Water Reduction Delivery Plan

Operational Owner:	Head of Sustainability
Executive Owner:	Chief Operating Officer
Effective date:	January 2025
Review date:	Annually. Full review 2030.
Related documents:	Sustainable Procurement Plan Net Zero Carbon Plan

1. Introduction

1.1 Purpose

1.1.1 The purpose of this plan is to set out objectives and actions that the University needs to meet to reduce its water use and thereby limiting its consumption of a resource under considerable pressure. This will include targets (including any relevant milestones), key objectives and actions.

1.1.2 Scope

1.2.1 The plan applies to all students, staff, consultants and contractors.

1.3 Definitions

1.3.1

Greywater Use – Wastewater (excluding sewage) which is most commonly used in flushing toilets to avoid the use of freshwater for this purpose.

Rainwater Harvesting – The collection and storage of rainwater via roof capture and storage tank systems. The water can be re-used in toilet flushing or irrigation.

Whole Life Costing – Often referred to as lifecycle cost analysis. In this context WLC is defined as an assessment of the financial benefit of a particular technology or building component based on its impact on operational costs and not just the up-front capital cost.

2. Plan Vision

2.1. Global Context – UN Sustainable Development Goals (SDG)

The University of Surrey has a moral, financial and legislative responsibility to reduce water use through efficient practices. By reducing water use, the University reduces its consumption of a resource that is already coming under considerable pressure.

From a global perspective, there is a lack of clean, accessible water. This risk is clearly represented in the Sustainable Development Goals which were adopted in 2015 and set a series of targets for 2030. These targets address global challenges including poverty, inequality, climate, environmental degradation, prosperity and peace and justice. There is a goal linking to the conservation and efficient use of water:

- Goal 6: Ensure access to water and sanitation for all

Sub-objectives of this goal include target 6.4 'By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity'

Making progress towards these objectives, as set out in this plan, will contribute towards meeting this SDG objective and the associated sub-targets for goal 6.

2.2. The 30% reduction target by 2029/30

This policy establishes a 30% water reduction target on a 2022/23 academic baseline year which should be delivered by the end of the 2029/30 academic year.

The ability to meet the 30% reduction target has been assessed by reviewing the current water reduction projects underway and planned (funded) and the water savings that are likely to result. It has also been reviewed against the University's likely development plans and forecast changes in student numbers.

The target has been set using SMART criteria and is therefore Specific, Measureable, Achievable, Realistic and Time bound.

3. Plan Principles

The principles underpinning the Water Reduction Plan are set out as below. These principles guide the plan. The emphasis on these principles will change as the University progresses towards meeting its targets and the plan will be reviewed accordingly to reflect this. New objectives may also be introduced, or existing ones replaced at review.

3.1. Monitoring and Measuring Water Use

Using existing sub-meters, the University will monitor water consumption at the entrance point to site and buildings. Additional sub-meters will be installed where there is a lack of visibility. Major water consuming equipment will also be monitored. By understanding the usage trends and patterns, abnormal usage will be identified including areas suspected of having leaks.

3.2. Compliance

The University will ensure that its operations meet and where practicable, exceed the legislative requirements pertaining to water conservation and management.

3.3. Conserving Water

The University will evaluate water using equipment including washroom facilities and where practicable, replace equipment with water efficient equipment. This is also particularly relevant in halls of residence. For example, ageing washroom/bathroom facilities use considerably more water than modern fittings and, in some instances, have the facility to be left running. Replacing such fixtures via a targeted programme of work across the University and halls of residence will reduce water use.

3.4. Greywater / Rainwater Harvesting

Where practicable, the University will consider the capture and re-use of water in new buildings via systems of greywater and rainwater harvesting. The systems will be evaluated on a whole life costing basis which also considers the carbon cost of pumping water from collection tanks.

Consideration will also be given to the impacts of reduced water use on trade effluent discharges. Monitoring of water discharges will be undertaken.

3.5. Building and Maintenance Standards

The University's development plans mean the construction and refurbishment of buildings across the estate. In the construction of new buildings, it is essential that the best standards of

water efficiency are pursued to minimise water use and associated costs over the operational lifetime. This process begins at the project inception in the assessment of proposed water reduction technologies. Whole life costing needs to be applied to all projects to ensure value for money.

Good standards of maintenance are fundamental to reducing water use on site. The importance of repairing leaks as they are identified cannot be understated due to the cumulative effect of this water use. Maintenance teams frequently visit back of house areas and are therefore crucial in identifying leaks which would otherwise go unnoticed.

3.6. Procurement

The University will establish procedures for assessing the water efficiency of new equipment. This will require a cross-department approach working with procurement teams.

Buying water will be reviewed to ensure best value is obtained.

3.7. Engagement and Collaboration

Key to success in reducing water use is the engagement with both staff and students across the University. On a day-to-day basis, staff and students influence water use. The University will establish behavioural change campaigns for staff and students to educate and empower them to take action in reducing water use.

Collaboration will also follow in the form of supporting student and academic projects by providing water data and where required, expertise whilst facilitating the implementation of onsite-demonstrator projects. This will enhance the University's research bids by providing on-site projects whilst contributing to an increased chance of research success.

4. Water reduction action plan, baseline and auditing

4.1. University of Surrey recognises that many aspects of its operations use water and is therefore committed to reducing water use and promoting water efficiency. In 2022/23, the University used 395,374 m3 of water* and has been set as a baseline year for monitoring against. The University has set a target of a 30% reduction in water use to be delivered by the end of the 2029/30 academic year. All staff, students, consultants and contractors are expected to collaborate to deliver water consumption reductions and efficiencies.

* Historic water data has been prone to metering errors, 2022/23 was the first year that reliable data is available for water consumption and thus is used as a baseline year.

Water Reduction Action Plan			
Action	**Target Date**	**Measure**	**Outcome**
Monitor and measure water consumption monthly, ensuring meters are reading correctly, replacing where necessary.	**July 2026**	**% of all meters read and correct.**	**Full, verifiable data set.**
Identify any gaps in data and install water sub-meters, identify where smart water meters could be installed.	**July 2026**	**% of gaps not rectified.**	**Full, verifiable data set.**
Identify significant and abnormal water use including leaks and take mitigating actions to reduce consumption.	**July 2026** **Ongoing monthly after 2026.**	**% of abnormal reading investigated and corrected.**	**To ensure consumption does not increase.**
Improve the water efficiency of existing buildings and facilities with a targeted capital programme of works. Audit and develop business cases.	**Audit by July 2025. Develop business cases for 2025/26**	**% of project identified, implemented.**	**Water reduction.**
Investigate and develop opportunities for rainwater / grey water harvesting based on a whole life costing approach – set out business case for projects.	**Audit by July 2027.**	**% of projects implemented.**	**Water reduction.**
Minimise the use of water through best practice maintenance & cleaning routines	**Identify measures by July 2025.**		**Water reduction.**
Review 30% target in light of water reduction audits and re-set target, to include milestones. Set targets for residential and academic/admin building stock.	**Review target and set milestones by July 2026.**	**New targets in place**	**Realistic target set.**
Achieve the highest practicable water efficiency standards in the development of the Estate; with a BREEAM rating of 'Very Good' as a minimum for new builds with an aspiration of 'Excellent'	**Standard agreed.**	**% of projects reaching agreed standard.**	**Water reduction.**
Introduce standards for low water consumption equipment as part of procurement processes	**Identify and agree standards by July 2027.**	**Standards included in procurement processes.**	**Water reduction.**
Engage with University of Surrey students and staff to inspire them to take actions to reduce water consumption	**Run campaigns, annually from August 2025.**	**Water reduction achieved.**	**Water reduction**
Collaborate with University of Surrey academics on water efficiency research projects	**July 2025.**	**Activity case studies.**	**Water reduction projects**
Communicate with staff and students to encourage water saving behaviour	**Campaigns to be run from 2025 onwards.**	**No. of Communications noted.**	**Awareness raised.**

5. Governance

5.1. Implementation / Communication Plan

The plan will be communicated both internally and externally. The plan will be communicated on the University's sustainability external facing website. Staff and students will be made aware of the plan via sustainability communications.

The plan will be reported on annually via the Sustainability Annual report and to operations committee and executive board.

5.2. Review and Change Requests

This plan will be reviewed on an annual basis. The plan will be reviewed and agreed by the Napier group and will be submitted to Operations Committee and Executive Board for renewal.

Minor interim changes such as changes to rhetoric or minor amendments to objectives will be managed by the Operational Owner with the approval of the Napier Group.

Major changes to the plan including the meaning, nature or substantial changes to the statement objectives will be managed by the Operational Owner, with agreement from the Executive Owner, approval of the Napier Group and the Executive Board.

5.3. Reporting

Performance against the target established in this plan will be monitored on a monthly basis by the Sustainability Team. The outcome will be reported to the following boards by the Head of Sustainability at the following frequencies as part of the overall Sustainability Report.

- In the Sustainability annual report
- To the Napier Group
- As part of the Times higher Impact Ranking
- In the University Annual Report – Annually

All annually.

5.4. Equality

The University is strongly committed to equality of opportunity and the promotion of diversity for the benefit of all members of the University community. The University's approach is to promote equality across the full range of its activities, in employment, teaching and learning and as a partner working with and within local, national and international communities. Equality Analysis is a process which examines how the impact of the plan has been considered on the diverse characteristics and needs of everyone it affects. This policy has been reviewed and no

negative impact on equality has been identified.

In the communication of the plan, a full range of media and techniques will be used to promote inclusion. This is essential so as not to discriminate against any particular member of the University community who may not be able to access or use media in a particular format.

6. Legislative context

6.1. Objective 3 states that the University will meet and where possible, exceed all relevant legal requirements. Examples of the water related legislation that the University must comply with are set out below. This list is not exhaustive, and a full register is held in the Estates, Facilities and Commercial Services department.

Water Industry Act 1991
Environmental Permitting (England and Wales) Regulations SI 2016/1154
Environmental Permitting (England and Wales) Regulations SI 2016/1154
Anti-Pollution Works Regulations SI 1999/1006
Water Supply (Water Fittings) Regulations SI 1999/1148
Water Resources Act 1991

Appendix I – Plan Statement

UNIVERSITY OF SURREY WATER PLAN STATEMENT

University of Surrey recognises that many aspects of its operations use water and is therefore committed to reducing water use and promoting water efficiency. In 2022/23, the University used 395,374 m3 of water. The University has set a target of a 30% reduction in water use to be delivered by the end of the 2029/30 academic year. All staff, students, consultants and contractors are expected to collaborate to deliver water consumption reductions and efficiencies.

University of Surrey is committed to providing adequate resources to meet the following objectives across all UoS sites:

1. Monitor and measure water consumption and identify significant and abnormal water use including leaks
2. Meet and where possible exceed all relevant legal requirements
3. Improve the water efficiency of existing buildings and facilities with a targeted capital programme of works
4. Investigate and develop opportunities for rainwater / grey water harvesting based on a whole life costing approach
5. Minimise the use of water through best practice maintenance & cleaning routines
6. Achieve the highest practicable water efficiency standards in the development of the Estate; with a BREEAM rating of 'Very Good' as a minimum for new builds with an aspiration of 'Excellent'
7. Integrate a whole-life costings approach in assessing the value for money of building and construction specifications against operational water savings
8. Introduce standards for low water consumption equipment as part of procurement processes
9. Engage with University of Surrey students and staff to inspire them to take actions to reduce water consumption
10. Collaborate with University of Surrey academics on water efficiency research projects
11. Communicate with staff and students to encourage water saving behaviour