Future Water Association

Informing, Innovating, Influencing

Horizon Water Infrastructure

eps

Can We Build Smarter?

1.5M Homes & the Water Demand Dilemma

Future Water Association

Informing, Innovating, Influencing

Horizon Water Infrastructure eps

Opening Remarks

Paul Horton, CEO
Future Water Association

Our Mission

Future Water Association

Informing, Innovating, Influencing

Since forming in 1986, Future Water Association has aimed to shape the future of our industry by informing, innovating and influencing.

We are the voice of the water sector, advocating with Government, industry, members, and the public.

Through collaboration, innovation and honest dialogue, we can facilitate positive change in the UK water industry.

Our theme for 2025 is Transformation of the Water Sector.

Future Water Association

Informing, Innovating, Influencing

What are the Future Water Working Groups?

- Future Water's working groups are collaborative hubs bringing together experts from across the water sector to tackle key challenges and drive transformation.
- Each Future Water working group is made up of a diverse range of professionals from across the entire water supply chain: Water companies, Regulators, Tier 1 and Tier 2 contractors, Consultancies and specialists, Startups and innovators, Suppliers and manufacturers
- Each group benefits from real-world perspective, technical expertise, and strategic alignment, while also creating space for new voices, bold ideas, and collaborative problem solving. It's this diversity that enables Future Water to take a truly system-wide view and drive forward meaningful, sector-wide transformation.

Future Water Association

Informing, Innovating, Influencing

OVARRO CONNECTING TECHNOLOGIES

AHS PIPELINE INNOVATION

eps

TRANSFORMATION PARTNER

Horizon Water Infrastructure

Future Water Association

Informing, Innovating, Influencing

Development Services Group

Why Development Services Matter

Delivering smarter, more sustainable infrastructure is key to meeting the demands of new developments. This group brings together key stakeholders to tackle planning, delivery, and environmental challenges collaboratively

The Role of the Working Group:

- Tackle issues around network expansion, water availability, and infrastructure reinforcement
- Promote smart metering, data integration, and system-wide innovation
- Drive progress in SUDs, water reuse, and nutrient neutrality
- Push for regulatory alignment and pricing reform to enable efficient delivery
- Facilitate collaboration across developers, water companies, NAVs, regulators, and suppliers
- Highlight inconsistencies in delivery and regulation through the Future Water Report Card
- Champion the potential of NAVs and innovative approaches to transform developer services

This year at FWA

Future Water Association

Informing, Innovating, Influencing

Horizon Water Infrastructure

Hosted 20+ events.

Awards Ceremony recognising the incredibly people that make up our sector.

Represented our members at multiple industry events across cyber, net zero, innovation, skills.

Released a series of 3 podcasts on transforming the sector with Horizon Water Infrastructure.

This year at FWA

Future Water Association

Informing, Innovating, Influencing

Horizon Water Infrastructure

Policy impact

Held 3 webinars to inform our response to the Cunliffe Commission.

Worked directly with the Commission.

From the draft report, there were areas of significant correlation with our input.

Future Water Association

Informing, Innovating, Influencing

Cunliffe Report

Thematic Area	Alignment Level	Notes
Strategic Planning & Vision	✅ Strong	Shared call for long-term, integrated strategy
Regulatory Architecture & Culture	✅ Strong	Agreement on systemic reform and culture shift
Environmental Integration	✅ Strong	Aligned on coherence, priority-setting
Ownership & Governance	✅ Medium-High	Different emphasis but same reform goals
Infrastructure & Innovation	✅ Strong	Agreement on visibility, standards, incentives
Workforce & Skills	✅ Medium-High	FWA stronger on detail (cyber, skills strategy)

Upcoming Events

02-03 July

10:00 - 15:30
Severn Trent + Arup

Leakage and Metering Summit

In person

09 September

10:00-15:00

Bristol

Data and Cyber Resiliency Event

In person

Networks November

All over the country!

8+ events across November looking at the state of our networks.

Future Water Association

Informing, Innovating, Influencing

Horizon Water Infrastructure eps

The Water Scarcity Challenge in UK Growth Areas

Martin Ballard, Wates

Long-term planning and water availability

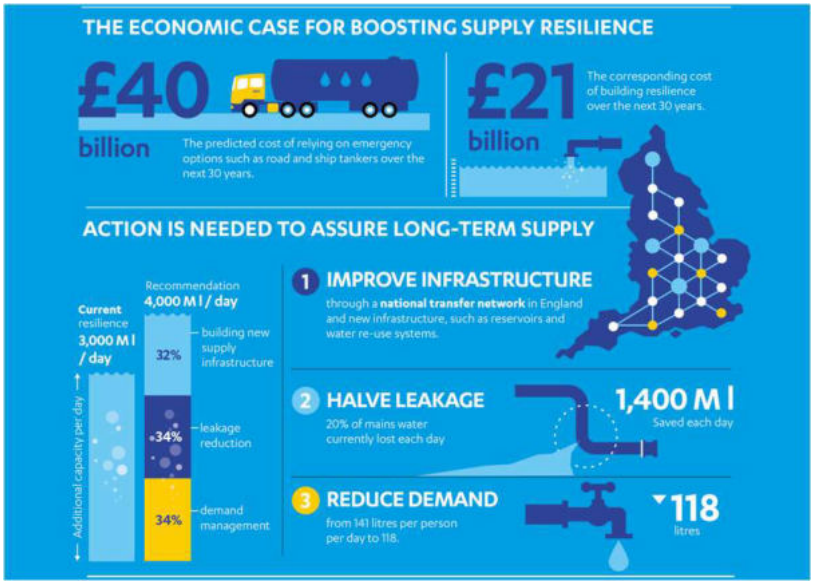
Lee Dance, Organisational Director, WRSE

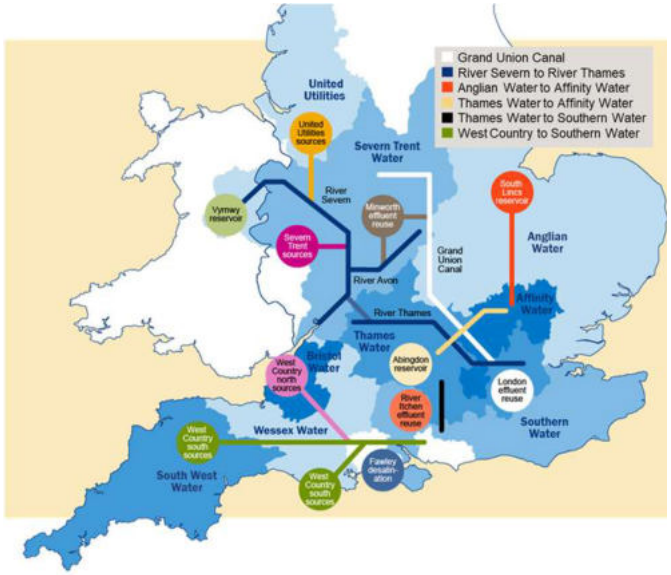
Three areas to cover:

- Changes that are happening already
- Key take homes from latest round of regional plans
- Future direction of travel and opportunities

Changes that are happening already

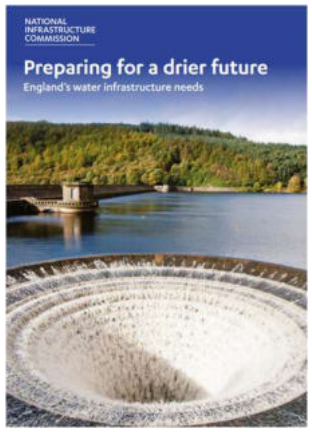
Significant shift in how we plan for water



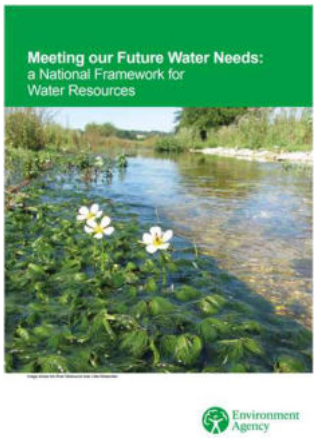


- Water resources under pressure from **climate change** and **population growth**
- Need to improve the **environment** and **resilience to drought**
- Risks will increase without a step change in approach
- Important to link: national, regional and local approaches; consider different plans; multi-sector needs

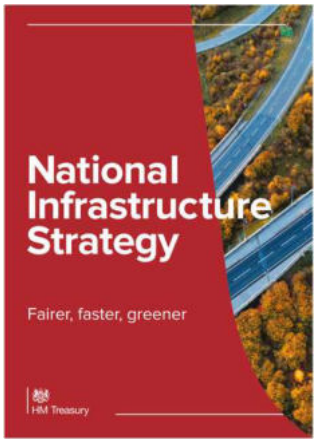
National policy - driving level of water need, and solutions



- Increase drought resilience
- Improve infrastructure
- Halve leakage
- Reduce demand
- Strengthen regional planning



- Establish regional water resources groups
- Projected public and non-public water supply needs
- Projected future needs of the environment



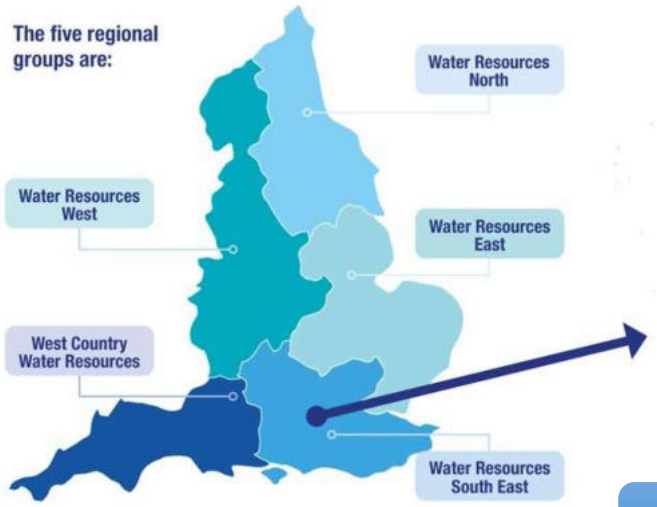
- Set policy objective to increase drought resilience to a 1 in 500-year drought event by 2040

- Formalised long-term and interim targets for:
  - Leakage reduction
  - Household consumption
  - Non-household consumption

- Accelerate investment in water supply infrastructure
- Reduce abstraction from chalk streams
- Increase water efficiency through minimum product standards
- Encourage accelerated smart metering

Regional planning – an evolving process

- A strategic plan that identifies the **future water needs of the whole region** – public and non-public water supplies - for the next 50 years
- Considers a **wide-range of options** and identifies the **optimal programme** of activity to address the projected future shortfall in water supplies
- Is **adaptive** to deal with future uncertainties
- Aligns with the other regions and identifies opportunities to **move water from one region to another**
- Is 'best value' delivering **wider benefits** to people and places
- Achieves government policy to **increase drought resilience, improve the environment and reduce leakage and demand for water.**



WATER RESOURCES SOUTH EAST

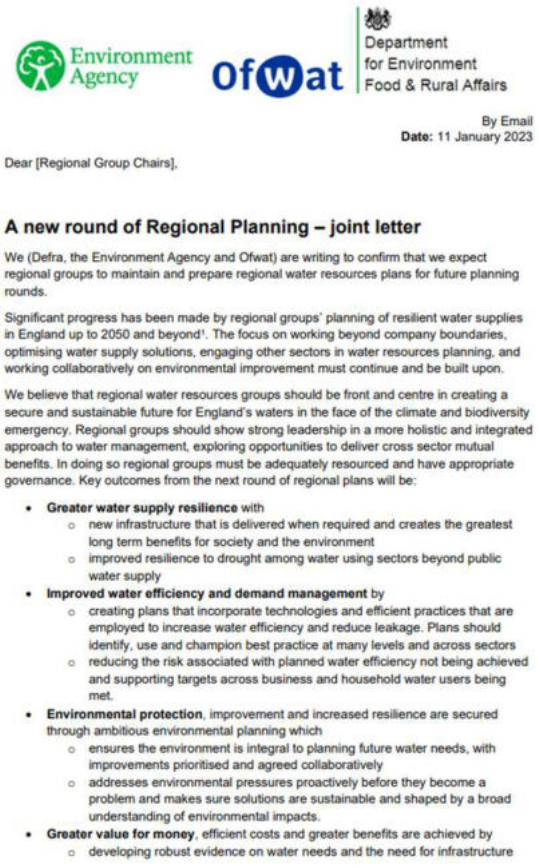
Informs company WRMPs

Affinity Water · Portsmouth Water · ses WATER · south east water · WATER for LIFE Southern Water · Thames Water

Broader remit for regional groups in next round

Government and regulators expectations for the regional groups and next round or regional plans:

- Improved resilience to drought amongst water using sectors **beyond public water supply**
- Plans should identify, use and champion demand management best practice and across sectors
- Reduce the risk associated with planned water efficiency not being achieved and supporting targets across business and household water users being met
- Ensure the environment is integral to planning future water needs, with **improvements prioritised and agreed collaboratively**
- Scoping a broad and innovative range of options for improving public water supply resilience, including **cross-sector options developed with third parties and strategic resources**
- **Effective regional engagement** – **maintaining a strategic overview** of **regional priorities and activities**
- **Ensuring the public and stakeholders**, such as **local planning authorities and catchment partnerships**, are **engaged and inform the plans**
- Ensuring regional consideration and representation within **national strategic project**



Environment Agency | Ofwat | Department for Environment Food & Rural Affairs

By Email
Date: 11 January 2023

Dear [Regional Group Chairs],

A new round of Regional Planning – joint letter

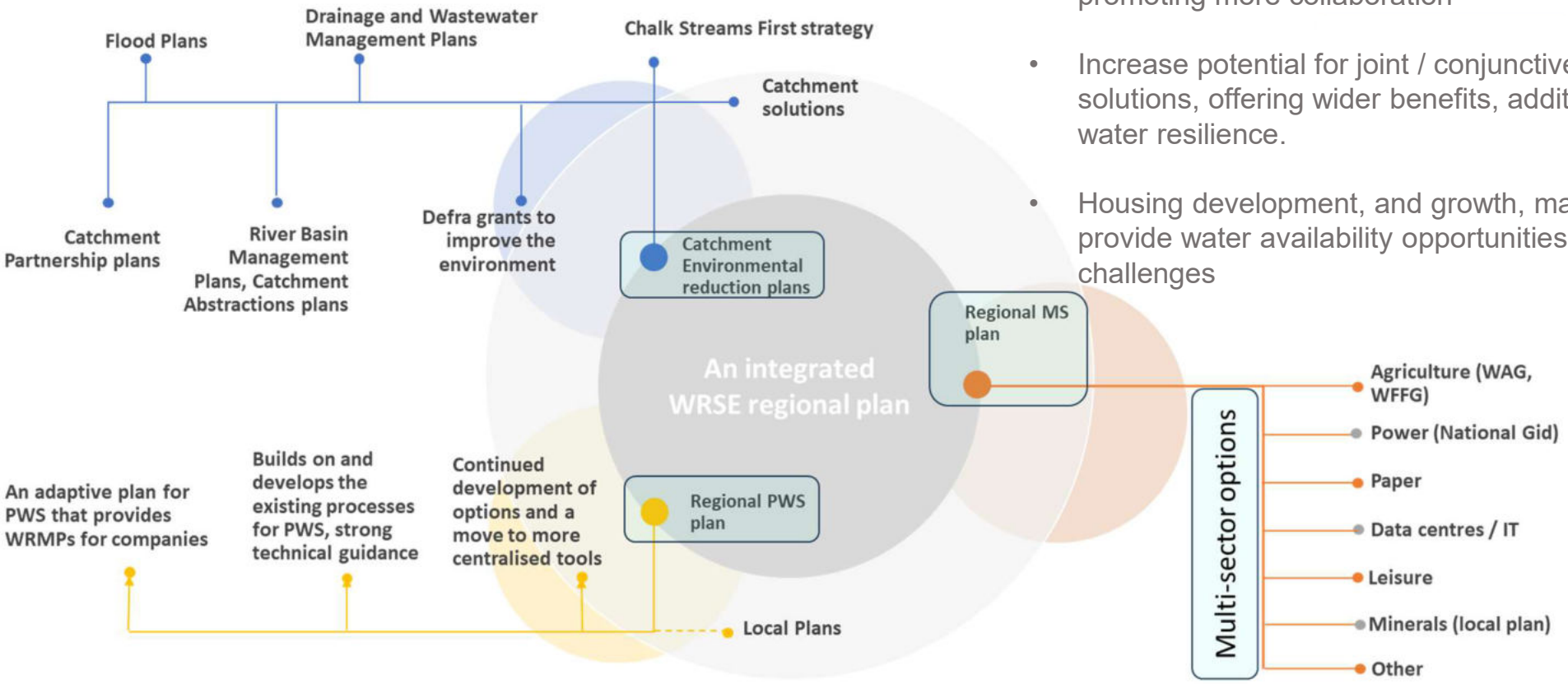
We (Defra, the Environment Agency and Ofwat) are writing to confirm that we expect regional groups to maintain and prepare regional water resources plans for future planning rounds.

Significant progress has been made by regional groups' planning of resilient water supplies in England up to 2050 and beyond[1]. The focus on working beyond company boundaries, optimising water supply solutions, engaging other sectors in water resources planning, and working collaboratively on environmental improvement must continue and be built upon.

We believe that regional water resources groups should be front and centre in creating a secure and sustainable future for England's waters in the face of the climate and biodiversity emergency. Regional groups should show strong leadership in a more holistic and integrated approach to water management, exploring opportunities to deliver cross sector mutual benefits. In doing so regional groups must be adequately resourced and have appropriate governance. Key outcomes from the next round of regional plans will be:

- **Greater water supply resilience** with
  - new infrastructure that is delivered when required and creates the greatest long term benefits for society and the environment
  - improved resilience to drought among water using sectors beyond public water supply
- **Improved water efficiency and demand management** by
  - creating plans that incorporate technologies and efficient practices that are employed to increase water efficiency and reduce leakage. Plans should identify, use and champion best practice at many levels and across sectors
  - reducing the risk associated with planned water efficiency not being achieved and supporting targets across business and household water users being met.
- **Environmental protection**, improvement and increased resilience are secured through ambitious environmental planning which
  - ensures the environment is integral to planning future water needs, with improvements prioritised and agreed collaboratively
  - addresses environmental pressures proactively before they become a problem and makes sure solutions are sustainable and shaped by a broad understanding of environmental impacts.
- **Greater value for money**, efficient costs and greater benefits are achieved by
  - developing robust evidence on water needs and the need for infrastructure

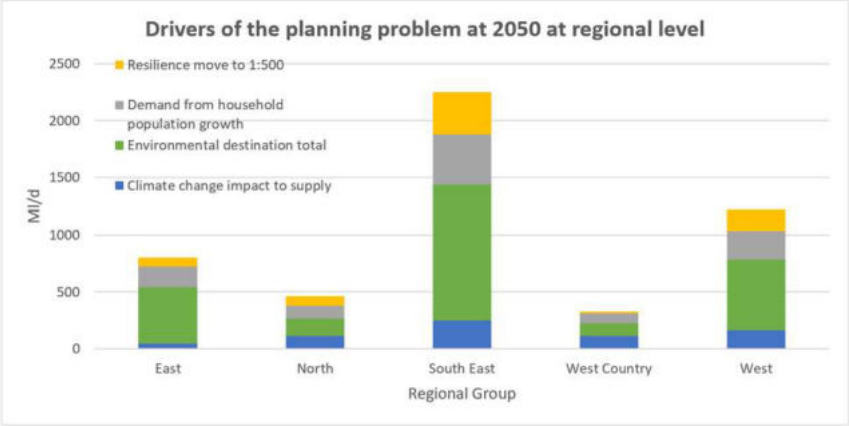
Thoughts on how to develop more integrated plans

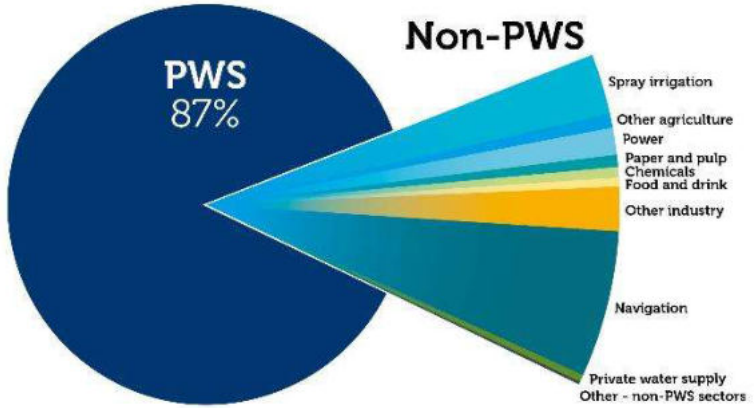


- Working spatially across plans and promoting more collaboration
- Increase potential for joint / conjunctive solutions, offering wider benefits, additional water resilience.
- Housing development, and growth, may provide water availability opportunities and challenges

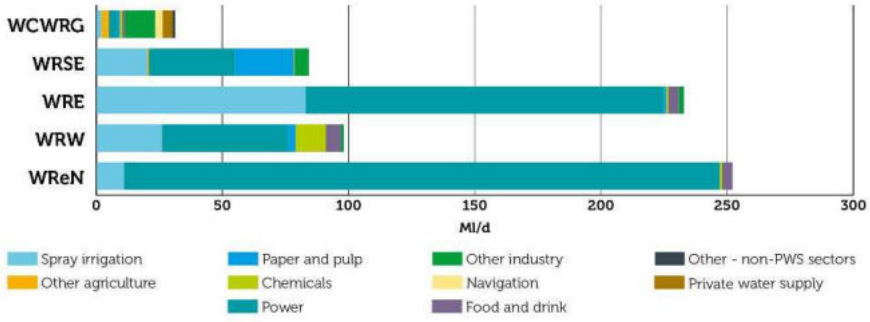
Key take homes from latest round of regional plans

The drivers for future water need are different to the past





WRSE regional plan shows if we do nothing, we could face a shortfall of over 2.7 billion litres of water per day by 2075



Housing and population growth is no longer the main driver

Solution remains twin track

To help meet this shortfall, here's what we will need to do.

Save more of the water we already have. We will reduce leakage by **20% by 2027**; by **30% by 2032**; and by **50% by 2050**.

Every customer will also need to lower their water use to help meet national targets of **9% by 2027**; by **14% by 2032**; and by **20% by 2038** – so that eventually we all use only **110 litres of water per person, per day**.

Between 2025 and 2035 we will need to:

- Complete the construction of **1** new reservoir in Hampshire and start building two more in Kent and Oxfordshire
- Develop an inter-regional water transfer scheme using the Grand Union Canal to transfer water from the Midlands to the South East
- Develop **6** water recycling schemes in London, Kent, West Sussex, Hampshire and the Isle of Wight
- Develop **5** groundwater schemes so we can store extra water in these vital sources

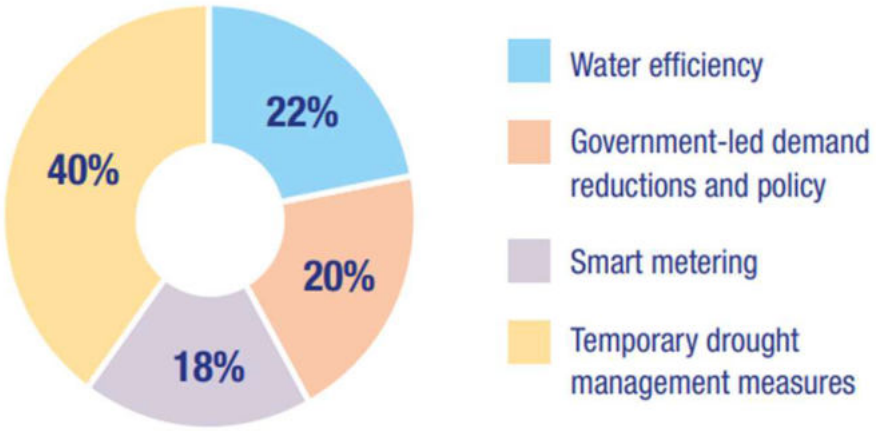
Between 2035 and 2075 we could need to:

- Complete the construction of **4** reservoirs in Kent, Oxfordshire, West Sussex and East Sussex
- Build **6** desalination plants in Kent and West Sussex
- Develop **11** more groundwater schemes so we can store extra water in these vital sources
- Develop **3** more water recycling schemes in Kent, West Sussex and East Sussex
- Develop **new** transfers from new strategic sources of water (such as reservoirs) to move more water around the South East

Reducing water use is critical to successfully deliver the plan

Reducing water use and leakage are central to the first 10 years of our plan. Combined, these two activities could save almost **860 million litres of water** per day by **2035 -** two thirds of the shortfall our plan identified in that first decade.

Percentage contribution of demand reductions from 2025 to 2035



Percentage contribution of leakage reductions from 2025 to 2035

Delivering this level of ambition cannot be achieved by water companies alone.

Government interventions

For us to meet these targets, the Government must introduce:

- Universal water labelling - scheduled to begin in **2025**
- Minimum standards for water-using products by **2030**
- New building regulations by **2040.**

These interventions could provide an extra **300 million litres per day.**

But, if they are not delivered, it risks adding **£2 billion** to the cost of plan and increases the risk of water use restrictions and drought permits and orders.

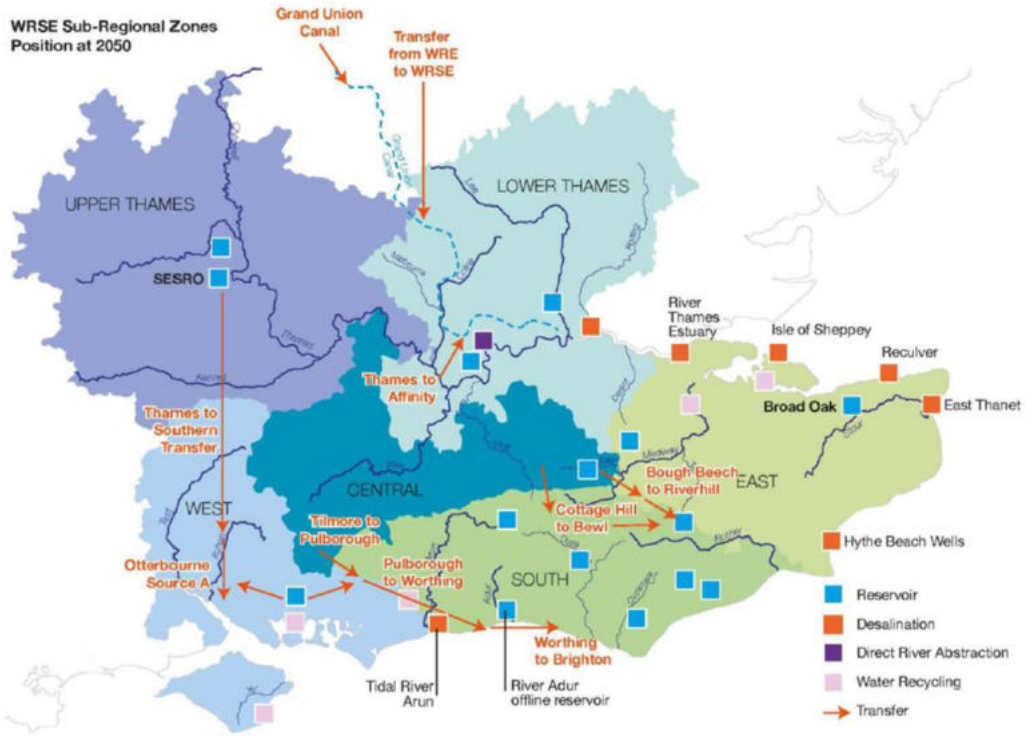
We have an adaptive that sets out what we will do when faced with different outcomes.

Water recycling

- Water recycling schemes are a critical part of the regional solution – six to be progressed between 2025 and 2035
- Involves treating wastewater to a higher standard before releasing it into a river or reservoir where it mixes with other sources before being treated to drinking water standard
- Customer acceptance and successful delivery of these schemes is essential for resilience and environmental protection.
- **At a more local level we think there are likely to be other opportunities to utilise water re-use for non-potable purposes.**

New reservoirs, strategic transfers and desalination

- Havant Thicket reservoir to be completed by 2030
- Reservoirs in Oxfordshire and Kent to be progressed and the River Adur offline reservoir in West Sussex further investigated
- Strategic transfers will enable more water to be moved around the region
- Desalination later in plan – **we want to explore other opportunities to use conjunctively with other sectors e.g. with energy sector, hydrogen production**



Future direction of travel and opportunities

Started by considering three core questions

1. Can we make the current processes more efficient?

2. Do we need to consolidate planning approaches?

3. How do we facilitate delivery of the plans?

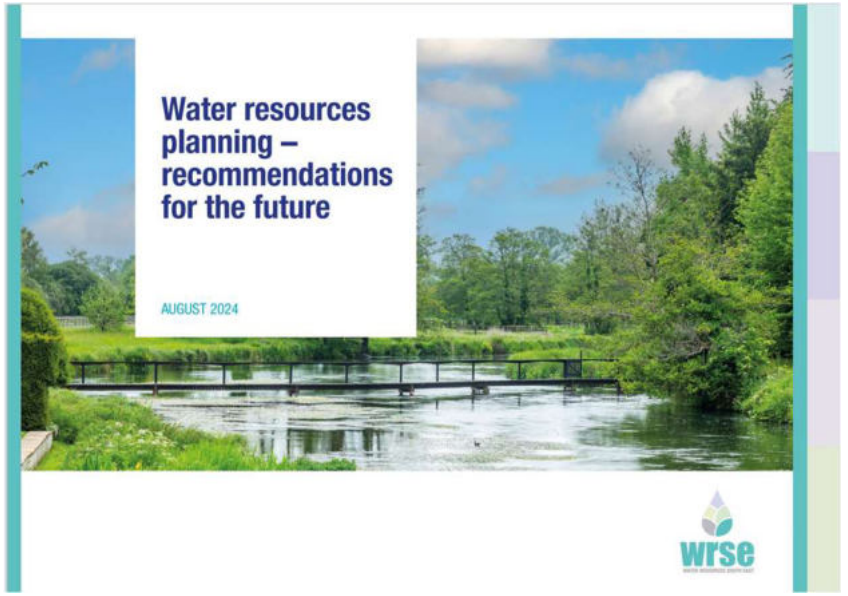
WRSE has set out its thoughts…

GOVERNANCE

- Establish strategic national leadership for water resources planning
- Produce centralized planning scenarios, upfront guidance and a national timeline
- Formally integrate non-public water supply users into regional group governances with dedicated funding for all major water users

PROCESS

- Formal review of the planning processes regarding WRMPs and regional planning is undertaken
- Implement a robust and evidence based environmental planning framework
- Review of demand management targets



Some collective thinking by regional groups

Water resources planning - considerations for the future

National Framework Leadership Board

January 2025

- Establish a three-tier planning framework for water resources
- Create a National Water Resources Forum
- Formally integrate non-public water supply users into regional group governance with dedicated funding for all major water users
- Align the water resources planning framework with other strategic water plans to provide more opportunities to develop integrated solutions across sectors and plans
- Implement a robust and evidence-based policy framework for environmental planning
- Managing future risks within the industry

Opportunity – we need a more integrated approach to spatial planning and water

- Help us to better understand and manage water availability, improve levels of resilience, identify most effective way to deliver planned levels of growth
- Introduce common standards, consistent planning scenarios and data, better understand water needs across sectors, and identify opportunities for shared solutions
- Align the water resources planning framework with other strategic plans to provide more opportunities to develop integrated solutions across sectors and plans
- Opportunity to bring local authority, water, energy and economic growth plans closer together
- Support collaboration needed to deliver water efficiency and manage demand – wider use of smart data, test new technologies, share best practice, deliver on government led interventions.
- Identify and explore a much wider and diverse range of options, including non potable use; nature-based solutions, conjunctive use schemes, or dual-purpose scheme
- Review of building regulations and collaborating to build more water efficient homes for the future. Supporting high water-using businesses (such as data centres) to reduce their water use, use alternative sources of supply

Thank you

Any further questions please contact me:

email lee.dance@wrse.org.uk

visit our website www.wrse.org.uk

Future Water Association

Informing, Innovating, Influencing

Horizon Water Infrastructure eps

- *Speakers*
  - Fareita Udoh, Future Water Association
  - Kara Cartwright, InnovateUK

Interactive Interview: Non-technological barriers to adoption: Cross sector learnings

Tackling Water Scarcity in New Developments

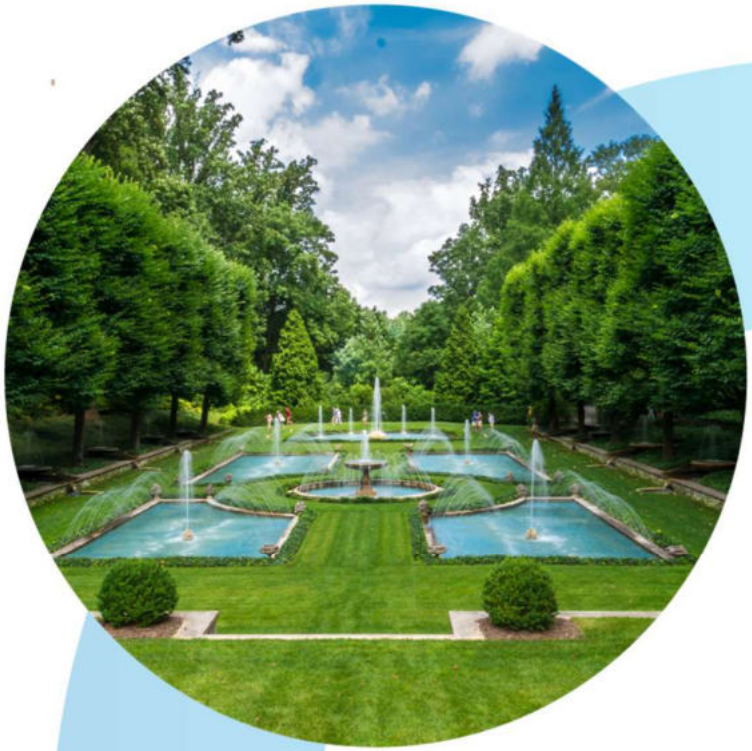
The Goal

To build water supply resilience through strategic development.

- Meet cadence requirements of additional ~305,000 houses to be delivered per annum over the next 5 years
- Deliver developments that increase water supply resilience
- Mitigate infrastructure strain
- Minimise environmental impacts (CO_2, nutrients, water)

The Problem

- Southern UK already classified as ‘severely water stressed’
- Low rainfall and high demand in summer months leads to uncertainty in water supply
- Water and sewerage infrastructure already facing capacity issues
- Frequent rainfall leads to perception of plentiful supply
- Lack of awareness of decentralised solutions
- Lack of incentives for decentralised re-use schemes



New Information

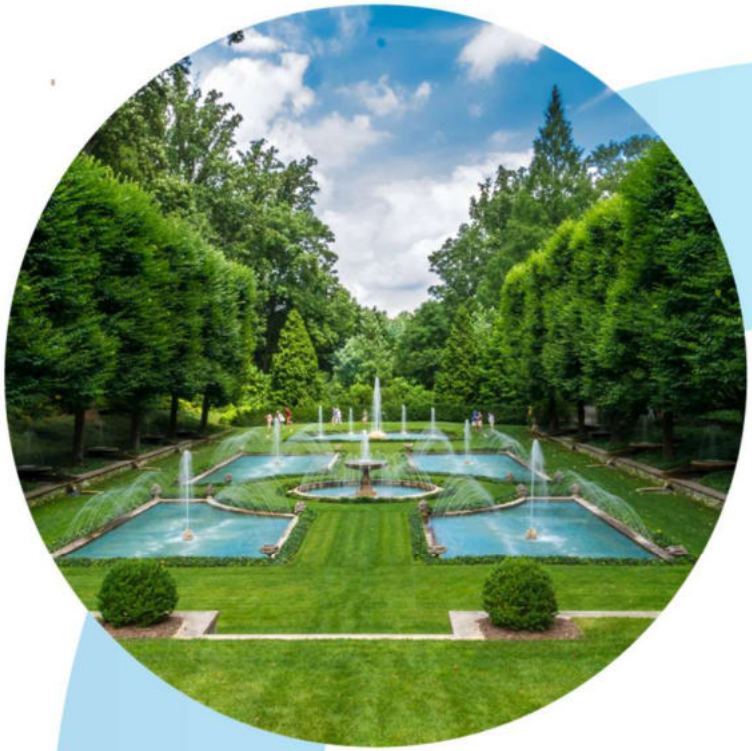
- Technological advancements provide viable technical solutions for water re-use
- Successful regulatory and incentive frameworks provide basis for implementation:
  - Australian Guidelines for Water Recycling (2006)
  - Water Industry Competition Act (2006) (NSW, Australia)
  - San Francisco's Non-potable Water Ordinance (Article 12C)
  - Utilisation of a risk-based approach outlining 'fit-for-purpose' water quality parameters

The Solution

- Development of planning requirements for incorporating re-use schemes
- Incentives/dispensation for developments that include re-use schemes
- Water budgets for developments to ensure continued system operation

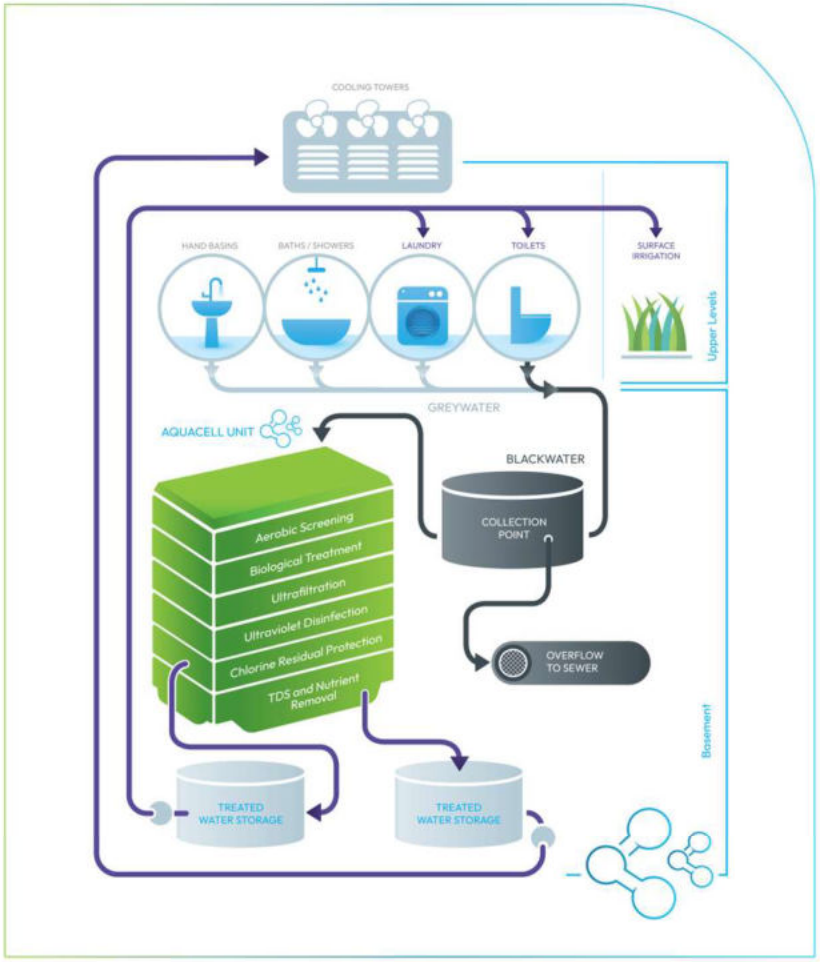
This will help to:

- Alleviate strain on water supply
- Minimise nutrient discharge from new development sites
- Reduce strain on centralised infrastructure capacity

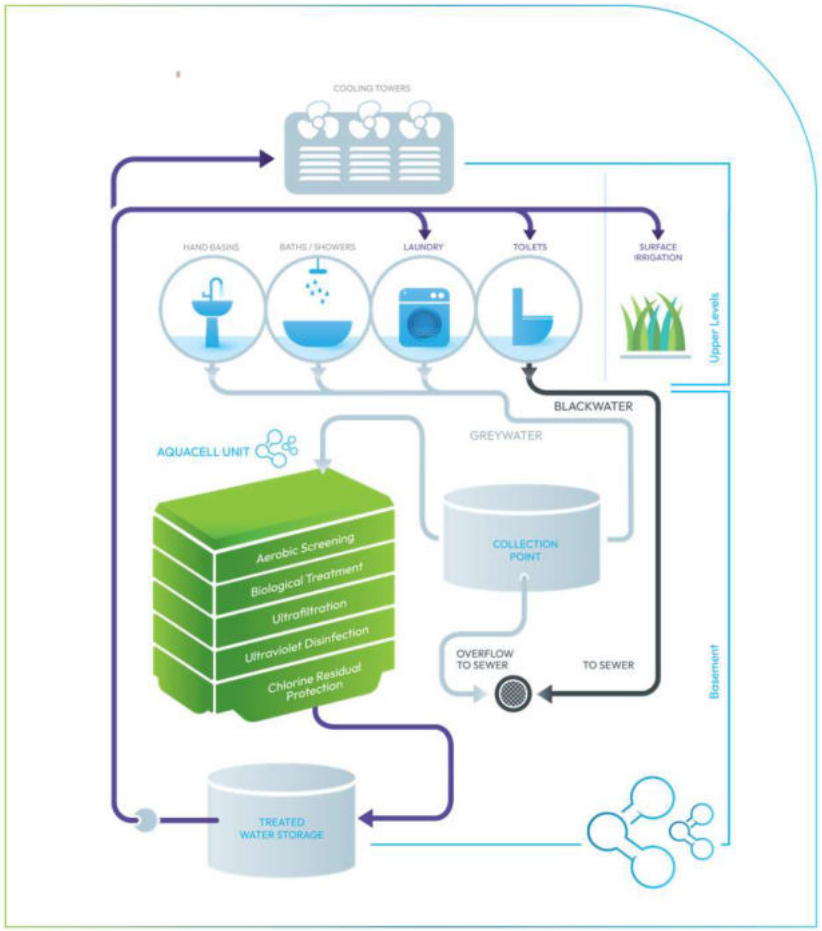


BLACKWATER GREYWATER RAINWATER STORMWATER

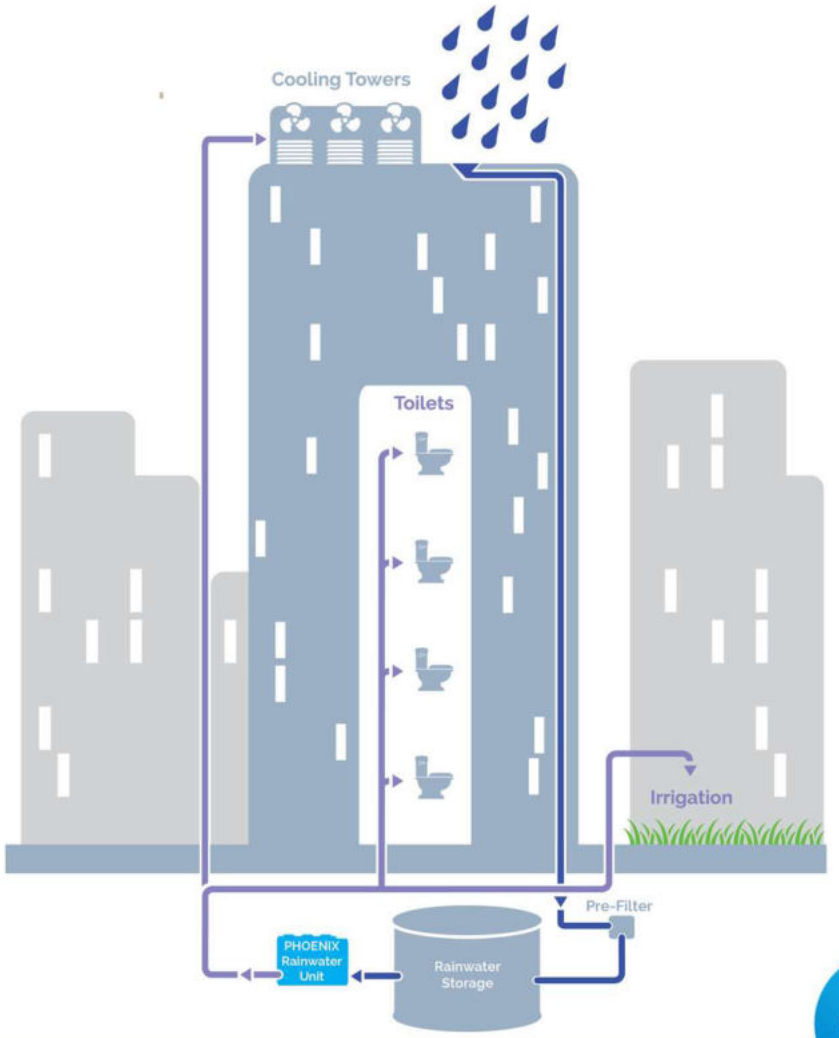
BLACKWATER


COOLING TOWERS
HAND BASINS
BATHS / SHOWERS
LAUNDRY
TOILETS
SURFACE IRRIGATION
Upper Levels
GREYWATER
AQUACELL UNIT
BLACKWATER
COLLECTION POINT
Aerobic Screening
Biological Treatment
Ultrafiltration
Ultraviolet Disinfection
Chlorine Residual Protection
TDS and Nutrient Removal
OVERFLOW TO SEWER
TREATED WATER STORAGE
TREATED WATER STORAGE
Basement

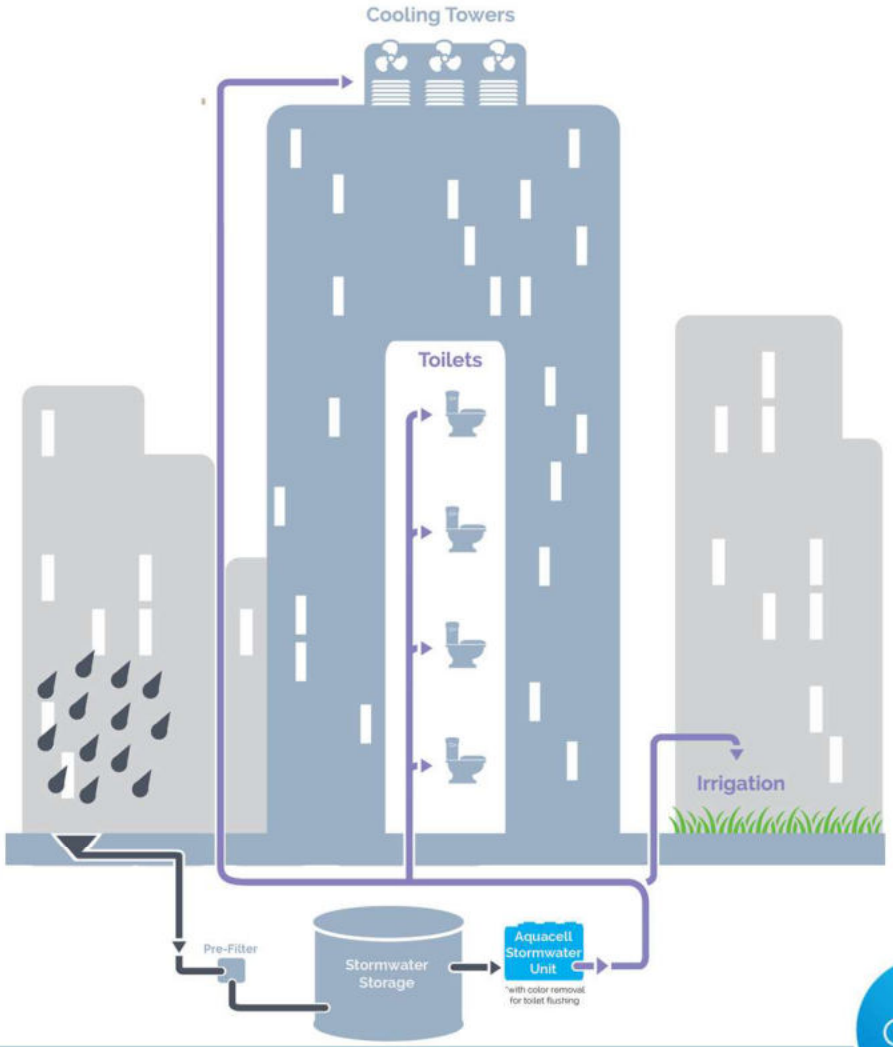
GREYWATER


COOLING TOWERS
HAND BASINS
BATHS / SHOWERS
LAUNDRY
TOILETS
SURFACE IRRIGATION
Upper Levels
BLACKWATER
GREYWATER
AQUACELL UNIT
Aerobic Screening
Biological Treatment
Ultrafiltration
Ultraviolet Disinfection
Chlorine Residual Protection
COLLECTION POINT
OVERFLOW TO SEWER
TO SEWER
Basement
TREATED WATER STORAGE

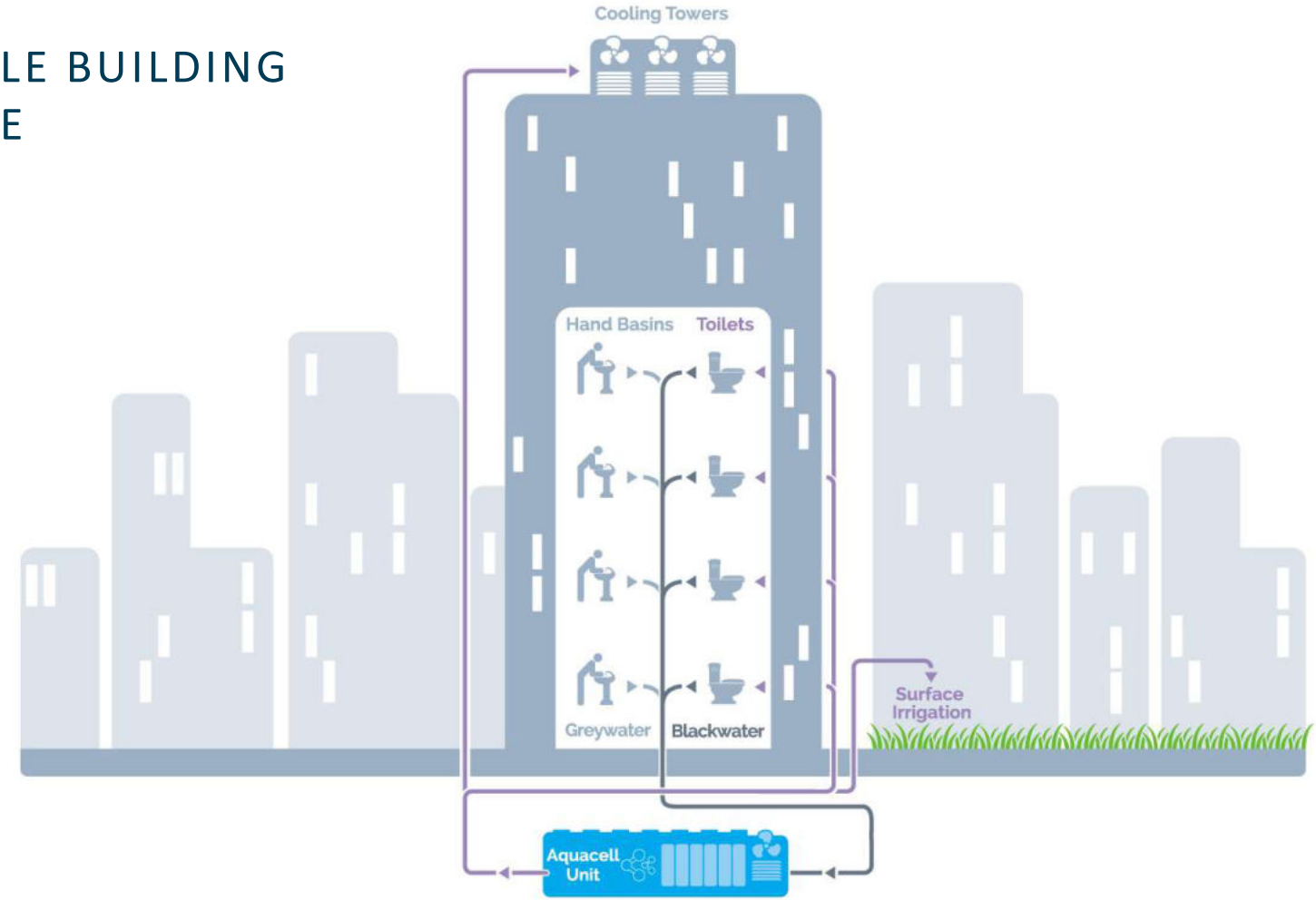
RAINWATER


Cooling Towers
Toilets
Irrigation
Pre-Filter
PHOENIX
Rainwater
Unit
Rainwater
Storage

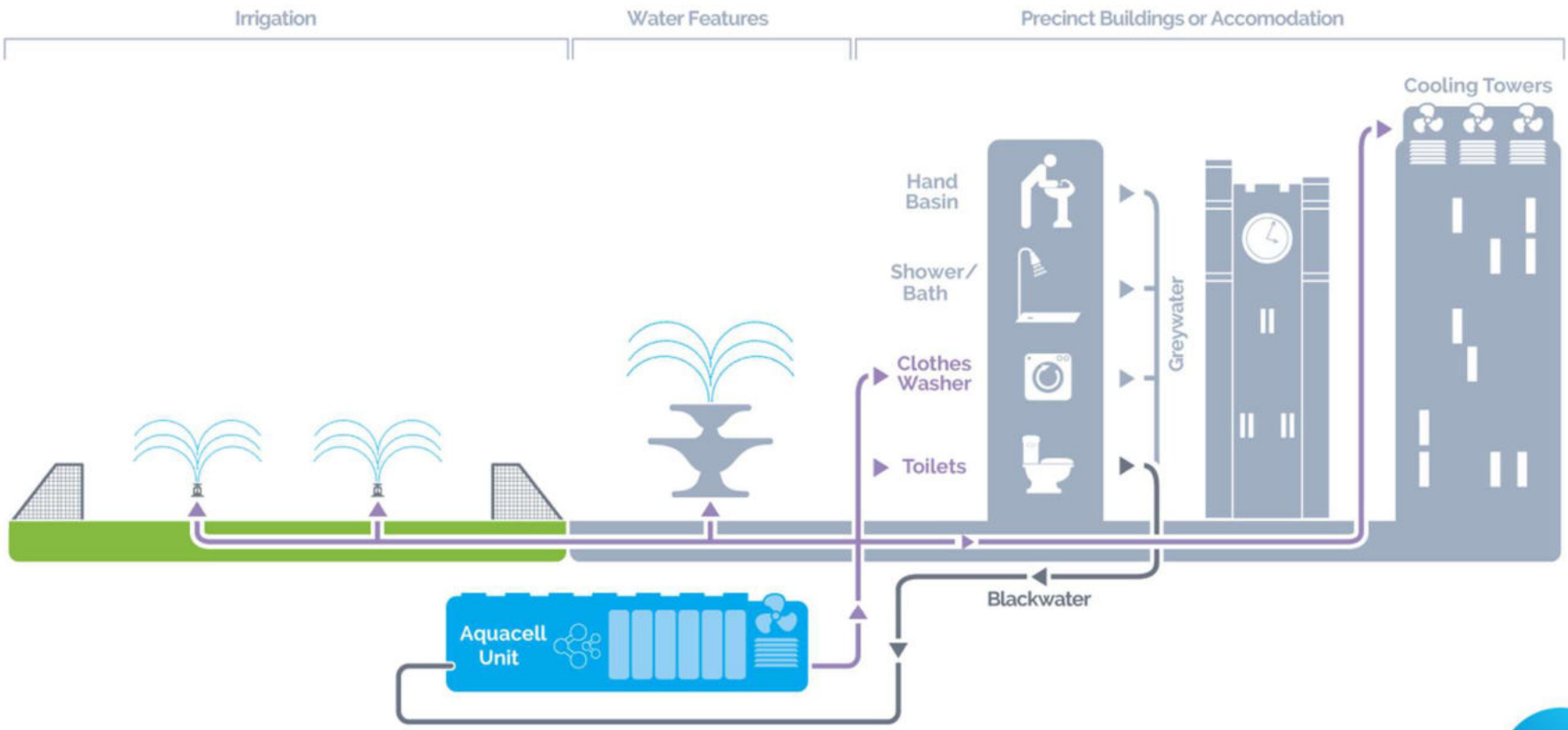
STORMWATER


Cooling Towers
Toilets
Irrigation
Pre-Filter
Stormwater Storage
Aquacell Stormwater Unit
*with color removal for toilet flushing

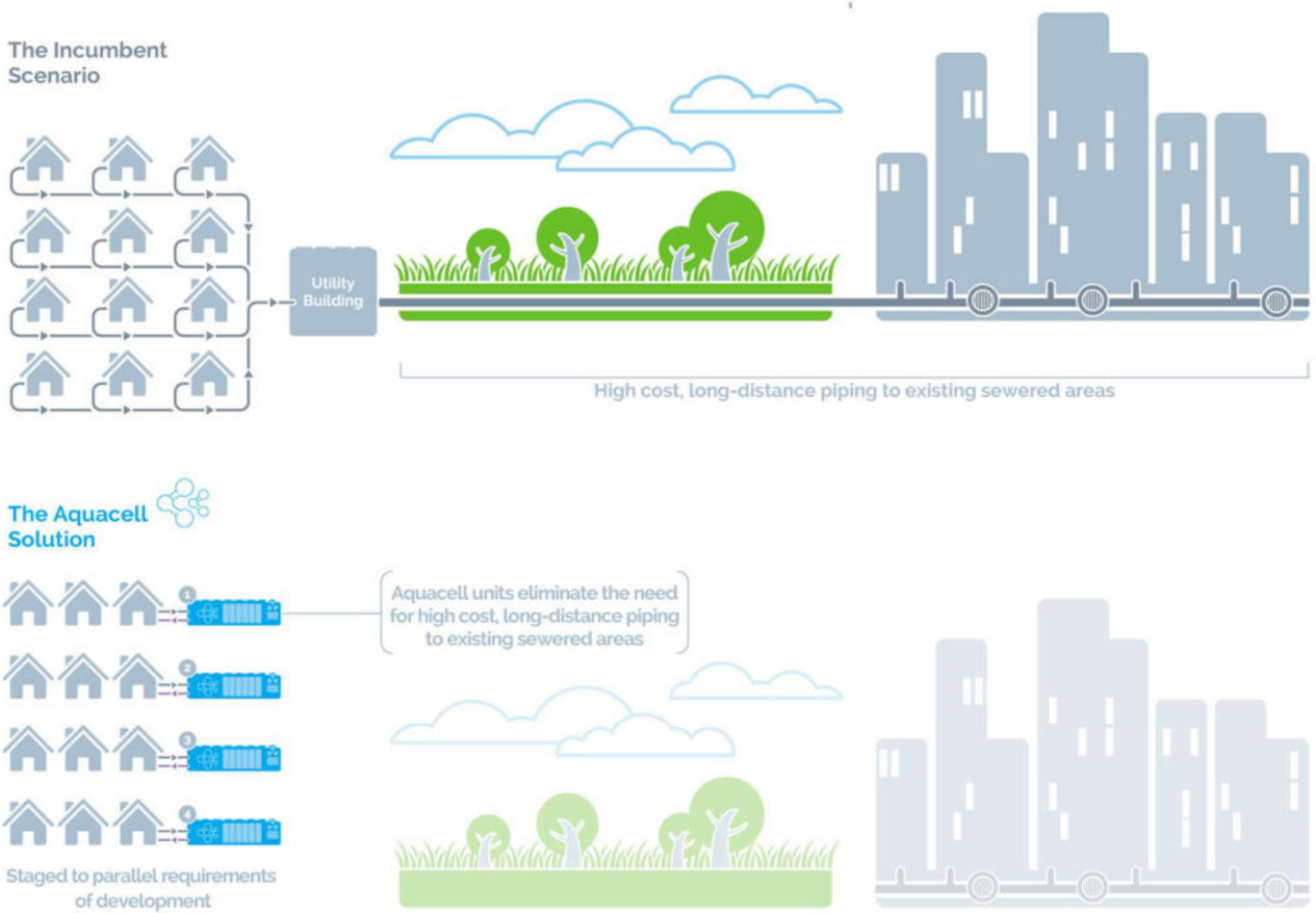
SINGLE BUILDING SCALE



PRECINCT SCALE



NEIGHBOURHOOD / COMMUNITY SCALE



“Most favoured future water source was recycled water for non-drinking purposes”

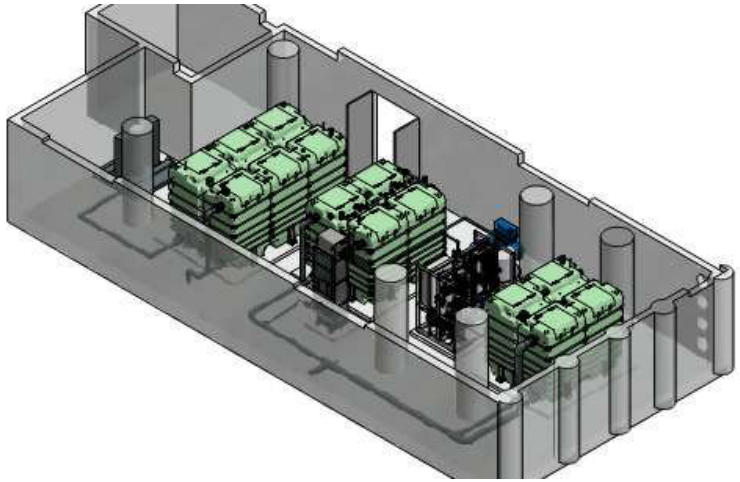
Future of Water Report – AWA & ARUP


CASE STUDIES

Spring Square

20,000 LITRES / DAY, SYDNEY

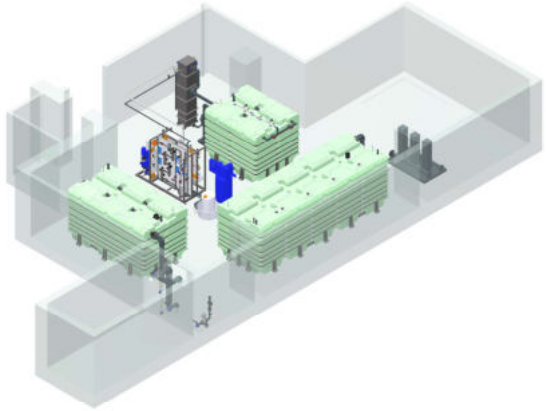
- Greywater plant
- Toilet flushing, irrigation, cooling towers and more
- Planning condition



The George Apartments

20,000 LITRES / DAY, SAN FRANCISCO

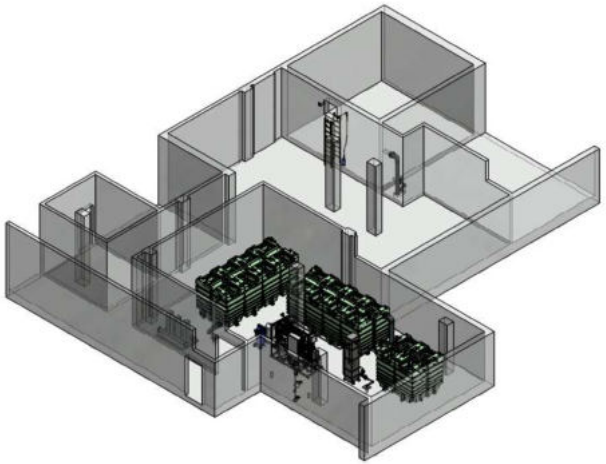
- Greywater plant
- Toilet flushing, irrigation
- Non-potable ordinance



The Brady

20,000 LITRES / DAY, SAN FRANCISCO

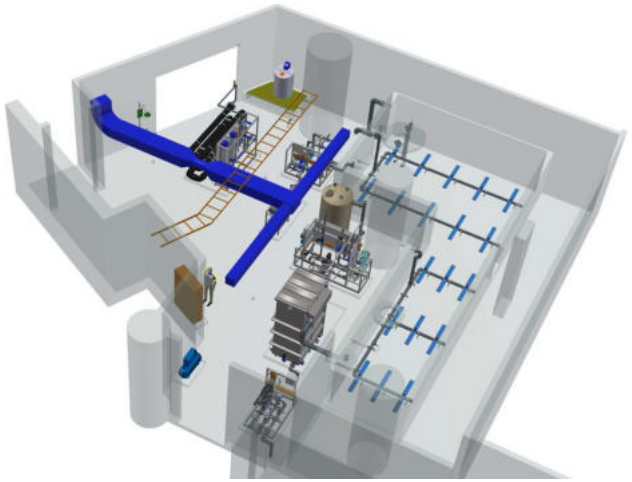
- Greywater plant
- Toilet flushing, irrigation
- Non-potable ordinance



Queens Wharf Brisbane

135,000 LITRES / DAY, BRISBANE

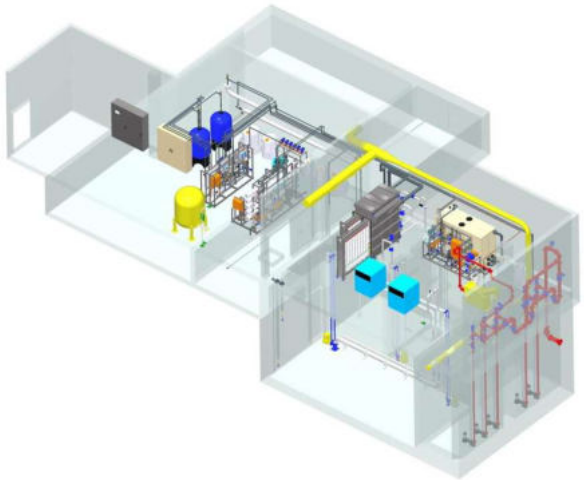
- Greywater plant
- Cooling towers
- Greenstar, planning concessions



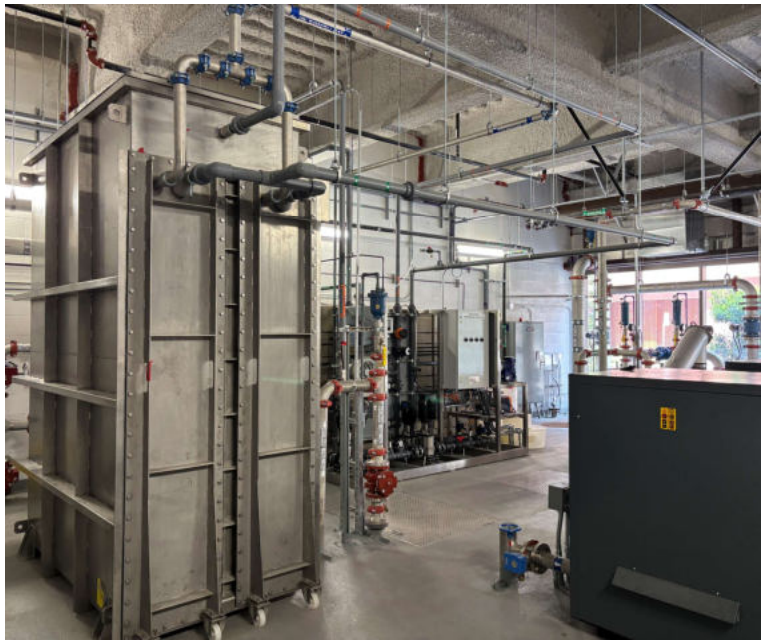
Mission Rock

250,000 LITRES / DAY, SAN FRANCISCO

- Blackwater plant
- Toilet flushing, irrigation
- LEED Platinum



Mission Rock



New Sydney Fish Market

150,000 LITRES / DAY, SYDNEY

- Tradewaste water plant
- Cooling towers, toilet flushing, washdown and more
- Greenstar

SYDNEY FISH MARKET

Salesforce Tower

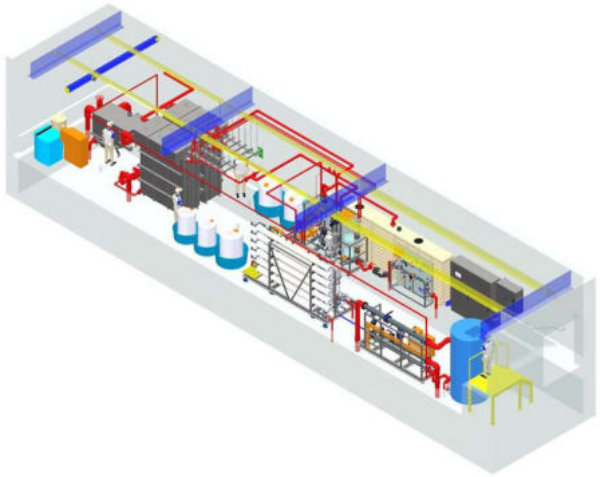
150,000 LITRES / DAY, SAN FRANCISCO

- Blackwater plant
- Cooling towers, toilet flushing
- LEED Platinum

Facebook Campus MPK21

350,000 LITRES / DAY, MENLO PARK

- Blackwater plant
- Toilet flushing, irrigation
- LEED Platinum



"INCREASING SUPPLIES of *manufactured water* through water re-use and recycling offers a reliable source of water that is not climate dependent"

GHD Aquanomics

Q&A

aquacell

aquacell
water recycling

Hugh Fisher
hughf@aquacell.co.uk

AUSTRALIA | USA | UK

Future Water Association

Informing, Innovating, Influencing

Horizon Water Infrastructure eps

Future Water Report Card Workshop

Future Water Association

Informing, Innovating, Influencing

Report Card

1/2

Overall Grade: C/D

There are positive initiatives and some forward-thinking policies, but challenges in execution, consistency, and long-term planning keep Developer Services from achieving a higher grade.

Understanding & Support (C-) – There are clear gaps in how developers interact with water companies, with inconsistencies in service and support. While progress is being made, the process remains complex, especially around NAVs and network expansion.

Infrastructure Expansion (C) – Pipe network reinforcement and connection processes are slow, and while PR24 focuses on infrastructure charges, there's still a lack of cost certainty and long-term strategy.

Future Water Association

Informing, Innovating, Influencing

Report Card

2/2

Sustainability & Innovation (C+) – Positive efforts in nutrient neutrality, SUDs, and water reuse, but wider adoption is slow and regulatory alignment is inconsistent.

Metering & Efficiency (C) – The push for smarter, above-ground metering is promising, but current installation practices still default to underground, limiting efficiency and leak detection improvements.

Regulatory & Pricing Incentives (D/E) – Pricing mechanisms to drive water-efficient development are being explored, but incentives remain weak, and cross-subsidy approaches need better refinement.

There are clear gaps in the regulated funding model that are preventing NAVs from adopted more complex assets.


Future Water Association
Informing, Innovating, Influencing
Horizon Water Infrastructure
eps
Lunch Break

Future Water Association

Informing, Innovating, Influencing

Horizon Water Infrastructure

eps

Speakers

Jamie Gordon, Cavendish Consulting

Julian Webster, Affinity Water

Naomi Sadler, SEES

NAVs and Water Efficiency: Reducing Potable Demand in New Developments

ENABLING WATER SMART COMMUNITIES

Agenda

- Introduction to EWSC
- Community-based stewardship
- Q&A

Your speaker today

Stuart Edwards
Project Delivery Manager

United Utilities

ENABLING WATER SMART COMMUNITIES

Project Overview

Project partners

What is a water smart community?

Shared challenges between water and housing

Enabling Actions

ENABLING WATER SMART COMMUNITIES

ENABLING WATER SMART COMMUNITIES

An innovation project exploring the relationship between integrated water management, community engagement & practices, and housing development to unlock new opportunities for cross-sector delivery and stewardship.

Project Delivery Team

love every drop anglianwater
United Utilities Water for the North West
Thames Water
Southern Water
ARUP
University of East Anglia
MANCHESTER 1824 The University of Manchester
CIWEM
COMMUNITY LAND TRUST NETWORK
KWR
Dm
CLES

Independent Programme Board

Environment Agency
Homes England
defra
NATURAL ENGLAND
Cranfield University
Future Homes Hub
LPDF
UKRHA
Catchment Based Approach
Taylor Wimpey
ARUP
CIWEM
Urban&Civic plc

Ofwat Innovation Fund
Water Breakthrough Challenge

What is a water smart community?

A **WSC** is a place where water is central to the design, where people embrace the principles of water stewardship and where they are empowered by assets and systems to use water wisely and with care for the environment

Our focus is on *Enabling*...

ENABLING WATER SMART COMMUNITIES

Shared challenges faced by water & housing sectors

Ministry of Housing, Communities & Local Government | Department for Environment, Food & Rural Affairs | Department for Levelling Up, Housing & Communities

Guidance

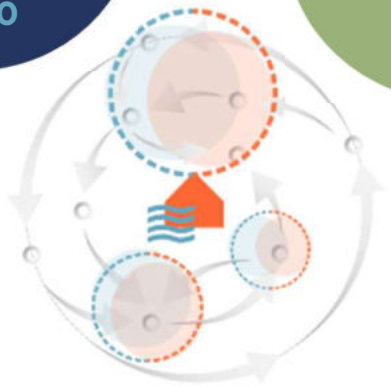
Addressing water scarcity in Greater Cambridge: update on government measures

Published 6 March 2024

1.5 million new homes in next 5yrs

>4.8 billion litres/day deficit by 2050

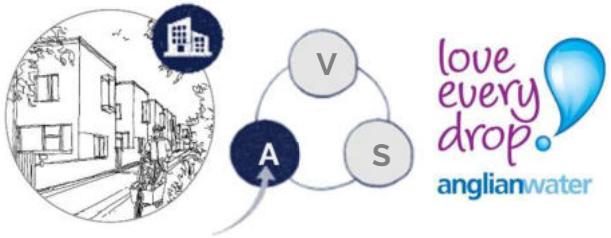
8 million properties at risk of flooding by 2050 (1 in 4)



ENABLING WATER SMART COMMUNITIES

‘Enabling Actions’

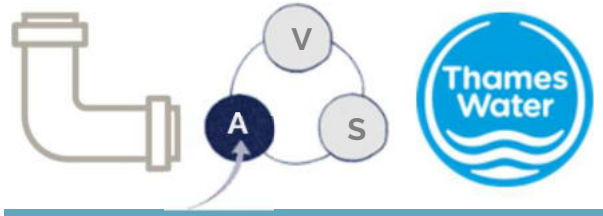
Values: Water for people and places



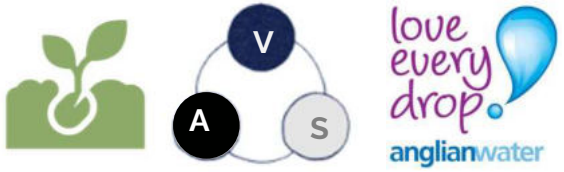
Assets: On-site water reuse

Finance & Funding

Community-based Stewardship



Assets: Impact of Reduced Water Usage on the Sewer Network



Climate Resilient Gardens

Note: above proposals are snapshots of workstreams currently in development.

Enabling Action Project

Stewardship

ENABLING WATER SMART COMMUNITIES

United Utilities

COMMUNITY LAND TRUST NETWORK

Project overview

The stewardship workstream is the progression of one of the three proposed enabling action area projects. These projects are live areas of experimentation, each exploring a design challenge connected to the themes of assets, value and stewardship.

Together, United Utilities, Community Land Trust Network, The National Organisation for Local Economies (CLES) and Arup set out to explore:

How might we create a sustainable community-led stewardship models for Integrated Water Management that empowers diverse sectors to adopt, operate, and maintain assets effectively?

01 Introduction

Drivers for stewardship - politics

The Competition and Markets Authority (CMA) recommended private management companies – currently responsible for public amenities 9 in 10 housing developments – be banned.

MPs have raised concerns with management companies in Parliament and called on ministers to act.

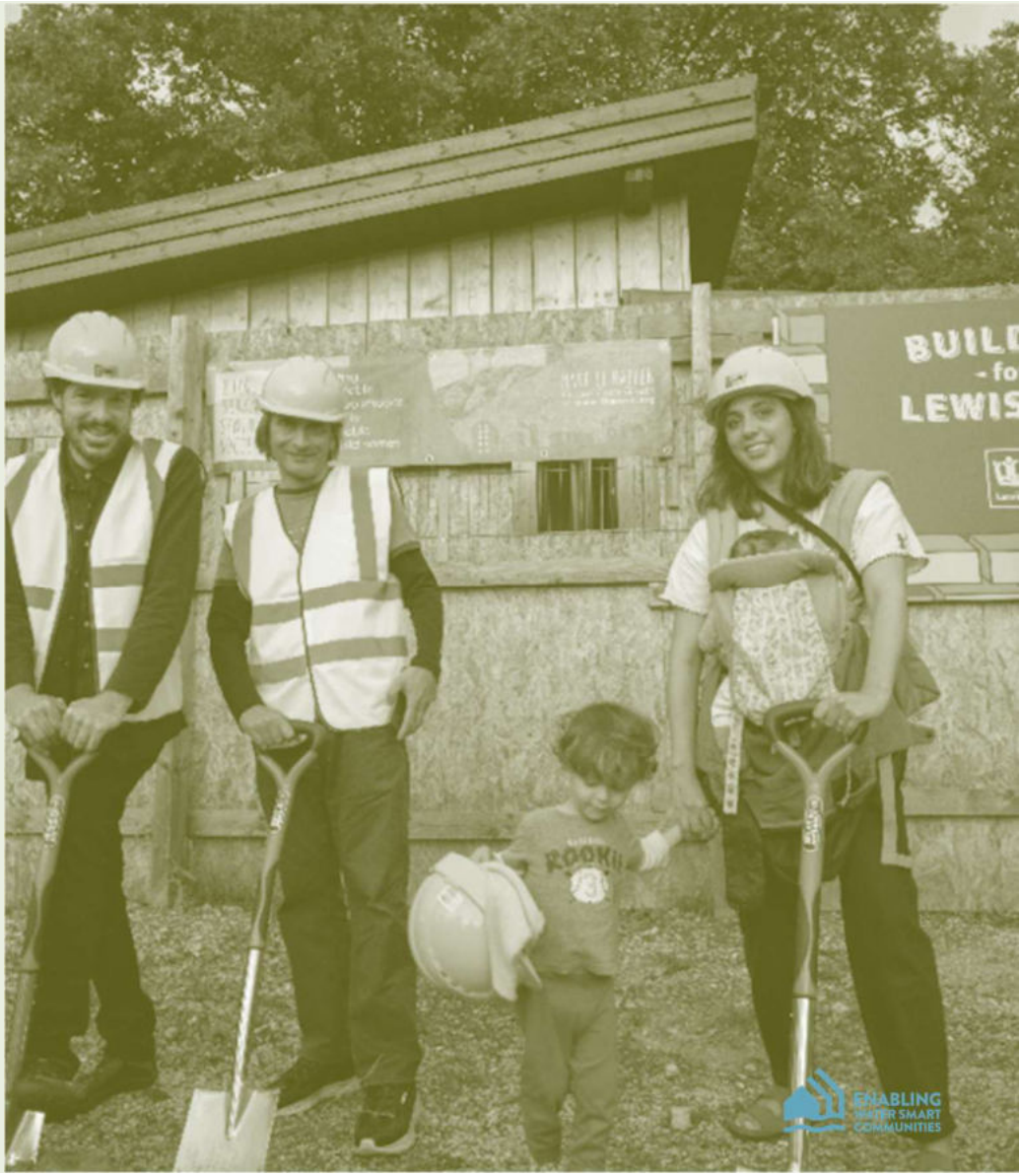
The government has pledged to end 'fleecehold' charges for estate management.

Other voices have called for changes to stewardship including the Building Better Building Beautiful Commission, the Town and Country Planning Association, the Bennett Institute, etc.

01 Introduction

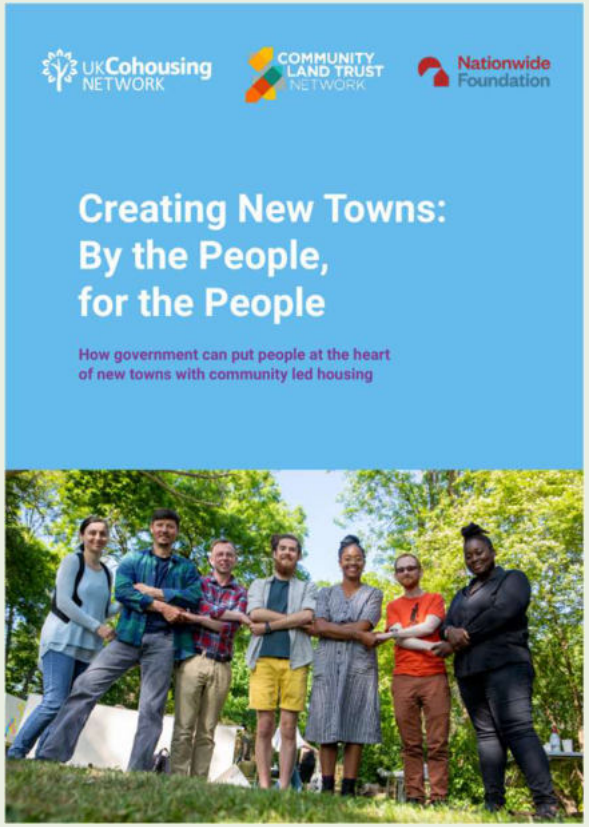
Why community land trusts?

- Established community stewardship model
- Purpose of 'furthering social, economic and environmental interests of a local community'
- Evidence base of environmental benefits relating to energy, circularity – transferable to water?
- Defined in law, and can take a variety of legal forms
- Can layer with other actors - e.g. CLT as freeholding steward of housing association homes, or business units, or local charity providing social services



01 Introduction

Connected CLT projects



ENABLING WATER SMART COMMUNITIES

Case Study No.1:

Kennett Garden Village

- A notable example of local authority leadership and strong civic commitment to place community stewardship at the heart of the housing growth agenda
- **Key learning:** local authority leadership, in this case from East Cambridgeshire District Council, can drive successful community-led development.

- **How it operates in practice:** The parish-wide CLT owns a proportion of the affordable homes as well as the public open space, while managing these and other community facilities, funded by management fees from residents and supported by a commuted sum from the developer.

Image Source: GaleaStudio 2024

Case Study No.1 | **Kennett Garden Village**:

How is it being stewarded?

- On the non-housing side, Kennett's open spaces, which will be adopted by the CLT, will be financed in two ways.
    - The Section 106 Agreement secured a financial contribution (estimate £1.6m) for the maintenance of the open spaces.
    - A management fee of £90 per annum, per property (being all 500) will be paid to the CLT. Unlike most management fees, the £90 figure will only increase with CPI on an annual basis.
- Kennett CLT will go on to manage the stewardship of the development, using a modest management fee levied on all residents of the new development to support its non-housing operations including:
    - Public open space, including SuDS and other plantings after an initial 12mo period of management by Bellway (maintenance supported by a £2.5m commuted sum through planning)
    - Allotments (to be leased at a peppercorn rent to an allotment society)

Case Study No.2:

Leeds Climate Innovation District

- A pioneering residential development project poised to be a leading eco-friendly urban neighbourhoods in the UK.
- Citu, the developer has a clearly expressed mission to tackle climate change through their model of European-inspired city-centre living.
- ***"We exist to tackle climate change –it's that simple. Everything we do is part of that mission…If we're going to stop climate change, we're going to have to radically change the way we live in our cities." - Founder Chris Thompson in CID Brochure (Aug 2021)***

Case Study No.2 | Leeds Innovation District:

How is it being stewarded?

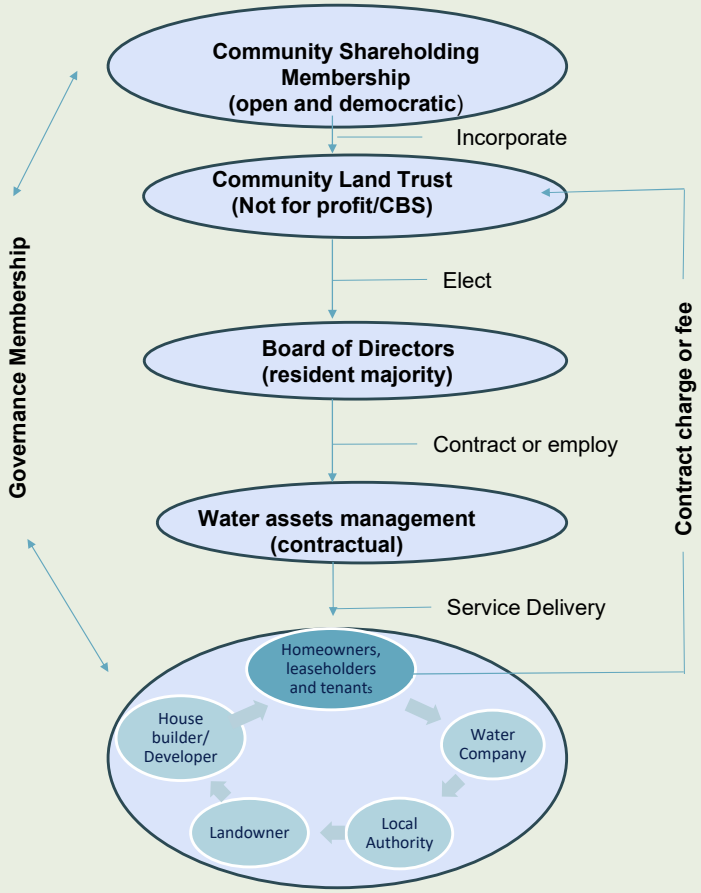
- A Community Interest Company (CIC) is being established with new residents and stakeholders in the early stage of the project.
- Developers stay on the board until they believe that the company is being run sustainably
- In addition to freehold land and common buildings, the CIC will own and stewards all communal areas, SuDs and parks.
- The CIC is funded by a £3,000 bond on every home purchase equivalent to the cost of freehold purchase.
- The CIC will form a subsidiary CIC (Company Limited by Guarantee) which owns the infrastructure for data, electricity **and water**.
- This utility subsidiary is designed as surplus generating, both to renew the sustainability assets at the end of their life and crucially to form part of the revenue model of the stewardship CIC

Key insights

- Communities are not always interested in managing water assets
- Difficulty in taking learnings from community-led stewardship in other sectors
- Lower land value limits investments in water infrastructure
- Water is not on the agenda, it is a blind spot
- The variability in housing models will pose a challenge to scaling any model.
- Challenges in transitioning governance and responsibilities when developer steps away.
- Current estate management models aren't invested in managing water assets effectively.
- Stewardship needs to be considered at inception and design stages of a new development.

Image Source: CIWEM

Prototype for testing



The model is initiated at the early stages of the development blueprint to create an incorporated legal entity.

It needs to be established prior to construction, so ready to adopt and take ownership of communal water and land assets from developers.

The model can include ownership of complementary income raising assets such as

- Affordable housing
- Community energy schemes
- Natural landscapes, woodlands and Sites of Special Scientific Interest (SSSI)
- Workspace and commercial building
- Community facilities

Governance structure allows for homeowners, leaseholders, and tenants, people that live around a development to all have membership – a share in the CLT.

Other stakeholders such as the developers, local authority or water company, can take up the option of a share membership in the CLT.

All shareholders appoint a board of directors where residents are often the majority.

The Board of Directors are responsible for contracting the management of their assets, and ensuring future investment in perpetuity

Prototype model

benefits to stakeholders

The Community

- Increased democratic involvement in ownership and management of water assets.
- Not for profit status to keep estate fees low.
- Opportunity for water assets to contribute to a sense of place and well being.

Water Company

- Community interest in ownership and management of water assets in perpetuity. Assists with tackling flood risk and potable water consumption.
- Legal entity which can enter into adoption agreements with water company.
- Optional associate membership to influence - representative from water company on Community Land Trust Board.

Developer

- Community buy-in and sustainable approach to water from the beginning, will assist with planning approvals for new Development.
- Ability to unlock housing in areas restricted by water supply or by flooding.
- Alternative to estate management and resident management approaches meeting CMA recommendations.

Landowner

- Community buy-in and sustainable approach to water from beginning to assist with planning approvals for new Development.
- Optional associate membership to influence – Landowner retain a role within the community land trust and partnership vehicle for development. Could have benefits to farmers selling off land.

Local Authority

- Assets managed in perpetuity that do not require Local Authority adoption.
- Engagement of community in planning process.
- Scalable across several sites within a Local Authority boundary.

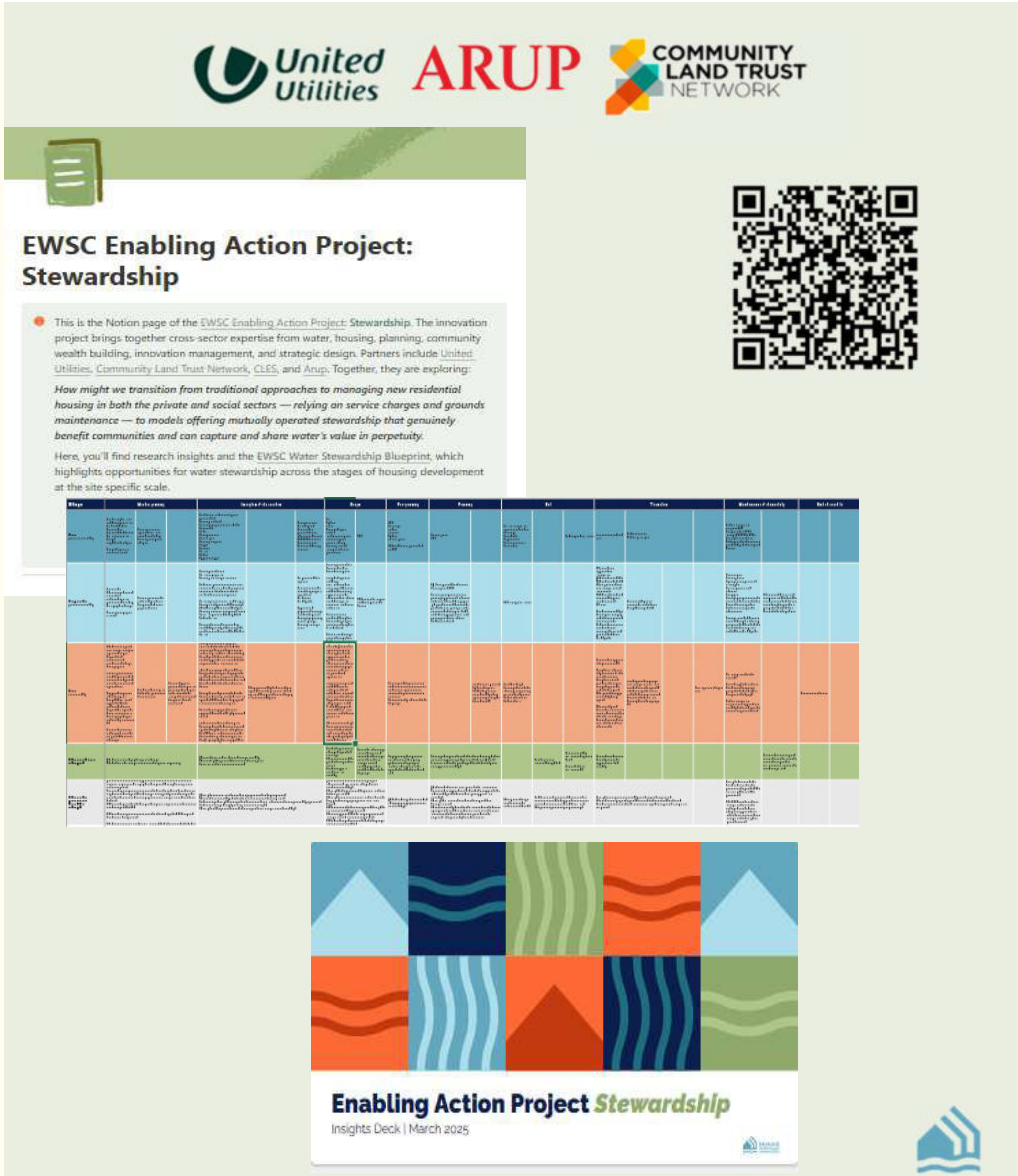
Stewardship blueprint

Stage	Masterplanning			Inception / site selection			Design		Pre-planning	
Substage	Refer to local plan (if available)	Area action plan delivered	Explore funding mechanisms	Landbecomes available for housing development financing and legal arrangements between land owner and developer	Land price negotiations	Handover	Design iterations that balance financial modelling/viability with design standards	Developers put a design forwards	Rounds of dialogue	Outline planning submission
Stage description	Stewardship starts at the master planning stage Ideally, every new housing development site should align with a Local Plan. These key planning documents guide land use for residential development, setting the location, number, and types of dwellings proposed. Local authorities must have a Local Plan and review it every 5 years. The Local Plan policies can include stewardship requirements (as demonstrated by The Parks Trust, Milton Keynes) and should extend to localised plans such as regeneration masterplans and neighbourhood plans.			Land falls into two categories—brownfield or greenfield—and can be privately or publicly owned. While development guidelines prioritize brownfield sites, housing development on greenfield land is permitted specific criteria. Emerging developments in the NPPF is leading to a new category around poor-quality greenbelt, referred to as grey belt. Land becomes available for development in several scenarios: - Scenario 1: A public body such as a Local authority selects land for sale. Will go into partnership with a housing association or developer - Scenario 2: Private Landowner wants to sell their land - Scenario 3 - Developer identifies land though local plan or land register			Compromises are often made at the design stage to ensure financial viability and fit to design standards and advocacy for diversity in housing type (ie determining the percentage of affordable homes and detailed tenure options). The impact of housing types on stewardship is still being explored. The Local Plan guides the design process, with quality depending on the chosen developers' approach. Larger sites often involve multiple developers working in consortium, while the Local Planning Authority oversees the	Pre-planning is a discussion stage between LPA and developer,A pre-planning application is a collaborative process between the developer and LPA. The developer provides location,site plans and elevations and design along with description of proposed works, along with ecology, arborial, highways and noise report. Larger developments will require an Environmental impacct report	There are two routes to obtaining planning permission: submitting an outline planning application or a full planning application. Outline planning is the application process the developer submits plans and reports but has up to 3 years to submit more detailed designs, as agreed with the LPA.
Key decision points	**Key point 1:** Integrate water into masterplans				**Key point 2:** Cost the price of stewardship into land price negotiations		**Key point 3:** Target invidiaul developers to better integrate water into proposed designs			
What we know (findings from our research)	To integrate water stewardship, larger scale thinking such as regional spatial and economic strategies need to be considered, as well as smaller localised plans such as regeneration	Sites at different scales will require a diversity of asset type, especially on multi phase sites.	Covenants around community ownership can be used in land sale negotiation Endowment sums based on	After securing a developer agreement, developers can consult water companies for development advice. Water companies typically provide high-level principles such as "Assist the draining of developments in a sustainable manner" or "All options for Sustainable Drainage Systems	Water assets legal aggreements, which are covered by law i.e. water company adoption under s104. Which are coveed by contractual agreements such as estate managment.	on for profit organisation - manages broad range of assets (Bornville Trust) to housing association (from LA)	Integrating water into designs in a way that enables good asset management should be considered. In positive instances, such as in Climate District Leeds, civils,	*Opportunity to target invidiaul developers developing their individual phases- could use their SuDS basins as something else	Submission by developer of pre planning documents; feedback from LPA officers feedback from local councillors. In larger scale development it can involve other stautory and non statutory consultees and	In larger scale developments, the process obtaining outline planning permission with option of 3 years to submit all details arou "reserved matters" for planning approval preferred to allow developers time to deve
Roles specific to water stewardship	Ministry of Housing Communitiesand Local government; Combined Authorities; Local authorities; Town and Parish Councils,	Development trusts can represent the community to structure house building development as part of a wider plan.		Landowner: may advocate for specific stipulaitons of build Development board Developer: progressive or volume builder Local authority Builder		Housing association Homes England; Local authorities; private landowners; other statutory land owners i.e	Civils highways structures drainage disciplines architects	LPA	LPA; Developer, architect; councillors, highways,	Water companies LPA
Responsibilities specific to water stewardship	Local authority: Advocating for the needs of future residents; understanding climate projections; understanding demographic change	Water companies need to understand growth across their regions, so that they can prepare for the future.		Planning coordination Community engagemnt Development management service Most Water companies offer an environmental incentive		Compliance with Water regulations. Council role of anchor institution delegating some responsibility to a	Developers are unlikely to have undertaken detailed site investigation. Instituting building control and	LPA oversees the maste plan and the integration of the different sites		S106 is a negotiated deal between develo LPA. Water companies proactively review plan applications submitted to local authoriti
Barriers to water stewardship	The benefits of integrated water management require regulatory changes in England and innovative and collaborative thinking from key strategic partners.	On residential developments the Water Companies are not Statutory consultees.	Asset ownership presents significant challenges to master planning where the type of assets that may need to be managed in unclear, and the target number and tenure are fluid.	Areas of poor land value limit progressive investment which we know is needed to encourage the careful design of water into any development . As Volume house building is driven by its speed of delivery, its less likely Innovative assets will be suggested as more time is needed for their integration and	Adopting a stewardship body after land prices agreed will result in suboptimal outcomes. But sub-optimal still worth doing. always benefit of adopting some level of stewardship on site.		Expense of implementing water smart designsIn our own experience, utilising water efficient taps, showers, and appliances can do a great deal to cheaply reduce water		Developers, with their greater resources and influence, can influence local authorities, often limiting creative water-conscious designs in favour of efficient construction. Water asset ownership must be clarified at the	
What could we test at this stage?	1. Models of asset ownership in light of regulatory change 2. Methods to frame the management of water as a key aspect of master planning			1. New land transfer mechanisms that enable long-term stewardship 2. How land might be parcelled differently to facilitate better integration 3. Investment mechanisms for sites on low value land			How the design of a site can change if designed with water as a priority What incentives could be provided to integrate better water assets How housing type limits or enables	It's known that multi developers sites can led to fragmented solutions where developers are left to choose different management and stewardship options. How can this	If the pre-planning is the stage is one of informal discussions and interpreting guidance, and isn't prescriptive, mechanisms to keep water on the	Develop a deeper understand of how Loca planning obligation such as Section 106 designs. What within these obligations c
What are the questions we should be asking?	1. How can Local Authorities be supported to advocate for future residents' needs and integrate climate projections, demographic change, and housing development to justify water asset integration? 2. In areas with regional governance structures (like Greater Manchester), what are the levels of synergy between the Integrated Water Management strategy and spatial and local plans? In areas without these structures, what levels of priority is given to water management and assets in Local Authorities?			1. How might we overcome land transfer challenges, particularly when designing at scale? 2. To enable water stewardship, who should own water assets on new development sites? 3. In these early stages, how might developers be further incentivised to commit to the transfer land to not for profit stewardship organisation? Are the incentives to get through planning more efficiently enough? 4. How might land be parcelled to enable better integrated water management and stewardship?			1. Who needs to be involved at the design stage to advocate and implement water smart designs that can enable water stewardship? 2. How might building control and design recommendations be better implemented? 3. How might any innovative financial mechanism be used to help mitigate		1. What skills and capabilities are needed at the pre-planning stage to influence water stewardship?	1. We know that there are some exemptio social housing providers and charitable h affordable, would exemptions apply to co 2. How might Community Interest Levey b assets?

*This blueprint provides a way synthesise research and communicate the **barriers to water stewardship** across the site development process. This can be used in collaboration with partners to identify what changes can be made by whom to best enable community involvement in decisions about water management and better support their role as asset managers and stewards of the places that they live.*

Where did we get to?

- Output Insights document, Summary document and blueprint synthesis.
- Current estate management approaches do not satisfy current requirements let alone future.
- Increasing citizen involvement in water stewardship is difficult, however, we have an approach, but it needs a site to test and design in detail such as legal models.
- Whilst industry experts have been engaging with stewardship, there is a lot of work to do to bring examples into mainstream housebuilding.
- 84% of January workshop attendees wanted to engage further on water stewardship.
- Financial and economic instruments investigated which will help to support stewardship.



Any Questions?

Stuart Edwards
United Utilities
Project Delivery Manger

For news or to get involved, please get in touch:

EWSC | https://www.ewsc.org.uk/

Medium Site | https://medium.com/ewsc

LinkedIn | https://www.linkedin.com/company/92882504

Email | ewsc@anglianwater.co.uk

Webinar series: https://www.ciwem.org/events/

Future Water Association

Informing, Innovating, Influencing

Horizon Water Infrastructure eps

- *Speakers*
  - George Warren, Anglian Water
  - John Hernon, Thames Water

Is the Regulatory Landscape Holding Back Innovation for New Developments?

Future Water Association

Informing, Innovating, Influencing

Horizon Water Infrastructure

eps

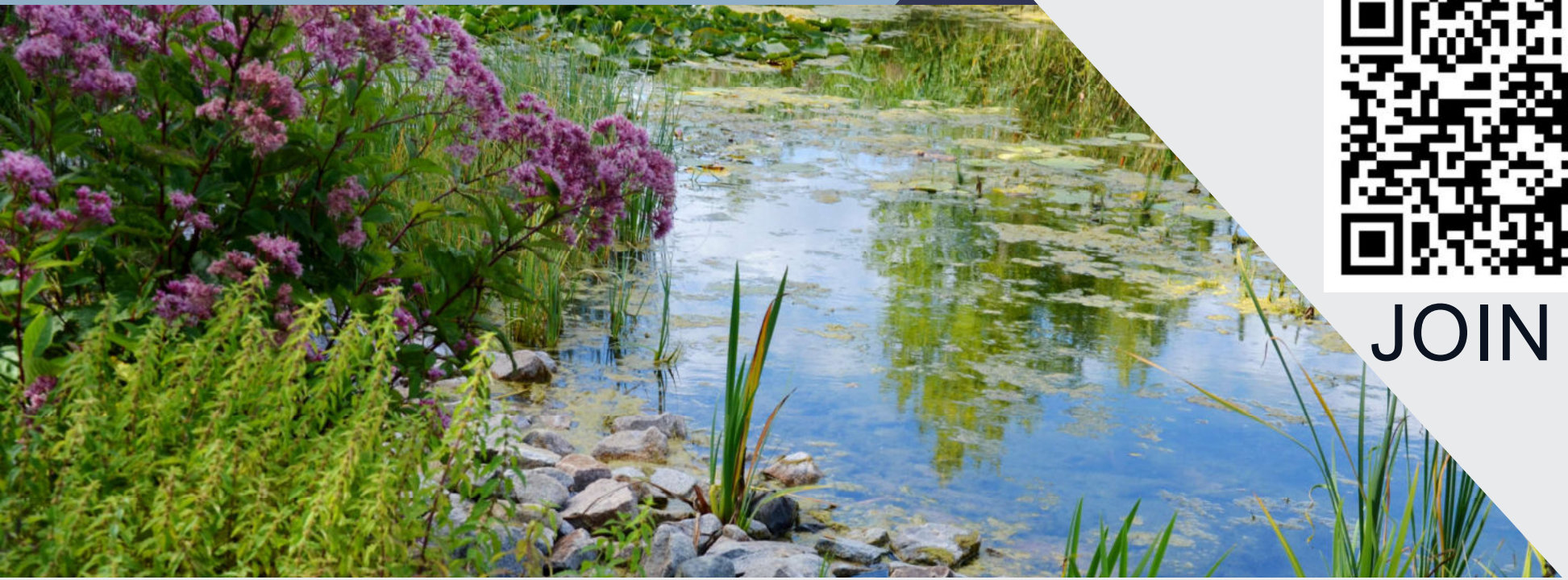
Discussion: How do we build 1.5M Homes with the Water Demand Dilemma?

WATER

AT CHELSEA FLOWER SHOW 2027

It is time to put **WATER** at the front and centre of The Chelsea Flower Show.

Could you be the one to make this happen?



JOIN US

170,000 visitors

1.2 million social media followers

650 International media contacts attend

13hrs of BBC coverage

ciria

BOS BUILDOFFSITE COLLABORATING FOR IMPACT

R·LA REFOLO LANDSCAPE ARCHITECTS LTD CHARTERED LANDSCAPE ARCHITECTS

Future Water Association
Informing, Innovating, Influencing


Future Water Association
Informing, Innovating, Influencing
Horizon Water Infrastructure
eps
Thank you.

Future Water Association

Informing, Innovating, Influencing

Join us

Paul Horton, CEO
paul@futurewaterassociation.com

Hannah Spencer, Operations Manager
hannah@futurewaterassociation.com