

Investors in the Environment Manual

Version 10
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Authorised for issue by



Victoria Blake
Environment & Sustainability Manager



Investors in the Environment

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Version Information

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1	13/03/2013	12/09/2013	Version 1 created
2	04/04/2013	03/10/2013	Version 1 superseded by Version 2
3	20/01/2014	19/07/2014	Version 2 superseded by Version 3
4	23/04/2015	22/10/2015	Version 3 superseded by Version 4
5	06/05/2015	05/05/2015	Version 4 superseded by Version 5
6	25/3/2016	25/09/2016	Version 5 superseded by Version 6
7	25/4/2017	25/10/2017	Version 6 superseded by Version 7
8	3/5/2018	3/11/2018	Version 7 superseded by Version 8
9	03/10/2019	09/10/2019	Version 8 superseded by Version 9
10	03/08/2020	16/09/202	Version 9 superseded by Version 10

Introduction and Scope

An Environmental Management System (EMS) considers the environmental impacts of an organisation and provides a systematic approach to planning and implementing continual improvements to environmental performance. It considers what an organisation is legally obliged to do and what it chooses to do, whether this be for economic or ethical reasons. Top management have overarching accountability for an EMS and provide the strategic direction. The University of Northampton 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.

All University activity including teaching, research, administrative and operations are under scope of this EMS. The scope has been determined considering where the major impacts originate and what can realistically be managed. This document summarises the University's EMS, following the Investors in the Environment (iE) six step process, aiming to satisfy the criteria for iE Green Level accreditation. The University's EMS is maintained by the Safety, Health and Environment Team, within the Estates and Campus Services department.

In September 2018 The University of Northampton (UoN) moved to our 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 (<http://hellowaterside.northampton.ac.uk/>). A small amount of teaching remains at St Georges Avenue, as well as administrative activity. Three halls of residence are all that remain of Park Campus, which is now referred to as Boughton Green Halls. Several satellite buildings are also occupied by the University.

Environmental Policy

The Health, Safety, Security & Environment (HSSE) Committee is a cross-functional group that formulates strategy, policy, procedures, implementation structure, objectives and targets for all significant operations across The University of Northampton which impact upon the environment. The HSSE Committee has agreed terms of reference. The University's Environmental Policy has been established by the HSSE Committee and is reviewed annually. It was last reviewed and re-issued in March 2019 (Version 11) and is authorised by the University's Chief Operating Officer. An annual review of the policy took place in March 2020 and showed that the policy continues to reflect the University's current objectives, with no changes needed. The University's Environment Adviser, Emma Stone, is responsible for implementing the [Environmental Policy](#).

Future revisions of the Environmental Policy will be undertaken by the Environment & Sustainability Board, this Board will be a cross-functional group that formulates strategy, policy, procedures, objectives and targets for all significant operations across The University of Northampton which impact upon the environment and sustainability.

The University is committed to reducing and managing its environmental impacts and to the continual improvement of our environmental performance. To help achieve this, we are working towards Investors in the Environment Green accreditation.

Resource Use

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 half hourly tariff meters on a resilient HV ring main covering the entire campus. Avenue Campus is supplied via two half-hourly tariff meters, one for the Newton building and one servicing the rest of the campus. The electricity supply at Park Campus is supplied by two half-hourly tariff meters.

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 (going back to 2008) is stored on a central server and can be interrogated by the Environment & Sustainability team.

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. Consumption data is used to compile annual Display Energy Certificates and to complete carbon foot printing.

Baseline annual electricity consumption for 2005/06 academic year was 8,530MWh. Annual electricity consumption for 2019/20 academic year was 10150 MWh. This represents an increase of 1620 MWh from the base line an increase of 19%.

Gas

Waterside Campus has two gas supplies. A medium pressure main serves the energy centre plant and a low-pressure main supplies the rest of the campus. Park Campus has two supply points servicing the Park Student Village. Avenue Campus is supplied via 5 tariff meters, 4 fitted with supplier AMR.

As with electricity supply, 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. This data (going back to 2008) is stored on a central server and can be interrogated by the Environment & Sustainability Team. 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 2019/20 academic year was 12,072 MWh. This is a 33% reduction when compared to the baseline with a 13% reduction when compared to 2018/19. Our natural gas supplier was change during April 2020, this would have resulted in some discrepancy in consumption data which would have impacted on our consumption data.

This reduction may also be a result of the introduction of the biomass boiler at the Waterside campus and a reduction in the use of the buildings at Avenue Campus. The biomass boiler

produced 2.7 MWh of heat energy during 2019/20, contributing 43 tonnes of CO₂e to our carbon footprint.

Biomass and Renewables

The University's biomass boiler has been in use for 18 months and during the AY 2019/2020 generated 2,718,418 kWh of renewable heat energy. The carbon emissions associated with this energy source are 42 tonnes CO₂e. Using biomass as a heat source offsets 366 tonnes of carbon emissions when compared to using the equivalent heat energy from natural gas.

St Johns Hall PV solar system has generated 5,554 kWh of renewable electricity during the academic year, which has resulted in an income of £1,733 via incentivised payments received from the governments Feed-In-Tariff.

Water

Waterside campus has two water supplies. One serving the administrative block called Senate, and the second serving the remaining campus. Park Campus has recently had a new water supply point installed as part of the site works, replacing the previous supply which served the whole campus. Avenue Campus is supplied via 2 tariff meters, which are fitted with supplier AMR.

As with electricity and gas supplies, all tariff meters except for the new water supply at Park Campus 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.

Cost and consumption data from invoices is input onto spreadsheets to enable comparison to sub-metering data and figures from previous years.

Baseline annual water consumption for 2005/06 academic year was 101,069 m³. Annual water consumption for 2018/19 academic year was 83460 m³. This represents a decrease of 17%.

Waste sent to landfill

The University has been recording the amount of waste sent to landfill since the academic year 2007/8. During the academic year 2019/20 the waste contract was sent to tender and awarded to Suez. The contract with Suez will commence from the 1st September 2020.

Each waste collection is weighed by Cawleys, the University's waste contractors, and monthly data is supplied. This data is stored on a central server and can be interrogated by the 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.

Baseline annual waste sent to landfill for 2007/08 academic year was 570 tonnes. Annual waste sent to landfill for 2019/20 academic year was 0 tonnes.

The baseline for waste performance was set as the academic year of 2007/08 when 74% of waste was classified as general. In the academic year of 2019/20, 29% of waste was classified as general

waste and processed for energy recovery, meaning the Universities general waste has reduced by more than half from the baseline figure.

Glass and food waste recovery

Following a campus-wide waste audit, glass bottles and food waste were identified as creating a significant proportion of the total weight of waste arisings across the campuses. It was initially decided to focus on glass segregation and recovery, before then focussing on food waste as part of the University's 'Sustainable waste and resource management strategy'. Glass segregation and collections from Halls of Residence and catering facilities were started in November 2008, with food waste collections commencing in October 2012.

Baseline annual glass and food recovered for 2008/09 academic year was 42 tonnes. Annual glass and food recovered for 2019/20 academic year was 192 tonnes, 32% of total waste, therefore we have recovered 4.5 times more food and glass this academic year than during the baseline year 2008/09. The glass waste is sent for recycling, whilst the food waste is sent for anaerobic digestion where the resulting gas produced is collected for use.

Commuting by single-occupancy car

The University encourages students, staff and visitors to consider using alternative transport methods when travelling to the campuses to reduce the congestion and pollution caused by single-occupancy car 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 car. The proposed single occupancy car-use target for staff and students combined is no more than 33% by 2021.

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.

The baseline of 42% of students and staff commuting by single-occupancy car was derived from a 2008 travel survey. The most recent travel survey from 2019 suggests the percentage of students and staff commuting by single-occupancy has risen to 71%. A 2020 travel survey is planned to be issued in October 2020.

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.

Carbon Footprint

The second revision of our Carbon Management Plan produced in 2017 made a commitment of a 30% reduction in our CO₂e emissions by 2020, compared to our 2005/2006 baseline. This plan was developed in line with the reduction target set for HE in England as a response to the 2008 Climate Act.

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.

Interventions introduced to the estate to reduce carbon production have managed to offset the increased energy demand in line with our larger estate and student numbers. In isolation these steps have in fact led to a 1% reduction in carbon emissions against 2005/2006 figures.

Covid – 19 will have had an impact on reducing our energy demand and therefore favourably affect our carbon figures, exactly quantifying this is challenging given that we do not have a nominal year data (by which we mean our estate remaining unchanged for 12 months). However informal calculations estimate this to be between 4-8%.

By far the largest contributor to our reduction in carbon emissions is the decarbonising of the grid (greening of the grid). The reduction in the use of fossil fuel and the increase in renewables and nuclear power to generate electricity has reduced the carbon emissions associated with energy generation. In short, every kWh supplied to the grid in 2019/2020 has produced 42% less carbon than it would have in 2005. This one change would have secured 26% of 30% target. The cumulative effect is an overall reduction of 30.33% achieving our target of 30%. It needs to be recognised that there is a potential margin for error in these figures and without the changes in demand as a result of the Covid – 19 Lockdown, most modelling assumptions would result in missing our 30% target by 4-6%.

Targets

Targets have been set for improving environmental performance in the six measured resources, as well as scope 1&2 carbon footprint. Table 1 illustrates performance against the baseline year and against the previous years.

Resource	Baseline	2017-18	2018-19	2019-20	Annual Target	Previous Year Performance	Baseline Year Performance
Electricity (MWh)	8,530	12,587	11,202	10150	2%	-9%	19%
Gas (MWh)	18,058	18,045	11,358	12,072	2%	6%	-33%
Water (m ³)	101,069	122,610	143,170	90,345	1%	-42%	-17%
Waste sent to landfill (tonnes)	570	0	0	0	2%	0%	-100%
Glass and food waste recovery (tonnes)	42	182	259	192	1%	-26%	357%
Commuting by single occupancy car (%)	42	63	63	71	1%	13%	69%
Carbon footprint (tCO ₂)	7,380	7,808	5,610	5,054	2%	-8%	-30%

Table 1. Environment Performance Targets

Electricity consumption has increased by 19% since the baseline, however has reduced by 9% on the previous year. The expansion of the University in terms of size and student numbers contributed to the increase, however the 2019/20 reduction compared to the previous year can be attributed to COVID-19 as many buildings were taken out of operation during the lockdown period. Gas consumption has risen slightly from the previous year however, this is a 33% reduction on the baseline 2008/09 figure. A travel survey carried out in 2019 shows that commuting by single car occupancy increased to 71% in 2019/20 from 63%. This is an 8% increase compared to the 2016 survey, a student and staff survey will be carried out in October 2020. Both targets relating to waste management have been exceeded, new targets are to be agreed.

Table 2 shows yearly progress against targets since the baseline date of 2005/2006. This highlights the impact of the biomass boiler, green of the grid and Covid-19 has had on achieving the 30% reduction in CO₂ emissions set within the 2017-2020 Carbon Management Plan. This table also highlights investigation into the reduction in water consumption is needed and that zero waste to landfill is no longer an appropriate waste target. New targets have been set, with details provided in Action Plan 4.

Table 2. Targets and Progress to Date

Resource	Target	Unit of measure	Target Progress														
			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	2019/2020
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
Electricity	30% reduction by 2020	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
	Efficiency measure	kWh/m ²	94	90	88	86	90	94	86	86	72	75	74	81	103	79	66
	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%
Gas	30% reduction by 2020	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
	Efficiency measure	kWh/m ²	198	183	188	195	192	179	150	162	136	142	143	143	148	80	79
	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%	-33.1%
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
	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
	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%	-17.4%
Waste sent to landfill	Reduce to zero by 2015	Tonne			570	483	456	460	413	22	0	0	0	0	0	0	0
	Compared to baseline					-15%	-20%	-19%	-18%	-96%	-100%	-100%	-100%	-100%	-100%	-100%	-100%
Waste recorded as general waste	Reduce to zero by 2015	Tonne			127	483	456	459	412	432	365	392	354	316	271	252	172
	Compared to baseline					280%	259%	261%	224%	240%	187%	209%	179%	149%	113%	98%	35%
Glass & food waste recovery	Collect from all buildings by 2014	Tonne				42	47	43	38	113	134	141	109	105	182	259	192
	Compared to baseline						12%	2%	-10%	169%	219%	236%	160%	150%	332%	517%	357%
Commuting by single-occupancy car	Reduce to 32% by 2016	% of staff & students				42%	42%	42%	40%	55%	42%	42%	42%	63%	63%	63%	71%
	Reduction compared to baseline						0%	-1%	-6%	31%	0%	0%	0%	50%	50%	50%	69%
Carbon Footprint*	30% reduction by 2020	Tonne CO2	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
	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%

With the conclusion of the Carbon Management Plan 2017 – 2020, we are in the process of preparing a paper for the University's Management Team, on agreeing our Net Zero Carbon targets and timescales. Overarching and annual targets for 2019/2020 are summarised in table3.

Table 3; Summary of overarching and annual targets for 2020/2021

Plan	Overall Target	Annual Target(s)	Progress against annual target	Responsible Person	Target date
1	Cut overall electricity consumption by 30% by the end of 2019/20 compared to a 2005/06.	Reduce electricity consumption by 2% in 2019/20 compared to 2018/2019	9% decrease in electricity consumption	Paul Tucker/ Victoria Blake	Jul-20
2	Cut overall gas consumption by 30% by the end of 2019/20 compared to a 2005/06.	Reduce natural consumption by 2% in 2019/20 compared to 2018/2019	6% increase in gas consumption	Paul Tucker/ Victoria Blake	Jul-20
3	Cut overall water consumption by 30% by the end of 2019/2020 compared to a 2005/06	Reduce water consumption by 2% in 2019/20 compared to 2018/2019	42% reduction in consumption	Paul Tucker/ Victoria Blake	Jul-20
4	Reduce generation of non-recyclable waste to 30% by weight of total waste arising by 2021	Increase recycling rate by 9% from 71% of total waste in 2019/20 to 80% in 2020/21. Reduce non-recyclable waste by 2% in 2019/20 compared to 2018/2019	Recycling rate currently 71%	Emma Stone	Jul-21
5	Increase glass and food waste recovery so that all possible material is collected.	Increase food and glass recycling rates by 2% in 2020/21 compared to 32% in 2019/20.	26% decrease in food and glass recycling rates	Emma Stone	Jul-21
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 10% in 2019/20 compared to 2018/2019	13% increase in commuting by single-occupancy car	Emma Stone & Amy Moore	Jul 20

Action Plans

Overall Responsibility	Victoria Blake Environment & Sustainability Manager
Review Date	February 2021

Plan	Overall Target	Annual Target(s)	Responsible Person	Target date
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
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
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
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 to 32% by 2019/20.	Reduce staff and students commuting by single-occupancy car by 39% in 2020/21 compared to 2019/2020	Emma Stone & 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 the University estate.	Emma Stone & John Howes	Jul 21

Essential Actions

Following the award of funding from environmental charity Hubbub to finance a coffee cup recycling initiative, the UpForTheCup project went live in January 2020. The first collection from Waterside Campus took place on 27th January 2020, using the Cawley's Infinity Recycling Scheme. A total of 8 bins have been placed across key campus buildings with 1 external bin situated along with the recycling station opposite the Visitor Centre and Creative hub. Students from Waste Management, Digital Marketing and Gaming Art courses have been fully engaged throughout the project and have played an active role in raising the awareness of cup recycling which has been included as part of module assignments.

The University continued its partnership with 'Cycle CoNnect', the NCC Highways cycle hire initiative, during the relocation, including a large capital spend to install a dock on site. However, this sadly ceased at the end of 2019. The University is currently in talks with Beryl Bikes as an alternative alongside our town partners involved in the Northampton Town Working Group.

The University partnership with Cycle Solutions continues to provide our tax-free bike purchase scheme. Cycle Solutions administer the scheme free of charge including providing all promotional material and face to face events. Since our sign up, we have arranged for Cycle Solutions to visit our old campuses in order to assist with the transition to Waterside, and to Waterside itself on 3 occasions. Cycle Solutions were due to come in for a 4th time, in April 2020, but this was cancelled due to the lockdown, instead Cycle Solutions provided us with some webinars. Between 1st August 2019 – end of July 2020 we have had 11 requests for a tax-free bike, some of these were cancelled resulting in 6 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.

2019/2020 saw our second year with Liftshare, for both staff and students – both having their own community group, which they could also cross over should they wish. However, this scheme has not proved popular at the University with very few sign ups and even fewer actual journeys. Therefore, this scheme will not be renewed. Instead residents of Northampton can use the Northampton generic Liftshare scheme that exists.

The University of Northampton Students' Union has been audited for Green Impact Students' Union. They have completed criteria and expecting the highest award of Green Impact Excellence.

The University has installed a 1MW biomass boiler and district heating system in the new Waterside campus energy centre which saved 366 tonnes of CO₂ emissions during 2019/2020 AY.

Action Plan 1 – Electricity

Overall Target	Cut overall electricity consumption by 43% by the end of 2020/21	Action Plan reference 1		
Annual Target (s)	Reduce electricity consumption in across the estate by 10% compared to 2019/2020			
Measure/indicator of success	Overall consumption of electricity monitored through the University's sub-metering system. 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 behaviour. 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	
Co-ordinate Student Switch Off programme in conjunction with NUS. Provide feedback with new scorecard system.	Danielle Bird	July 21		
Provide School Health, Safety & Environment Committees with monthly energy data for buildings used.	Simon Pole	July 2017		
Coordinate with IT for shut down system PC's.	Danielle Bird	July 21		
Conduct audits of largest buildings to identify energy saving measures or equipment left on over weekends.	Danielle Bird	Apr 21		
Start ISO 50001 Energy Management System	Danielle Bird	Jul 21		
Optimise Elcomponent MW2 sub-meter system	Danielle Bird	Dec 20	In progress	

Action Plan 2 – Gas

Overall Target	Cut overall gas consumption by 43% by the end of 2020/21 in order to reduce overall carbon emissions	Action Plan reference 2		
Annual Target (s)	Reduce gas consumption in across the estate by 5% compared to 2019/2020			
Measure/indicator of success	Overall consumption of gas monitored through the University's sub-metering system. 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 localised (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	
Provide feedback with new scorecard system	Danielle Bird	Monthly		
Provide Sustainability Board with monthly consumption data, which can be used for campaigns and project success or fail indicator	Danielle Bird	Monthly		
BMS Health Check for Waterside Campus with the aim to provide energy saving recommendations and programme of works.	Danielle Bird	Dec 21		
Investigate the potential for biomass boiler running at 4kw capacity	Danielle Bird	Jul 21		
Optimise Elcomponent MW2 sub-meter system	Danielle Bird	Dec 20	In progress	

Action Plan 3 – Water

Overall Target	Cut overall water consumption by 30% by the end of 2020/21 in order to reduce overall scope 3 carbon emissions	Action Plan reference 3		
Annual Target (s)	Reduce water consumption in existing buildings by 5% in 2020/21 compared to 2019/20.			
Measure/indicator of success	Overall consumption of water monitored through the University's sub-metering system. 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 behaviour. 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
Create process and procedure for main meter readings and sub meters (should this not be picked up by MW2)		Danielle Bird	Mar 21	
Detailed analysis of water consumption across the University's estate		Danielle Bird	Feb 21	In progress
Water saving behaviour change campaign in Halls of Residence		Danielle Bird	Jan 21	
Optimise the use of the Elcomponent MW2 software system		Danielle Bird & Elcomponent	Dec 20	In progress

Action Plan 4 – Waste Reduction and Segregation

Overall Target	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.	Action Plan reference 4		
Annual Target (s)	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.			
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 maintain 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 non-domestic 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 20	Complete	
Refresh bin labels and waste guidance signage across all campus buildings.	Emma Stone	April 21		
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.	Emma Stone	Jan 21	Drafted	
Set up trading platform for unused equipment and stationary. We now have the facility to utilise the Reuse4Education platform for this.	Emma Stone	Feb 21	In progress	
WEEE amnesty for staff equipment	Emma Stone			
Waterside cup recycling bins and reusable cups	Emma Stone	Dec 20	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			

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 X% 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.	Emma Stone	Jan 21	Drafted	
Ensure food waste bins are located in all kitchen areas and are appropriately labelled.	Emma Stone	Jan 21		
Include waste guidance in new Welcome communications for new starters in halls and across campus.	Emma Stone	Sept 20	Complete	
Roll out glass recycling containers to Halls	Emma Stone	Jan 21	In progress	
Engagement of catering staff in the segregation of food waste and glass	Emma Stone	April 21		
Trial the use of a catering supplier scorecard relating to the segregation of waste	Emma Stone	July 21		

Action Plan 6 – Commuting by Single Occupancy Car

Overall Target	Reduce the proportion of staff and non-residential students commuting to the University by single-occupancy car to 32% by 2020/21	Action Plan reference 6		
Annual Target (s)	Reduce staff and students commuting by single-occupancy car by 39% in 2020/21 compared to 2019/2020			
Measure/indicator of success	Comparison of student and staff travel modes against previous surveys.			
Project Objective	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. Combined with the commuting habits of staff and no-residential students, the usage of single occupancy vehicles leads to increased carbon emissions and congestion experienced in the local area. Many staff members use their own vehicles for business travel with consequential issues related to the use of this 'grey fleet'.			
Scope of the project	Members of staff and students at both campuses.			
Key milestones	Responsible person (s)	Target date	Status	
Conduct Annual Travel Survey	Amy Moore	Oct 20	Drafted	
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	Sept 20	In progress	
Continue Dr Bike maintenance sessions	Amy Moore		In progress	
Coordinate police bike tagging with Campus Security	Laura McSherry	March 21		
Trial of Student Loan Bike, where students can hire bikes for travel to and from and around UoN Campuses	Amy Moore	Oct 20	In progress	
Trial of electric bikes on campus along with trailers to encourage the use of the bikes by external services staff to supplement the electric vehicles available.	Amy Moore	Oct 20	In progress	
Participation in the Council electric scooter initiative across the town centre	Amy Moore	Sept 20	In progress	
Student on campus parking is restricted to 160 spaces	Amy Moore	Sept 20	Completed	

Action Plan 7 – Biodiversity

Overall Target	To conserve and enhance biodiversity and to realise the wider benefits.	Action Plan reference 7		
Annual Target (s)	To engage and educate students and staff in the importance of biodiversity on the University estate.			
Measure/indicator of success	Completion of Biodiversity Action Plan for the Waterside campus, successful accreditation as a Hedgehog Friendly Campus, increased engagement of staff and students in Project Awesome and increased number of species across the University estate.			
Project Objective	<p>The primary purpose of this action plan is to protect and improve areas identified as important for local biodiversity within the University estate. This will include the creation of wildlife friendly urban landscapes, which are species rich and provide ecological corridors across the estate and into Northampton town.</p> <p>There is also the opportunity here to recognise the importance of our green infrastructure to students, staff and the local community and its potential to be used as a resource for teaching, research and engagement.</p>			
Scope of the project	Members of staff and students at both campuses.			
Key milestones	Responsible person (s)	Target date	Status	
Produce a Biodiversity Action Plan (BPA) for the Waterside Campus	John Howes & Victoria Blake	March 21		
Virtual Ecology Tour	John Howes & Emma Stone	March 21		
Investigation opportunities for wildflower gardens within the University Campus – locations, costs, species, seeds, plants, tuff etc.	Danielle Bird & John Howes	Feb 21		
Revive Project Awesome 2.0. This a key engagement group for staff, students and the wider community. Events and campaigns covering coppicing, walks, planting, national Tree Week, student ecology projects.	John Howes & Emma Stone & Danielle Bird	March 21		
Obtain Silver Hedgehog Friendly Campus accreditation	Emma Stone	Jan 21		

Action Plan 8 – Carbon Footprint

Overall Target	Net Zero Carbon Scope 1&2 carbon emissions by 2030 and Net Zero Carbon Scope 3 emissions 2050		
Key milestones	Responsible person (s)	Target date	Status
Obtain agreement from University Management Team to commit to Net Zero Targets	Victoria Blake	Oct 20	
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.	Victoria Blake & Emma Stone	Oct 20	Drafted
Switch to 100% UK based renewable electricity and 100% green gas or brown gas	Victoria Blake	Oct 20	In progress
Work with UNO Bus on the potential to convert buses to biodiesel or electric options	Victoria Blake & Amy Moore	Jan 21	
Calculate Scope 3 emissions for water and waste and agree reduction strategy	Victoria Blake	Jul 21	

Environmental Projects

Up for The Cup

During 2019 UoN was awarded £75,000 of funding from environmental charity Hubbub to finance a coffee cup recycling initiative, UpForTheCup. Northampton is one of 12 cities around the UK to roll out city-wide takeaway cup recycling. The funding is in support of engagement, awareness, marketing, infrastructure and collection, with an overall target to recycle 160,000 cups. The project went live in January 2020. The first collection from Waterside Campus took place on 27th January 2020, using the Cawley's Infinity Recycling Scheme.

A total of 8 bins have been placed across key campus buildings with 1 external bin situated along with the recycling station opposite the Visitor Centre and Creative hub. Active partners with bin's in place across the town centre include, The Grosvenor Shopping Centre, The Royal & Derngate Theatre and Northampton General Hospital. All partners began their coffee cup collections in February along with the Innovation Centre.

Approx. 8,000 cups were calculated to have been collected by Cawleys on 24th January from Waterside Campus.

Project Awesome/Ecology

Set up as a collaboration between academic and professional services, Project AWESOME is a group dedicated to protecting and enhancing the natural environment of the University and its surrounding area. It is inclusive of staff at all levels as well as students and has engaged in activities with local stakeholders with similar interests. Activities for 2019/2020 include receiving Bronze accreditation as a Hedgehog Friendly Campus, staff members monitoring flora and fauna, with one member of staff sighting over 78 bird species on and around the University's grounds and a recent addition of a list of fungus spotted onsite by a resident amateur mycologist. We also work in partnership with our biomass woodchip supplier, who recently sourced a rotavator allowing us to cultivate an extremely rare wild flower that has not been seen in Northamptonshire since 1843.

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 for 96% of 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 2020.

Monitoring and Reporting Progress

Details on how all resources are managed and action plan progress is summarised throughout this manual.

The University's Occupational Health, Safety, Welfare and Environment Committee meets quarterly throughout the year to review and monitor the progress of initiatives and actions against the resource targets set for the year. Information from the OHSW&E Committee is reviewed by the University's Senior Management Team and an annual report is sent to the University's Governing Council. The University publishes annual consolidated financial statements

In addition, the Sustainability Team produces regular articles for internal student and staff communications, 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 Officers' Group and the East Midlands Universities Association.

The Safety, Health and Environment team also other oversee other sustainability related aspects including:

- Sustainable construction and refurbishment
- Biodiversity on the campuses
- Sustainable and ethical procurement
- Student sustainability initiatives in conjunction with the Students' Union & NUS

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

Accreditation

The accreditation process is expected to be undertaken annually in the Spring. Supporting information for audits is available on the Sustainability shared drive in the Investors in the Environment folder.

The University was awarded the Investors in the Environment Great Green Award in March 2017 and rewarded the Green Level Award at the IiE Awards Ceremony April 2018.