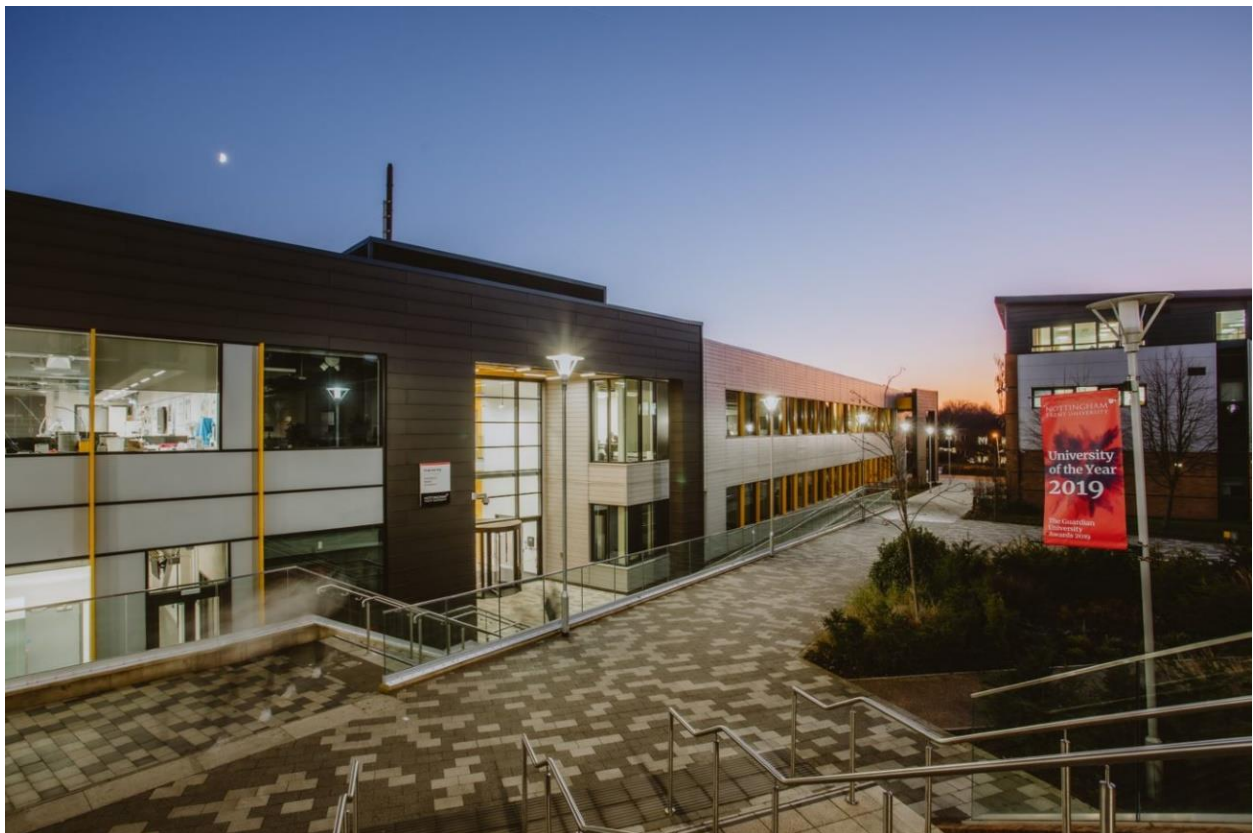
1.3.3. Interdisciplinary Science and Technology Centre (ISTEC) (2017)

This building provides the resources for research and teaching, bringing together students, researchers, staff and businesses for project-based work and its application in the real world.

Facilities include chemistry, physics and bioscience laboratories; a robot arena to use humanoid robots and specialist computing labs including networking, security and forensics, games, data science and high-performing computing.

A beehive has been installed on the roof of this building and is used by an NTU Associate Professor for research. The purpose of which is to be able to monitor the activity of bees remotely without disturbing them, via the use of small, coin-sized accelerometers which detect the vibrations caused by the buzzing and which indicate the activity of the hive.

1.3.4. Engineering building (2019/20)



The Engineering building February 2020

Works were completed in 2020 on the School of Science and Technology's Engineering building, the new home to the Department of Engineering.

The building features attractive and flexible learning and teaching space provision with specialist equipment to support project-based, industry-focused research into nine technologies including autonomous robots, simulation and cybersecurity: transforming automation in manufacturing and production.

There are also facilities for commercial research, professional development and consultancy activity.

1.3.5. Medical Technologies Innovation Facility (MTIF) (2019-2021)

This new multi-disciplinary research and development building will enable early-stage research and development in medical technology with a strong focus on medical devices. The building was completed in January 2021 and provides a location for organisations, clinicians and university researchers to develop their ideas and get them to market as quickly as possible.



MTIF Clifton building January 2021

1.3.6. Health & Allied Professions Centre (2020-2022)

Completed in 2022, the purpose-built Health & Allied Professions (HAP) Centre is home to our world-class teaching, practice, research and scholarship in the Institute of Health and Allied Professions (IHAP). The 34,000-square-foot building features mock hospital wards, consultation

and counselling rooms, creative teaching spaces and specialist equipment, providing our students with the knowledge and skills required for a dynamic career in nursing, paramedicine and healthcare.



Health & Allied Professions Centre building 2022



Section 2: A Welcoming Place

2. A Welcoming Place

2.1. Good and Safe Access

The award-winning Go2 Uni4 bus service is available for everyone to use throughout term time. This service takes about 25 minutes to travel between the City Campus and Clifton Campus. The route is ideal for both students and NTU staff as it passes through Nottingham City Centre via Nottingham train station. Double-decker buses serve this route and stop on both campuses.

A predominantly traffic-free cycle route between the City site and Clifton Campus takes around 30 minutes. More information on cycling between campuses and around the city can be found on NTU's Sustainability web pages. The NTU Cycle Hub operates from NTU's City Campus, allowing staff and students to hire a bike for £49 a year for travel between and around the Campuses, accommodations and city.

NTU's Clifton Travel Plan and Nottinghamshire County Council's cycle strategy, predict growing trends in non-motor users. An additional secure cycle compound was installed in December 2019 comprising 30 bike parking spaces. Work such as this aims to strengthen the cross-campus cycle route and encourage more visitors to the site using active and sustainable travel options.

Access across the site complies with BS 8300, the design of buildings, and its approaches to meet the needs of people with disabilities to ensure that buildings are accessible to all. This includes level or ramped access into buildings, as well as dropped kerbs and tactile paving at most road crossings. Paths across the Campus have been made accessible to wheelchairs and pushchairs. When any new development is carried out consideration is given to DDA.



Typical cycle compound on Clifton

2.2. Signage

All NTU students, visitors and deliveries are asked to use the Main Gate to the campus and report to the gatehouse. South Gate is for staff use only. Standardised signage using the NTU 'brand' logo and typeface is located across the campus. A further entrance on Clifton Lane is for pedestrians and cyclists only referred to as the Central Approach.

As part of the Heart of Campus regeneration, a bus stop was installed on campus when entering the site from the Main Gate. This 'Gateway' means that the Go2 Uni4 buses enter and exit the campus from the Main Gate. The number 1 bus service provides an alternative travel option for students, staff and visitors 7 days a week, dropping off passengers just outside of campus. The Rivergreen Tram stop is a short 10-minute walk to campus. In 2020 a Tram Park and Ride offer was introduced for NTU staff and students providing an off-campus overflow car park option.

On entering the campus from the Main Gate, students and visitors are directed to park in the student car park. All students must have a valid parking permit for which there is an annual charge. All visitors are given a day parking permit, free of charge. It is recommended that visitors contact the site before their visit, but this is not essential. Cyclists will be directed to the most appropriate cycling compound of which there is a variety across the site. On entering South Gate, staff use the South Gate car park which has a daily charge and is automatically taken from their accounts when using their staff cards at the barriers on entry. Both car parks are located on campus with campus facilities just a short walk away.

Information boards for all site users are provided across the campus, showing basic details of the campus buildings and providing on-site security contact details. As part of the Heart of Campus development, new copper information boards were installed to outline the 'Green Zone'.

Beyond the buildings, the Clifton Nature Trail is an informal path that follows the perimeter of the site where users can enjoy many of the site's landscape assets. Information boards designed and located around the path to provide staff, students and members of the public information on the landscape, ecology, history and management of the site as well as information on the wildlife you might hear and see throughout the year. Access for all users can be limited during very wet weather conditions, however, improvements to the path have been made over the years.

2.3. Equal Access for All

As well as being an important resource for students and academics, Clifton Campus provides facilities that are used by the local community.

The focus for community use is the Lee Westwood Sports Centre, providing a wide range of facilities, further details of which can be found in **Section 7.5**.

Public involvement is actively encouraged to ensure that the community maximises the opportunities available at Clifton Campus. These include Open Dome astronomy events, Open Days and sporting events. Community groups and schools can also use the allotment and outdoor classroom located behind the Peverell hall reception for activity sessions (see **Section 7.6**).



Section 3: Health, Safety and Security

3. Health, Safety and Security

3.1. Appropriate Provision of Quality Facilities and Equipment

The University recognises it is necessary to ensure that the Campus remains a safe environment for all prospective site users. To maintain a safe environment, the Estates Department runs a programme of cyclical inspections to identify and address potential issues. A sample maintenance plan is provided in **Appendix A**. Any staff member can report a problem to the maintenance department via the Estates Helpdesk accessible through NTU MyHub. Issues are prioritised by maintenance and carried out as quickly as possible. The public may report issues to Reception Officers or use the contact numbers provided widely across campus.

A wide range of indoor and outdoor sports facilities are available on campus to students, staff and the public and these are maintained to a high standard by landscaping, maintenance and sports staff.

The dining outlets offer a range of freshly prepared, tasty eats, from across the globe every week including great value breakfasts and healthier choices. The NTU Catering Team works in partnership with the Sustainability Team (ST) and Procurement Team (PT) to consider ethical, social and environmental factors when making decisions on the food and drink products served.



Outdoor seating space on the Plaza

Outdoor seating is available around campus including on the Plaza, the Student Union and the outdoor classroom at the allotment site.

Security staff are all first aiders and can be reached 24/7 by all Campus users on 0115 848 6600, the number is provided on the Campus information boards.

Toilets are found all over Campus with most being accessible to the public.

3.2. Safe Equipment and Facilities

Equipment used to maintain the grounds is subject to an annual inspection to ensure that it is safe to use. Landscape Services also operate a Reactec Hand Arm Vibration (HAVs) safety system to protect its personnel during their work activities.

As part of NTU's work associated with the Hedgehog Friendly Campus (HFC) initiative during 2020 all strimmer's and mowers have been labelled asking users to check for Hedgehogs and other wildlife before using them, more information about HFC is provided in **Section 7.2**.



Landscape Services equipment labelled with Hedgehog warning sticker

Built features within the grounds are subject to inspections and appropriate action is taken if required.

External consultants FPCR Environment and Design Ltd survey all tree stock including woodlands within the Campus every 3 years providing advice on their condition. This identifies any trees that

are dead, dying or dangerous. Trees are then maintained accordingly. The most recent survey was undertaken in December 2022.

The Landscape Services Manager proactively monitors potential external threats to tree stock, including the national spread of tree diseases, to take pre-emptive action if required.

Water safety is a priority and as such, the risks posed by water bodies have been assessed and responded to appropriately to ensure that the grounds can be safely used. The three balancing ponds south of Peverell Hall are surrounded by dense native vegetation, discouraging public access, though access is available for maintenance, teaching and research. Gently sloping, solid edges comply with safety guidelines. These also allow for wildlife, such as Hedgehogs, to be able to escape if they were to enter the water. Pedestrian guardrails around the Swale at New Hall Student Village help to prevent access to the water. Drainage outlets also ensure that the water does not become deep. Regular checks of guardrails, outlets and barriers are made as part of the maintenance regime.



One of the balancing ponds located by the Peverell Halls

3.3. Personal Security

Security at Clifton Campus is 24/7 providing surveillance and helping to give peace of mind to all site users.

The Campus is monitored by CCTV cameras, which are recorded 24 hours a day and can be viewed by the Security Team. The network of cameras provides excellent coverage of the Campus.

The on-site Landscape Services Team works with the Security Team to ensure views from CCTV cameras are obstacle-free and good sightlines are maintained along footpaths and other access routes.



The Pavilion and Plaza are suitably lit for safety and aesthetic

Streetlights provide appropriate levels of lighting along roads and paths around the main Campus. Where hedges are located alongside these routes, these are maintained to a maximum height of 1.5m to improve lines of sight for security and maintenance purposes.

Any incidents of crime are recorded, and annual statistics are produced. This allows the Security Team to review progress and take appropriate action to develop the security policy and reduce the likelihood of any future incidents.

3.4. Health and Safety

The Landscape Services Manager has the responsibility for ensuring safe working practices within the Landscape Services Team. Risk Assessments and safe working practices are in place and are reviewed regularly. Control of Substances Hazardous to Health (COSHH) Assessments are recorded and updated as required. The Landscape Services Team are trained in their responsibilities under Health and Safety legislation.

The University Health and Safety and Wellbeing Team have developed their own health and safety policy and procedures. All necessary precautions are taken to ensure that the grounds can be used with minimal risk of accident or injury. Suitable and sufficient management practices are in place to address health and safety issues.

Staff working on the grounds are provided with all necessary protective clothing and equipment. All necessary training is provided to staff, covering topics such as chainsaw use, tree climbing, fire training and first aid. Staff are provided with details of risk assessments and information leaflets relevant to any risks applicable to their job.

3.5. Accident and Incident Reporting

As a requirement of the Health and Safety at Work legislation, the University ensures that all accidents and near misses are reported on-site using a standard report procedure. Results are monitored centrally by the University, which instructs accident investigations if necessary.

3.6. Dog Fouling

Currently, dogs are not encouraged on the Campus, due to the presence of outdoor sports facilities; however, members of the public are known to use the site for walking their dogs. This is usually around the perimeter of the campus along the Nature Trail.

To accommodate this, dog waste bins have been installed at the beginning and the end of the Nature Trail. In addition, the interpretation boards situated around the Nature Trail have a note asking dog owners who use the site to behave responsibly and remove all waste. Signage is also deployed specifically regarding dog fouling reminding visitors to clean up after their dogs.

3.7. Working Hours

The Estates Department works closely with the timetabling department, NTU Sport and Marketing departments to ensure that there is no conflict with residents or students during exam periods, sports events or open days. For any disruptions that may be caused to the Estate, staff and students are directed to a dedicated webpage for further information (Estates Works). For campus development information staff and students are directed to a dedicated NTU webpage called Campus Transformations.



Section 4: Cleanliness and Maintenance

4. Cleanliness and Maintenance

4.1. Litter and Waste Management

The appearance of the Campus is a priority for the University and is recognised as a basic requirement for attracting new students. The Landscape Services Team is responsible for maintaining the landscape, while the Facilities Team empties external litter and recycling bins daily, at the same time conducting litter picks and leaf sweeping when necessary. All the entrances are manually cleaned/picked daily. The sweeper also does the rounds of the hard surfaces every morning. The sports pitches are picked and cleaned daily with car parks cleaned on an ad hoc basis. The service operates on weekdays only (except when there are special events) and priority is given to weekend high-use areas on Monday mornings, for example around the Students' Union.

Since 2019 the Facility Support Team have extended their litter picks to include the roadside of the A453, supporting the work of a local Clifton Village resident who is a Nottingham Clean Champion.

To encourage site users to keep the Campus litter-free, litter bins and recycling banks are provided extensively throughout the Campus. In 2021 all external litter bins across the estate were replaced for a more cohesive approach to waste disposal. Clothing recycling banks are found on Campus at New Hall and Peverell Halls of Residence, allowing staff, students and visitors to donate unwanted clothes, footwear and books to the British Heart Foundation (BHF).



Promoting British Heart Foundation donations to fellow students

NTU ST has worked with UPP Ltd and NTSU to promote the locations for donations across three of its campuses. In 2019 this work was recognised by the national award, winner in the Retail Partner category at the British Heart Foundation Hero Awards.

During 2022, the students studying at the University of Nottingham and Nottingham Trent University – both those living on campus and in privately rented accommodation in the city – donated a staggering 6,230 bags of unwanted items to the British Heart Foundation, as part of its Pack for Good Campaign. Raising £87,220 through the sale of the goods at the charity's network of shops, the donations also diverted almost 50 tonnes from landfill, the equivalent of 294,163 kg of CO₂ emissions.

NTU has a fully integrated Environmental Management System (EMS) further details of which are provided in **Section 5**. As part of this system, a series of policies have been written to underpin the sustainability objectives of the EMS. NTU's waste guides are available on the Sustainability webpages, encouraging the use of recycling bins and donation banks.

In September 2019, NTU rolled out additional bin signage on all internal bins. The signage gave clarity on the waste acceptance criteria and early results show an improvement not only in waste segregation rates but also in the quality of the material.

The ST promote the use of Warp It, an online furniture and equipment reuse portal. All NTU staff can use Warp It to redistribute their unwanted furniture. Since September 2018, internal reuse has saved 42,141kg of CO₂, diverted 17,491 kg of waste from landfill and increased resource efficiency.

4.2. Horticultural Maintenance

The Landscape Services Team is responsible for the upkeep of the grounds, helping to enhance the outward appearance of the Campus. The team meets regularly to discuss priorities at relevant times of the year, such as the clearance of leaves in autumn and cutting of grass in summer (including sports pitch maintenance). In addition to a short-term annual programme of maintenance requirements, a longer-term programme is in place to address more complex issues, such as de-silting the balancing ponds and replanting of areas.

To date, 1.2 million bulbs and 8,000 square meters of wildflower meadow have been planted around campus over the last few years to improve the biodiversity and appearance of the Campus.

4.3. Tree Maintenance

FPCR's three-year surveys identify the location of every tree or group of trees, identifying them by a code. A database linked to the plans lists the species and condition of each tree, identifying

any required maintenance work. The Landscape Services Team uses this active database as a tool to manage the tree stock. This work is underpinned by any reactive works that may crop up such as responding to storm damage.

4.4. Building and Infrastructure Maintenance

Buildings on the Campus are diverse in terms of age, scale, style and use. These buildings have specific uses for teaching, research, administration or residential purposes, but all share the same setting. All buildings are maintained to a high standard by the Estates Department. An on-site maintenance team is responsible for the upkeep of the buildings.

4.5. Equipment Maintenance

A programme of equipment inspections is in place to ensure that all work equipment is safe to use, as required by the Provision and Use of Work Equipment Regulations 1998 (PUWER). Appliances are PAT tested, to comply with the Health and Safety at Work Act (1974), which places a duty on employers to ensure that electrical appliances used by employees, or the public are safe to use.

Six-monthly inspections are carried out on tree climbing equipment under the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER).

NTU's vehicles are managed by Campus Services, who ensure that they are serviced, tested and inspected as required. Specialist vehicles, such as tractors, are either owned or leased. Servicing and maintenance of lease vehicles are included in the lease fee.

An onsite closed loop system vehicle wash-down facility located within the Landscape Services maintenance compound helps to maintain and clean landscape machinery and equipment as well as NTU fleet vehicles.

4.6. Maintenance Planning

The Landscape Services Team are flexible to changing conditions, undertaking tasks as needed such as gritting roads in icy conditions and clearing tree debris after strong winds. Day-to-day maintenance is discussed as a team, with objectives and actions agreed upon with the Landscape Services Manager. Works with health and safety implications are given the highest priority. The Team also has a tree replacement policy, aiming to plant a new tree for every tree removed through maintenance.

Cyclical maintenance activities, such as shrub bed maintenance, planting of summer bedding, mowing and strimming are all undertaken by the Landscape Services Team. An example planning document for this work is provided in **Appendix A**.



Section 5: Environmental Management

5. Environmental Management

5.1. Managing Environmental Impacts

NTU is committed to recognising and reducing its impact on the environment. NTU's Environmental Policy is publicly available via the NTU Sustainability webpages.

Since 2020, the ST have run monthly staff awareness courses for all colleagues, including new starters. The training allows staff to gain an understanding of sustainability at NTU, understand their responsibilities as staff members and find out ways they can get involved with sustainability projects and events. This training can also be accessed as an online awareness training module on Thrive.

As of January 2022, NTU is rated a first-class University in the People & Planet League and placed 2nd in the University of Indonesia Green Metric World University Ranking.

The University has several policies, some of which are listed below, relevant to environmental sustainability. These are reviewed annually by senior management. They are all available on NTU's Sustainability web pages and include:

- Environmental Policy
- Biodiversity Policy
- Net Zero Carbon Policy
- Plastic Pledge
- Student and Staff Engagement Strategy
- Sustainable Construction Policy
- Sustainable Procurement Policy
- Transport Policy
- Waste Policy
- Water Policy

NTU has pledged to achieve Net Zero Carbon (NZC) emissions by 2040 in order to create a Zero Carbon culture across the NTU community. NZC by 2040 is now an institutional strategic KPI and NTU has set out key milestones to reach on the journey to net zero carbon for 2025 and 2030. It will not only include tackling carbon emissions associated with energy use across the entire NTU estate but also emissions associated with those activities that NTU has less control over, known as scope 3 emissions.

5.2. ISO 14001

Initially established through the 'EcoCampus' scheme, NTU's Environmental Management System (EMS) is aligned with the ISO 14001 standard, initially gaining certification in November 2012.

ISO 14001 is an international standard and provides a framework for identifying and controlling environmental aspects, improving environmental performance and ensuring legal compliance.

5.3. Pesticides and Herbicides

Integrated Pest Management (IPM) is in place to maintain the landscapes. This is an effective and environmentally sensitive approach to maintaining the landscapes and relies on a combination of environmentally sound practices.

Pesticides are kept and used where tasks dictate and in accordance with legislative guidance. Pesticide use is part of an integrated regime where cultural and biological control measures are undertaken where necessary within maintenance schedules. Herbicides are used for weed control in certain areas, as well as some turf fungicides and insecticides, where appropriate to do so. All ground maintenance staff have been fully trained in the safe application of herbicides and hold appropriate certification.

5.4. Composting and Elimination of Pesticide Use

To help minimise the wider environmental impact of our landscaping work, peat alternatives or peat-reduced compost are used on Campus, including compost made on-site.

Horticultural waste from the grounds is recycled to produce compost or mulching material. Landscape Services staff segregate woody material (used for mulching) and softer materials such as autumn leaves (for enriching soil). The team uses a composting machine, and a chipper is used to break down the landscape waste.



Composting facility on campus converts pruning to a rich compost

Landscape Services utilise a dedicated composting facility which is located within the far perimeter of the student car park area and is used to recycle all soft and woody landscape material. Most of this material is processed with a composting machine. This material is then regularly turned and left in the bay area for a minimum of six months before being returned to the woodland areas. This landscape recycling facility is fenced off and licenced by the Environment Agency. All compost material generated is used on the grounds.

5.5. Nottingham City Transport (NCT) Number 4

During term time, the award-winning NTU NCT Number 4 runs between the City site and Clifton Campus every 7-10 minutes. This fleet was replaced at the beginning of the 2019/20 year by the latest clean buses with Euro IV engines – with a fraction of the emissions and carbon of the previous fleet.

5.6. Nottingham Express Transit (NET)

Staff, students and visitors can alight at Rivergreen stop with a short 10-minute walk to the entrance of the Campus. A direct tram can be taken from NTU City Campus to Rivergreen taking just 22 minutes.

The Tram Park and Ride offer a discount for NTU students and staff, allowing a return ticket from Clifton South Tram Park and Ride to Rivergreen Tram Stop for £1.50. This can be used as an overflow car park, alleviating on-campus parking services.

5.7. Cycling

The University hosts a Cycle Hub, which encourages staff and students to cycle more often. The project runs a range of activities including infrastructure improvements on and between Campuses, promotion of cycling via social media and engagement events and a bike hire scheme for students and staff.

200+ men's and women's hybrid bikes are available in different sizes and can be hired for the academic year for £49 (plus a £60 refundable deposit). The cost of the cycle hire includes maintenance sessions, lights and a D lock, access to secure cycle storage at all campuses, and access to free Ridewise training and advice and information (through information packs and general ongoing support such as drop-in surgeries). In 2020 the ST purchased two e-bikes for staff to trial for free as an alternative mode of transport.

NTU's Sustainability webpages provide staff, students, stakeholders and the wider public with up-to-date information on cycle facilities such as maps showing locations of cycle compounds, cycle routes, lockers and showers. The website also provides information to the general public on topics such as buying a bike, bike maintenance and cycle clothing. Further cycle information is planned to be incorporated into the external campus information boards found around the campus in the future.

Currently, 600 spaces are provided for bicycles on campus. Many of these are housed in restricted access shelters with swipe card access and CCTV. In line with the Clifton Campus travel plan, cycle facilities at the campus are in the process of being upgraded, providing more covered and restricted access cycle parking.

In addition to bike hire, NTU staff can get a tax-free bike and accessories up to the value of £2,500 with the help of the Cycle to Work scheme.

5.8. E-scooter Trial

NTU is championing the Nottingham City Council e-scooter trial to offer greener travel options for short-distance travel across Nottingham City. The trial was launched in October 2020 with a fleet of 250 scooters, which were utilised for more than 500,000 rides in Nottingham in the first 8 months of the trial.

5.9. Electric Vehicles

In 2014, NTU purchased its first zero-emissions van for use by the maintenance teams across the estate and the Landscape Services team also has its own electric vehicle. Landscape Services use and maintain its own John Deere electric-powered gators (all-terrain utility vehicles) for on-site maintenance.

NTU has 27 EV charging bays across our City, Clifton and Brackenhurst Campuses. Colleagues can use these to charge their electric vehicles. Five of these are dedicated accessible spaces for blue badge holders. Clifton Campus hosts a total of 10 bays, including one accessible, in the Main Gate car park. There is also one accessible space at Clifton Security Gate House and Four bays in the South Gate car park.

5.10. Solar Photovoltaic Panels (PV)

There are PV installations on the Clifton Library, Rosalind Franklin, Pavilion, The Club House, Engineering Building, MTIF, HAP and ISTECH buildings. These installations generated 180,674 kWh of renewable energy in the academic year 2021/22. The New Hall student accommodation has solar thermal panels, generating hot water used by the residents.

5.11. Efficient Cooling System

An efficient cooling system has been installed in the Clifton Data Centre to reduce its carbon footprint. The Evaporative Cooling System maintains a relatively stable internal environment in terms of temperature and humidity regardless of the external conditions.

The system provides a 90% reduction in annual running costs, which also means that up to 40% of the power for the installation could be provided by the photovoltaic cells installed on the roof of the data centre. Overall, the carbon footprint for cooling in the data centre has been significantly reduced.

5.12. Combined Heat and Power (CHP) Plant

There are two CHP units on Clifton Campus, fuelled by natural gas, supplying several buildings with heating on the campus. NTU's electricity is purchased from a green energy provider. The University continues to work on projects for more renewable sources across the estate.

5.13. Environmental Management Review Committee

The Environmental Management Review Committee is held bi-annually and ensures that the University's Environmental Management System is implemented successfully across the NTU estate, to improve environmental performance. The objectives discussed and reviewed include waste reduction, sustainable transport, reduction of energy-related emissions, reduce water consumption, sustainable procurement and enhancing biodiversity.

5.14. Staff Engagement

In January 2019 NTU launched Green Rewards, a programme for all students and staff to sign up to and take part in. Participants earn rewards for taking actions that reduce their impact on the environment, positively impact the local community and boost their health and well-being. As

of January 2023, NTU has 1,519 students and 1,147 staff signed up to the Green Rewards platform with 202,581 actions completed which has led to a saving of 408,841 kg of CO₂.

As of January 2023, 22 staff are currently signed up for the “Sustainability Ambassadors” Scheme. The scheme consists of department representatives who are encouraged to engage with the ST and report any issues and suggestions across the campus landscape and operations. Termly meetings are held with the group, and a Microsoft Teams Network allows continual discussion.

The ST run monthly staff awareness courses for all colleagues, including new starters. The training allows staff to gain an understanding of sustainability at NTU, understand their responsibilities as staff members and find out ways they can get involved with sustainability projects and events.

5.15. Fairtrade

NTU has been awarded Fairtrade University status for the last 12 years. Fairtrade products are available in all Campus shops and catering outlets and used in all meetings hosted by the University and the Students' Union.

Fairtrade Fortnight events are held at NTU each year to raise awareness of the impact of Fairtrade amongst staff and students. This is led by the Fairtrade Steering Group who demonstrate a strong commitment to increasing Fairtrade consumption on all NTU Campuses. The ST and Fairtrade Steering Group achieved the new Fairtrade Universities and Colleges Award (FTUC) under the updated criteria in 2019. In 2022 we retained our accreditation; the next audit will take place in 2024.

5.16. Climate Change and Adaptation

As one of the UK's largest universities, NTU acknowledges that its activities will significantly impact the environment at both local and global levels. As such, NTU aims to reduce the impact of all activities that can contribute to climate change and take a holistic and integrated planning approach to landscape management to adapt to the impacts of climate change.

An example of this is that Landscaping Services have stopped the purchase of peat-containing compost and is currently experimenting with several products and samples which can replace peat-containing products. The campus is now utilising the remaining stock, alongside products such as bark mulch, and aims to become entirely peat free by 2028. The Landscaping Services team have also been adapting the management of the Clifton Campus to combat the impacts of climate change. This means that the species selected are continuously reviewed and can be tailored to drought-tolerant species when required, as well as utilising more advanced stock that can become established quicker.



Section 6: Biodiversity, Landscape and Heritage

6. Biodiversity, Landscape and Heritage

6.1. Management of Natural Features, Wild Fauna and Flora

Management techniques employed across the Campus ensure that the potential for biodiversity is maximised, resulting in several varying habitats.

Areas of woodland around the edges of the Campus are largely comprised of native species such as Oak, Ash and Field Maple. The woodland is managed to promote biodiversity, by allowing interesting ground flora to grow and using small piles of wood and stone to encourage small ground-dwelling animals, such as hedgehogs and toads.

Bug hotels have been installed on regular occasions as part of compensation work for new developments over the years as well as being part of student projects and engagement activities. These important insect refuges have also been used in student research projects investigating their effectiveness near recreational land use.



Undergraduate students constructing and installing mini-beast hotels

As part of the development projects many different types of bird boxes and bat boxes have been installed on trees. In addition, amphibian habitats have been created, these are primarily located around the 3G sports pitch and towards the east of the site.

In Peverell Hall gardens lies the Foodshare Allotment where the flowers, bushes, leaf piles and compost provide food and habitats for wildlife.

The Old Marl Pit (known as the Dell), located within the woodland towards the east of the site, provides an important wildlife habitat as it has a unique form and is relatively undisturbed by human activity. Both Green Woodpeckers and Lesser Spotted Woodpeckers as well as foxes have been heard and seen in the Old Marl Pit. The pit is managed with the sole focus of increasing biodiversity.

The woodlands near the Observatory contain a good collection of snowdrops, bluebells and primroses, which were transplanted by students from other areas on Campus which were being developed.

Where practicable and safe to do so, dying trees are left for biodiversity benefits. Tree stumps are cut high to encourage wood-boring beetles and sculpted to retain water.

The three balancing ponds, south of Peverell Hall, are aerated using a fountain, to help provide an ideal habitat for aquatic invertebrates and other wildlife. As a result, herons have been seen on pond margins.

The ST was approached by the Clifton Security Team due to their wildlife sightings during their night-time. Observations are recorded and include species sightings such as sparrow hawks, muntjac deer, owls and foxes.

All the campus is used for student practical instruction and projects.



Wildflower meadow and A453 compensation planting

Wildflower meadow planting has taken place in the south of the campus, with over 600,000 bulbs planted in a special mix of carefully selected natives and non-natives which provide a visual impact and benefits for fauna. There are now over 1.2 million bulbs planted across the campus and 8,000 square meters of wildflower meadow.

NTU is a Silver accredited as a Hedgehog Friendly Campus (HFC) for the Clifton, Brackenhurst and City Campuses. More information on HFC is provided in **Section 7.2**.

In 2019 NTU was awarded the Bees Needs Champion 2019 award recognising the bee-friendly environment that the campus creates through maintenance practices, planting design and species selection.

6.2. Compensation Planting

Compensation planting has occurred across the campus as seen in the below picture. This plan was drawn out to identify where existing compensation planting is on campus and to avoid its removal in future campus regeneration plans. Areas in red are marked out as potential sites for future compensation planting.



Compensation planting plan as of January 2021

6.3. Water Conservation

The balancing ponds are naturally filled with rainwater from Peverell Hall student accommodation. Summer bedding schemes use water-retaining granules or gel to reduce drying-out as well as reducing the frequency of watering required.

Water used by the wash-down facility, located within the Landscape Services maintenance compound, is pumped around the system to be re-used.

The Swale at New Hall student accommodation acts as a flood attenuation basin, collecting surface runoff, and then allowing it to seep into the water table.



The Swale at New Hall student accommodation

6.4. Planting Policy

Native species are largely used for planting and replacement of trees, woodland and hedgerows, to promote biodiversity through the creation of appropriate wildlife habitats. Ash, Field Maple and Oak are locally native species found throughout the site woodland. During the outbreaks of Ash dieback, no cases were reported on the Clifton campus due to the vigilance of the Landscape Services Team. If a case was to be reported the best practice procedures would be followed.

The £100k glasshouse facility at Brackenhurst Campus can produce a mix of seasonal bedding plants throughout the year, which are raised from seeds & plugs. This provides a wide range of

plant materials for estate projects across all campuses. If necessary, nurseries are used to provide additional plants.

The glasshouse facility has a turnover of over 30,000 plants annually, satisfying a large majority of all soft landscaping requirements across NTU campuses.

New planting is largely undertaken as part of development schemes. In addition to the amenity benefit of planting, the University recognises the important biodiversity benefits. An example of this can be seen in the 1200 m² of wildflower planting in the south of the site, which not only provides a visual benefit but is attractive to fauna also.

6.4. Conservation of Landscape Features

The Campus is a comparatively recent development and therefore contains little in the way of historic features. The features, as described in **Section 6.1**, that are shown on the 1883 Ordnance Survey map are believed to date from much earlier.

Despite the lack of apparent site heritage, there are historic features near the Campus. Most noteworthy is Clifton Grove, situated immediately northwest. Clifton Grove is a historic avenue of Elm trees, which were planted to create a majestic route alongside the river Trent to the front of Clifton Hall, this, unfortunately, fell victim to Dutch elm disease.

Clifton Village and Clifton Grove are Conservation Areas. The historic core of Clifton Village contains 22 listed buildings and features, including Clifton Hall and the associated Icehouse. The closest listed buildings to the campus are The Old Rectory and School House, which lie near the Observatory. Although these features do not fall within the site, development within Clifton Campus must be sensitive to the setting of these adjacent Conservation Areas.

As described in **Section 6.1**, the steep-sided Old Marl Pit (The Dell), originating from around 1700, is situated within the woodland on the northeast boundary of the site. Although this feature is not recognised by way of designation as having any historic importance, it does serve as a reminder of past land use on the site, and features on the 1883 Ordnance Survey map. This area will remain an important feature, protected by the surrounding woodland. It is intended that future management will ensure that the potential for biodiversity is maximised.

In the southeast corner of the site, an ancient hedgerow believed to date back to around 1840, bordered Clifton Lane until January 2013. This was beyond the Campus boundary and NTU was not responsible for its maintenance. Due to the A453 widening works in January 2013, the hedgerow was removed. Compensation planting as part of this road widening scheme was incorporated into the design and a new hedgerow was successfully planted in March 2014.

A group of 10 Turkey Oak trees (*Quercus cerris*), each over 20 metres in height, are located along the perimeter of the cricket pitch, on the northern corner of the site.

As with all trees on the Campus, these are regularly surveyed by external consultants and maintained accordingly. They are also protected under a Tree Preservation Order (TPO) due to their prominence and contribution to the landscape both for their historical and ecological value. It is believed that these ancient trees, planted in the early 19th Century, represent the 10 fallen Clifton soldiers who fought and died at Waterloo with General Sir Arthur Clifton.



Clifton Turkey Oak trees



Section 7: Community Involvement

7. Community Involvement

7.1. Community Events

NTU actively views Clifton Campus as an asset to the community, be it students and staff, local school children, local sports teams, members of the public or other community groups with a range of events throughout the year formally inviting the public to the campus, alongside the on-going access to the Clifton Nature Trail.

NTU's ST and Landscape Services Manager are keen to create as many opportunities as possible for staff, students and members of the local community to help enhance the environment of the campus for all to enjoy.

The Centre for Student and Community Engagement Team (CenSCE) team support staff groups and arrange Team Challenges at the Foodshare Allotment Project (see **Section 7.6**). Since September 2020, 11 groups totalling 87 colleagues have done Challenge, including 'bespoke' tasks such as building raised beds to general gardening days. The opportunity gives teams the chance to take valuable action together whilst stepping away from desks, especially during the pandemic when the Foodshare project had limited resources. In 2021/22, NTU made a positive impact with many young people (aged 7–18) from disadvantaged backgrounds in Nottingham through programmes raising attainment in schools, NTU Sport initiatives, and community volunteering opportunities. A specific example is through our Progression Programme where young people helped at the Foodshare allotment during their summer residential. Our volunteers grew fruit and vegetables for local charities including community kitchens and foodbanks at our Foodshare allotment.

The ST work with CenSCE and with local schools for partnership events which have historically included bulb planting, tree planting and applying woodchip to the nature trail path.



Local Clifton residents visiting the campus allotment during the summer of 2018

Community groups that have taken part include children and teenagers from the Spiral bereavement group, who part in garden craft activities and harvested fruit and vegetables with a professional gardener, and volunteers from Nottingham's Women's Institute as well as groups of local Clifton residents.

'Open Dome' astronomy events are held regularly at the Observatory, managed by the School of Science and Technology. These events are publicised locally in Clifton Village as well as on the NTU staff and student events and Facebook pages. These events are open to the public, as well as staff and students.

They comprise a tour of the Optical Observatory, which houses a 20-inch telescope, a solar scope and a range of smaller telescopes, as well as providing opportunities to explore the wonders of the sky. Each Open Dome Event includes a talk, focusing on interesting, recent and sometimes surprising topics relating to astronomy. Members of the audience also have time to talk to scientists about astronomy and ask questions. These events have recently been postponed due to the COVID-19 pandemic.

The University often arranges one-day seminars on subjects taught at Clifton Campus. These are open to professionals and the public, to make training available to a wider audience.

Open Days offer another opportunity to all sections of the community, giving people with an interest in higher education a chance to view and use the facilities. A full programme of site-wide open days is advertised widely, with temporary signage provided on roads to ease access. During 2020 these events have been made virtual due to the COVID-19 pandemic.

7.2. Hedgehog Friendly Campus (HFC)

Since 2020, HFC has provided an exciting opportunity to engage with students and staff on actions to make the campus more Hedgehog-friendly. Clifton is currently a Silver Accredited campus, and we await confirmation of our HFC Gold Award in 2023. As well as awareness stickers being added to all estate strimmers and mowers (see **Section 3.2**), the project has seen NTU support the British Hedgehog Preservation Society's Hedgehog Awareness Week, undertake hazard audits, survey for hedgehog presence and engage with students and staff through webinars and social media campaigns.

During Welcome Week 2020 the ST held an HFC event for students and staff to attend and take part in learning how to survey for hedgehogs on Clifton Campus. The group made Hedgehog survey tunnels and put these out across the campus to survey for five days. Although no Hedgehog prints were recorded on campus, the event helped to educate staff and students about these wonderful creatures. Hedgehog surveys have since been undertaken several times across

the campus annually and rewilded areas have been established to increase the provision of hedgehog habitats.

During 2022, while working towards Gold Accreditation, our Landscaping Services team attended Hedgehog Friendly Grounds training to increase awareness of hedgehog-friendly landscaping techniques.



Student setting up a Hedgehog survey tunnel on Campus

7.3. Community Access

Information can be found around the campus via the information boards located on the Nature Trail. These contain details concerning the natural points of interest, contact numbers, and a brief Code of Conduct notice. The boards were installed with the help of staff and Student Union volunteers.

In 2014, the NTU's Student Health Team developed a Mindfulness Walk at Clifton that takes in much of the nature walk. More information on the walks and well-being can be found by contacting the Chaplain.

7.4. Room Hire

Several Campus buildings offer rooms for various functions, such as seminars and conferences. On-site catering can deliver hospitality for a range of events.

7.5. Sports Facilities

NTU Sport offers a comprehensive, inclusive and high-quality programme to students, staff and the local community. We attract complete beginners and international performers.

Clifton Campus is home to a large complex of sporting facilities. Close to Peverell Halls of Residence is a cricket pitch and pavilion, a sand-based hockey pitch, a state-of-the-art 3G pitch and an indoor tennis centre. Our outdoor facilities also boast five grass pitches, which are used for a wide variety of sports, including football, rugby union, lacrosse and American football. Amongst these pitches stands the Lee Westwood Sports Centre, which plays host to a multi-station fitness suite, dance studio, squash courts, sports halls and a high-performance gym.

Although largely for student use, NTU is proud to have recently hosted local sports teams including Nottingham Forest Women and Notts County Football Club. On a national and international level, we have also hosted international Netball teams in their training build-up to the Vitality Nations Cup and Tennis matches from the Nottingham Nature Valley Open.

The cricket pitch and pavilion are shared between NTU and Clifton Cricket Club. The historic shared agreement between Colonel Clifton and the Clifton Cricket Club gives the club use of the cricket pitch. Clifton Cricket Club is also involved with local schools, helping to coach children.



The start of the annual NTU charity run

Each year NTU's John van Geest Cancer Research Centre holds its annual 5km run and 1.5km fun run around the Clifton campus. The last event attracted 200 participants, made up of students, staff, and the general public to raise over £4,000 for the Research Centre. The 5km route leads runners around the nature trail on campus, as well as a small excursion through the Clifton Grove area. This event is currently on hold following the impacts of the COVID-19 pandemic.

Since its opening in 2010 by Ryder Cup winner Lee Westwood, the Lee Westwood Sports Centre has opened its doors to accommodate more than the average gym user. With the addition of superb outdoor facilities, NTU Sport now sees its partnership clubs making use of our fantastic rooms and equipment. The high-performance gym contains specialist equipment to suit athletes from an elite sporting background, making it a regular spot for teams such as Championship side Nottingham Rugby's training sessions. This also heightens the appeal to NTU from high-level sporting students looking for a university that can accommodate their needs.

By opening its doors to the local community and external clubs, NTU is established in the local area as a hot spot for sport. Alongside regular student fixtures, a whole range of different sporting activities often book space in the Campus's facilities. Organisations that have been welcomed through our doors include England Hockey, different Roller Derby teams, the Wheelchair Football Association, Badminton England, various local schools, England Touch Rugby and British Gymnastics to name a few.

With growing demand from external and internal clubs and users, NTU Sport is constantly striving to keep ahead of the game with its facilities and presence to accommodate not only the increasing standard of sport among the students but also the rising level of participation in the community and local area.

7.6. Foodshare Allotment

Located in the gardens of Peverell Hall, the campus allotment was established in the 2014/15 academic year. It provides the home for NTU's Foodshare project.

A joint venture between NTU, UPP Ltd, NTSU and Nourish Associates, the project is designed to teach NTU students and staff about growing food in a sustainable manner.



Allotment volunteers harvest organic produce weekly

Volunteering sessions run every Wednesday afternoon during term time and are led by an organic food specialist.

In 2021, during the pandemic and subsequent lockdowns, the allotment sessions were unable to take place. However, the site was up kept, and food was still grown and donated. An influx of wintering seeds took over after the first lockdown, leading to several crops of minor's lettuce, mustard greens and chard. Food grown over the past year has been donated to local community groups and charities including Guru Nanak's Mission and Windmill Community Gardens, used for both community meals and children's crafting sessions where paints were made from berries!

Staff volunteer groups have also been helping at the allotment throughout 2021, groups visited the allotment to help weed, sow, lay paths and create composted beds for wildflowers. The ST did their part in volunteering by building three new recycled raised beds at the site, sourced from "British Recycled Plastic".

The opening term of the 21/22 year saw student volunteers return to the site, and on top of the usual weekly sessions, there have been activities including pumpkin carving and wreath making taking place on-site. Student volunteers from the University of Nottingham's allotment project visited the site in December 2021 and there are plans in place to develop a continuing partnership between both sites.

At the allotment is the Outdoor Classroom – a circular structure of pergolas and log benches with a wooden throne-like chair, surrounded by a wildflower bank and fruit trees. The classroom was built in 2017 after securing £8000 in funding from Tesco's Bags of Help scheme. The space is available for anyone to use as a social or teaching space and has been used during children's activity sessions for local schools and community groups.

Since the allotment's beginnings in 2014, more than 35 different types of food have been grown on-site, including melons, grapes, sweet potato, physalis and much more.



Outdoor classroom with features for teaching and wildlife

7.7. Educational Activities

The balancing ponds act as a site for an annual research project offered to Bioscience students researching the forensic breakdown of materials in submerged waters and newt trapping techniques in the spring. Other projects on Campus include the identification of trees, bird and mammal surveys, invertebrate surveys and environmental quality assessments.

The Clifton Campus is also used as a teaching and learning resource by many courses in the Nottingham Institute of Education, for students who are studying to work with children in schools and wider services. Adopting the Forest School approach to outdoor learning for children, students explore the active child-led possibilities offered by the outdoor environment. Teaching and learning principally takes place in the woodland areas which border the Campus on the east side and with occasional use of other areas that all offer a variety of habitats and landscapes to explore. All students who engage in these outdoor sessions can submit a portfolio which is externally assessed and accredited at either Level 1 or 2 by AIM Awards, giving students an additional qualification on graduation.

Three or four times a year, the Nottingham Institute of Education invite local Primary School Classes to Clifton Campus for an Outdoor teaching experience, this mainly is to promote the teaching of the Primary Science element from the National Curriculum. They are provided with mini activities to do at the balancing pond, woodland and outdoor classroom of the campus, which are planned and delivered by our BA Primary students.



Forest school teaching session with undergraduate students

A staff member within the Institute organises a Wellness Walk around the campus, this is advertised for Staff and Students alike and occurs every Wednesday at lunchtime. He shares his love and knowledge of the natural environment we have on our grounds, which has had a ripple effect on some of our students who carry out this walk most days and find out more about the different flora and fauna they may come across.

Forest School is offered to Students within the Nottingham Institute of Education and more recently, we have been approached to offer this facility to other external Schools and Colleges. This is very popular with high numbers of students attending yearly.



Section 8: Marketing and Communication

8. Marketing and Communication

8.1. Marketing and Promotion

Increasing efforts are being made to make the local community aware of the facilities at Clifton Campus, which are available for them to use and enjoy. The NTU website includes extensive features on the Campus, including information on the facilities available to the public. The news section of the main website and NTU's Sustainability webpages give information on current and future events.

8.2. Communication Channels

Internal communications within NTU include the MyNTU dashboard which displays daily updates to all members of staff with forthcoming events and news within the University. For 2021, a new student dashboard was launched, which provides updates on what has been happening on all campuses and what is coming up. NTU also has a University Calendar for students and staff to refer to via the website.

The Green Flag status of the campus is used and shared through events such as Sustainability Awareness sessions, Sustainability in Practice tours and Welcome Week. Green Flag status is also promoted through the NTU Sustainability webpages and social media channels (Twitter, Facebook and Instagram).

The ST have strong relations with both the staff and student communication teams and works closely to ensure key messages and opportunities for involvement are advertised for all. The team have their own social media accounts and there are many other accounts for different areas of NTU that can help spread the word about news or events.

The NTU ST's Twitter account has over 2,607 followers with tweets communicating to both students and staff. The account is used multiple times a week to keep followers up to date with all the activities the team are involved in from tree planting to workshops as well as retweeting important environmental news pieces.

Due to high student demand, Facebook and Instagram pages for the ST were launched in the winter of 2016/17. The Facebook page now has over 950 likes, and the Instagram account has over 1,210 followers as of January 2023.

NTU Landscape Services' Twitter account has over 1,287 followers with regular updates about their work to make the campus an attractive space for wildlife and people. NTU Estates has an Instagram account used as an image portfolio and dedicated webpages to inform staff and students about any disruptions to users as well as updates on current campus developments.

8.3. Educational and Interpretational Information

The Nature Trail around campus includes educational signs for walkers.

NTU's Sustainability webpages have a dedicated page on Clifton Campus which includes a copy of this LMP for staff, students and members of the public to view and learn more about the opportunities the campus offers.

Educational experiences on campus such as allotment sessions can be accessed by local schools via CenSCE the team.



Section 9: Management

9. Management

9.1. Management Structure

Clifton Campus is managed by the Landscape Services Team who are part of the Estates Department. As part of this management, NTU's ST helps ensure that up-to-date information on best practices regarding environmental issues is disseminated throughout the University.

The Director of Estates is supported by the University Executive Team in the management and implementation of the University's Environmental Policy.

The Landscape Services Team meet regularly with academics to give updates and ensure continuity between Landscape Services and teaching projects.

The Hazardous Waste Management Group (HWMG) ensures the University meets its legal obligations regarding the storage and disposal of hazardous waste. The group meets with the Environmental Manager to discuss waste contract management, refresh training and discuss legal compliance.

This LMP is reviewed annually by the ST and the Landscapes Services Manager.

9.2. Project Funding

Currently, NTU is involved in major redevelopment across its Campuses. Working capital for site work is used to deliver these projects. With each new building project, the University has sought to deliver new associated landscape areas which are now supported by the Landscape Strategy.

The Landscape Services Team have an annual budget for all three campuses of around £450k. A breakdown of the spending on larger projects is provided in the Implementation Plan in **Appendix B**.

The University committed more than £1 million towards wider landscaping works to enhance biodiversity as part of the Heart of Campus development.

9.3. Management Priorities

The current short-term aims for Clifton Campus are:

- Continue carpet bedding scheme and wildflower meadow creation as a result of the Clubhouse development
- Create a newly landscaped area at the Central Approach onto campus, to include a forest garden, meadow and bioswales – a design for this area was completed in November 2018 and awaits financial support and final sign-off.

- Providing surfaced footpaths along 'desire lines' – ongoing.
- Providing cycle paths around the campus – ongoing.
- Maintaining and improving cycle storage – ongoing with the most recent cycle compound being constructed in December 2019.
- Further development of links with local community groups, such as Clifton Village Residents Association and local schools – the most recent link being that with the Nottingham Clean Champion.

The long-term aims are:

- Increased useable open space for staff, students and visitors as part of the 'Heart of Campus' redevelopment – completed, there are plans in place for more green space.
- Increased creation of invertebrate, bird, bat and, small mammal habitats across the estate as part of the campus development – ongoing.



Bulb planting scheme on campus

Appendices

Appendix A – Sample Maintenance Plan

Examples of Landscape Maintenance Schedules

Shrub Beds:

- Shrub beds will be managed to maintain a healthy stock of plants. The edges of the beds will be neatly defined by appropriate means. Beds shall be weed-free and mulched annually to suppress weed growth and retain moisture content within the soil. However, should the prevailing weather conditions dictate these beds shall be irrigated during the dry spells to remove undue plant stress and the potential for die-back.
- Pruning will be carried out on shrubs that require it according to species to remove the dead and damaged branches and retain the natural shape and encourage good flowering to improve health and vigour.
- Where die-back of plant material has been identified new plants will be planted as soon as possible, using species that maintain the character and continuity of the shrub bed. Replacement planting will use the species with a form and flowering habit that is appropriate for that plant's position in the bed as well as the context of the nearby environment.

Winter sports pitches (Football/Rugby):

- Grass in these areas will be maintained to a height governed by the respective playing needs at the time of play and to provide a suitable and safe playing surface throughout the season. Areas will be gang-mown weekly throughout the growing season. In addition, other tractor-mounted tasks will be undertaken to provide a true, safe and free-draining surface. These tasks will include monthly aeration, rolling and chain harrowing throughout the playing season. The ratio and timing of these tasks will be determined by user needs as well as maintaining the quality and integrity of the playing surface. Throughout the year regular applications of fertilisers and herbicides will be considered on their merit and need under the prevailing weather/ground conditions.
- Throughout the playing season and as determined by fixture arrangement the pitches will be fully marked out per the Association Rules and Regulations. Respective posts and crossbars will be safely erected at the start of each playing season and regularly checked before and after each fixture including the setup and removal of nets (football). At the end of each season, this equipment will be safely dismantled, repaired and stored until it is next required.

- End-of-season renovations will include topdressing and over-seeding and re-establishing of levels to make safe and maintain the integrity/quality of the playing surface.
- Preparation and maintenance tasks are mainly carried out during the academic year (Sept- June) when demand is at its greatest with the end of the season works taking place as demand eases. We have a working partnership with Clifton Village CC to ensure their fixtures are fulfilled during the summer months.

Landscape Machinery and associated equipment – maintenance:

- All landscape machinery and associated equipment are subject to regularly prescribed checks to ascertain service and repair needs under the Provision and Use of Work Equipment Regulations (PUWER) 1998 including six monthly safety inspections of Arboriculture equipment which falls under Lifting Operations and Lifting Equipment Regulations (LOLER) 1998.
- All works, repairs and inspections are documented and maintained to file for access, monitor and review where requested.

Arboriculture:

- During the Autumn/Winter period or when safety issues prevail. Care is taken to avoid such work during the nesting season and work action accordingly. Works are driven by a 3-yearly survey, by external consultants, which prioritises works according to either tree health/failure as well as the potential risk to the public or property. Successional planting is factored into replanting where trees could or have been lost.
- All tree stock, within the remit of NTU, is reviewed on a 3-yearly cycle to determine workload priorities and assess the health, well-being and vigour of both specimens and groups of trees.
- Regular inspections are undertaken throughout the year where high winds may present a threat to NTU trees and works are actioned accordingly to maintain the integrity of specimens affected and to remove the potential risk to people & property.
- Safe work practices are adopted in relation to working at height within trees. Operatives undertaking work are IPAF certified to use mobile elevated work platforms & NPTC compliant up to units cs38/39 as well as MEWP trained.

Turf Maintenance:

Defined as either high or low amenity areas and subject to respective maintenance regimes.

This may include:

- Mowing, throughout the growing season to the respective height (collected or non-collected);
- Use of a variety of cylinder, rotary mowers and strimmers during the growing season;
- Application of granular or liquid fertilisers to improve turf health and vigour;
- Application of granular or liquid chemicals for the control of weeds, pests & diseases;
- Application of water &/or wetting agents during periods of drought;
- Aeration & scarification to improve drainage, quality, integrity & appearance of grassed areas;
- Re-instatement of new, damaged or worn areas by turf or seed mixes;
- Introduction of topdressings to improve drainage and levels;
- Removal of litter & debris from surfaces.

Landscape (Biodiversity):

All landscape tasks give due consideration to the impact of our activities on all flora & fauna such as:

- Green waste recycling – all landscape material composted and chipped for re-use across campus to aid weed suppression and combat drought
- Introducing a palette of colour-rich wildflower areas to improve biodiversity
- Legal compliance to minimise the impact on wildlife such as nesting birds & Great Crested Newts
- The utilisation of Integrated Pest Management (IPM) techniques reduces the reliance on chemicals
- Introducing wildlife habitats such as bird boxes & log piles as well as shelters for a wide range of other invertebrates & insects
- Engaging with key partners & stakeholders, through volunteering projects, to improve biodiversity
- Actively encourage students to utilise the landscape areas for research and coursework and how to add value to biodiversity through study.

Internal Plant:

Service and maintenance to over 200 planters, throughout the year, across key building forums on all three campuses. Includes watering, feeding, pruning and cleaning down of containers.

Appendix B – Implementation Plan

	Action	Target	Budget	Timescale	Owner	Status
Clifton Campus	Develop biodiverse and social areas at the Central Approach	Create a more welcoming approach at the central entrance with seating, trees and a garden area to improve the student experience while providing valuable habitat.	TBC	TBC	ST	Approved, awaiting funding
	Develop student allotment	Continue to develop a student allotment first installed in Autumn 2014 to increase levels of engagement and the amount of organic fresh food produced.	£3k	2014-Present	ST	Professional gardener and volunteers maintain the allotment weekly.
	Continue path-laying activity	To provide a good substrate for the nature trail, as mentioned in previous Green Flag feedback.	~£20k	2023/24	Alan Horgan	First 300m laid in summer 2014. Aspirations to complete the trail.
	General maintenance regimes	To maintain and improve where possible the Clifton campus for staff, students and wildlife.	Landscape Services annual budget circa £453k	Ongoing	Alan Horgan	Ongoing, routine. An example is attached in appendix A.
	Develop Clifton Campus to provide more teaching facilities	Expand the built environment on campus whilst enriching biodiversity through green infrastructure.	TBC	Ongoing	NTU Estates	Ongoing, see appendix C for development mapped.
	Create a Habitat and Protected Species Action Plan for Clifton Campus	To guide future campus development and the ongoing management of the estate to protect and enhance biodiversity	TBC	2022/23	ST	Due to be published by mid-2023.
	Implement rewilding areas across the Clifton campus	To increase the biodiversity of specific areas of grassland by allowing the area	TBC (signage costs for educational purposes)	2022-Present	Alan Horgan & ST	Rewilded areas were first implemented in 2022. Signage is due for

		to rewild. This will result in the natural establishment of flora and increase the habitat provisions for invertebrates and amphibians.				deployment in 2023.
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Appendix C – Clifton Campus Masterplan

