



SEVERN TRENT: SUPPORTING THE GREEN RECOVERY

October 2020

WONDERFUL ON TAP

SEVERN
TRENT

Background

In July 2020, the Government and regulators invited water companies to come forward with proposals to support the country's green recovery.

We're looking at how we can help support the recovery by accelerating and broadening our plans to generate real and lasting benefits for our customers, the environment and the wider economy.

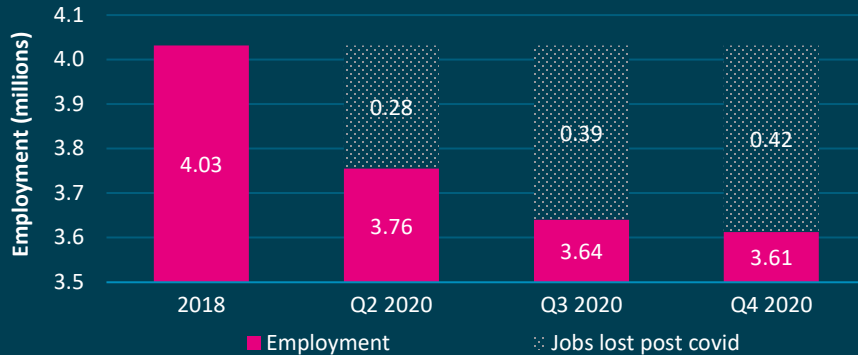
The following slides outline our thoughts on what the green recovery could look like in the Midlands, with the focus on the need and the potential benefits new investment could bring. We have outlined four ideas:

- **Idea 1** –unlock faster progress to address water scarcity in an environmentally ambitious way
- **Idea 2** –unlocking the potential of our rivers
- **Idea 3** –taking care of customer owned supply pipes (removing lead and tackling leakage)
- **Idea 4** –transform flooding from a devastating problem into a shared natural asset

These ideas go beyond our usual remit and are looking to identify opportunities to work with other organisations to support our communities through an improved environment and prosperity for current and future generations.

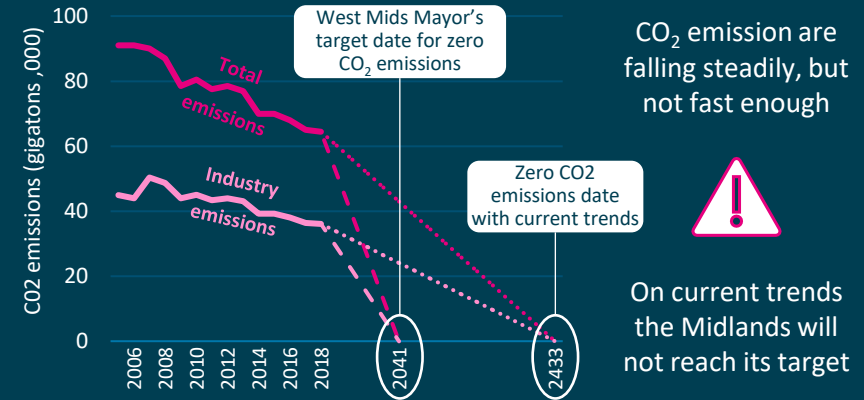
This is a unique opportunity for the water sector to support the green recovery...

1. Jobs and investment are needed across the Midlands



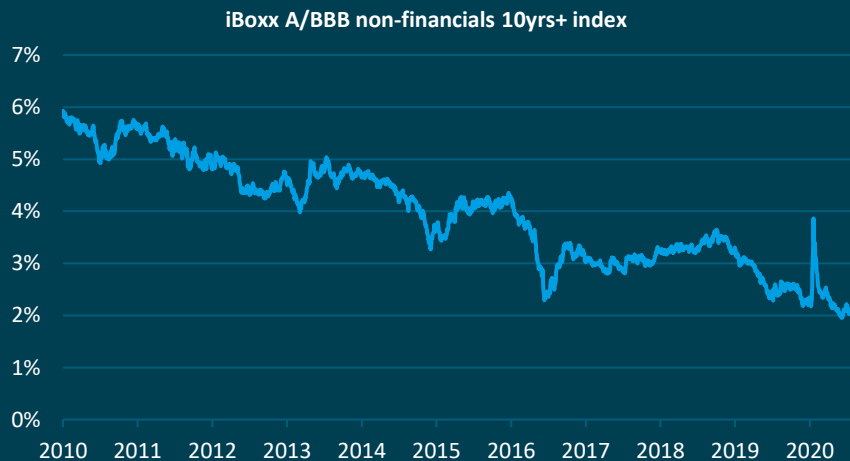
Predictions are for the Midlands to lose over 400,000 jobs by Q4 this year

2. The climate needs us to accelerate change



4. Current low financing is key to affordable investment

Current low financing rates allows investment at a much lower cost



3. The pace of environmental and climate change is accelerating

Winter	Summer
↑ 16-42% wetter	↑ 16-46% drier
↑ 1.9-3.3° warmer	↑ 3.7-6.8° peak days
↑ Wet day intensity	↑ x16 heatwaves

Ofwat and the water industry will have a critical role to play in enabling adaptation to the UK's changing climate, and should embed this as a core objective





Reducing UK emissions Progress Report to Parliament – Committee on Climate Change, June 2020

There has to be a high bar for delivering extra investment

1. Proposals will need to meet robust criteria

-  ✓ deliver a green legacy
-  ✓ deliver more on top of our current business plan (2020-5)
-  ✓ minimise impact on customer bills
-  ✓ offer either truly new ways of doing things or step-change improvements
-  ✓ Backed by customers

2. Partner selection is an important decision

-  ✓ Strong environmental credentials – e.g. Environment Agency EPA 4 star
-  ✓ Capacity to deliver and still do the day job
-  ✓ Keeping on top of service delivery
-  ✓ Ability to absorb investment and keep bills low

4. Fresh ideas for making this happen


1  Carbon neutral water supplies

2  Unlocking the potential of our rivers

4  Flood resilient communities

3  Taking care of private supply pipes

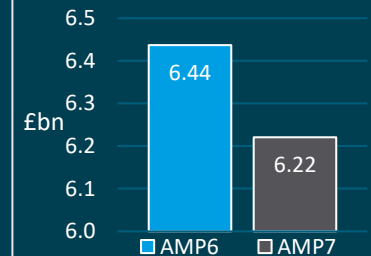
3. We stand ready to act as a partner

 EA top 4-star rating for the 4th time in 7 years.

Our Covid-secure engagement with customers is underway



We have delivered more in the previous AMP so know how to deliver more

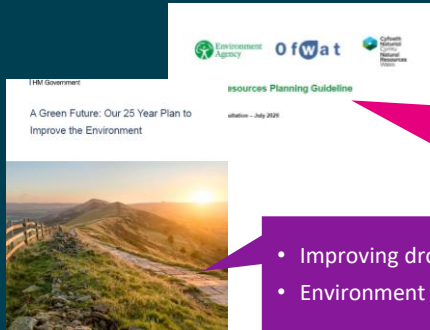


ODI Strongest service delivery for customers, as measured by ODIs, in AMP6.

Idea 1 – unlock faster progress to address water scarcity in an environmentally ambitious way



1. Policy direction is clear – address the growing water deficit + enhance the environment + drive down carbon



"You should therefore consider carbon through your options appraisal, but also consider how your plan can contribute to the sector's commitment to carbon neutrality."

WR planning guideline consultation, July 2020

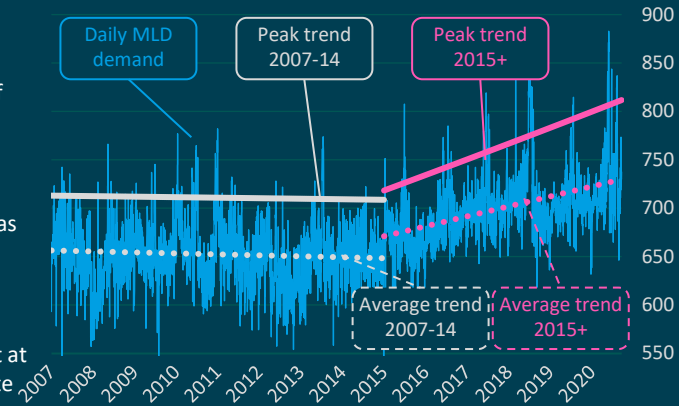
- Improving drought resilience to 1 in 500 year
- Environment bill will set legally binding environmental targets

4. Large-scale pilots (c£140m) will unlock how we meet the growing water shortage in a carbon neutral way

- ✓ Deliver 145 megalitres (MLD) of capacity (bathing rivers 30 MLD, Rugeley 65 MLD, flood relief storage 50 MLD)
- ✓ Create around c500 jobs over the next five years – on site work, site support and local activity
- ✓ Deliver a 25-30% carbon reduction compared with conventional solutions
- ✓ The potential to save 350,000-420,000 tonnes of embedded carbon if applied in full to estimated water deficit of 3,500 MLD for England

2. Peak demand has been steadily rising as the climate changes

- Over last 3 years companies have reduced amount of water used per person by c~2%
- But since 2015 average demand has risen faster due to population growth
- Peak demand has grown twice as fast at a time when climate has been changing noticeably



3. We need to break the link between environmental improvement and increased carbon

Environmental improvements delivered over the last 10 years have increased carbon by 25 kilotons per year.



Idea 2 – unlocking the potential of our rivers



1. The UK needs to deliver river quality targets

- Recent Environment Agency data shows just 14% of English rivers are of good ecological standard.
- The UK is likely to miss its 2027 targets under the water framework directive.
- Hazardous chemicals, pharmaceuticals and antimicrobial resistance, could drive new legislation, as we have already seen in Switzerland.
- To change requires investment and a focus on river outputs, not sector inputs.



4. Our two pilots (c£150m) will reveal the costs and benefits of a full scale roll out

- Installing advanced treatment at 4 sewage treatment works
- Storm overflow improvements at c20 key sites through a combination of keeping rain water in nature, better control and sizing of c5 major pumping stations
- Sewer improvements
- Catchment management to reduce bacterial loading from livestock farming
- Connection to water treatment works to support peak demand (unlocking c30Ml/d)

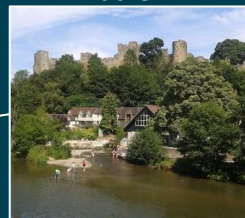
- Installing advanced treatment at a sewage treatment works
- Catchment management to reduce bacterial loading from livestock farming
- Storm overflow improvements at c5 key sites

Potential to create around 500 jobs

Stratford upon Avon – the Old Bathing Place



Ludlow



2. The public expects better river quality

Concern about combined sewer overflows (CSOs)

MP calls for crackdown on raw sewage discharges in English rivers

Exclusive: water firms discharged raw sewage into England's rivers 200,000 times in 2019

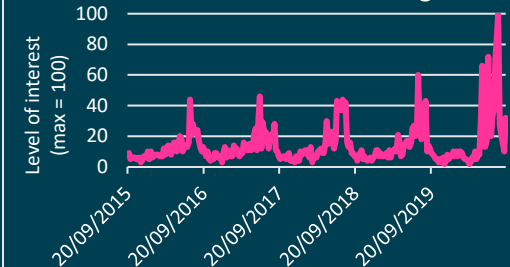
Untreated effluent flowed into waterways for more than 1.5m hours, data shows

Strong and growing support for river swimming



64% of customers believe some of our rivers should be bathing water standard

Interest in river swimming



3. Bathing rivers offers transformational change for society, the economy and environment

- The furthest point in the UK is 70 miles from a bathing beach – in the heart of the Midlands

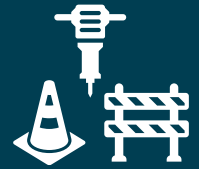


- Positive impact on the local economy, as seen in Munich, where an 8 km stretch of river has been transformed into a bathing site

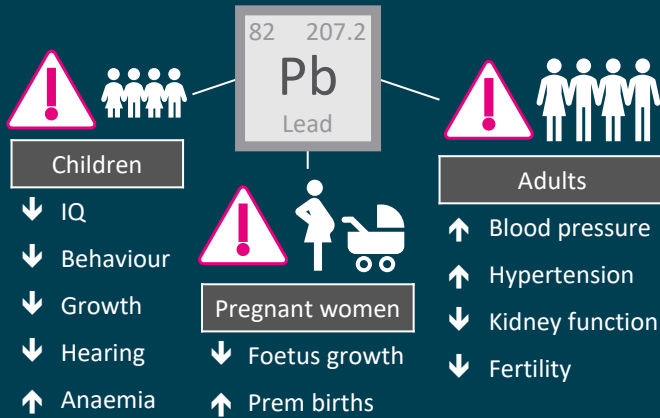


- An environment that benefits through improved standards and a reduction in storm overflows

Idea 3 – taking care of private supply pipes

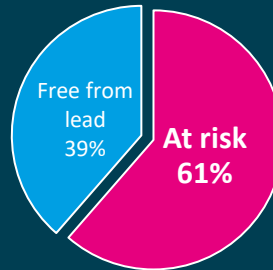


1. Tackles the long-standing health issues with lead



We currently use phosphate dosing to deal with lead

61% of English & Welsh housing is at risk of lead pipes



Over a third of at-risk properties are rented

2. Significant potential for direct customer benefits

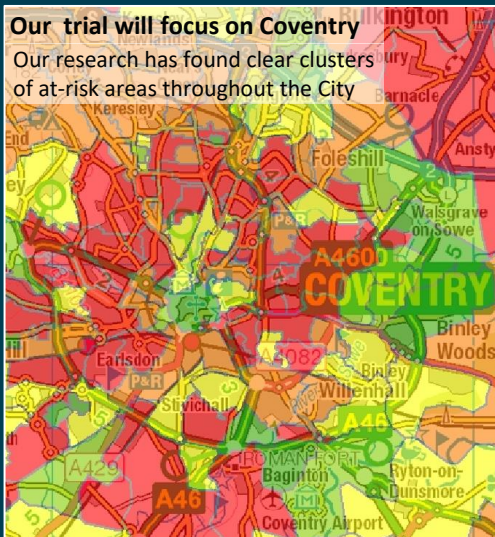


Tackling lead	£0.25-0.5bn health benefits	This is Midlands-only view England → £1.5-3.3bn benefits
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Service	Sustainable network management	<ul style="list-style-type: none"> ↓ leakage ↓ chemicals <ul style="list-style-type: none"> ↑ metering ↓ energy
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4. Plans for a strategic pilot



- Large scale pilot (c£90m) to tackle lead across Coventry
- A holistic replacement programme which tackles lead, leakage
- Innovative trial of lead detection technologies
- Potential to create 100s of jobs and improve 1000s of people's skills

3. Much broader benefits are expected



<ul style="list-style-type: none"> ↓ water deficit + carbon ↓ carbon 	MLD + Tons	<ul style="list-style-type: none"> • Estimated that 770 megalitres per day (MLD) lost from supply pipes • Reducing leaks avoids need for future capital solutions and reduces carbon
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Societal benefits	Repair cost >£900 vs +£4 on bill <i>Defra/UKWIR</i>	<ul style="list-style-type: none"> • Over 10m household have no savings • Removing lead or fixing a leak is not only beyond the means of many families, it could lead to severe financial hardship
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Idea 4 – transform flooding from a devastating problem into a shared natural asset

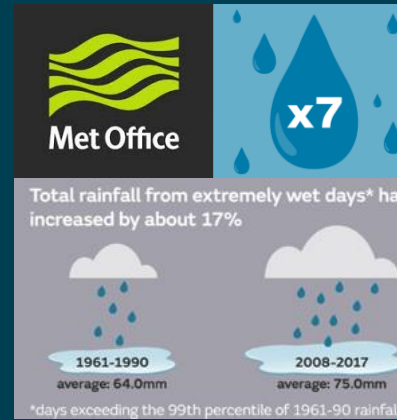


1. There is clear desire to tackle flooding but confused ownership is a barrier



- Customers and communities are confused and frustrated by the lack of clear ownership
- 2020 Flooding policy statement calls for holistic flooding and drought planning

2. The scale and frequency of storms are getting worse



- Extended periods of extreme winter rainfall - 7 times more likely due to human induced climate change
- Total rainfall from extremely wet days has increased by about 17%
- Number of consecutive days of rain is also increasing

4. Creating three flood resilient communities as a pathfinder for multi-party whole-life solutions (c£200m)



Large-scale urban flood reduction (Nottingham)

Tackling surface water separation, using real time control, creating amenity and biodiversity benefits to unlock economic growth



Large-scale retrofitting (eg Mansfield)

To identify solutions to enable our communities better adapt to flood conditions and at the same time improve their environment



Fluvial flooding partnership along River Severn that better links flooding and drought resilience and boosts biodiversity

Potential to create over 500 jobs

3. Tackling flooding has potential for much wider benefits

	Health and well-being	<ul style="list-style-type: none"> • 88% experience an overall boost in their mood when in nature – <i>Mind 2018</i> • 80% adults agree that “being in nature makes me very happy” – <i>Survey May 2020</i>
	Biodiversity	<ul style="list-style-type: none"> • generate new wetland habitats • boost for freshwater and wetland species at risk of extinction
	Levelling up	<ul style="list-style-type: none"> • potential opportunities where there is high flood exposure and high social vulnerability
	Savings for the economy	<ul style="list-style-type: none"> • reduce clean-up costs from floods • reduce insurance pay-outs with potential for lower premiums