



Environment & Sustainability Annual Operational Report

Our Environment & Sustainability Annual Operational Report is a snapshot of what we have been doing to improve sustainability across our University. The report highlights performance against our targets set across carbon, energy, water, waste, transport and biodiversity against the previous 12 months and touches upon the next 12 months. This report compliments our Environmental Management System (EMS) manual which gives details of our eight Action Plans.

The Environment & Sustainability team consists of Victoria Blake, Environment & Sustainability Manager; Emma Stone, Environment Adviser; Amy Moore, Sustainable Travel Officer; Danielle Bird, Energy Officer and Hollie Darby, Travel Coordinator.

The Environment & Sustainability team are dedicated to developing and demonstrating our commitment to environmental management and sustainability at an institutional, local and national level.

Governance Structure

To enable us to build on the achievements made to date by the SHE Team and to demonstrate our commitment to embedding sustainability, the University Management Team (UMT) agreed a Sustainability Governance Structure. This governance structure will ensure effective oversight and decision-making on strategy, performance, responsibility and accountability. This consists of a newly created Sustainability Board, which is attended by senior academics, team leaders or members from the wider university, members from Action Groups and representatives from the Environment & Sustainability Team. The Board met three times this year, agreeing ToR and feeding into specific activities covering the Sustainability Leadership Scorecard, new policies and presenting in specific topics that are linked to sustainability.

Carbon Management Plan

Climate change is one of the biggest global challenges faced today. In response to the UK government target of achieving Net Zero emissions on all Greenhouse Gas (GHG)

emissions by 2050, the Association of Colleges, EAUC, GuildHE and Universities UK partnered to establish a Climate Commission for UK Higher and Further Education. A key aspect of the Commission are the targets set for achieving Net Zero in Scope 1 & 2 GHG emissions by 2030 and Scope 3 Net Zero GHG emissions by 2050.

The Environment & Sustainability Team prepared a paper for the UMT requesting agreement and sign off on our own Net Zero by 2030 carbon target. In February 2021 the University of Northampton signed up to the [One Planet Pledge](#), demonstrating our commitment to becoming a [Net Zero institution in our Scope 1 & 2 Greenhouse Gas emissions](#) (GHG) (carbon emissions) by 2030 with a baseline of 2019/2020 of 4,716 tonnes CO₂e.

A key part in reaching Net Zero Carbon by 2030 requires an increase in low carbon energy solutions. We have instigated first contacts and meetings with various providers, suppliers and consultancies. This is to begin gathering information on the scope of services involved with increasing and optimising existing low carbon energy. Some examples include site visits at Waterside to review solar PV potential, a maintenance repair and clean on the existing solar panels at St Johns Halls and the maintenance and repair of our CHP engines at St Johns Halls.

Current carbon footprint

Our current carbon footprint is 3,947 (t) CO₂e, which is a combined total of 3,579 (t) CO₂e for energy-based emissions (gas, electric and biomass) and 338(t) CO₂e from fleet emissions. Further details and breakdown of our energy related carbon footprint can be found below in Tables 1 and 2.

The overall decrease in energy consumption for 2020/2021 has resulted in a decrease in our energy related scope 1 and 2 emissions. This academic year, our CO₂e emissions have decreased 25% and 11% for gas and electric (respectively) compared to last academic year (Table 1) and 58% and 47% when compared against our baseline year of 2005/2006 (Table 2). Moving forward, academic year 2019/2020 will be our new baseline for carbon emission reporting.

Table 1: CO₂e emissions 2020/21 and comparison against 2019/2020.

2020/2021 CO ₂ e against 2019/20			
	2019/2020	2020/2021 CO ₂ e (t)	% Change
Gas	1,869	1,403	-25%
Electric	2,397	2,142	-11%
Biomass	38	34	-11%
Total	4,304	3,579	-17%

Table 2: CO₂e emissions 2020/21 and comparison against baseline year 2005/2006

2020/2021 CO ₂ e against baseline			
	Baseline 2005/06 CO ₂ e(t)	2020/2021 CO ₂ e (t)	% Change
Gas	3,303	1,403	-58%
Electric	4,056	2,142	-47%
Biomass	N/A	34	N/A
Total	7,359	3,593	-51%

Energy Consumption

The University consumed a total of 9,687MWh of electricity and 7,645MWh of gas across the estate*. The overall electricity consumption has decreased by 2% and natural gas consumption has decreased by 24% when compared to academic year 2019/2020 (Figures 1a and 1b). Figure 1a shows an increase in electricity use from April 2021 compared to the same period during 2019/2020. This is most likely due to the easing of lockdown measures as more staff and students returned to site. Gas consumption across the estate was lower per month compared to 2019/2020, until April 2021 (Figure 1b). The biomass boiler was not operational during March and April so this could account for the increase in gas during April. Other reasons for the increase compared to last academic year include lockdown measures easing, improved data collection and cooler temperatures this year compared to the same period last year. June and July saw significant increases compared to the previous year which is mainly attributed to gas use at Boughton Green Road and St Johns Halls. Lockdown may be the reason for this but gas use at Boughton Green Road has been raised as a query for further investigation into current settings and efficiency.

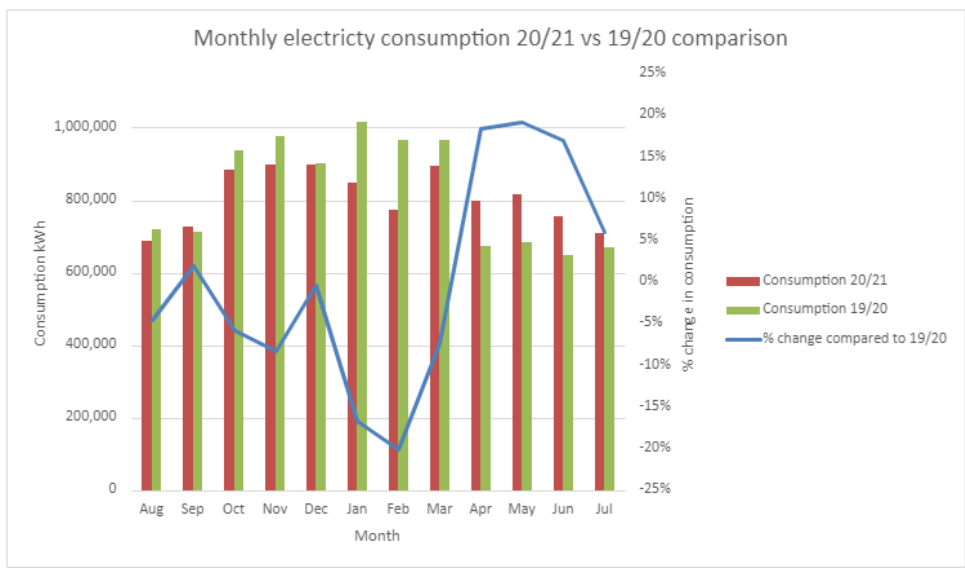


Figure 1a: Monthly electricity consumption kWh 2020/2021 compared to 2019/2020.

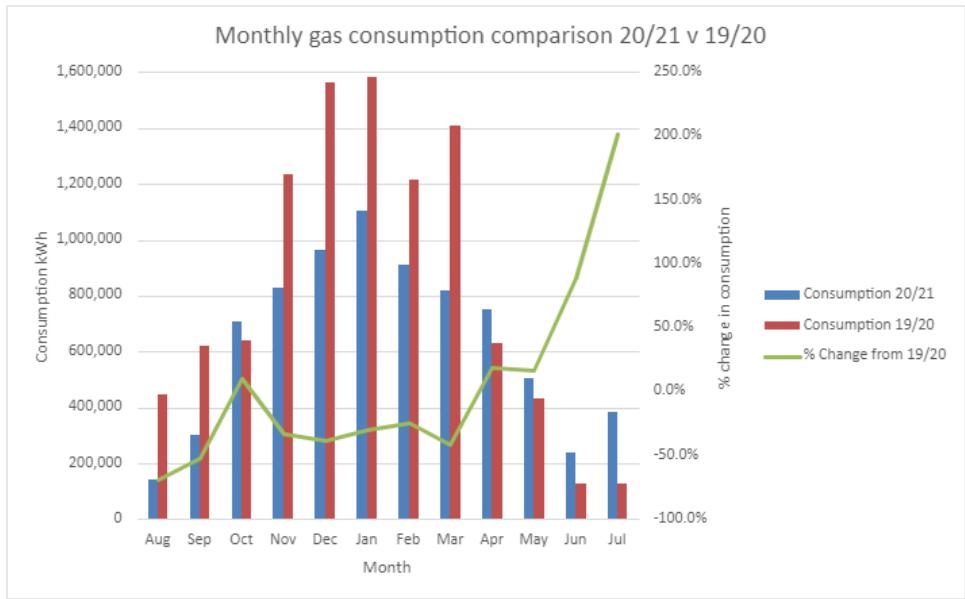


Figure 1b: Monthly gas consumption kWh 2020/2021 compared to 2019/2020.

**Includes a small portion of estimated data due to queries or unavailable at the time of writing.*

Biomass and Renewable Energy

The biomass boiler has generated 2,241MWh during 2020/2021. This is a 9% reduction in consumption compared to 2019/2020, however, it was not operational during March and April due to a fault. It has produced 34 tonnes of CO₂e emissions, a decrease of 6 tonnes from last academic year. The biomass boiler has saved 377 tonnes CO₂e emissions compared to using natural gas for this amount of energy.

The solar PV array at St Johns underwent a maintenance, repair and clean in 2021. Whilst we do not have the data to show the accurate kWh generated due to technical issues with submetering, Figure 2 demonstrates a clear increase in performance since these works were carried out on 8th June 2021 when reviewing the same 3 month period for 2020 and 2021.

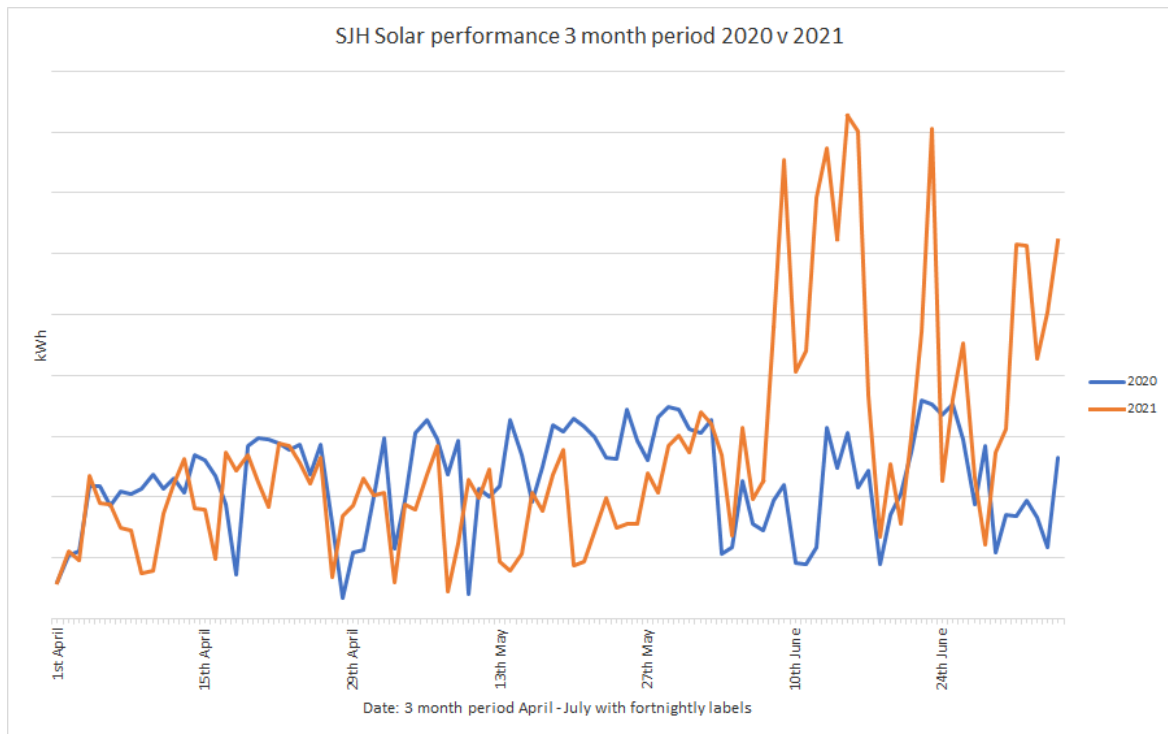


Figure 2: Performance of solar panels April – July 2020 and 2021. Refer to legend for details.

Resource Efficiency

Waste

As a result of COVID-19 secure working practices last A/Y, we forecasted an increase in waste rates and potentially new materials entering the waste stream, examples being single use packaging from grab and go catering, takeaway coffee cups, PPE, and an increase in plastic packaging from hand sanitiser, anti-bacterial wipes and packaging from Lateral Flow Test kits.

Waste produced (excluding the COVID Test centre) between August 2020 to July 2021 was 560.914 tonnes of which 403.559 (67%) was recycled with 202.005 tonnes of waste sent for energy recovery. This is a slight increase of 1.359 tonnes of waste when compared to same time period of the last academic year.

The volume of general waste produced increased from 172.96 tonnes in AY19/20 to 202.005 tonnes this year, this increase can be attributed to the higher volume of non-recyclable waste including PPE, antibacterial wipes across the estate and single use packaging generated by the catering outlets. COVID Mass testing waste has been extracted from the General Waste figure to enable us to draw a comparison on the previous year.

Recycling rates have reduced by 4% to 67% from the previous year's 71%. The weight of recycled materials (excluding the Cup Fund) reduced by 27.731 tonnes to 403.559, it is

anticipated that this is a result of reduced foot fall and reduced recyclable packaging available at the catering outlets.

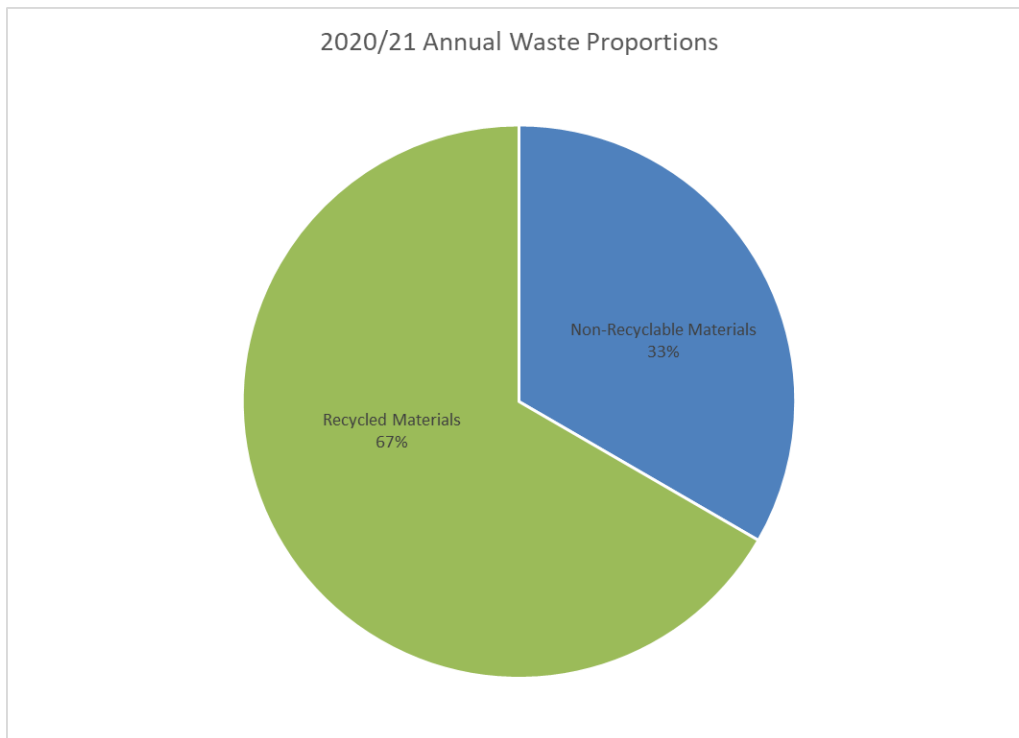


Figure 3a: Annual Recycling vs General Waste

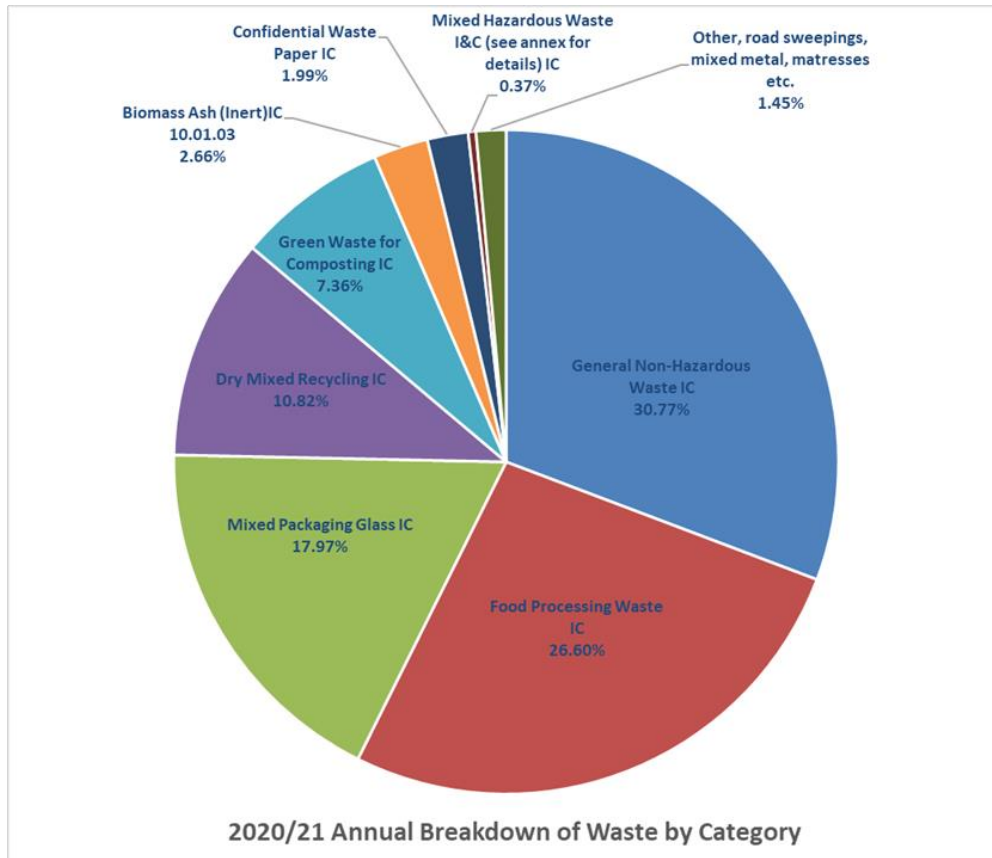


Figure 3b: Annual waste breakdown

COVID Test Centre Waste accounted for 1.252 tonnes of waste within AY 2020/2021

Water

Water consumption data has previously not been monitored to the same standards as our energy use. This has been a focus during 2020/2021 to ensure that we can accurately report and monitor our water use and demand across the estate as this has impacts on resource use and the environment. Some key findings include that some of our sites did not have water accounts set up, we were out of contract and paying higher rates, and that we do not yet have a reliable baseline for Waterside since opening due to provider issues and estimation of data.

We have now signed a new water contract within a framework which will produce more reliable and accurate reporting and support us in establishing our true consumption. All sites will be under one provider with improved account management. This will help in identifying water saving opportunities, highlight any areas where water is wasted and provide a scope for any technologies or campaigns to reduce our water demand and scope 3 emissions.

Biodiversity

A Management Plan for biodiversity is currently being written to document our approach to biodiversity across the campus and to highlight our aspirations to conserve and enhance the natural habitats and variety of species we have.

In recognition of the important role that biodiversity plays in providing health benefits to our students, staff and the wider community and of experiencing nature, we aspire to ensure that our spaces can be used to educate and support the mental health and wellbeing of everyone who uses Waterside campus.

As part of Project AWESOME we received [Hedgehog Friendly Campus](#) Silver Award this year and are currently working towards the Gold Award, which will involve increasing hedgehog related initiatives such as litter picks and fund raising events.

University Travel Plan

The 2018 University Travel Plan aims to:

- Reduce the environmental impact of travel associated with the university;
- Reduce parking congestion on campus and in the locality during term-time;
- Improve the options available for travel to the university, and between sites;
- Improve the safety and accessibility of travel within and to the university.

A Framework Travel Plan covering the Waterside Development was produced in 2018 to meet the Planning Conditions for Waterside Campus. The conditions set required the

University to take this forward and produce a five-year University-wide Travel Plan with implementation plan and officer before first occupation.

The University of Northampton Travel and Car Park Management Plan was developed in 2018 and outlines how the University intends to implement and promote specific measures to help staff, students and visitors commute to the University's sites via sustainable measures and aims to reduce Single Occupancy Journeys (SOV) by 20% in 5 years.

In 2020, the university met this target, three-years early, with a reduction in staff SOV usage of 38%, this was largely due to the increase in working from home following the March 2020 pandemic.

Table 3: Travel by Single Occupancy Vehicle (SOV) has reduced since 2016 and cycling and walking has slightly increased:

Mode	2016 – Park Campus	2019 – Waterside	2020 - Waterside
SOV	75%	71%	37%
Cycling & walking	9%	10%	11%

This is a reduction of 393 (t) of CO₂e based on the average distance to work for our staff and the vehicle types they reported to have. The IEA suggests working from home is the greener option if your journey to work is more than 4 miles, our staff travel almost 15 miles each way on average.

Sustainable Travel Initiatives

The University recognises the benefits of smarter ways of working, not only on travel but staff wellbeing, and has produced a smarter working policy based on a blended approach. As well as working from home, the team has coordinated several sustainable travel initiatives over the year for staff and students.

Public Transport

The University part owns a bus company, Uno Buses Ltd, which links our university sites with the town, bus station and rail station. Uno not only caters for our staff and student travel but is also a lifeline for the town residents, particularly in Kingsthorpe. The Uno Bus routes are subsidised to allow for a discounted rate for our staff and students at 50p within the inner town and £1 to Kingsthorpe and suburbia.

During 2020 - 2021, Uno ran three bus services:

- #18 - Park and Ride – Rail Station – Waterside
- #19/19A – Scholars Green Halls – Kingsthorpe – Bus Station – Waterside
- #21 – Rectory Farm – town centre – Bus Station

All bus services were subsidised for staff and students Monday – Friday.

Bus frequencies resumed as normal in September 2020 following lockdown, these were continually reviewed during lockdown periods and scaled back where needed.

The University has its own Park and Ride scheme for staff and students. Situated on the edge of town, the Sixfields Park and Ride can hold up to 1,500 vehicles. Staff and students can park for free and just pay for the bus journey, which is subsidised. The University also opened this facility up to the West Northamptonshire Local Authority Staff.

The Claret car park, at the park and ride, has been in use since the summer of 2020 by the Department of Health as a COVID - 19 testing site free of charge. This will be reviewed for 2021.

During 2020-2021, we have continued to promote the local rail station with information on our website including how to travel there by bus, the young person's 16 – 25 railcard and the student Oyster card for our London cohort.



Cycling & Walking

The NCC Highways cycle hire initiative, Cycle CoNNect, ceased at the end of 2019, subsequently the University launched its own cycle loan initiative for students in October 2020. A total of 4 bikes were purchased and students could hire them on a termly basis with a refundable deposit. We have had 5 students hire the bikes since November 2020. After feedback on bike sizes, we have added 4 new bikes to the fleet in smaller sizes and recently launched a shorter hire scheme. As we want to encourage students to cycle whether for commuting or pleasure, we now have a 4 day hire option if a student wants to take a bike out to explore the town over a weekend or travel to a one off destination such as an appointment. We have designed communications to promote these schemes in the new academic year and with Dr Bike carrying out servicing twice a year unless reported otherwise.



Cycle Solutions continued to provide our tax-free bike purchase scheme during 2020/2021. Cycle Solutions administer the scheme free of charge including all promotional material and face to face events. Cycle Solutions provided us with webinars

during periods of lockdown and returned to site on 10th June for information and Dr Bike. The Dr Bike sessions were fully booked.

Between 1st August 2020 - end of July 2021, we have had 8 requests for a tax-free bike, some of these were cancelled resulting in 5 full orders for the year. This is a low number for the University, but it was likely to be hindered by the lockdown and the lack of commute during the summer months for most of our staff.

In the summer of 2020, the Local Authority began their E-Scooter pilot with the Department for Transport. The provider, Voi, launched E-Scooters across the town including at the University. During the yearlong pilot, Northampton was said to be the most engaged county across the country with highest usage figures, consequently the scheme was expanded across the county. The University continues to support and promote the scheme.

We added two cargo bikes to our fleet in March 2021, this included a cargo bike for the Catering Team and for the Building Services team. The Building Services team have reported issues with the size of the carrier on the bike, so it is likely this bike will be re-purposed for another team and with a follow up meeting to be arranged with the Building Services Team to establish their requirements.

During 2020/2021, we continued to promote our walking routes, this included: The Safer Route Home from the town to Waterside, our Waterside walking & jogging trail and the new Wellbeing Walks around campus with the Grounds Team. The periods of lockdown meant the Wellbeing Walks were paused at times, but these were reinstated in May 2021 with social distancing measures in place.

Car

The University car parks continue to be 'pay to park' for all users and we promote our sustainable modes of travel above all else.

Student permits for those who commute to university moved to a Pay-As-You-Go approach in order to be flexible during the pandemic but also to discourage bay hogging and unnecessary journeys, instead students are encouraged to park minimally and pay for the time they park.

Staff are encouraged to continue to blend working on site with working from home.

The University has 6 Pod-Point charging points at Waterside and 10 at the Development Hub, we installed 2 new charge points at Scholars Green Halls for student use.

Local car dealerships, Richard Sanders and Allen Ford, have provided specialised discounts for Electric Vehicle purchase/lease for University of Northampton (UON) staff and students.

Our UON Liftshare account was not renewed in 2020/2021 due to low engagement and use. Instead, residents of Northampton can use the Northampton generic Liftshare scheme that exists, and we signpost to this.

Communication

Information is regularly provided to our student and staff community, including:

- UON website pages;
- Social media updates relating to travel and parking, including the Uno bus updates;
- Travel and Uno messages on our Waterside Real Time Passenger Information Units;
- Internal communication channels, such as TV screens, Energy Tower and eNewsletters;
- Travel roadshows run twice per year, including a Dr Bike session and bike marking in conjunction with the UON Policing team and UON Campus Security;
- Maps and website content have been regularly produced and updated to inform staff and students of changes;
- Liaison with the Student Union on changes and updates, including having an Elected Officer present out our Uno Operational Meetings.

Projects

UpForTheCup Project Update

Since the UpForTheCup project went live in January 2020, progress of achieving the target of collecting and recycling 160,000 cups has been a challenge largely due to the pandemic. Since the first collection from Waterside Campus on 27th January 2020, 57,500 cups have been collected and recycled across all partners. This figure assumes of 25% contamination rate and a 12g average cup weight as defined at the start of the



project. Reporting data provided by Cawleys was split by site from October 2020, since then we have collected approximately 17,700 cups from Waterside alone.

As a result of lockdown partners such as the Royal and Derngate Theatre, The Grosvenor Shopping Centre and The Train Station were closed or had minimal footfall and

therefore stopped the cup

collections. On a positive note, we were able to bring onboard Delapre Abbey who have been collecting and recycling cups from their coffee outlets since January 2021 which has helped to increase our rate of collection.

We are now in the process of bringing all our partners back on board including a potential new partner Travis Perkins, so hope to achieve our 160,000 cup collection and recycle target by the end of next academic year.

Sustainability Assessments

People & Planet League Table

People & Planet is a student campaign network which annually compiles a league table on universities commitment to improved environmental performance. The rankings did not go ahead in 2020 due to the pandemic, it is not known if the activity will go ahead in 2021, therefore we are still ranked at 102 out of 124. However, over the last 12 months we have worked hard to ensure our website is updated with all the sustainability initiatives and engagement activities undertaken as well as demonstrating our plans for the future, so are confident that we will see an improvement in our position once the assessment is completed.

Investors in The Environment

Investors in the Environment (IiE) is an environmental accreditation scheme designed to help businesses reduce their impact on the environment. The framework encompasses performance in areas such as resource efficiency, recycling systems, having a travel plan in place and calculating our carbon footprint as well as setting targets for carbon reduction. All relevant information and data are collated and presented to IiE to form the university Environmental Management System (EMS) and IiE manual. Our current IiE accreditation is Green certification which is the highest level. We are audited on an annual basis with the next audit scheduled for September 2021.

Sustainability Leadership Scorecard (SLS)

The Sustainability Leadership Scorecard has been developed for universities to self-assess their sustainability performance achieving no level, bronze, silver, gold or platinum level. The SLS enables us to understand where efforts need to be focused and can be used to benchmark performance against other universities. A key aspect of the SLS is its aligned to the UN Sustainable Development Goals (SDGs) in its assessment approach and therefore compliments the university's SDGs work. 2020/2021 input was provided from across the university resulting in an accurate assessment of our current performance, resulting in a Silver level being achieved. The assessment has highlighted two key areas of action, one relating to Climate and Adaptation and the other to Food and Drink. Our assessment was included within the second Sustainability Leadership Scorecard Annual Report 2020, which aims to show where the sector is leading and where it needs to improve, this report enables us to gauge where we are compared to the rest of the HE sector.

UN Sustainable Development Goals (SDGs)

The Times Higher Education Impact Rankings are global performance tables that assess universities from around the world against the UN Sustainable Development Goals (SDGs). In collaboration with the SDG Working Group we prepared and submitted an assessment to the 2021 Impact Rankings, which was the first time the UON had made a submission to the rankings. The team wrote policies, webpages and content across 5 of the 11 goals submitted for assessment. UON achieved a Top 200 ranking out of 1117 universities ranked globally.

Communications and Engagement

During the last 12 months there were several engagement activities delivered by the team often working closely with the Grounds Team.

Internal based activities:

- Clean Air Day. Using our reusable cups students and staff were able to pot and take away a plant that improved indoor air quality.
- We held a Travel Roadshow in June which featured discounts on Electric Vehicles from Richard Sanders Car Dealership, Dr Bike from Cycle Solutions, and the Police Team carried out bike marking for staff and student bikes.
- My Green Journey. A series from staff on their low or zero carbon journey to work covering, Park & Ride and cycling to work.
- Travel competitions; for Living Street's 'Walking Month of May' we held a photo competition and challenged people to walk to work and capture their favourite things. We had some lovely entries and food vouchers were won
- Wellbeing Walks. Every second Wednesday of the month Wellbeing walks combined with specialist talks on biodiversity and Waterside Campus.
- The team has its own sustainability social media accounts including Instagram: uon_sustainable and Twitter: @UonSustainable

External activities:

- Northamptonshire Sustainability Forum. Team members regularly attend and present sharing our expertise and collaborating with local businesses.
- Sustainable Food Places Network. A founding member of the network, we sit on both the Board and attend subgroup meetings that support our sustainable food and procurement goals.
- A member of the Levelling Up Goals - Goal 13 Harnessing the Green Energy Transition panel discussion and part of the kick-off webinar.
- CEC3Counties Elevenses: As a founding member of the Circular Economy 3 Counties Group we supported lunchtime events on reducing food waste and alternatives to furniture disposal.

Awards

Investors in the Environment

[The Green Award 2020 Accreditation](#) was awarded to the University for going above and beyond for environmental initiatives, including biodiversity enhancement, policy, action planning and communication.



Hedgehog Friendly Campus

Working with Project AWESOME we received [Hedgehog Friendly Campus](#) Silver accreditation this year in recognition of our conservation work and commitment to protecting an iconic but endangered animal.

University Levelling Up Goals

The University received the award linked to Goal 13; “Harnessing the energy transition” for our pledge to eliminate or [offset 5,000 tonnes of carbon emissions by the end of the decade](#) and deliver Net Zero Carbon by 2030.



Green Gown Finalist

Our UpForTheCup project has been shortlisted as a Green Gown Finalist for the Student Engagement category, these awards give recognition to and emphasise the role universities have in enabling and empowering young people to tackle pressing global issues.