

Water Strategy – 2014/15 – 2018/19



Introduction

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 37,500 m³ in 2012/13. The University is monitoring and setting targets for consumption in relation to m² of the GIA and number of FTE staff and students to allow for expansion of the University. The University aims to reduce water consumption by 5% per m² of the GIA and per FTE staff and student.

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 2010 to 2015 and 3% p.a. from 2015 to 2020. 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 2011/12, water consumption accounts for 19% of the total cost of utilities (including gas, electricity and water). 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 2013-2018 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 aims to reduce water consumption by 5% per m² of the GIA and per FTE staff and student each year from 2010 to 2015 against the 2008/9 baseline. The water consumption will then be more difficult to reduce and the target reduction will be reduced accordingly.

Current consumption

In 2012/13, the University used 37,500 m³. The supply and treatment of waste water is responsible for the emission of 38 tonnes of carbon dioxide. This is a reduction of 11% when compared to the

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figures for 2011/12. The water consumption figures and changes between 2011/12 and 2012/13 are shown in the table below:

	Consumption 2008/9 (baseline)	Consumption 2011/12	Consumption 2012/13	Percentage change between 2011/12 and 2012/13
Water consumption (m ³)	33,475	42,733	37,547	11% decrease
Consumption per m ² of GIA	5.39	5.37	4.67	13% decrease
Consumption per FTE staff/student	0.65	0.6	0.5	20% decrease

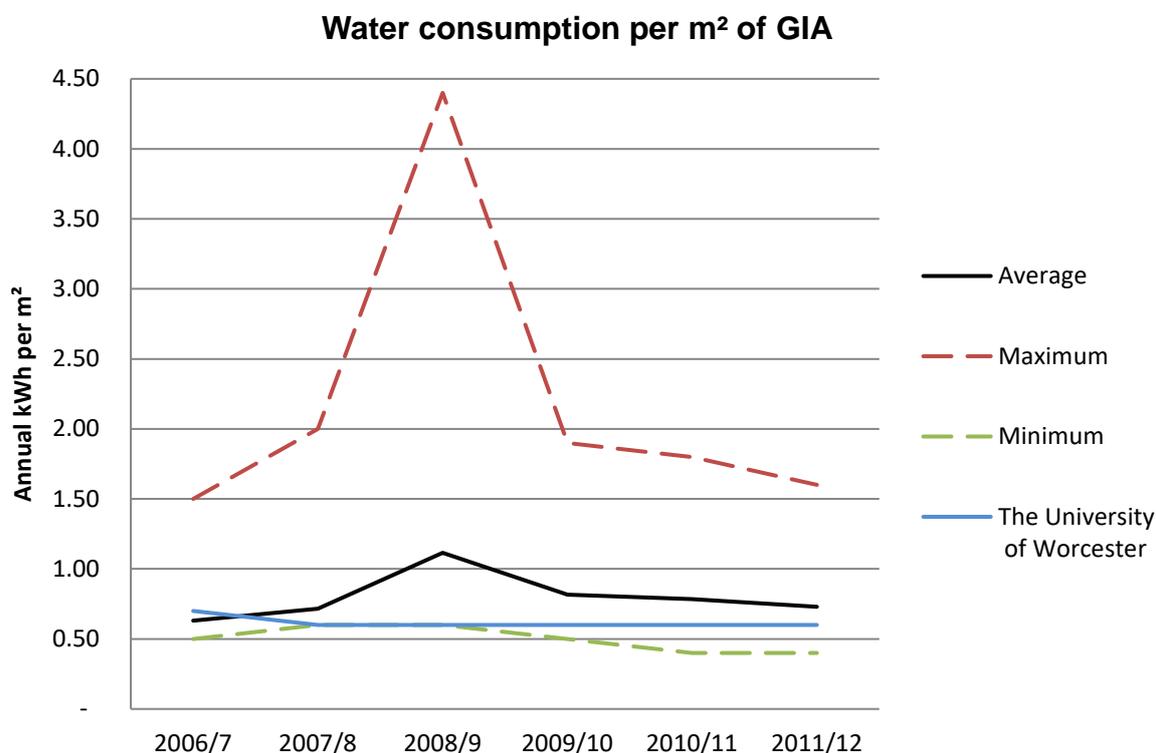
The overall water consumption has increased from the baseline year however, when compared to the GIA and the number of full time staff and students, the consumption has decreased. This indicates that, although the University has expanded, water is being used more efficiently than the baseline year. The water consumption has decreased in 2012/13 despite an increase in both GIA and FTE staff and students.

The main site meter for City Campus has not been included in the gas data because the meter has only recently been located. The University is currently in the process of resolving the issue and determining the additional water consumption from City Campus. This will alter the readings shown in the table above. City Campus accounts for 15% of the total GIA of the University and the majority of buildings have been recently constructed or refurbished therefore impact on the water consumption should be minimal.

Benchmarking

The water consumption can be compared to the consumption of other universities throughout the UK. The graph shows the water consumption per m² of the GIA as compared to the average, maximum and minimum of other universities across the UK. The graph indicates that University's water consumption is below average when compared to other institutions.

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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 estimated carbon savings and details of progress of each of the projects are shown in Appendix 1. The installation of automatic metering technology on all water sub-meters will allow 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 installation 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 to be implemented.

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Appendix 1

Measure	Description	Estimated carbon savings	Progress
Water leak monitoring	Ongoing project to quickly identify and fix leaks across the campus	40.4	Ongoing project
Manual flush controls	Install manual flush controls to all urinals across campus and pilot timer clock controls in Edward Elgar and the sports centre	0.01	Plans to pilot in Edward Elgar and the Sports Hall.
Bill Validation		tbc	
Showers flow rates	Reduce shower flow rates to max 8L/min, beginning with those halls with shared facilities.	0.6	Complete in 9 of the Worcester Halls and planed installation in AE Housman and EB Browning over the summer
Hand basin taps	Reduce hand-basin tap flow rates to max 8L/min and reduce time on push taps to a maximum of 10 seconds	0.3	This will be trialed in Vesta Tilley when refurbished.
Toilet dual flush	Install dual flush fittings to existing toilets, beginning with most frequently used	0.3	This has been completed in Abberley and will be completed in Vesta Tilley when refurbished.
Toilet displacement devices	Reduce toilet cistern volumes to 6L or 6.5L by the use of displacement devices.	0.5	Planned trial in Abberley.