



Environmental Management System

Investors in the Environment

Version 11

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Contents

Introduction and Scope	5
Environmental Policy	6
Measuring Resource	6
Electricity	6
Lighting	6
Office Equipment	7
Kitchen Equipment	7
Air Conditioning	7
Gas	9
Water	11
Toilets	11
Drinks	11
Washing up	11
Waste Management	13
Waste sent to landfill	14
Waste Measurement	15
Travel	16
Commuting by single-occupancy car	16
Operational Fleet	16
Target and Performance	17
Performance Analysis:	18
Summary of performance against annual targets for 2020/2021	18
Normalisation	21
Energy Performance	22
Waste Performance Analysis	24
Travel Plan Performance Analysis	25
Action Plans 2021/22	26
Action Plan 1: Electricity	28
Action Plan 2: Gas	29
Action Plan 3: Water	30
Action Plan 4: Waste Management	31
Action Plan 5: Glass and Food Waste Recovery	32
Action Plan 6: Single Occupancy Travel	33

Action Plan 7: Carbon Management	35
Carbon Footprint.....	37
Carbon footprint 2021 calculation details:.....	37
Environmental Projects:	38
Ecology and Biodiversity	38
Coffee Cup Recycling “Up for The Cup”	38
Renewables for Business Tariff	39
Monitor and Report Progress, and Communication	40

Version Information

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2	04/04/2013	03/10/2013	Version 1 superseded by Version 2
3	20/01/2014	19/07/2014	Version 2 superseded by Version 3
4	23/04/2015	22/10/2015	Version 3 superseded by Version 4
5	06/05/2015	05/05/2015	Version 4 superseded by Version 5
6	25/3/2016	25/09/2016	Version 5 superseded by Version 6
7	25/4/2017	25/10/2017	Version 6 superseded by Version 7
8	3/5/2018	3/11/2018	Version 7 superseded by Version 8
9	03/10/2019	09/10/2019	Version 8 superseded by Version 9
10	03/08/2020	16/09/2020	Version 9 superseded by Version 10
11	09/09/2021	30/07/22	Version 10 superseded by Version 11

Introduction and Scope

In September 2018 The University of Northampton (UON) moved to the new £330m Waterside Campus, located close to the heart of Northampton's bustling town centre. The new campus provides a modern, urban environment, making use of carefully designed spaces for learning and teaching, socialising, sport and leisure for up to 11000 students. Three halls of residence are all that remain of Park Campus, which is now referred to as Scholars Green Student Village. Several satellite buildings are also occupied by the University.

The UON Environmental Management System (EMS) considers the environmental impacts of the institution across the estate and provides a systematic approach to planning and implementing continual improvements to its environmental performance. The system is based on the Investors in the Environment (IIE) six step process, with all University activity including teaching, research, administrative and operations under scope and is maintained by the Environment and Sustainability team, within the Estates and Campus Services department. Led by the Environment and Sustainability Manager, the Environment & Sustainability team consist of 4 additional roles including an Energy Officer, Environment Advisor, Sustainable Travel Officer and Travel Plan Co-ordinator. Together, they are dedicated to developing and demonstrating a commitment to environmental management and sustainability at an institutional, local and national level.

The University Management Team (UMT) have overarching accountability for the EMS and provide the strategic direction through the governance structure. The UON is committed to continually improving the environmental performance across all functions and operations and according to all legal, regulatory and service requirements. The University recognises that our activities impact upon the local and global environment and is committed to lessening this impact through embedding sustainability across the institution.

To demonstrate this commitment to embedding sustainability, the UMT agreed a Sustainability Governance Structure. This governance structure ensures 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.

Environmental Policy

The UON is one of the youngest Universities in the UK and one of the first to be named as a Changemaker Hub, reflecting a special focus on social impact. This means that as an institution, we work hard to have a positive impact on the world around us. The University recognises our activities can have a negative effect on the environment both locally and globally and we are committed to managing and minimising that impact. The full UON Environmental Statement can be read [here](#).

The University's [Environmental Policy](#) has been established by the Environment and Sustainability Team to enable delivery against our Environmental Statement. The policy is reviewed annually, with the last review taking place in March 2020 (V10) with no amendments necessary, demonstrating that the policy continues to reflect the University's current objectives, with no changes needed.

Measuring Resource

There are numerous methods used by the University to measure resource use, enabling annual, monthly and more refined measurements. Sophisticated cloud-based utility management database and software, information received from utility suppliers, data received from waste service providers, and employee surveys all have an important role to play in our EMS.

Electricity

Waterside Campus is supplied via two half hourly tariff meters on North and South HV ring mains that cover the entire campus. The electricity supply for our Halls of Residence at Scholars Green Village and at our Newton Building (formerly part of St Georges Avenue Campus) is supplied by a half-hourly tariff meter. Our estate is supplied with 100% renewable electricity with REGO's (Renewable Energy Guarantees of Origin) via our provider.

The primary use of electricity within the University of Northampton is lighting, office and classroom equipment such as screens and computers, catering facilities, air handling units, and plant. We monitor our bills monthly.

Operating hours vary across the University estate. Building settings change seasonally to accommodate the changes in temperatures. Operating hours are generally set from 6am to 6pm except for our main academic building which has 24-hour access. Other parts of our estate include halls of residence which are also 24/7.

Lighting

Waterside campus is fitted with sensor LED lighting throughout. This includes classrooms and open spaces where lights will come on when the space is occupied. The lighting system is

maintained by the University's facilities team to monitor the sensors and identify any issues or challenges at the first instance so that it can be resolved.

Other sites have a mixture of sensor LED lights in common areas such as hallways, open offices and shared kitchens in the halls of residences. Other areas do not have sensor LEDs but are still fitted with LED lighting. The only lights that remain on are fire exit lights which is a legal requirement.

Office Equipment

The UON uses office and classroom equipment at Waterside and our satellite sites. This includes computer monitors, laptops, photo copier and printers and LED screens in the classroom and throughout the academic buildings at Waterside for digital displays.

The screens are managed through a software operated within the IT and AV department. The screens have three settings; off, idle and in use. They operate between 8am and 7pm. The space booking system is also connected so the screens will automatically switch on and off around meeting times scheduled in via the space bookings. When screens are in idle mode, they are running at 20%.

Staff use laptops which are the responsibility of the individual and are therefore switched on and off per use. Monitors at the University are not controlled by a software and will be manually switched off or left on standby mode.

Kitchen Equipment

Kitchen equipment in office spaces at the University include fridges and an instant hot water tap. There are a few microwaves located in open spaces in the academic buildings for students and staff to use. A new process for communal microwaves is in the process of being implemented. These will be switched off after hours but remain on during the day for regular use. Fridges must be left on to prevent food waste and to maintain hygiene standards.

Our catering facilities, including two restaurants and three take away coffee stations use chillers, fridges, barista coffee machines and instant hot water boilers. Operating hours vary between 8am and 9am opening and 3pm and 10pm closing. When some of these facilities close for term holidays (e.g., summer period) all equipment is switched off at the mains. When the facilities are open, fridges and chillers remain on for hygiene standards and to prevent food waste.

Air Conditioning

Air conditioning is only used at Waterside Campus in the data center rooms, one located on each of the four floors with one Main Equipment Room on the 4th floor. This must always be kept on ensuring the IT equipment does not overheat. Except for these rooms, the campus uses a natural ventilation system where ambient air is drawn in and cooled and ventilated through the building. Sensors are located across the buildings in rooms to monitor air quality. These are linked to the Trend BMS, managed by the facilities team.

Further Information

Plant equipment such as chillers are required for our academic buildings. We have 1 off chiller on each academic building, Senate and the Creative Hub, and 2 off chillers for the third and largest academic building, The Learning Hub. 2 extra chillers are required to cool the Main Equipment Room.

Measure

Our baseline year for reporting was 2005/06. Since this year, the University estate has grown to include satellite sites and halls of residences and most recently, our Waterside Campus. We reached target in 2020 and will be using academic year 2018/19 as our new baseline moving forward. Monitoring is a mix of monthly utility invoices, manual reads and submeter data.

Most of our tariff meters are half hourly, supplying our electricity provider (EDF) with accurate data. Cost and consumption data from our EDF online account is input onto spreadsheets to enable comparison to sub-metering data and figures from previous years. This spreadsheet is updated monthly by our Energy Officer where data is regularly analysed for our reporting. Consumption data is used to compile annual Display Energy Certificates and to complete carbon foot printing.

All tariff meters are included in the University's utility monitoring system, provided by Elcomponent, which also includes building-level sub-meters for most on and off campus buildings, giving real-time consumption readings every half-hour. This data is stored on a central server and can be interrogated by the Environment & Sustainability team. The sub-metering software allows us to review and compare data against invoices for bill ratification.

Baseline annual electricity consumption for 2005/06 academic year was 8,530MWh. Annual electricity consumption for 2020/21 academic year was 9,687 MWh. This represents an increased 1,157 MWh from the base line, an increase of 14%. Moving forward, our new baseline is academic year 2018/19. Annual electricity consumption in 2019/20 was 9,872MWh. 2020/21 usage shows a 2% decrease against 2019/20.

Baseline (2005/06)	kWh used	Previous Year (2019/20)	kWh used	Current Year (2020/21)	kWh used
August	521,993	August	721,380	August	688,874
September	573,563	September	711,788	September	725,992
October	781,782	October	935,998	October	882,378
November	834,044	November	977,976	November	897,242
December	714,308	December	902,392	December	898,770
January	825,350	January	1,017,638	January	848,605
February	796,870	February	966,739	February	772,449
March	878,226	March	965,980	March	894,625
April	628,714	April	673,012	April	797,251
May	760,397	May	683,732	May	814,604
June	632,911	June	646,886	June	756,742
July	582,247	July	669,061	July	709,170
Total	8,530,405	Total	9,872,222	Total	9,686,700

Table 1a: Electricity kWh used vs baseline

Gas

Waterside Campus has two gas supplies. A medium pressure main serves the energy centre plant which provides gas to the campus except for the ICLT building which is supplied via a low-pressure main. Boughton Green Road has one supply point servicing the student halls and the Newton building is supplied via 1 tariff meter.

At Waterside Campus, a 995KW biomass boiler is the primary source of heat. 3 off 12KW gas boilers provide the surplus heat whilst the biomass takes the baseload and distributes heat across the campus on the district heat network. The new baseline year moving forward is 2018/19 when the Waterside campus was opened, however, the biomass boiler was not operational until January 2019.

Biomass and gas are used to heat our academic buildings and halls of residences. Temperature, seasonal and operational settings are controlled by the BMS.

All tariff meters are either already included or soon to be added in the University's utility monitoring system, provided by Elcomponent, which also includes building level sub-meters for most on and off campus buildings. This data is stored on a central server and can be interrogated by the Environment & Sustainability Team. Data provided by billing is also reviewed and analysed monthly by our Energy Officer for monitoring and reporting. Consumption data is used to compile annual Display Energy Certificates and to complete carbon foot printing.

Baseline annual gas consumption for 2005/06 academic year was 18,058 MWh.

Annual gas consumption for 2020/21 academic year was 7,645 MWh. This is a 58% reduction when compared to the baseline with a 24% reduction when compared to 2019/20.

During the AY 2020/21, the University's biomass boiler generated 2,241MWh of renewable heat energy. This has produced 34 tonnes of CO₂e emissions. Using biomass as a heat source has saved 411 tonnes of carbon emissions when compared to using the same amount of MWh from natural gas. Total annual consumption during 2020/21 has decreased by 9% when compared to 2019/20.

Gas (kWh)

Baseline (2005/06)	kWh used	Previous Year (2019/20)	kWh used	Current Year (2020/21)	kWh used
August	491,891	August	448,352	August	139,906
September	517,524	September	620,852	September	299,783
October	1,165,610	October	637,867	October	705,863
November	2,148,311	November	1,236,12	November	829,486
December	2,156,145	December	1,562,662	December	963,067
January	3,525,576	January	1,583,068	January	1,102,586
February	2,195,496	February	1,214,659	February	909,898
March	2,009,355	March	1,408,989	March	819,280

April	1,473,813	April	628,740	April	749,813
May	830,977	May	431,672	May	504,763
June	1,160,692	June	126,131	June	237,605
July	383,606	July	126,928	July	383,265
Total	18,058,996	Total	10,026,043	Total	7,645,315

Table 1b: Gas kWh used vs baseline

Biomass (kWh)

Baseline (2018/19)	kWh used	Previous Year (2019/20)	kWh used	Current Year (2020/21)	kWh used
August		August	0	August	0
September		September	90,872	September	154,524
October		October	195,911	October	445,834
November		November	447,162	November	99,131
December		December	35,048	December	130,124
January	367,942	January	433,703	January	261,287
February	328,721	February	295,955	February	395,298
March	243,494	March	273,837	March	0
April	487,871	April	0	April	0
May	256,494	May	275,652	May	217,977
June	236,460	June	171,204	June	342,215
July	73,139	July	239,386	July	194,460
Total	1,994,121	Total	2,458,730	Total	2,240,850

Table 1c: Biomass kWh used vs baseline

Water

Waterside campus has two water supplies. One serving the administrative block called Senate, and the second serving the remaining campus. There is one main tariff water meter at Scholars Green Village Halls of Residence and a tariff meter supplying the Newton Building.

Water is used primarily for toilets, making drinks, washbasins and for washing up. The supplier is Anglian Water and our provider is Wave. Our bills are monitored monthly. The University is in a framework with Wave as the provider. This was set up at the end of academic year 2020/21 and will support the monitoring of the estate's water consumption. This is done using monthly water bills and through a mix of manual meter reads and sub-metering.

Toilets

The toilets at Waterside campus are dual flush cisterns (four and six litres). Flushing of urinals is sensor controlled so they only flush once they have been used. Cistern size depends upon the number of urinals on a run.

All toilet areas have sensors connected to solenoid valves on the water supplies. These turn off the water to the toilets, basins and urinals when the toilets have not been used for a while to reduce the water waste. The taps are either percussion or electric sensor operated.

Drinks

Hot water taps are in staff kitchen areas, eliminating the requirement of kettles. Access to free drinking water is provided through water coolers situated throughout the site, a [watercooler map](#) is available to show the locations of each station, therefore cold drinks, including just water, do not need water from the mains supply.

Washing up

Kitchen sinks are in staff rooms for minimal washing up. There are four hospitality areas onsite, 2x restaurants and 2x coffee shops which have sinks for washing up equipment. During 2020/21, items such as cups, plates and cutlery were not used due to the pandemic, therefore washing up would have been significantly reduced in these facilities.

Processes

Water is used for window cleaning which is contracted to a third party. This is monitored by the contractor and external services team. All mains water supply usage is monitored by the Energy Officer through water bills and meter reads.

Trade Effluent is a product of the Tannery. This is also metered and monitored through the provider, Wave.

Measure

Cost and consumption data from invoices are input onto spreadsheets for data monitoring and reporting. During 2020/21, all the University's water supply was moved onto a contract with one

sole provider, instead of having more than one provider across the estate. This will allow for a more streamlined and manageable approach to collect water consumption data.

Baseline annual water consumption for 2005/06 academic year was 101,069 m³. Annual water consumption for 2020/21 academic year was an estimated 61,051 m³. This represents a decrease of 40%. It is expected that annual consumption will be reported as an increase during academic year 2021/22 due to improved monitoring and reporting with the new contract.

Meter reads are carried out by meter operators at a frequency depending on the size of the year which is standard in the industry. Water meter readings are taken when possible for additional measure, but due to the location and accessibility of the tariff meters (under heavy manhole covers), it is not possible to do this each month.

Water use and waste data is stored on a central server and can be interrogated by the Environment & Sustainability Team. Data provided by billing is also reviewed and analysed monthly by our Energy Officer for monitoring and reporting. Consumption data is used to complete carbon foot printing.

Baseline (2005/06)	M3 supply used	Previous Year (2019/20)	M3 supply used	Current Year (2020/21)	M3 supply used
August		August	3641	August	8593
September		September	6871	September	5312
October		October	4001	October	4896
November		November	4026	November	4953
December		December	4314	December	4402
January		January	5543	January	4777
February		February	4027	February	4502
March		March	5666	March	5227
April		April	5830	April	6043
May		May	6939	May	4661
June		June	3851	June	3800
July		July	3338	July	3884
Total	101,069	Total	55046	Total	61,051

Table 1d: Water M3 used vs baseline

Waste Management

The UON [Waste Policy](#) demonstrates a strategic approach to waste management, with a target of zero avoidable waste on campus by 2030. Every effort is made to support the correct segregation of waste to maximise the recycling opportunities and reduce waste sent for energy recovery. This is achieved by applying the principles of the waste hierarchy and the appropriate handling of Hazardous waste.

Applied Waste Hierarchy Principles:

- **Prevent**



Communicate with staff and students to be mindful when making non-essential purchases along with the university's definition of avoidable waste.

- **Re-use**

Ensure items are maintained, repaired, refurbished, used for spare parts or donated where applicable. This is evident in a recent project to decommission The St Georges Avenue Campus, through the donation of desks, chairs, IT equipment for use here in the UK and in Djibouti. We also encourage student initiatives such as Hazaar and have a long-established relationship with The British Heart Foundation with donation banks on site for staff and students to donate quality clothing, books, DVDs etc. Further information on the work we have completed with Phoenix and The British Heart Foundation can be found [here](#).

- **Recycle**

Every effort has been made to make waste segregation easy for staff, student and visitors across the campus through the installation of internal and external recycling stations. These allow for separation of food, mixed recycling (plastic, paper, card, cans) and general waste.



Our halls of residence have the same bin segregation structure as the rest of the campus, with the addition of glass segregation bins. Campaigns take place on a regular basis to encourage waste segregation and increase recycling rates including recycle week and zero waste week. All labelling is the same across all areas of the campus to ensure consistency of messaging.



In addition to mixed recycling we offer coffee cup recycling through our Up For The Cup campaign (further information in the project section) with special cup recycling bins in place to allow for the separation of the lid, liquid and cup to reduce contamination and optimise recycling rates. To date we have collected approx.50,000 cups for recycling.

- **Recover**

All non-recyclable waste is processed as a source for low carbon energy production by Suez, our waste management service provider. This enables us to divert our residual waste from landfill and to recover value from a resource by producing energy.

Waste sent to landfill

The University has been recording the amount of waste sent to landfill since the academic year 2007/8, the baseline for that year for waste sent to landfill was 570 tonnes. Since then zero waste was sent to landfill until this last year 2020/21 when our Bio Ash from the Biomass boiler was unknowingly to us sent to landfill by our newly appointed waste management contractor. This was a total of 15.94 tonnes equating to 2.66% of total waste produced.

As detailed in our 2021/22 action plan we have found a potential solution for our ash going forward which would be mixed with compost, we are currently awaiting test result to prove the non-hazardous structure of the ash before it can be accepted for the compost process. Currently, the Bio Ash is being appropriately stored on campus until a suitable method of disposal is found to prevent further waste going to landfill.

Waste Measurement

Each segregated waste collection taken from UON is weighed by Suez and monthly data is supplied via the customer portal and is accessible by Environment & Sustainability Team and Facilities Management. This data is for routine day-to-day campus activities but does not include waste from construction or refurbishment projects.

Regular waste audits are conducted across the campus by students or Suez to enable us to establish the effectiveness of our segregation and potential contamination, the most recent was carried out in August 21 of our catering facility bins. This identified food waste in the general waste bins along with plastic bottles, this is enabling us to tailor our messaging effectively across the catering team and monitor improvements and progress.

Travel

Commuting by single-occupancy car

The University encourages students, staff and visitors to consider using alternative transport modes when travelling to the campus to reduce the congestion and pollution caused by single-occupancy vehicle travel. The University's Travel and Parking Management Plan (2018) highlights the ways in which the University is developing alternative travel options to help reduce commuting by single-occupancy vehicle. The University has set a five-year target to reduce single occupancy vehicle travel by 20% by 2023.

Staff and student travel surveys have been carried out since 2008 and are undertaken at regular intervals to measure and understand the mode and level of commuting to and from the University. The baseline and progress figures have been calculated using sampled data from the University's travel surveys.

Before the relocation to Waterside in 2018, the last travel survey was conducted in 2016 for Staff only. This survey showed that SOV travel was at 75%. One year after relocation to Waterside, the 2019 Staff survey showed that SOV had reduced to 71% while cycling and walking had both increased by 1%.

The most recent travel survey (2020) was conducted for Staff and Students, a summary comparing the results is below:

Mode	SOV	Cycling & Walking
2016 – Park Campus (Staff)	75%	9%
2019 – Waterside (Staff)	71%	10%
2020 - Waterside (Staff)	37%	11%
2020 - Waterside (Staff & Students)	27%	16%

Table 2: 2020 Travel Survey Results

Single Occupancy Vehicle travel reduced significantly in 2020, this was a direct result of staff and students working/studying from home due to the pandemic. The IEA suggests working from home is the greener option if your journey to work is more than 4 miles. The University has produced a Smarter Ways of Working Policy to encourage working from home for the long term.

Operational Fleet

The University operates a fleet of vehicles for operational purposes. Fuel consumption is monitored and reported to account for greenhouse gas emissions of these vehicles. The fleet is currently under review with hire agreements coming to an end during 2021 – Spring 2022. Currently the fleet is at 12 vehicles with 5 of these being electric (42%). Moving forwards we have reduced the fleet by two (10 vehicles) and 6 of these will be electric (60%). Additionally, we have added two cargo bikes.

Target and Performance

Performance against target in the six measured resources, as well as scope 1&2 carbon footprint.

Resource	Target	Unit of measure	Target Progress															Notes for audit -Sept 2021	
			2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20		2020/21
Total building area (GIA)	Efficiency factor	m ²	91,185	92,063	92,818	92,818	96,726	97,437	106,599	106,644	123,525	123,525	121,775	121,775	121,775	141,423	152,880	125,169	
Electricity	43% reduction by end 2020/21	MWh	8,530	8,303	8,132	8,017	8,690	9,124	9,150	9,169	8,924	9289	8993	9891	12,587	11,202	10,150	9,687	Data range Aug20 to Jul21. Baseline date and original targets remain unitl Estates & Campus Services Plan and Net Zero Carbon Plans and targets are approved.
	Efficiency measure	kWh/m ²	94	90	88	86	90	94	86	86	72	75	74	81	103	79	66	77	
	Consumption compared to baseline			-2.7%	-4.7%	-6.0%	1.9%	7.0%	7.3%	7.5%	4.6%	8.9%	5.4%	16.0%	47.6%	31.3%	19.0%	13.6%	
Gas	43% reduction by end 2020/21	MWh	18,058	16,867	17,461	18,101	18,576	17,396	15,964	17,267	16,834	17,597	17,436	17,457	18,045	11,358	12,072	7,645	Baseline date and original targets remain unitl Estates & Campus Services Plan and Net Zero Carbon Plans and targets are approved.
	Efficiency measure	kWh/m ²	198	183	188	195	192	179	150	162	136	142	143	143	148	80	79	61	
	Consumption compared to baseline			-6.6%	-3.3%	0.2%	2.9%	-3.7%	-11.6%	-4.4%	-6.8%	-2.6%	-3.4%	-3.3%	-0.1%	-37.1%	6.3%	-57.7%	
Water	30% reduction by 2020	m ³	101,069	92,117	90,325	96,000	97,664	94,506	88,830	87,438	89,799	108,110	107,500	108,067	122,610	143,170	83,460	61,051	Baseline date and original targets remain unitl Estates & Campus Services Plan and Net Zero Carbon Plans and targets are approved.
	Efficiency measure	m ³ /m ²	1.1	1.0	1.0	1.0	1.0	1.0	0.8	0.8	0.7	0.9	0.9	0.9	1.0	1.0	0.5	0.5	
	Consumption compared to baseline			-8.9%	-10.6%	-5.0%	-3.4%	-6.5%	-12.1%	-13.5%	-11.2%	7.0%	6.4%	6.9%	21.3%	41.7%	-41.7%	-39.6%	
Waste sent to landfill	Reduce to zero by 2015	Tonne			570	483	456	460	413	22	0	0	0	0	0	0	0	15.9	
	Compared to baseline					-15%	-20%	-19%	-18%	-96%	-100%	-100%	-100%	-100%	-100%	-100%	-100%	2.7%	
Waste recorded as general waste	Reduce to zero by 2015	Tonne			127	483	456	459	412	432	365	392	354	316	271	252	172	202	
	Compared to baseline					280%	259%	261%	224%	240%	187%	209%	179%	149%	113%	98%	35%	59%	
Glass & food waste recovery	Collect from all buildings by 2014	Tonne				42	47	43	38	113	134	141	109	105	182	259	192	267	Original target remaining of collecting food and glass from all buildings, however data will be segregated for appropriate target setting.
	Compared to baseline						12%	2%	-10%	169%	219%	236%	160%	150%	332%	517%	357%	536%	
Commuting by single-occupancy car	Reduce to 32% by 2020	% of staff & students				42%	42%	42%	40%	55%	42%	42%	42%	63%	63%	63%	71%	27%	
	Reduction compared to baseline						0%	-1%	-6%	31%	0%	0%	0%	50%	50%	50%	69%	-36%	
Carbon Footprint*	30% reduction by 2020	Tonne CO ₂	7,380	7,008	7,146	7,296	7,666	7,470	7,135	7,338	7,712	8,191	7,643	7,518	7,808	5,610	5,142	3,950	Baseline date and original targets remain unitl Estates & Campus Services Plan and Net Zero Carbon Plans and targets are approved.
	Reduction compared to baseline			-5.04%	-3.17%	-1.14%	3.88%	1.22%	-3.32%	-0.57%	4.50%	10.99%	3.56%	1.87%	5.80%	-23.98%	-30.33%	-46.47%	

Performance Analysis:

Summary of performance against annual targets for 2020/2021

Plan	Overall Target	Annual Target(s)	Responsible Person	Target date	Performance Summary
1	Cut overall electricity consumption by 43% by the end of 2020/21	Reduce electricity consumption in across the estate by 10% compared to 2019/2020	Danielle Bird & Victoria Blake	Jul 21	Electric consumption has increased by 14% compared to 2005/06. During this time, the estate has grown, and Waterside campus has increased digital displays for learning, in line the with University's strategic plan to be "Future Focused" and "Super Supportive". The total reduction for the estate was 2% compared to 2019/20. This small reduction could be due to lockdown easing in April 2021 with more staff and students returning to campus. 2019/20 had typically lower usage due to lockdown starting in March 2020.
2	Cut overall gas consumption by 43% by the end of 2020/21 in order to reduce overall carbon emissions	Reduce gas consumption in across the estate by 5% compared to 2019/2020	Danielle Bird & Victoria Blake	Jul 21	Total gas consumption has decreased by 58% compared to 2005/06, exceeding the overall target. Gas consumption across the estate has decreased by 24% compared to 2019/20, also exceeding the target. Targets were exceeded even though gas use increased from April 2021 when lockdown measures eased. The main cause for the estate's decreased gas use can be attributed to the biomass boiler at Waterside which takes approximately 80% of the heat demand.

Plan	Overall Target	Annual Target(s)	Responsible Person	Target date	Performance Summary
3	Cut overall water consumption by 30% by the end of 2020/21 in order to reduce overall scope 3 carbon emissions	Reduce water consumption in existing buildings by 5% in 2020/21 compared to 2019/20.	Danielle Bird & Victoria Blake	Jul 21	Water consumption (including supply and waste) has decreased by 40% compared to 2005/06, exceeding the overall target. However, it increased by 11% compared to 2019/20. It is expected that water consumption will appear to increase due to improved monitoring and reporting since 20/21 academic year.
4	Reduce generation of non-recyclable waste to 30% by weight of total waste arising by 2021 and increase recycling rates to at least 80% by weight of total waste arising.	Increase recycling rate by 9% from 71% of total waste in 2019/20 to 80% in 2020/21. Reduce general waste sent for energy production by 4% in 2020/21 compared to 29% 2019/20.	Emma Stone	Jul 21	Due to the issues of the last academic year and an increase in single use non-recyclable packaging in our catering outlets (compostable packaging is used which we are unable to process at present) it has been a challenge to achieve our target of 80%. A recycling rate of 67% was achieved for AY 2020/21
5	Increase glass and food recovery so that all possible material is collected	Increase glass and food waste rates by 10% in 2020/21 compared to 32% in 2019/20	Emma Stone	Jul 21	Glass and food waste has risen significantly over the last 9 years due to segregation across all university buildings.
6	Reduce the proportion of staff and non-residential students commuting to the University by single-occupancy car to 32% by 2019/20.	Reduce staff and students commuting by single-occupancy car by 39% in 2020/21 compared to 2019/20	Amy Moore	Jul 21	
7	To conserve and enhance biodiversity and to realise the wider benefits.	To engage and educate students and staff in the importance of biodiversity on	Emma Stone & John Howes	Jul 21	A Management Plan for Biodiversity is currently being written as a collaborative approach across the Estates team and Academia. The plan is scheduled to be presented

Plan	Overall Target	Annual Target(s)	Responsible Person	Target date	Performance Summary
		the University estate.			to the Sustainability Board in March 2022

Normalisation

Normalised targets for electricity, gas and water are normalised using the gross internal floor area of all our buildings.

Normalisation Data Table		GIA (m2)		
Baseline Factor (05/06)		91,185		
Factor 19/20		152,880		
Factor 20/21		125,169		
Resource	Electricity	Gas	Water	
Baseline Factor (05/06)	8,530	18,058	101,069	
Factor	93.5	198.0	1.1	
2019-20	10150	12072	83,460	
Factor	81.1	96.4	0.55	
2020-2021	9,687	7,645	61,051	
Factor	77.4	61.1	0.5	
Target	-2%	-2%	-1%	
Year on Year Performance	-5%	-37%	-27%	
	-5%	-37%	-11%	
Performance against baseline	14%	-58%	-40%	
	-17%	-69%	-56%	

Table 4a: Normalised performance vs baseline

Normalised targets for Carbon are normalised to student FTE. Decreasing year on year against baseline.

Carbon Normalisation Data		FTE Students
Baseline Factor (05/06)		8,245
Factor 19/20		10,084
Factor 20/21		10,109
Resource	Carbon kg CO2e	
Baseline Factor (05/06)	7,380	
Factor	0.9	
2019-20	5,142	
Factor	0.5	
2020-2021	3950.3	
Factor	0.4	
Target	-2%	
Year on Year Performance	-23%	
	-23%	
Performance against baseline	-46%	
	-56%	

Table 4b: Normalised carbon performance v's baseline

Energy Performance

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.

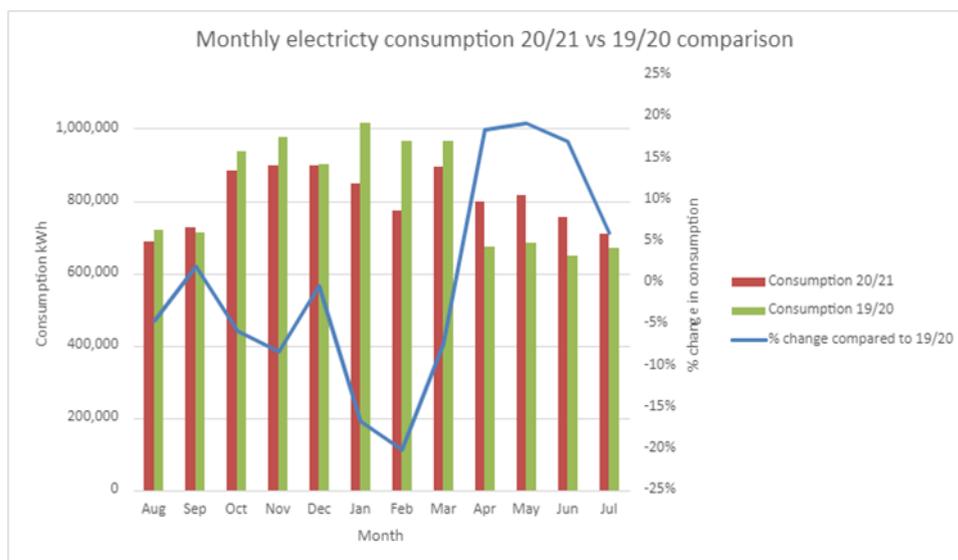


Figure 1a: Monthly electricity consumption kWh 2020/2021 compared to 2019/2020.

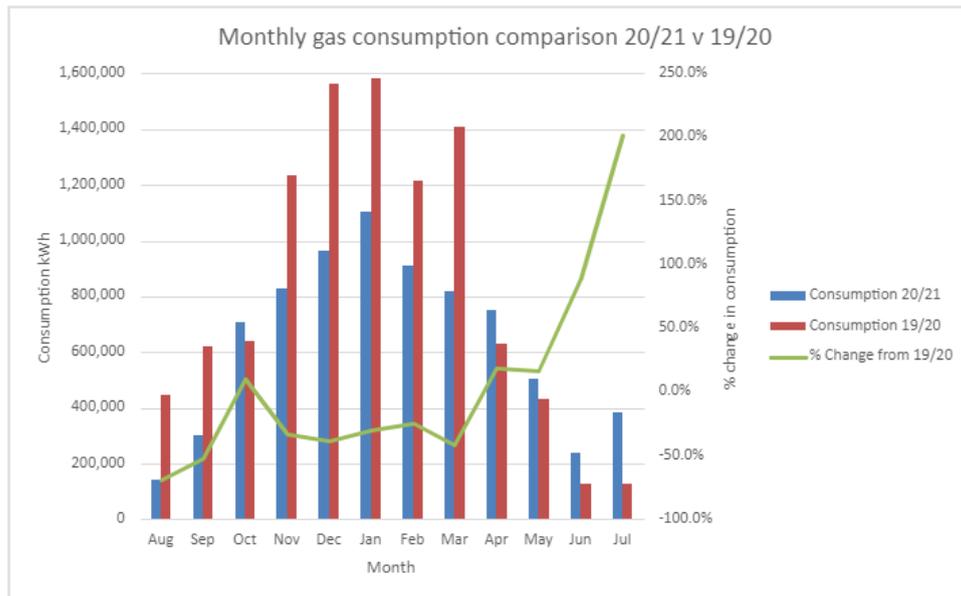


Figure 1b: Monthly gas consumption kWh 2020/2021 compared to 2019/2020.

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

The biomass boiler has generated 2,241 MWh 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.

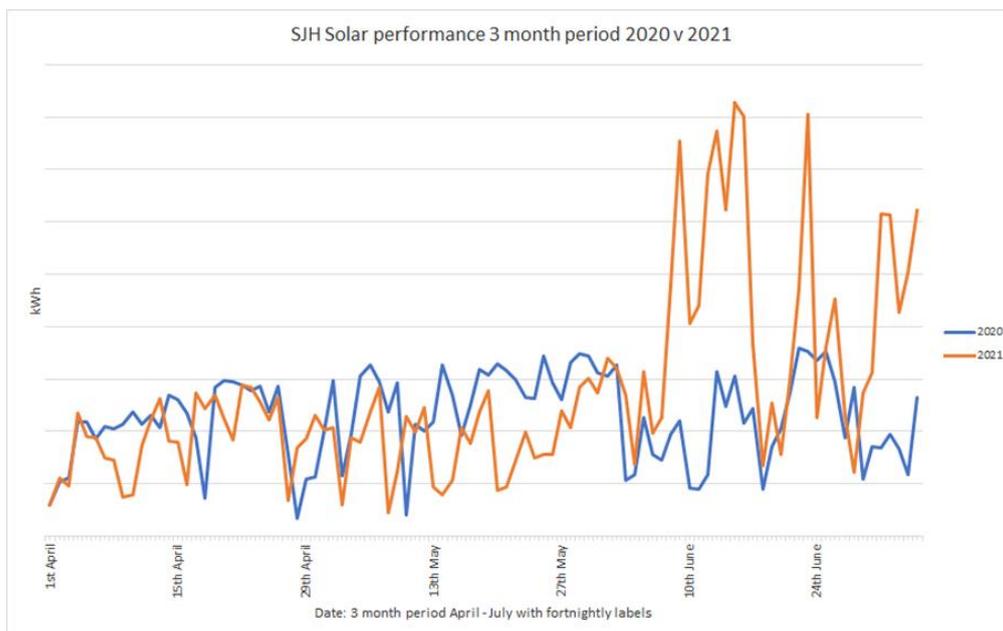
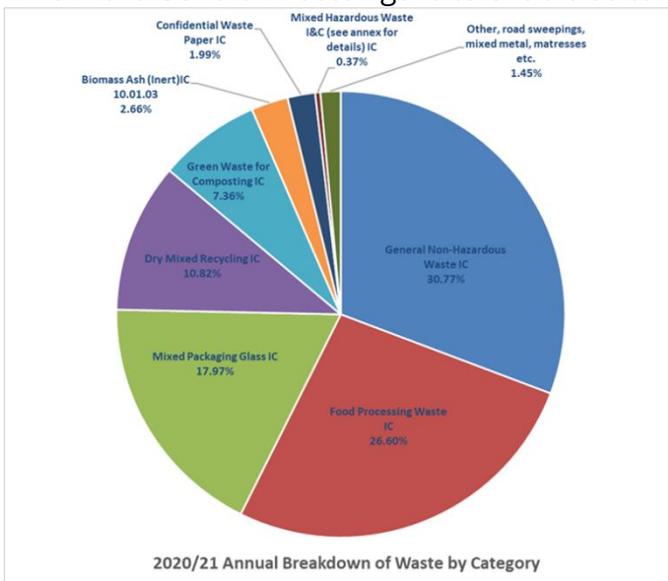


Figure 1c: Performance of solar panels April – July 2020 and 2021. Refer to legend for details.

Waste Performance Analysis

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 of the last academic year.

The volume of general waste produced increased from 172.96 tonnes in AY19/20 to 202.005 tonnes in 2020/21 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.



Annual waste breakdown 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.

The baseline for waste performance has been reset based on the data collated during the year of transition to Waterside Campus 2018/19. Therefore, the revised baseline is set at 252 tonnes general waste and zero to landfill.

Figure 1d: Annual waste breakdown

Travel Plan Performance Analysis

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 5 below demonstrates how 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%

Table 5: Modes of Staff Travel

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.

Action Plans 2021/22

Overall Responsibility		Victoria Blake Environment & Sustainability Manager		
Review Date		February 2021		
Plan	Overall Target	Annual Target(s)	Responsible Person	Target date
1	Interim target whilst the Estate Plan is under development is to not exceed electricity consumption beyond 2018/19 levels	Reduce electricity consumption across the estate by 8% compared to 2018/19 levels.	Danielle Bird	Jul 22
2	Interim target whilst the Estate Plan is under development is to not exceed gas consumption beyond 2018/19 levels.	Reduce gas consumption in across the estate by 25% compared to 2018/19	Danielle Bird	Jul 22
3	Interim target whilst the Estate Plan is under development is to not exceed 2020/21 water consumption (supply and waste) levels by 10%	Reduce water consumption in existing buildings by 5% in 2021/22 compared to 2020/21.	Danielle Bird	Jul 22
4	Reduce generation of non-recyclable waste to 30% by weight of total waste arising by 2021 and increase recycling rates to at least 80% by weight of total waste arising.	Increase recycling rate by 9% from 71% of total waste in 2019/20 to 80% in 2020/21. Reduce general waste sent for energy production by 4% in 2020/21 compared to 29% 2019/20.	Emma Stone	Jul 21
5	Increase glass and food recovery so that all possible material is collected	Increase glass and food waste rates by 10% in 2020/21 compared to 32% in 2019/20	Emma Stone	Jul 21
6	Reduce the proportion of staff and non- residential students commuting to the University by single-occupancy car by 20% in five years (2023).	This target was met and exceeded in 2020, three years early, it is acknowledged this was a direct result of the pandemic and work/study from home, it is important that the University now puts the strategies in	Amy Moore & Hollie Darby	Jul 21

		place to maintain this target, or within tolerance of the 20% initial goal.		
Plan	Overall Target	Annual Target(s)	Responsible Person	Target date
7	To conserve and enhance biodiversity and to realise the wider benefits.	To engage and educate students and staff in the importance of biodiversity on the University estate.	Emma Stone & John Howes	Jul 21

Action Plan 1: Electricity

Overall Target	Interim target whilst the Estate Plan is under development is to not exceed electricity consumption beyond 2018/19 levels	Action Plan reference 1		
Annual Target (s)	Reduce electricity consumption across the estate by 8% compared to 2018/19 levels.			
Measure/indicator of success	Overall consumption of electricity monitored through the University's sub-metering system and monthly utility invoicing. DEFRA emissions factors applied to calculate carbon emissions.			
Project synopsis	Utility spend is a major revenue expenditure for Infrastructure services, particularly with the introduction of new legislation. The most significant influence on electricity consumption is staff and student behavior. Through education and good practice (switching off of appliances etc.) a significant reduction in utility consumption is achievable. Key barriers to reducing consumption are awareness of good practice, motivation of staff and students and monitoring the practices within the local environment.			
Scope of the project	Existing domestic and non-domestic buildings across both campuses.			
Key milestones	Responsible person (s)	Target date	Status	
To streamline sub-metering and optimize use of the reporting software for increased monitoring	Danielle Bird	Nov 21		
Increase awareness and visibility of electricity use through digital displays and communications to staff and students to encourage behavior changes	Danielle Bird	July 2022		
Coordinate with Planning and Space manager and AV on a project to best utilize spaces and AV software to increase efficiency of space and screen use.	Danielle Bird	July 22		
Conduct energy audit of Learning Hub (primary academic building) to understand buildings performance and identify energy saving measures.	Danielle Bird	Dec 21		
BMS health check to investigate current settings and operations	Danielle Bird	Feb 22		
To run switch off campaigns for Christmas and semester breaks.	Danielle Bird	July 22		

Action Plan 2: Gas

Overall Target	Interim target whilst the Estate Plan is under development is to not exceed gas consumption beyond 2018/19 levels	Action Plan reference 2		
Annual Target (s)	Reduce gas consumption in across the estate by 25% compared to 2018/19			
Measure/indicator of success	Overall consumption of gas monitored through the University's sub-metering system and monthly utility invoicing. DEFRA emissions factors applied to calculate carbon emissions.			
Project Objective	<p>Gas is consumed for the provision of spatial heating and hot water across The University. Therefore, consumption is dependent on occupancy and external temperature.</p> <p>The University has a BMS (Building Management System) which provides central control over heating, ventilation and air conditioning. Central control of these systems is influenced by localized (generally adjustable) settings, thermostats and radiator valves.</p> <p>The combination of the BMS and sub-metering system is an excellent tool that can be used to manage campus gas consumption.</p>			
Scope of the project	Existing domestic and non-domestic buildings across both campuses.			
Key milestones	Responsible person (s)	Target date	Status	
To streamline sub-metering and optimize use of the reporting software for increased monitoring	Danielle Bird	Nov 22		
Review and update heating & cooling guidance document used by Building Services to ensure key information, settings and operations are up to date and reflect best practices for energy efficiency and student welfare	Danielle Bird	Dec 21		
BMS Health Check for Waterside Campus with the aim to provide energy saving recommendations and programme of works.	Danielle Bird	Feb 22		
Investigate and review biomass boiler is running efficiently	Danielle Bird	Jan 22		
Increase awareness and visibility of electricity use through digital displays and communications to staff and students to encourage behavior changes	Danielle Bird	July 22		

Action Plan 3: Water

Overall Target	Interim target whilst the Estate Plan is under development is to not exceed 2020/21 water consumption (supply and waste) levels by 10%	Action Plan reference3		
Annual Target (s)	Reduce water consumption in existing buildings by 5% in 2021/22 compared to 2020/21			
Measure/indicator of success	Overall consumption of water monitored through the University's sub-metering system and monthly utility invoicing. DEFRA emissions factors applied to calculate carbon emissions.			
Project Objective	Utility spend is a major capital expenditure for the Estates team. The most significant influence on water consumption is staff and student behavior. Through education and good practice (turning off taps etc.) a significant reduction in utility consumption is achievable. Key barriers to reducing consumption are awareness of good practice, motivation of staff and students and monitoring the practices within the local environment.			
Scope of the project	Existing domestic and non-domestic buildings across estate.			
Key milestones	Responsible person (s)	Target date	Status	
Monitor new utility invoicing since joining framework for 2021/22 and ensure smoother billing process and greater data collection	Danielle Bird	Dec 21		
Detailed analysis of water consumption across the University's estate	Danielle Bird	Jul 22		
Installation of either AMR or sub-meter on Waterside tariff meter	Danielle Bird	Nov 21		
Optimize the use of the Elcomponent MW2 software system	Danielle Bird	Nov 21		

Action Plan 4: Waste Management

Overall Target	Reduce the generation of non-recyclable waste to 25% by weight of total waste arising by 2022 and increase recycling rates to at least 80% by weight of total waste arising.	Action Plan reference 4		
Annual Target (s)	Increase recycling rate by 13% from 67% of total waste in 2020/21 to 80% in 2021/22. Reduce general waste sent for energy production by 4.33% in 2020/21 compared to 30.77% 2020/21.			
Measure/indicator of success	Maintaining zero waste sent to landfill Reduction in the weight of residual waste sent for conversion to energy Increase in weight and % of waste recycled Above will be monitored using the Suez monthly waste reports			
Project Objective	To increase the volume of materials recycled and ensure zero waste being sent to landfill through behaviour change and staff and student engagement activities as well as providing adequate resources and signage to support the separation and collection of the various waste streams.			
Scope of the project	Existing domestic and commercial buildings and external areas across both campuses.			
Key milestones	Responsible person (s)	Target date	Status	
Include waste guidance in new Welcome communications for new starters in halls and across campus.	Emma Stone	Sept 21	Complete	
Refresh bin labels and waste guidance signage across all campus buildings.	Emma Stone	Sept 21	In progress	
Create and implement a communication and engagement strategy using social media resources and university communication channels to promote a change in behaviour and educate staff and students on correct disposal of waste. Student engagement teams (Residential Life) will be key partners in this initiative.	Emma Stone	Jan 22	In progress	
Define and implement a Zero Avoidable Waste Policy	Emma Stone	Mar 22	In progress	
WEEE amnesty for staff equipment	Emma Stone	Jan 22		
Source a long term solution for Waterside cup recycling project	Emma Stone	Dec 21	In progress	
Investigate the potential for operating a textile recycling facility across campus with a view to running a pilot project in 2021	Emma Stone	July 22	In progress	
Complete termly waste audits across all areas of campus and report on findings	Emma Stone	July 22		

Action Plan 5: Glass and Food Waste Recovery

Overall Target	Increase glass and food waste recovery so that all possible material is collected.	Action Plan reference 5		
Annual Target (s)	Increase food and glass recycling rates by 10% in 2020/21 compared to 32% in 2019/20.			
Measure/indicator of success	<p>Maintaining zero waste sent to landfill</p> <p>Reduction in the weight of residual waste sent for conversion to energy</p> <p>Increase in % of glass recovered from halls of residence</p> <p>Increase the segregation of food waste to 30% of waste</p> <p>Reduce the level of food waste at both a student and catering staff level</p> <p>Above will be monitored using the Suez monthly waste reports</p>			
Project Objective	<p>The action plan for glass and food waste recovery will be split into two focus areas, these will include the student community in halls of residence and our catering providers. Both areas will be targeted to increase the levels of glass and food segregation whilst minimising the amount of food going to waste.</p> <p>This will be achieved through behavioural change and engagement activities as well as providing adequate resources and signage to support the separation and collection of the various waste streams.</p>			
Scope of the project	Existing domestic and non-domestic buildings across both campuses.			
Key milestones	Responsible person (s)	Target date	Status	
Create and implement a communication and engagement strategy using social media resources and university communication channels to promote a change in behaviour and educate staff and students on correct disposal of waste. Student engagement teams (Residential Life) will be key partners in this initiative.	Emma Stone	Jan 22		
Include waste guidance in new Welcome communications for newstarters in halls and across campus.	Emma Stone	Sept 21	Complete	
Engagement of catering staff in the segregation of food waste and glass	Emma Stone	Oct 21	In progress	
Trial the use of a catering supplier scorecard relating to the segregation of waste	Emma Stone	Jan 22	In progress	
Provide regular news updates / food waste reduction initiatives / ideas for students in halls. Residential Life will be key to supporting this initiative.	Emma Stone	July 22		
Complete termly waste audits across all areas of campus and report on findings	Emma Stone	July 22		

Action Plan 6: Single Occupancy Travel

Overall Target	Reduce the proportion of staff and non-residential students commuting to the University by single-occupancy car by 20% in 5 years (2023).	Action Plan reference 6		
Annual Target (s)	4% reduction in single-occupancy car travel.			
Measure/indicator of success	Comparison of student and staff travel modes against previous surveys.			
Project synopsis	<p>Provisions have been made to enable staff and students to park at both campuses of the University. The provision of car parking spaces for students and staff members encourages the use of private vehicles for commuting purposes and demand often exceeds capacity, this leads to increased carbon emissions and congestion in the local area. It is important that there are sustainable alternatives for staff and students to attempt to minimise our carbon impact.</p> <p>Additionally, many staff members use their own vehicles for business travel with consequential issues related to the use of this 'grey fleet'. Again, the University needs to provide alternative solutions.</p>			
Scope of the project	Members of staff and students at both campuses.			
Key milestones		Responsible person (s)	Target date	Status / Progress
Conduct Annual Travel Survey		Amy Moore	2020	Baseline conducted in 2016 First follow up completed in 2019 Second follow up completed in 2020. Next survey – November 2021.
Provide bus and cycle maps during welcome week and Union Day and travel guidance in new Welcome Guide for new starters 2020/21.		Amy Moore/Hollie Darby	2018	First provided in July 2018 and ongoing annually thereafter. Next date – Sept 2021.
Continue Dr Bike maintenance sessions		Amy Moore/Hollie Darby	2018	First delivered in 2016 and annually thereafter, Next date will be Spring 2022.
Co-ordinate police bike tagging during Travel Roadshow for staff and students.		Amy Moore/Hollie Darby	2018	Bike tagging and roadshows delivered bi-annually. First delivered in 2016 and next date booked for Sept 2021.

Trial of cargo bikes on campus along with trailers for external services staff to supplement the electric vehicles available.	Amy Moore	2021	Two bikes arrived in March for a two-week trial. One bike was swapped for a smaller version and the other kept. The bikes are used by Building Services and Catering.
Participation in the Council electric scooter initiative across the town centre	Amy Moore	2020	The Council launched the E-Scooter scheme with Voi in August 2020 and the University has fully supported this including liaising with Voi for parking zones, speed restrictions and exclusion zones. Voi will be attending the September 2021 Welcome Weekend for Health & Safety demos.
Edge of town Park and Ride	Amy Moore	2018	The University has purchased and leased two car parks on the edge of town to provide 1500 free parking spaces for staff and students. The bus to Waterside is subsidised to just £1 return. Operational Monday – Friday.
Student on campus parking is restricted to 160 spaces	Amy Moore	2020	160 commuting permits are awarded termly – this number is considered appropriate with the capacity however permits have strict eligibility criteria including a 10-miles exclusion zone and students must reside on the East of town (the opposite side to where our Park & Ride is located).
Student Bike Loan Scheme	Hollie Darby	2020	4 bikes were purchased in October 2020 for a new termly loan scheme for students, the scheme has proved popular with all bikes being utilised. We are looking to expand with additional bikes arriving shortly.
Business and student travel (scope 3 carbon emissions) and Procurement Travel Policy	Amy Moore	2022	Working with procurement on implanting a business travel hierarchy and agree student travel to campus boundaries.

Action Plan 7: Carbon Management

Overall Target	Net Zero Carbon Scope 1&2 carbon emissions by 2030 and Net Zero Carbon Scope 3 emissions 2050	Action Plan reference 7	
Annual Target (s)	Net Zero Carbon Plan dates have been agreed, with final plan to be signed off by 31 st March 2022.		
Measure/indicator of success	Sign off of the Net Zero Carbon Plan		
Project synopsis	Net Zero is an ambitious and long-term project. Our Carbon Management Plan (2030) will identify key strategic choices for the University in terms of energy conservation, generation and supply. These will be a collection of activities including major infrastructure changes, refurbishment of buildings (where needed), changes to new build standards, renewable generation of electricity and heat, and numerous other activities.		
Scope of the project	Net Zero Carbon institution in Scope 1 & Scope 2 emissions by 2030.		
Key milestones	Responsible person (s)	Target date	Status
Obtain agreement from University Management Team to commit to Net Zero Targets	Victoria Blake	Oct 20	UMT signed off on Net Zero Carbon Target & signed up to the One Planet Pledge.
Review Carbon Management Plan 2017-2020. Previous Carbon Management Plan based upon HEFCE targets. Intend to plan up to 2030, matching the overarching University strategy, and make first steps towards the governments net zero 2050 target. Revised Target for CMP2030 First draft of the Carbon Management Plan to be complete by 31st January Final version of the Carbon Management Plan to be complete	Victoria Blake & Emma Stone	Oct 20	CMP 2017 review completed and published on UON Sustainability Hub pages. Net Zero Carbon Plan dates have been agreed, with final plan to be signed off by 31 st March 2022.

by 31st March for Exec Board sign off.			
Switch to 100% UK based renewable electricity and 100% green gas or brown gas	Victoria Blake	Oct 20	All sites are now 100% renewables for business tariff. Financial review of green/brown gas options underway as per Gas Action Plan.
Work with UNO Bus on the potential to convert buses to biodiesel or electric options	Victoria Blake & Amy Moore	Jan 21	Uno have plans in place regarding greening of their vehicles.
Calculate Scope 3 emissions for water and waste and agree reduction strategy	Victoria Blake	Jan 21	Emissions calculated based on current water data (there are some issues associated with this as highlighted in the Water Action Plan. Waste provided by Suez. Energy reduction strategy will be included within new CMP2030.
New: Mapping exercise to identify what is already being done to reduce carbon emissions, establish what could be done and agree priorities	Victoria Blake	Oct 21	
New: Calculate Scope 3 carbon emissions covering: Business travel, staff commuting and student travel. Procurement: identify high value and quantity of purchased product & services Set scope 3 reduction targets and add these to the CMP2030.	Victoria Blake	Sept 22	

Carbon Footprint

Climate change is one of the biggest global challenges faced today. In 2019 the UK government passed legislation under the Climate Change Act for the UK to become Net Zero Carbon by 2050, following this public and private sector bodies have responded by setting themselves challenging targets, which in some instances aim to bring forward the target date of 2050 or split into smaller targets.

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

In response to this Environment & Sustainability Team prepared a paper for the University Management Team (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 4716 tonnes CO₂e.

Net Zero is an ambitious and long-term project. Our Carbon Management Plan (2030) will identify key strategic choices for the University in terms of energy conservation, generation and supply. These will be a collection of activities including major infrastructure changes, refurbishment of buildings (where needed), changes to new build standards, renewable generation of electricity and heat, and numerous other activities.

UMT have requested a first draft for comment of our Carbon Management Plan 2030 by 31st January 2022, with final Executive Board sign off by 31st March 2022.

Carbon footprint 2021 calculation details:

The University's carbon footprint has been completed following a consistent methodology going back to 2005/06. This method makes use of an "Emissions Baseline & Targeting Tool for UK Higher Education Institutions (Release version 1.2)" issued by the Carbon Trust. All carbon conversion factors have been updated using the 'UK Government GHG Conversion Factors for Company Reporting' spreadsheets. All relevant data used for calculating carbon footprint has been extracted from appropriate monitoring spreadsheets and the data includes:

- Grid electricity consumption
- Gas
- Biomass
- Transport emissions including estates vehicles, inter-campus bus travel (Uno Buses) and estimated grey mileage.

Environmental Projects:

Ecology and Biodiversity

The University of Northampton Estate attracts a vast array of flora and fauna, from riverside habitats and urban tundra to tree belts and roof gardens. All are carefully managed by a team of staff and students to conserve, encourage and create habitats for our native species.

A Management plan for Biodiversity is currently being written setting out the University's current approach to Biodiversity across our campus and the aspirations to conserve and enhance the natural habitats and variety of species we have.

Our approach is aligned to Biodiversity 2020 – A Strategy for England's wildlife and ecosystem services seeking to guide conservation efforts in England from 2010, including the setting of goals to halt overall loss of England's biodiversity by 2020. In the longer term, the ambition is to move progressively from a position of net biodiversity loss to net gain.

Biodiversity and the opportunity to experience nature plays an important role in providing health benefits to our students, staff and the wider community, we aspire to ensure that our spaces can be used to educate and support the mental health and wellbeing of everyone who frequents the campus.

We are a [Hedgehog Friendly Campus](#), achieving a silver accreditation in 2021 and encourage projects aimed at bringing staff and students together to benefit the environment. [Project Awesome](#) is an excellent example of a collaboration of staff and students whose engagement and passion has been able to benefit our natural environment. Our formal education courses include [Environmental Science](#) and encourages our students to make use of our estate through the placing of wildlife cameras to support the monitoring and surveillance of species.

The External Services Grounds Team delivers a large proportion of our biodiversity aspirations through sustainable grounds management practices and consults with the Environment and Sustainability Team on new initiatives and best practices to maximise the biodiversity we achieve across campus.

The Management Plan for Biodiversity will guide our efforts to conserve, enhance and improve the biodiversity of the species across all University landscapes over the next 5 years, with a view to achieving biodiversity net gain.

Coffee Cup Recycling “Up for The Cup”

Since the Up For The Cup 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. 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.

Renewables for Business Tariff

As part of our commitment to reducing the carbon emissions associated with our electricity consumption, we have signed up to EDF's Renewables for Business across the University Estate. Renewables for business means that for every kWh of electricity we consume from the grid, 1 kWh of renewable energy is put back into the grid. Renewables supplied are a mixture of wind, hydro, solar, biomass and landfill gas. We will have the REGOs, the certificates of origin confirming the type of renewables that have been put back into the grid and the quantity, by the end of October 2021.

Monitor and Report Progress, and Communication

To enable us to build on the achievements made to date and to demonstrate our commitment to embedding sustainability, UON requires a Sustainability Governance Structure (**Table 6**). This ensures effective oversight and decision-making on strategy, performance, responsibility and accountability. This framework supports the progress reporting, monitoring and communication of environmental performance and sustainability across the institution.

Progress reporting takes place twice yearly with an annual report presented to the UMT and sustainability board in the Autumn and a mid-year review provided towards the end of spring. The sustainability board meets 3 times per year with a full progress update presented by the Environment and Sustainability Manager and supported by the rest of the team.

In addition to the formal framework other methods of communication include an Estates and Campus Service newsletter and termly department briefing, updates are provided by the Environment and Sustainability Team on projects, campaigns and performance to ensure all departments are aware of the impact and progress of the projects underway. The Sustainability Team also produces regular articles for internal student and staff Communications (UNIFY), as well as material on the University's website and in external publications.

The University is a member of the Environmental Association for Universities and Colleges and regularly participates in the Northamptonshire Climate Change and Social Impact Groups, for example Northamptonshire Sustainable Food Places, Circular Economy 3 Counties and the East Midlands Universities Association.

This list is by no means exhaustive but does provide an insight into the areas of communication covered within the organisation.

Training is considered key in ensuring effective communication of our environmental and sustainability performance, over the last 12 months the team have attended several training courses to include 3 members of the team completing the IEMA Certificate in Environmental Management, carbon literacy training is scheduled for the whole team to attend before the end of the year. This ensures the team can communicate accurate and relevant information across the University.

Table 6: UON Sustainability Governance Structure

University Management Team (UMT) Board Level	Purpose: Responsible for agreeing sustainability strategy, accountabilities, responsibilities and governance structure with respect to sustainability.
Sustainability Board	Who: At least one member of the (UMT), senior academics from key Faculties, team leads or members from the wider university teams, representatives from the Action Groups and Environment & Sustainability Manager (or representative of the Environment & Sustainability Team).

	<p>Purpose: To oversee our objectives, targets and work on sustainability. Responsible for ensuring that our sustainability targets are integrated into projects, initiatives and where appropriate approving projects. This group is responsible for reviewing our progress against targets and strategy. This Group is responsible for signing off policies and procedures.</p> <p>Reporting Structure: Chair updates the UMT once a year</p> <p>Frequency: Sustainability Board meets termly.</p>
<p>Environment & Sustainability Team</p>	<p>Who: Members of the Environment & Sustainability Team.</p> <p>Purpose: Oversee and coordinate the implementation of the sustainability strategy. Monitoring reporting and reviewing sustainability policies and practices. Provide specialist advice as required.</p>
<p>Action Groups</p>	<p>Who: Members of the Environment & Sustainability Team, staff and students.</p> <p>Purpose: Action Groups are voluntary groups responsible for generating ideas for innovation and support activities such as applying for support and funding for initiatives, implementing specific UON projects, engaging staff, students and the local community.</p> <p>Reporting Structure: Action Team members report to the Sustainability Board.</p>