

Bangor University - Water Conservation Standards

1. Introduction

The objectives of the Water Conservation Standards (WCS) are to promote and implement sustainable water management practices that reduce water consumption and encourage responsible water usage on the University campus. The WCS will also assist the University in supporting its and the Welsh Government's net zero carbon strategies and local, national, and global sustainable water initiatives.

Water and sustainable water management are at the core of sustainable development and critical for socio-economic development, healthy ecosystems and for human survival itself. It is vital for reducing the global burden of disease and improving the health, welfare, and productivity of populations. Water is also at the heart of adaptation to climate change, serving as the crucial link between the climate system, human society, and the environment¹.

2. Function of the WCS

Sustainable water management delivered through the WCS will help enable the University to:

- identify its water usage and opportunities to reduce waste and impact on sewer and water systems
- plan for minimising water demand during building work, institutional growth and building refurbishment
- create and implement sustainable water design guides for new and refurbished buildings and reactive works
- create and secure water reduction budget to deliver on the WCS
- continue to provide and enhance the provision of free drinking water to staff and students
- help protect local watersheds and terrestrial and marine ecosystems and biodiversity
- help safeguard public health and ensure sanitation and discharge standards
- promote greater economic development and water resource security
- reduce the University's impact on water supply and treatment infrastructure
- prevent pollution
- measure, assess, and promote conscious water use and reuse on campus, and in the wider community
- reduce the amount of water disposed of for treatment
- investigate and maximise water reuse
- quickly and efficiently identify leaks
- promote, educate and inform staff, students and others on the value of safeguarding the finite supply of water for future generations

¹ Adapted from the United Nations statement on water and sustainable development.

3. WCS Delivery

a. Water Audits and Assessments

- Conduct a water audit and analysis of data and trends to determine water consumption patterns, produce a definitive benchmark, identify areas of greatest water usage per m², per person and per activity, and identify potential opportunities to better manage water resources
- Evaluate the University's water infrastructure, including water sources, distribution systems, and wastewater treatment facilities (i.e. local package treatment and septic tanks), including the potential to reduce impact on local sewer infrastructure
- Identify potential leaks and water wastage

b. Water Conservation Measures

- Investigate the benefit of, and implement where reasonably practicable, water conservation measures, where not previously installed, such as:
 - retrofitting faucets, showerheads, urinals, and toilets with low-flow, more efficient or waterless fixtures.
 - installing sensor-based faucets and toilets to minimise water wastage.
 - promoting water-saving practices through educational campaigns and awareness programs.
 - encouraging the use of native and drought-tolerant landscaping to reduce outdoor water usage
 - implementing rainwater harvesting systems to collect and reuse rainwater for non-potable purposes.
 - removing infrequently used outlets, reducing legionella risk, and reducing the potential for leaks

c. Leak Detection and Repair

- Regularly inspect the University's water distribution systems for leaks and promptly repair any identified issues
- Monitor water usage data to proactively identify and address leaks
- Speedily find and repair water leaks, identifying potential mitigations against future water loss
- Educate staff and students about reporting leaks, dripping taps and cisterns, and encourage their active participation in leak detection and water management efforts

d. Water Quality Management

- Continue a water quality monitoring program that ensures the safety and quality of drinking water on campus
- Regularly test water samples from various sources, including taps and water fountains, for contaminants
- Develop an emergency response plan for water quality incidents and communicate it to relevant stakeholders

e. Stormwater Management

- Evaluate current stormwater management arrangements and where necessary develop strategies or plans to better manage stormwater runoff, minimising erosion and pollution risk
- Investigate installing permeable pavement and rain gardens to promote natural infiltration and filtration of stormwater, both as retrofit and for all new developments

f. Monitoring, Evaluation, and Reporting

- Establish a system for ongoing monitoring and evaluation of water usage, conservation measures, and progress toward goals
- Regularly track key performance measures, such as water consumption per m² floor area and per FTE (staff and students)
- Generate periodic reports to communicate progress, challenges, and recommendations to University stakeholders

g. Stakeholder Engagement

- Foster collaboration and engagement among University staff and students and the wider community to promote water conservation
- Drive the implementation of the WCS and provide a platform for input and feedback from stakeholders
- Conduct workshops, seminars, and awareness campaigns to educate the campus community about the importance of water conservation and the University's water management initiatives

h. Continuous Improvement

- Regularly review and update the WCS based on changing needs, advancements in technology and emerging best practices

- Seek opportunities for innovation, research, and partnerships to further enhance water management practices and sustainability efforts

4. Review

The WCS will be reviewed every two years by the University.

(End of document)

Approved by:



Wayne Jones, Head of Estates Management

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