Water Strategy 2020 – 2030

Introduction

The University declared a Climate Emergency in July 2019. In September 2020 the University Executive approved a new Sustainability Strategy 2020 - 2030 which reviewed the carbon journey since 2008/9 baseline. Based on a 1.5-degree warming scenario the university aims to reduce its direct and indirect GHGe emissions to be **net zero by 2030** from a new baseline year 2018/19. This water strategy follows on from the 2006 strategy and has been developed to support the University's aim of improving sustainability which includes reducing water consumption. The Water strategy outlines:

- Drivers for reducing water consumption
- Targets for reduction
- Current consumption
- Water reduction projects

The University used 65,547 m^3 in 2018/19, our baseline year. The University aims to reduce water consumption and GHGe emissions. Metrics to measure will be based on gross internal area and full-time equivalent students and staff, so any changes in the size of the estate and people using the facilities will not affect our ability to measure our impacts.

Drivers for change

The main environmental impact of water consumption is the energy required for extraction, purification of water for drinking and treatment of waste water. Emissions from the use of water are classified as scope 3 emissions as they are indirect emissions but are caused by the actions of the University. The University aims to reduce scope 3 emissions by 5% p.a. from 2020 to 2030. Water management is an important aspect of this target.

Water is a crucial resource however the effect of increasing population and global warming is causing an increase in pressure on these resources. This is resulting in water being unavailable in areas with a high density of people. The University has an appreciation of these concerns and is working towards reducing its water footprint.

Decreasing water consumption will have an additional financial benefit through reductions in water bills. Based on the 2018/19, wastewater volumes in the non-residential estate were 46,774 m3 and 18,773 m3 in the halls of residence. A reduction in water consumption will have a significant impact on the University's utility bills.

Sustainability has become an important factor for students when selecting a university. The University strategic plan 2019 includes a commitment to make an outstanding contribution to economic, social and environmental sustainability. The University is keen to educate and take a lead in the reduction of water consumption. This will raise awareness of the effect of water consumption and promote water saving measures within the community.

Targets

The University sustainability policy commits the University to reduce our water use. It aims to reduce water consumption by 2.5% in water GHGe emissions from a 2018-19 baseline (22.6 tCO2e). That equates to 0.0024 per full time equivalent (FTE) student and staff. By measuring water consumption/carbon emissions by FTE this allows us to measure our progress regardless of growth in student and staff numbers.

Current consumption

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In 2018/19, the University consumed 65,547 m^3. The supply and treatment of wastewater is responsible for the emission of 23 tonnes of CO2e. In 2019/20 many students vacated the Halls, so our consumption of water decreased due to Covid. The water consumption figures and changes between the two baselines years 2008/9 2018/19 are shown in the table below:

	Consumption 2008/9 (1st baseline)	Consumption 2018/2019 (current baseline	Consumption 2019/20 (Covid)
Water consumption (m^3)	33,475	65,547	60,267
Consumption per m^2 of GIA	5.39	-	-
Consumption per FTE staff/student	0.65	0.0024	0.0023

Total scope 3 carbon emissions from water supply (tonnes CO2e)	Total scope 3 carbon emissions from wastewater treatment (tonnes CO2e)
22.548	50.366

Baseline year 2018- 2019

The overall water consumption has decreased in 2019-2020 from the baseline year however, this is predominantly due to students vacating Halls early and may not be a true reflection of water consumption.

Projects

To meet the water conservation targets, the University has been undertaking projects to reduce water consumption. The projects include:

- Leak monitoring
- Manual flush controls in urinals
- Reducing shower flow rates
- Reducing hand basin tap flow rates
- Install dual flush fittings in toilets
- Install displacement devices in toilets

The installation of automatic metering technology on all water sub-meters has allowed for the identification of areas with higher water consumption.

Conclusion

In the past year, the University has met targets for reduction in water consumption. To further reduce water consumption, ongoing water saving projects will continue to be implemented across campus.

The continued monitoring of automatic metering technology will allow buildings with the highest consumption to be identified and prioritised. It can also be used to identify further water saving projects. A full decarbonisation action plan of the estate is being undertaken during 2020 2021 and further detailed projects will be identified and costed.

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