



'Smarter' Water Catchments

A Water Company Approach to Catchment Management

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Activities in the current business plan period



Drinking WQ Projects



iHub live
modelling system

2 3 4 5



A lot of
really
engaging
stuff!

London 2100



River Evenlode Catchment Project.

Advice Service

Catchment Fund

Partnership Schemes

No Till and Cover Crop Trial



Arable Reversion



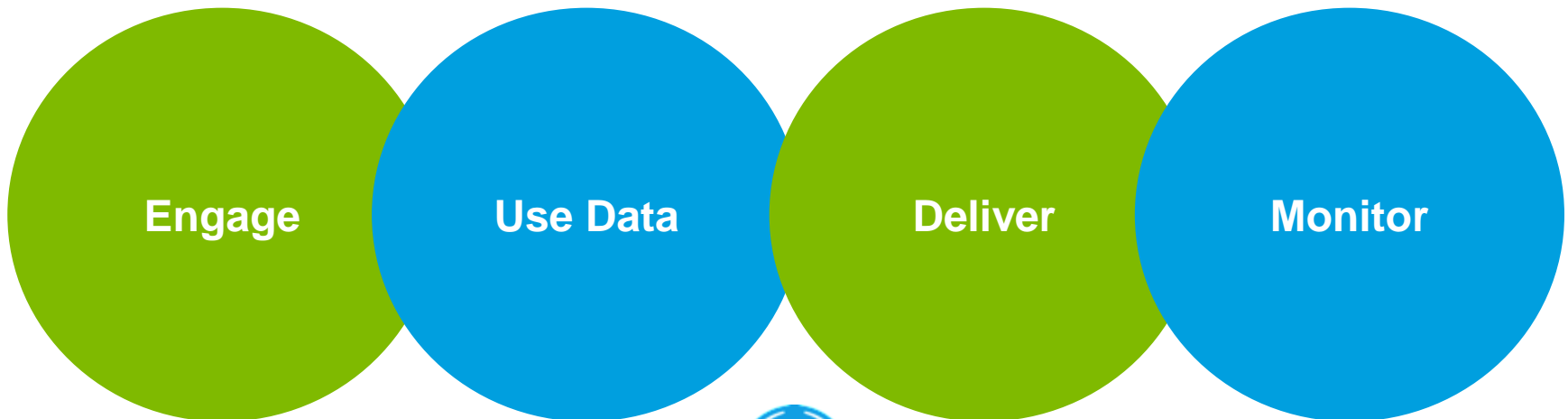
Honeydale Pond



Catchment based approach.

Local partnerships and delivery.

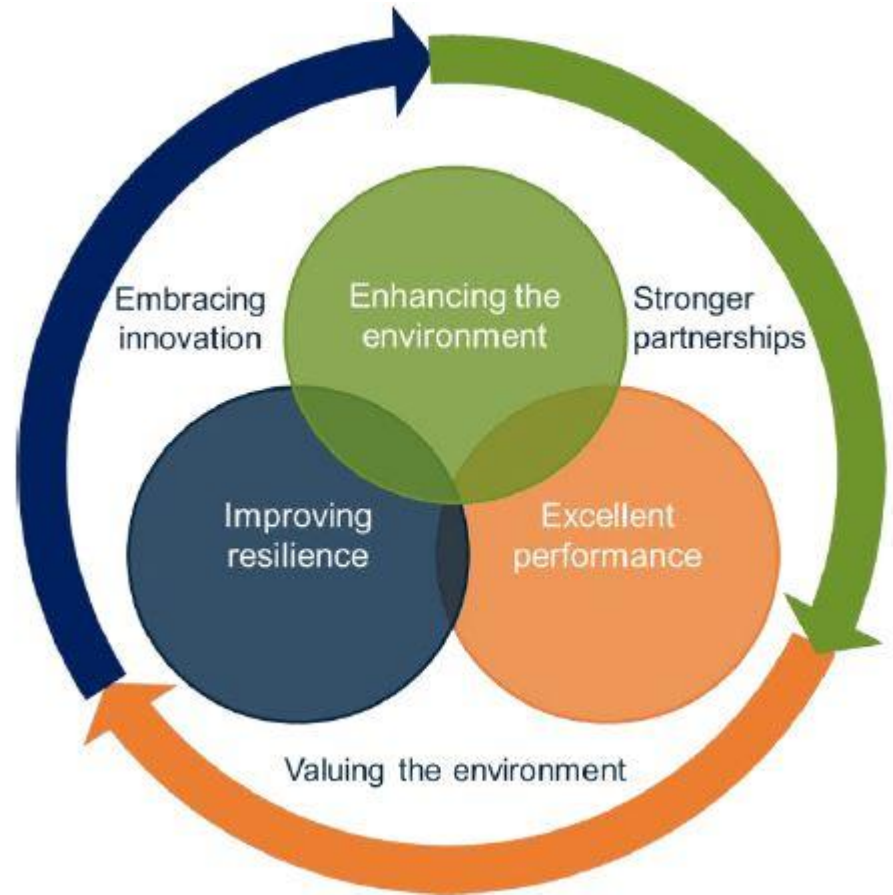
- Collaborative working on a river catchment scale.
- Cost effective delivery.
- Improvements to the environment.
- Targeted and integrated catchment interventions.



Priorities for AMP7.

Strategic Priorities Statement for Ofwat

- **Securing long-term resilience:** Customers expect resilient services, now and in the future – but some regions are exposed to substantial risks from service failures, for example due to drought.
- **Protecting customers:** Every home and business depends on a resilient water industry – but not everyone can afford their water bill.



Water Industry Strategic Environmental Requirements



Our challenges.

Upgrades
£100s
millions

Tighter
treatment
standards

Increase in
customer
bills

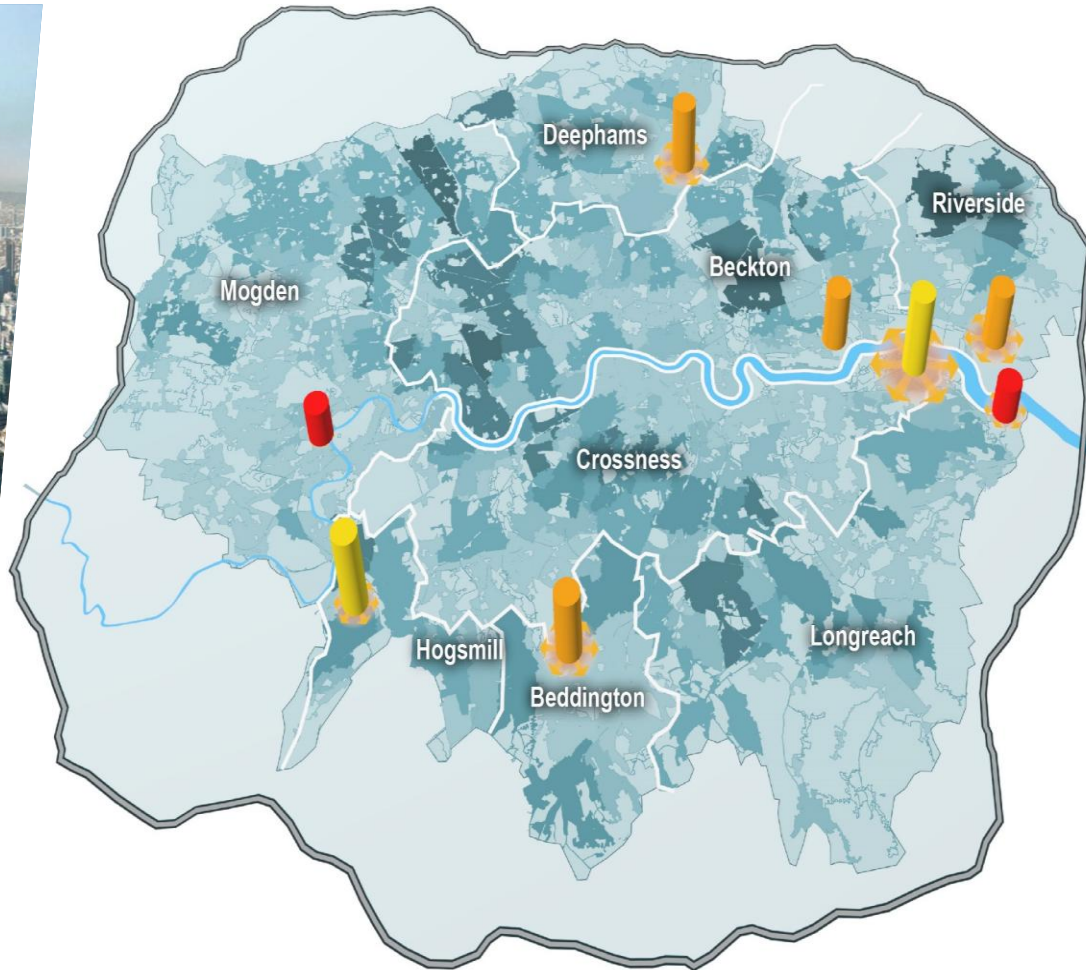
Record
growth

Extreme
weather
patterns

Increased
expenditure
in damages



The London challenge.



London is growing. FAST.

From 8.6 million people today, we expect that by 2036 our five largest catchments will need to transport and treat the waste of 10.8 million people.

By 2100 that number is forecast to grow to 15 million.

We have to serve these customers and deal with issues such as climate change, ageing infrastructure, new regulations, changing markets.



Mogden sewage treatment works - 1945



1945



Mogden sewage treatment works - 1999



1999



Mogden Sewage treatment works - 2017

2017





Rainwater Harvesting

Biodiversity

Abstraction

Invasive Species

Water Efficiency

Fluvial and Sewer Flooding

Sustainable Drainage

Combined Sewer overflow

Sewage Treatment Works

Channel modification

Rural diffuse pollution

Fish Farming

Pesticides and Nutrients

Highways Drainage

Misconnections

Sewer Misuse

Urban diffuse pollution



Smarter Water Catchments

Managing land and surface / ground water as a system.....

Catchment based

Multi-stakeholder approach

Engaging our customers

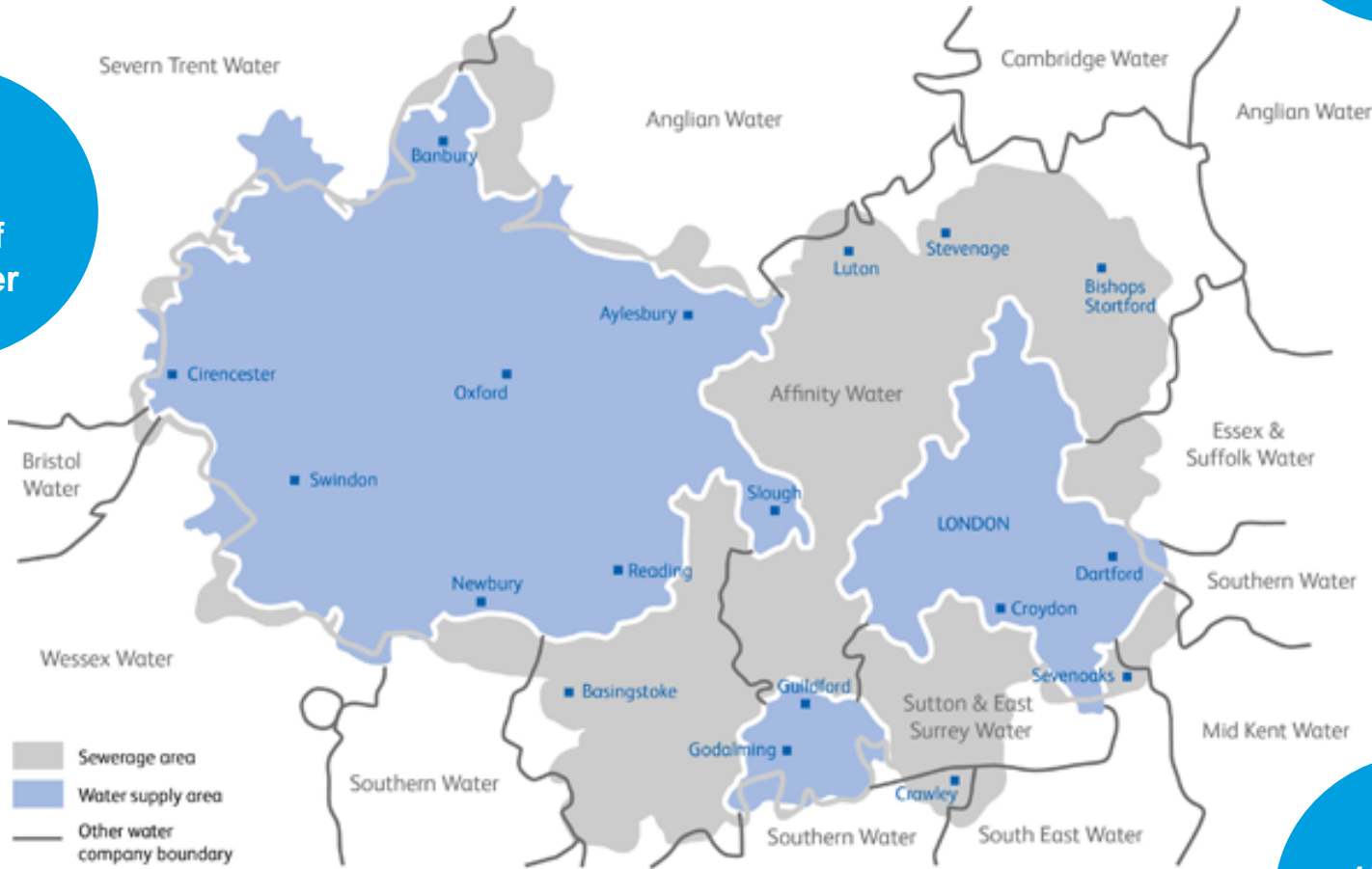
Delivering wider societal benefits



Thames Water.

UK's largest water and waste water provider

2,600 million litres of tap water



15 million customers



Our proposed pilots.



**Urban
catchment
management
- Crane**

**Education,
engagement
and
behaviour
change**

**Water
resources
and flood
management**



**Rural
catchment
management
- Evenlode**

**Rural
catchment
management
- Chess**



**Developing
environmental
resilience**



River Crane Catchment Project



Urban Catchment Management

Working in partnership

What might solutions look like?

Option	Notes
Local catchment partnerships	<ul style="list-style-type: none">• Discussing with LCP how we could work together
Catchment modelling	<ul style="list-style-type: none">• Sophisticated map and model key for wider work• Repository for citizen science data; potential as engagement tool
Misconnections; outfall restoration; foul network issues	<ul style="list-style-type: none">• Surface water in combined networks significantly increasing flow to works• Estimated 25% SWOs polluted• Opportunities for new foul network and recommissioning of old SWOs
SuDS	<ul style="list-style-type: none">• Significant element of AMP7 business plan
Domestic drainage schemes	<ul style="list-style-type: none">• E.g. water butts; attenuators; planters• SuDS in schools
Citizen science	<ul style="list-style-type: none">• Seek to extend successful existing programme• Training and quality assurance key
Education and engagement	<ul style="list-style-type: none">• Programme targeting 60 schools within catchment

Progress to date.

Establish pilots within current business period ready to start delivering projects and work on the ground in AMP7 business plan.

Identified key partners for each pilot and held initial discussions to gauge support.

All potential partners are supportive but different. This will demand adaptive ways of work and governance arrangements – one size does not fit all!

Final thoughts...

- **Drive to change the way we operate and integrate with catchment partnerships to deliver at a local scale.**
- **Delivery of multiple benefits makes it an attractive option.**
- **Extent of growth and limited land availability are heavily influencing case for urban catchment management.**
- **Working at a catchment level can offer value in smaller, rural catchments – complex urban environments are a tougher test.**
- **Ultimately, the approach will have to prove whether it is better value over the long term than ‘harder’ alternatives.**



Thank you

