



Brunel University Water Management Plan

2022-2025

DOCUMENT OWNER

Environmental Sub-Committee

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Introduction

Brunel University London (BUL) is committed to reducing its impact on the environment and in January 2020 the University declared a climate change emergency, and re-stated its commitment to research to support sustainability and tackling global challenges.

BUL is a large campus University located in Uxbridge comprising over 70 buildings including 35 halls of residences, academic buildings ranging from 1930 – 2011 builds, some listed (The Lecture Centre is grade II listed, while the Towers A-D are of local interest), recreational buildings including leisure facilities, shops and bars. The University also owns land surrounding the main campus, with the river Pinn running through the campus itself.



Aspirations and Targets

The main aim of the Water Management Plan is to establish procedures and recommended actions to enable Brunel University London to use, conserve and discharge water as responsibly and sustainably as possible.

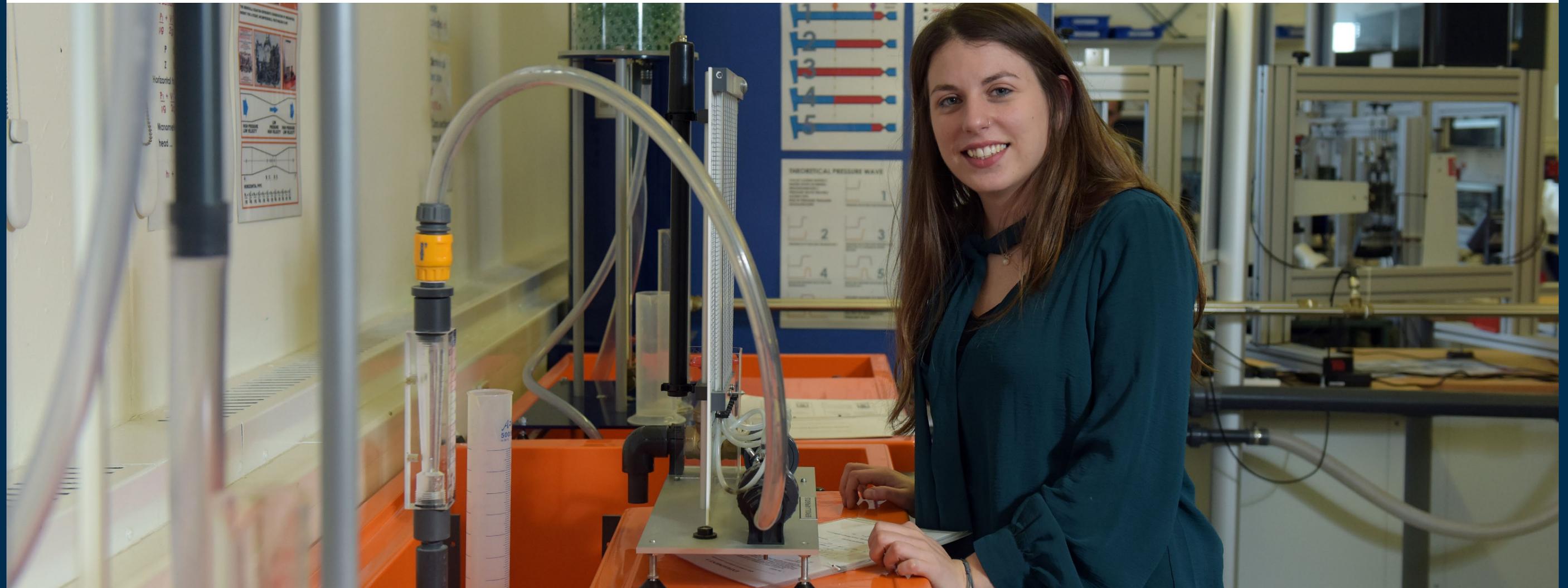
The University aspiration is to control water consumption in order to:

- Avoid unnecessary expenditure on water and drainage.
- Improve water efficiency.
- Reduce our Scope 3 greenhouse gas emissions from water usage in line with national, sector-wide and institutional targets.
- Reduce unnecessary water consumption.
- Protect the environment.

Strategic Approach

In order to meet the above aspirations and targets the University will:

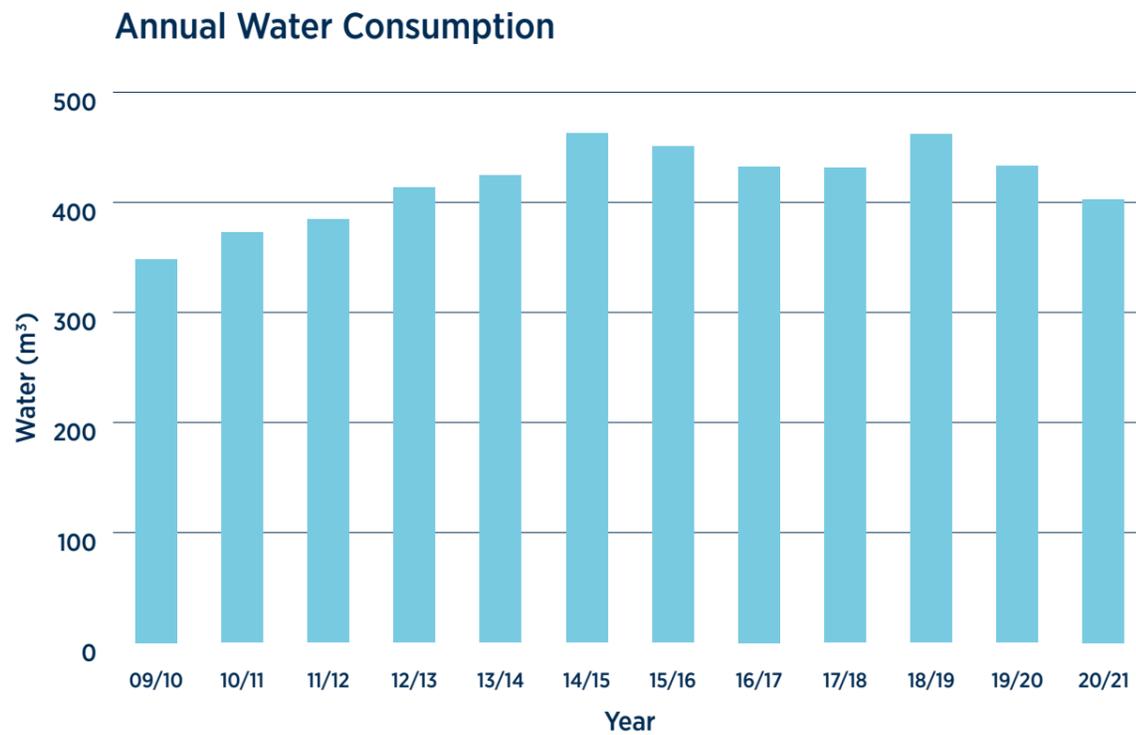
- Endeavour to reduce water consumption and associated carbon emissions in line with the University's aspirations to be Net Zero by 2040.
- Install and monitor sub-metering of individual buildings across the Campus.
- Better understand the University's water efficiency across different buildings types.
- Utilise water from sustainable sources where practicable, including incorporation of renewable technologies into building development projects, such as grey water harvesting.
- Invest in projects and equipment to reduce water usage across the University.
- Engage with staff and students regarding the important contribution each member can make to water conservation.



The Story So Far

HISTORICAL WATER CONSUMPTION

The graph below presents the historical annual water consumption:



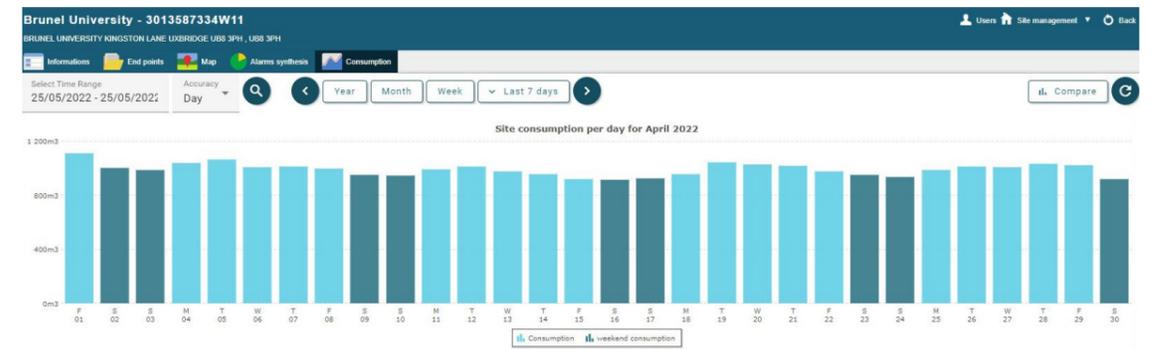
The table below presents the 2020/21 consumption and associated CO₂e emissions spilt between residential accommodation and non-residential usage.

WATER & SEWERAGE	CONSUMPTION m ³	EMISSIONS kgCO ₂ e
Non-Residential	100,706	42,397
Residential	302,118	127,191
Total	402,824	169,588

METERING

The first step towards the development of relevant KPIs in order for water efficiency to be measured for different buildings across the University, is to establish an accurate method of measuring individual building consumption. In the past the University has relied on manual monthly/quarterly readings of the main water meters across the site to record consumption. Considerable progress has been made in the last two years to move towards automated meter reading (AMR) of water consumption.

There are two large supplies that provide the majority of water around site, one located on Kingston Lane and one on Cowley Road. AMR devices were fitted to the Cowley Road meter in January 2021 and to the Kingston Lane meter in July 2021. Detailed consumption analysis can be obtained via an online Portal provided by Brunel's water supplier. The screenshot below from the portal demonstrates the level of detail recorded:



As well as the AMR devices on the main water meters there are water sub-meters installed all around the campus. These meters are in varying states of condition and had not previously been connected to any form of software. Substantial progress has been made to ensure the water sub-metering is repaired and calibrated. An Energy Manager Platform has now been developed and individual buildings' water consumption can be analysed. The following Screenshot presents the locations of the water sub-meters:



Actions and Timelines

Brunel University London (BUL) has set a target to analyse and identify areas to reduce Scope 3 emissions, including those from water use and sewage treatment. Therefore, it is the intention of the University to increase water efficiency and potentially reduce unnecessary consumption.

The University will carry out the following actions:

- Continue to collate, monitor and reduce Scope 3 emissions associated with water usage.
- Continue to enhance AMR and sub-metering across Campus (by 2022/23).
- Develop KPIs for different building types (by 2023/24).
- Undertake annual engagement campaigns with Residences and Staff which promote water conservation.
- Carry out detailed analysis of individual buildings' consumption (by 2023/24).
- Endeavour to identify any leakage (on-going).

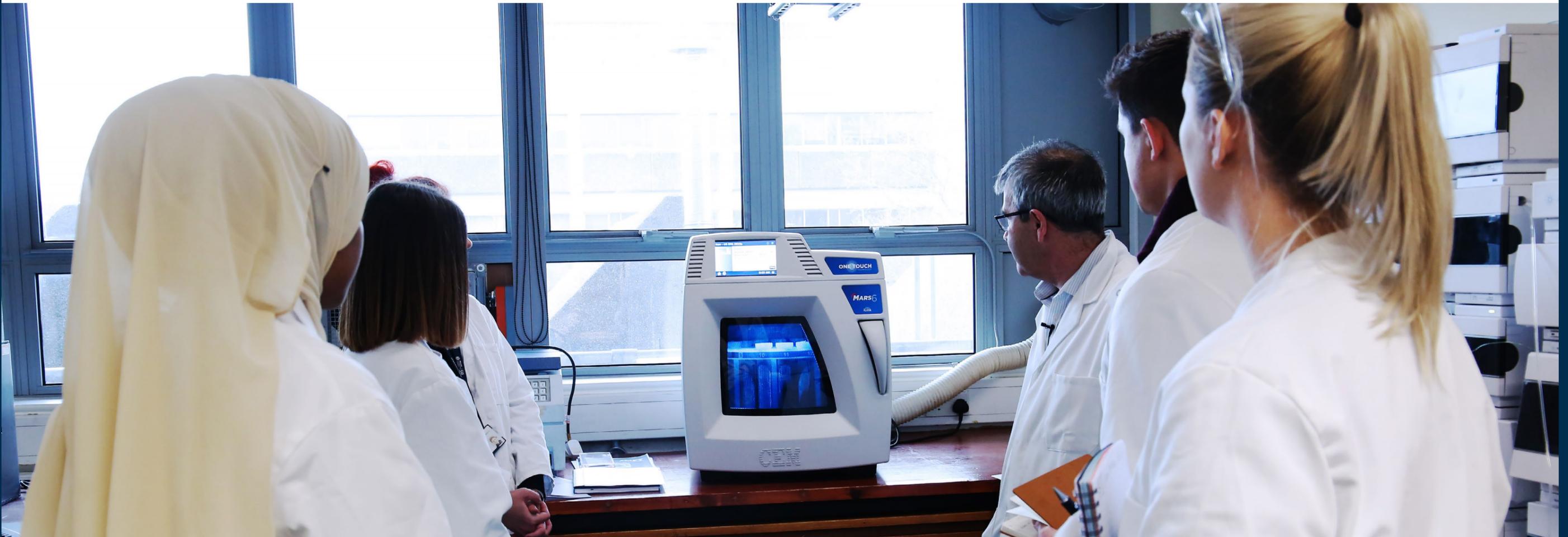
The University will also endeavour to invest in projects and equipment to reduce water usage across the Campus where deemed appropriate.

Water Saving Advice

The impact of climate change and rising demand for water are putting increasing pressure on our water resources. Water also uses electricity to treat, pump and heat it, so saving water can save energy thereby contributing to carbon management.

The parallel purpose of this plan is therefore to educate staff and students about all aspects of water i.e., consumption, waste and drainage, and raise awareness of how individuals can conserve water on campus through easily implementable actions as listed below:

- Turn off the tap when you clean your teeth.
- Take a shower – using 2 – 3 times less water than a bath.
- Wait until you have a full load before using a washing machine or dishwasher.
- Use a bowl in the sink when washing fruit, vegetables or dishes.
- Use the waste water to water your plants.
- Keep bottles of water in the fridge for making cold drinks.
- Report dripping taps as soon as possible.
- Report any unexplained running water noise as soon as possible.



Governance

The Environment Sub-Committee (EnvSC), chaired by the Associate Director of Environment and Sustainability, is the owner of the Water Management Plan. The University's EnvSC is committed to overseeing the development and implementation of the University's Environmental Policy and operation of the University's Environmental Management System.

The Environmental Sub-Committee meet every quarter and the Energy Sustainability Manager is responsible for submitting a paper that updates the committee on the University's water management performance.

The University encourages student participation and the Environment Sub-Committee includes student representation, giving the opportunity for the student body to contribute to the ongoing development of the Water Management Plan.



