

Save Our Streams: Water saving behaviour change programme

Objectives

Affinity Water region has one of the highest PCC (daily per capita consumption) in the UK. A growing population, increasing use, and climate change, results in the local environment feeling the impact.

We are dedicated to taking less water from the environment and are on track to reduce network leakage by 20% by 2025, but we are also working to support customers to change behaviour and reduce use.

Key Accomplishments

- **88% awareness** of water saving campaign amongst our customers
- **250,000+ households** have signed up and research shows hundreds of thousands more households have started their water saving journey
- Our customers water-saving efforts saved **more than 23.8 Ml/d** (million litres a day) based on 2022 - 23 PCC impact analysis

What are we doing?

Save our Streams helps people to make the link between the water they use and the impact on the local environment.

- Using **Com-B behaviour change model** customers given capabilities, opportunities, and motivation to save water, save money and help save our streams
- A focus on **behaviours with biggest savings and easiest to change**; 2 mins less in the shower, using eco mode on dishwashers and washing machines, and garden water recycling
- Engaging communications to educate and inspire, **high impact advertising**, social and digital media, tailored customer emails, plus PR featuring **high profile ambassadors**, influencers and **charitable partnerships** giving weight to campaign
- **Digital Hub - My Water Footprint**, bespoke water use calculator illustrates personal usage and allows ordering of free water-saving devices
- **PCC impact methodology** developed, measuring change in usage and Ml/d signed up and aware customers meter reads

Looking forward

Deliver stretching **30.42Ml/d** 2023/4 target with evolved programme, new school programme and a new strand to empower customers to identify and fix home leaks quickly. **In 2025 - 2030** we will use the 2020 - 2025 behaviour change learnings to provide greater uptake, engagement, and savings for the smart metering programme.

23.8 Ml/d

water saved per day



Chapter 3. Our long-term view | 3.1.2 Our achievements in the current period

Water neutrality at NAV sites in action (Bidwell): Collaborating with NAVs to deliver water-neutral housing developments

Objectives

To understand the impact of a **behavioural change** campaign on the Bidwell estate overall consumption.

To make Bidwell **'water neutral'** which means Houghton Regis will not use more water than before the Bidwell homes were built. We will effectively wipe Bidwell's consumption off the water balance.

Average of **15 litres per person, per day** reduction by the end of the campaign and sustained for at least one year.

To **alter the behaviour** of the whole household through a (6 month) campaign.

To **offset 350,000 litres** per day.

Key Accomplishments

We launched the **Bidwell Water Savers campaign**, targeting 1000 properties and with 15% of households already signed up pledging one specific water saving change, following the successful launch event in April 2023.

In **five months, nearly 50 non-households** have been engaged with **approx. 150,000 litres per day** saved through offsetting which equals to **circa 55,000,000m3 per annum**.

Most NHH are **saving over 20%** of their water use, with one school **saving 46%**. We are trialling a socially focused approach working closely with schools and local authorities.

150k

litres of water saved per day



Chapter 3. Our long-term view | 3.1.2 Our achievements in the current period

Water Smart hotels - Water efficiency solutions

Objectives

To engage in water smart projects to deliver water **efficiency solutions** to **non-household customers** and gain insights into water **saving opportunities** with these customers.

Key Accomplishments

Following a **successful** trial project with **Whitbread**, we undertook a co-funded project delivering water efficiency solutions to **69 hotels** and **39 restaurants** installing **over 14,000** water efficiency devices (delayed fill inlet valves, waterblade tap inserts, shower regulators), as well as **H2ONET monitoring systems** and the introduction of **innovative** delayed fill flush valves.

Whitbread have continued to apply this **water efficiency standard** to hotels and restaurants in other parts of the country.

14,000 

water efficiency devices installed

What are we doing?

Gathering occupancy data and **water use information** from H2ONET to analyse **water efficiency outcomes** and future opportunities.

Looking forward

We will use the outcomes of this project to **guide demand management opportunities** with non-household customers.



WHITBREAD

Chapter 3. Our long-term view | 3.4.3 Wholesale services to non-household customers

Improving the River Misbourne - between Amersham and Quarrendon Mill

Objectives

In September 2020, we launched a project to **improve the River Misbourne**. The aim was to return the river to its natural position in the valley bottom. We worked closely with key stakeholders,

The Chilterns Chalk Streams Project, the Misbourne River Action Group and the Environment Agency

We wanted to **improve** biodiversity in the river corridor and **create more habitat** for wildlife.

We wanted to **help** the river meet the requirements of **good ecological** potential under the EU Water Framework Directive.

Key Accomplishments

We created **a new**, meandering channel which is better connected to the surrounding floodplain.

A new wetland area provides habitat for wildlife as well as storage space for flood water.

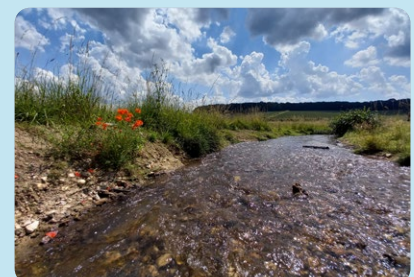
We installed **stock fencing** along both riverbanks to prevent erosion and grazing near the river.

The project was completed in June 2021.

Below: Drone image showing previous and new channels

Ongoing Assessment

We will assess the changes from the restoration works, we are monitoring the **hydrology and ecology** in and around the river restoration site and will continue the monitoring into AMP8. Aquatic animals and plants have started to establish at the site and a number of bird species have been using the wetland area, such as the white and yellow wagtail and the ringed plover, with sightings tracked by the Bucks Bird Club. There are plans to install an **interpretation board** at the site to **educate the public** on the completed work and the aims and objectives of the project.



Chapter 3. Our long-term view | 3.5.2 Delivery through partnership working

Working in partnership with the Chilterns Chalk Streams Project [CCSP] - Celebrating 25 years of rivers conservation work

Objectives

The project aims to conserve and enhance **chalk streams** in the Chilterns Area of Outstanding Natural Beauty and to encourage **enjoyment and understanding** of them.

The partnership includes statutory agencies, local authorities and voluntary bodies committed to **conserving the Chilterns' chalk stream environment**.

We are a regular contributor to its important work and in recent years committed further to help fund the work the project delivers. Education and engagement with schools, mutual support in delivery of river restoration, biodiversity enhancement and **improving access to the streams** for local communities to enjoy, are some of the main objectives.



CHILTERN
CHALK STREAMS
PROJECT



CHILTERN
CONSERVATION BOARD

What's happened

On 28th September 2022 together with Chiltern Society, Thames Water and Local Authorities, we celebrated the Chiltern Chalk Stream Project **25 year anniversary** of organisations dedicated to protecting the rare and valuable chalk streams in the Chilterns.

Since the project commenced, we have been working to reduce the amount of water we take from the chalk aquifer [through groundwater abstraction]. Our

aim is to further reduce groundwater abstraction by **36 million litres** of water a day by 2025. This will mean we would have reduced the amount of water we take from the chalk groundwater by almost **100 million litres** of water a day since the 1990s.

Our **Revitalising Chalk Rivers programme** is also working to restore and enhance chalks streams.



Chloe Bench, Nic Gilbert, Sarah Caleb and CCSP Manager, Allen Beechey

Chapter 3. Our long-term view | 3.5.2 Delivery through partnership working

Seagrass - Seeds of Recovery Providing the UK's first blueprint for the restoration of seagrass

Objectives

We will provide a **blueprint for upscaling the restoration of seagrass** to enhance the resilience of the estuarine and coastal waters of ours and Anglian Water supply regions in Essex and Suffolk.

It will draw on nature-based solutions by creating local opportunities to increase biodiversity and carbon/nitrogen sequestration. The project will provide a route map to unlocking the 'blue carbon' potential [carbon captured by the worlds ocean and coastal ecosystems], for the water industry and beyond.

At least **50%** of the UK's seagrass has been lost. Restoring it is vital for ocean health because it provides water filtration and can **reduce bacteria in our sea by 63%**.

50% 

of the UK's seagrass has been lost

Key Accomplishments


Working with our lead partner, Project Seagrass, we established, developed, and planted a **seagrass nursery** at the pilot site in South Wales. The nursery will improve the condition of the local environment and **help to explore innovative solutions** that will help restore seagrass life in our sea.

Identification of **z.noltii species** as the appropriate species for sea trials of seagrass restoration off the coast of our supply area around the Blackwater Estuary. Following approval from **Natural England**, trials will now take place in 2023.

We completed a research paper with **Oxford University** on the establishment of a **blue carbon code**, exploring the evidence base for **carbon sequestration** rates of seagrass beds, this will support the field trials and research into sequestration rates off the Essex Coast.

We worked closely with project partners and have undertaken effective **stakeholder engagement** across the wider seagrass community and this will continue following the

culmination of the 2023 field trials to disseminate results and progress the evidence base for a blue carbon code.

250k 
approx total budget



Chapter 3. Our long-term view | 3.6 Innovation

Flow regulators - Metersave

Objectives

Affinity water has one of the highest PCC (daily per capita consumption) in the UK. A growing population, increasing use and climate change are **impacting our local environment**.

We are dedicated to **taking less water** from the **environment** and are on track to **reduce network leakage by 20%** by 2025, we are also working to provide customers with an **innovative water efficiency solution**, flow regulators, to support reduced use.

Key Accomplishments

During years 2022 - 2023 we have delivered installation of **over 7,000** flow regulators to domestic customers.

Working with partners such as **Luton Council** we have undertaken **joint engagement campaigns** to deliver flow regulator water saving devices to affordable homes tenants with **positive feedback** from both partners and tenants.

What are we doing?

Working with **Cenergist**, we are offering an **innovative product** that supports water efficiency through **flow regulation** at the **point of supply**.


The main focus for 2024 is to **introduce metersaves** to the business and our customers and **deliver 11,000 installations** with a **saving of 69 litres** per property per day.

Looking forward

Work more closely with the **metering teams** to reach more customers with **water saving opportunities**.

Analyse the outcomes of **device installation**, including longevity of device with the expectation of **5+ years**.

Develop further **partnerships** with **affordable home providers** to deliver water efficiency opportunities to current tenants and new housing developments.

250k 
approx total budget



Luton  Cenergist

Chapter 3. Our long-term view | 3.6 Innovation

My Green Lab - Build a global culture of sustainability in science

About 'My Green Lab'

Our Scientific Services team want to gain accreditation as a 'My Green Lab'. My Green Lab is a global non-profit organisation with a mission to build a **global culture of sustainability in science**.

This is approached in two ways:

- The programme helps people rethink the 'way things have always been done'. Identifies **new approaches** that **reduces the environmental impact** of our work. This changes the culture in the lab from 'follow the protocol' to 'does this make sense/is there a better, more sustainable approach?'
- Data is gathered on **sustainable best practices** and shared with the community

The 'My Green Lab' programme

My Green Lab offer a suite of leading-edge programs to engage everyone in an effort to **improve the environmental** performance of laboratories.

We will participate in one of these programmes to gain 'My Green Lab certification'. Recognised by the **United Nations Race to Zero campaign** as a key measure of progress towards a zero-carbon future, My Green Lab Certification is considered the **gold standard** for laboratory sustainability best practices around the world.

To date, **My Green Lab** has supported over **1700 labs** in a range of sectors.


1,700 
labs supported

Our ambition

Our lab is the **first** water lab in the UK to have signed up to My Green Lab certification to be part of the change and go through the accreditation process.

By the **start of 2024 - 25** we expect to be **fully accredited** and **delivering the sustainable innovations and resource reduction** which is at the heart of the My Green Lab accreditation.



 **my green lab**
certification.

Chapter 3. Our long-term view | 3.6 Innovation

Catchment Systems Thinking Cooperative Project (CaSTCo): 'Making sure that people count, at the heart of rivers' recovery' - The Rivers Trust

Objectives

One of the winners of the 'Water Breakthrough Challenge' in September 2021 was the CaSTCo project. We were one of the partners in this initiative to:

Engage our communities in collecting and sharing river catchment data through citizen science.

Bring in **new sources of reliable information** and share them more widely.

Help **close the gap** that exists now **between people and data** on our catchments and decisions that affect our rivers.

Help **diversify and democratise** the data, plus inform better decisions.



What's happened

The demo will **build on** and **amplify citizen science** efforts (already active) in the River Beane catchment.

Volunteers have been using monitoring methods (ARMI, P&N tests, borehole measuring) for approx. 8 years.

The environmental monitoring data is available to all through our open source web portal platform (Aquarius).

Aspiration to:

- **Extend methods** for gathering meaningful data
- **Increase numbers** of volunteers engaged
- **Upskill** existing volunteers via training and equipment upgrades
- **Explore** different monitoring techniques including low-cost in situ sensors
- **Utilise data** better to answer specific questions about our catchment and target practical interventions e.g. pollution reduction capital investment

- **Improve** communication and the shared use of data alongside better coordination of monitoring between all demo partners to improve decision-making and practical action
- **Data** that results in **action taken** on the ground, potentially including enforcement action where appropriate

Organisations involved:

- Herts and Middlesex Wildlife Trust
- Environment Agency
- River Beane Restoration Association
- Local Farm Cluster Group
- Local volunteers



Chapter 3. Our long-term view | 3.6 Innovation

WaterSave tariff trial - Changing the way our water is charged

We are trialling a new charging system for clean drinking water to see if it is a **fairer** way to pay and to make it **more affordable** for our customers. In addition, to see if the tariff has an effect on demand.

WaterSave is a rising block tariff, meaning a different price will apply to the first, middle and end 'blocks' of consumption. Our WaterSave tariff will include a **free initial block of water**.

Objectives

We will **gather evidence** on the effects of the new tariff on **affordability and demand response**. Measure the effects by comparison of a trial group and control group.

Measures include:

- Consumption; Payment hardship; Collection rates
- Default on bills; Revenue collection costs; Contact rates



Trial design

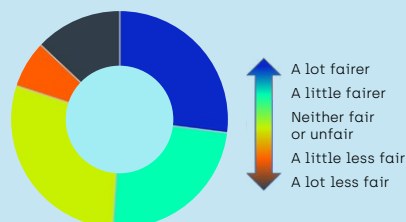
Our customers were asked about the fairness of rising block tariff in 2021. Results showed that just over half of customers thought the **new tariff would be fairer**, with others needing further information.

This customer feedback was used as part of our trial design to ensure the tariff would be **acceptable to customers**.

Identify a small group of metered properties (c. 1500 households) for a **trial group**, selected to ensure:

- Range of income distribution
- Range of low/high consumption

Identify a comparable group of properties **in a similar location** to act as a control group.



Looking forward

The trial **starts in October 2023** and runs for **two years**.

If the trial produces evidence of benefits to affordability and demand reduction, we will consider **extending the new tariff** to more customers in the area.



Chapter 3. Our long-term view | 3.6 Innovation

Qualtrics by Clarabridge - Voice of the customer programme

Objectives

In June 2022 we launched 'The voice of the Customer' programme to **supercharge customer insights** and allow us to **respond even more effectively to customer needs** across multiple touchpoints like never before.

Our vision is to enable the business to **better understand** how our **customers feel** about their experiences with us, by shining a light on **the impact of every interaction** and touchpoints they have with us, both in **isolation and collectively**.



Benefits of Qualtrics

- Qualtrics is an **AI system** supplied by Clarabridge with the ability to combine data from **call listening, social media, complaints and survey responses**
- It has **advanced analytical and data visualisation** with **dynamic dashboards** on customer conversations applying **speech & text analytics (NLP)** and **theme categorisation**
- Detects and scores **customer effort and sentiment** along with **satisfaction score** including C-MeX
- In-house easily configurable **branded surveys** across different contact channels providing **always-on** and **ad hoc listening**
- Automated quality management functionality [**QMS**] for **agent coaching**

Achievements so far

We are **proud** of the journey we have been on. Through advanced speech analytics software we were able to apply a sentiment score to every customer call, email and social media interaction. We can understand emotion, effort and intent of what our customers and employees are saying through all channels allowing us to **act and prioritise in real time**.

We **are the only water company to use Qualtrics** to date. Other companies have been in touch to understand our journey to date in more detail.



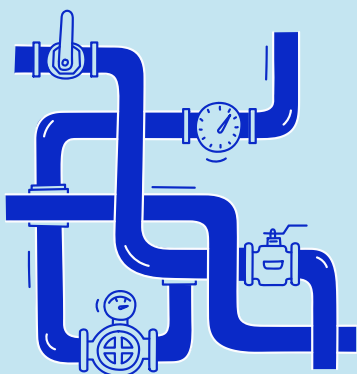
Chapter 6. Costs | 6.1.3 Household Retail

Asset Condition Laboratory

Background

Our Asset Condition Laboratory (aka 'Pipe Lab') has been running for **over 30 years** and has one of the most extensive continuous data sets of our pipe conditions of any water company, with **7,381 recorded pipe samples** analysed to date.

7,381 
recorded pipe samples



Objectives

The aim of this lab is to provide a lead indicator for setting renewal rates and targeting replacement or other interventions.

We collect these samples when undertaking planned work such as our **HS2 enhancement scheme**, and during **reactive work**. For example we take samples from over **70% of mains repairs** requiring replaced sections of main. We use a range of **condition assessment approaches** depending on the material of the main sampled. For instance cast iron mains are assessed through **destructive testing**, shot blasting to understand the degree of corrosion throughout the thickness of the main.



Key Accomplishments

More recent advances in data analytics have enabled us to **develop deeper insights** by bringing additional datasets together. This has improved our understanding of **asset health**, informing our deterioration modelling, targeting of mains replacement and other activities to reduce bursts.

We continue to build on our **industry leading** understanding of water network condition and will share this with the wider industry through our **open data initiative**.



Chapter 6. Costs | 6.2.4 Capital maintenance: infrastructure key investments

Energy efficiency - Site and system optimisation

Objectives

We have developed a programme of energy efficiencies through **site and system optimisation**, asset replacement and improvements to offices.

Our current programme has **over 80 named schemes** due for delivery by 2025 totalling **over £2m p.a.** in energy savings.



Key Accomplishments

In 2022 - 23, our efficiency programme delivered **over £500,000 p.a. benefits** from a capital investment of **£1.4m**.

Some standout schemes include:

- **Replacement** of one our **borehole pumps** at Stoke by Nayland where we have realised **£60,000 p.a. savings** from a **£15,000 capital cost**
- **Replacement** of our **borehole pumps** at Musley Lane which **paid back the £35,000** in energy savings in **just one year** and the replacement of **3 booster pumps** at Egham saving over **£100,000 p.a.**



£500k 

p.a. benefits from a capital investment of £1.4m from our efficiency programme



Chapter 6. Costs | 6.4.2 Energy

Supply demands for HS2 - Delivering large infrastructure programmes to enhance public value

Objectives

HS2 is **Europe's largest infrastructure project** which enters our supply area near Hanger Lane and leaves our supply area near Great Missenden.

They are **digging over 64 miles of tunnels** and piling for the UK's longest rail viaduct spanning the Colne valley. All of this has resulted in some large civils work that will **impact our groundwater sources**.

We work closely with HS2 and their contractors with the **objective of mitigating the risk** to our sources and of **minimising any impact** to our customers.



How this was delivered

- This was a **large diverse programme of works** including complex network diversions, developer services connections, treatment improvements onsite and new pumping stations and trunk mains
- A programme team was established to deliver these works and an appropriate supply chain setup due to the HS2 demands
- We were able to deliver **three complex membrane treatment plants** without impacting HS2 build programme
- A project was identified and implemented to ensure HS2 had **enough water for construction** which included building a **new PS and 8km of trunk main**. There were also a number of smaller schemes that were also complex in nature but delivered successfully
- The total of the programme outturn was **£160m over five years**. Through diligent appraisal of contractor cost and optioneering of solutions we delivered **£30m savings to HS2**

Looking forward

The approach taken here will be **rolled out across** our **capital delivery** to ensure we deliver our larger enhancement programmes.



Chapter 8. Deliverability | 8.3 Our 2025 – 2030 delivery plans



Green bond - Affinity Water issues first Green Bond in 2021 - 22

Objectives

In 2021 - 2022 we announced that our financing subsidiary, Affinity Water Finance PLC, issued a **Class A £130 million 0.01% CPI-linked private placement** due September 2038.

The issuance is our **first green bond**. The proceeds will be used to finance expenditure outlined in our recently published **Green Finance Framework**, which is available on our website.

The Green Finance Framework aligns our strategic and sustainability priorities with our funding and financial strategy.

What to achieve

We use environmental, social and governance ('ESG') themes to enhance sustainability within our activities. We have selected **several key focus areas** for green investments that are fundamental to our strategy, and add value while delivering tangible **environmental and social impacts**, alongside contributing to the **UNSDGs**.

The Green Finance Framework has helped to attract investors who are supportive of these goals, and who will act as **valuable partners in supporting our journey** to a more sustainable society.

The Framework covers **several different initiatives** including: sustainable water management; pollution prevention and control; terrestrial and aquatic biodiversity conservation; and energy efficiency.

This approach will align our **financing strategy** with our **ESG commitments**. It allows investment in assets and services to ensure a **sustainable supply of water** for our customers. So that we can leave more water in the environment to help our region's chalk streams, ensure resilience against impacts of climate change and move towards **net zero carbon future**.

