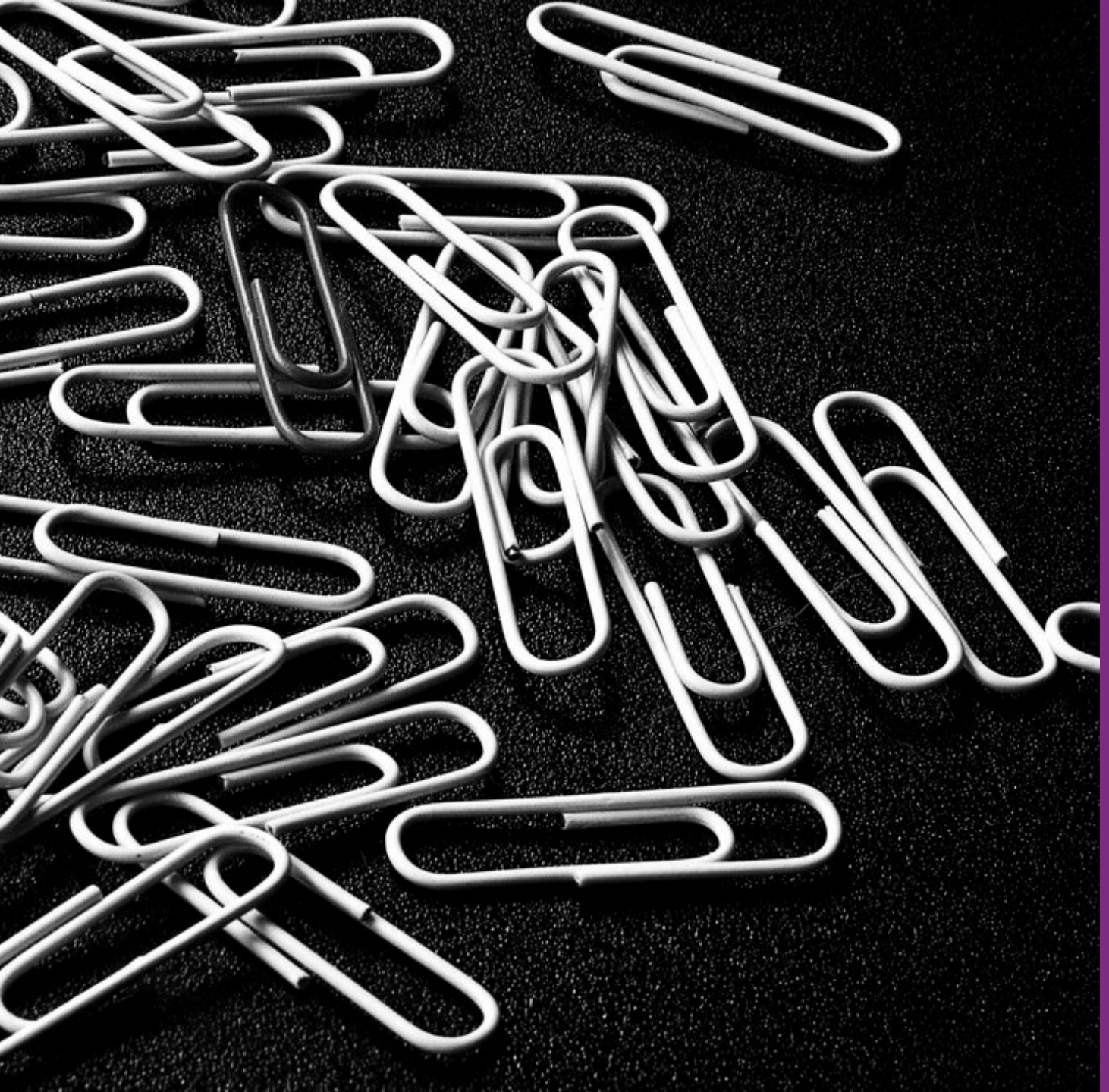
APPENDICES to report on findings from the WRAP's (Water Resources Advisory Panel)

Theme: Strategic Decisions

August 2021

community research

Bringing the voices of communities into the heart of organisations



1. Individual quiz (attitudes)
2. Individual quiz (information provision)
3. Principle statements
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5. Service levels infographic
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9. Top trumps exercise - South Staffs
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1: INDIVIDUAL QUIZ (ATTITUDES)– PROFILING QUESTIONS & ENVIRONMENTAL ATTITUDES AND BEHAVIOURS

These questions are being asked partly to get participants thinking, and partly to collect a little data for analysis (but not all questions will be used for analysis). Some profiling data has already been collected at recruitment – for example key demographics, if they have a water meter, the SSC segmentation questions and if they have contacted SSC in the last 2 years. Some questions about water supply/service are replicated from CCW's Water Matters survey[1] and some environmental questions are from the People and Nature Survey[2].

BILL PAYERS and SMES ANSWER ALL. SMES TO ANSWER FROM A BUSINESS POV THROUGHOUT

FUTURE CUSTOMERS ONLY ANSWER FROM Q5 ON

Q1 Thinking about your overall experience of your water supply - including the provision of water as well as charges, customer services and billing - how satisfied or dissatisfied are you? SINGLE CODE.

Please use a scale of 0-10, where 0 = extremely dissatisfied, 5 = neither satisfied nor dissatisfied and 10 = extremely satisfied. SINGLE CODE

0. Extremely dissatisfied
1.
2.
3.
4.
5. Neither satisfied not dissatisfied
6.
7.
8.
9.
10. Extremely satisfied
11. Don't know

Q2 Thinking now about value for money, how satisfied or dissatisfied are you with the value for money of the water services in your area? SINGLE CODE.

1. Very satisfied
2. Fairly satisfied
3. Neither satisfied nor dissatisfied
4. Fairly dissatisfied
5. Very dissatisfied
6. Don't know

[1] https://www.ccwater.org.uk/wp-content/uploads/2020/08/Water-Matters-Data-report-2019-2020.pdf

[2] file:///C:/Users/commu/AppData/Local/Temp/The%20People%20and%20Nature%20Survey%20for%20England%20Adult's%20Questionnaire.pdf

Q3 How much do you agree or disagree that the water charges that you pay for are affordable to you? SINGLE CODE.

1. Strongly agree
2. Tend to agree
3. Neither agree nor disagree
4. Tend to disagree
5. Strongly disagree
6. Don't know

Q4 How much do you agree or disagree that you would be willing to accept an above inflation increase in your water bills over the next 10-15 years to ensure a reliable service of high-quality drinking from your water company over the long term? SINGLE CODE. (add note: inflation is assumed to be 2% increase each year as the cost of providing drinking water rises over time)

1. Strongly agree
2. Tend to agree
3. Neither agree nor disagree
4. Tend to disagree
5. Strongly disagree
6. Don't know

FUTURE CUSTOMERS START HERE:

Q5 Which of the following best describes how you use drinking water at home? Please note that this includes tap water for cold drinks and boiled tap water for use in hot drinks

1. I only drink tap water at home
2. I mainly drink tap water but occasionally drink bottled water at home
3. I occasionally drink tap water as we mainly drink bottled water at home
4. I only drink bottled water at home

Q6 On a scale of 0-10, where 0 is don't agree at all and 10 is agree completely how far do you agree or disagree with the following statements:

I don't pay much attention to how much water I/my household use		RECORD SCORE OUT OF 10
Water is precious and we all have a responsibility to conserve it.		
In this country there's plenty of water to go around, so I don't worry much about how much I/my household use.		
I believe that water companies should be run as privately owned not for profit organisations or nationalised and run by the Government		

Q7 How important is protecting the environment to you personally? SINGLE CODE.

1. Very important
2. Important
3. Neither important nor unimportant
4. Not very important
5. Not at all important
6. Don't know

Q8 Which of the following statements applies to you over the last 12 months? Please select all that apply. ROTATE: apart from None of the above

1. I am an active member of an environmental / conservation group - e.g. Friends of the Earth, World Wildlife Fund, Extinction Rebellion
2. I am involved with helping a national or local initiative(s) to protect and improve the environment – e.g. volunteering my time or expertise
3. I actively encourage friends/colleagues to be more environmentally conscious
4. I have lobbied politicians and/or signed petitions on environmental topics
5. I actively stay up to date with the latest environmental news/research
6. I make a conscious effort to eat more sustainably – e.g. less red meat/dairy
7. None of the above

Q9 Below is a list of environmental problems. Please pick the ones that you are most concerned about. Please select up to four answers.

1. Decline or extinction of animal life
2. Decline or extinction of plant life
3. Frequent droughts and shortages of water resources
4. Extreme rainfall leading to floods
5. Pollution of rivers, lakes and ground water
6. Pollution of the sea
7. Air pollution
8. Noise pollution
9. Global warming
10. Growing amount of waste
11. Plastic pollution
12. Building on green and natural spaces/ green belt land
13. Chopping down forests
14. Other (specify)
15. None of these
16. Don't know

INTRO

The following questions are about free time you have spent outside in natural spaces. This includes any visits to…

- 'green' spaces in towns and cities (e.g. parks)
- 'blue' spaces in towns and cities (e.g. canals, rivers)
- the countryside (e.g. farmland, woodland, hills and rivers).
- the coast (e.g. beaches, cliffs) and activities in the open sea

DO include

- visits of any duration (including short trips to the park, dog walking, etc)

However, DO NOT include…

- time in your garden
- time outside as part of your job
- time spent outside the UK

Q10 In the last 12 months, how often, on average have you spent free time outside in green, blue and natural spaces?

Please select one answer
1. Every day
2. More than twice a week, but not every day
3. Twice a week
4. Once a week
5. Once or twice a month
6. Once every 2-3 months
7. Less often
8. Never
9. Don't know
10. Prefer not to say

Q11 Which of the following type(s) of green, blue and natural spaces have you been to during the last month? Select all of the types of places you have been to.

1. Urban green space (such as a park, field or playground)
2. Urban 'blue' space (such as a canal or city-based river)
3. Grounds of a historic property or country park
4. Allotment or community garden
5. Woodland or forest
6. River, stream, lake or canal
7. Hill, mountain or moorland
8. Beach / other coastline / sea
9. Nature / wildlife reserve
10. Fields / farmland / countryside
11. Another green, blue or natural space (specify)
12. No visits in the last month [exclusive]

Q12Please think about the services you receive from South Staffs Water/Cambridge Water and then tell us the one thing you really want them to focus on doing. This could be a new initiative/service or could be something they currently do well that you want them to carry on doing or something that they do now but you want them to improve on.

What's your number one priority (and 'why do you say that')

What's your number two priority

What's your number three priority

Q13 Please use this space to leave any other comments or thoughts

Open question

2: INDIVIDUAL QUIZ (INFORMATION PROVISION)

We'd now like to ask you a few quiz questions. It's not supposed to be a test, so don't worry if you don't know the answers. We find that giving information in this way is more interesting than just simply giving people lots of facts and figures….Please just have a go and see how you get on.

1. **Where do you think Cambridge Water/South Staffs Water take water from that it supplies to its customers?**

    a. Rivers and streams
    b. Reservoirs
    c. Underground water stores
    d. All of the above

ANSWER FOR SSW: D – all of the above. **EXPLANATION:** The water South Staffs Water supply is taken from Blithfield Reservoir, the River Severn and up to 27 underground water stores located across its area of supply. For example, this year there are currently 19-20 underground sources actively in use to supply drinking water to customers.

ANSWER FOR CW: C – Underground water stores. **EXPLANATION:** The water Cambridge Water supply is almost entirely held underground in the soil or in pores and crevices in the rock. The drinking water is mostly abstracted from the chalk aquifer (or water store) which lies to the south and east of Cambridge.

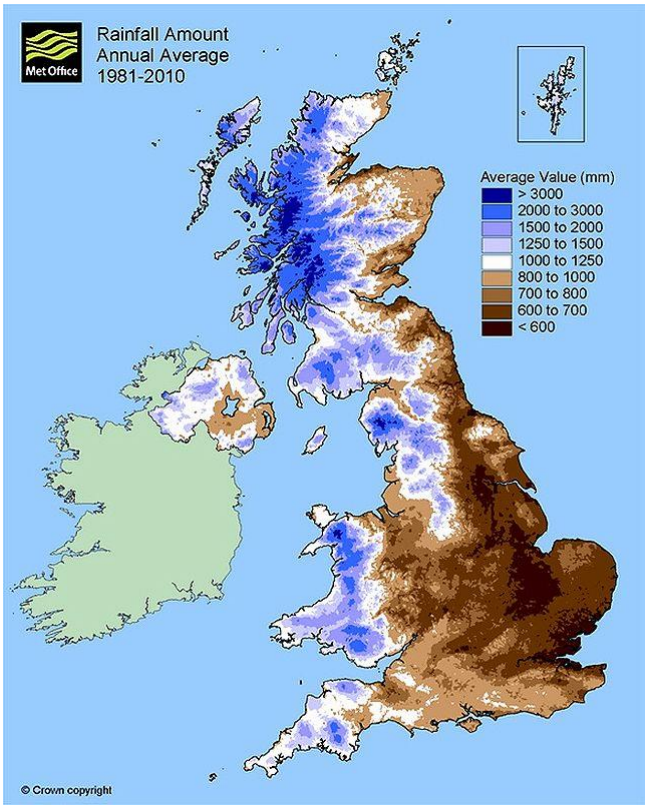
2. **Which of the following European cities <u>get more rain</u>, on average, per year (in inches) than Cambridge [FOR CAMBRIDGE WATER]/Walsall [FOR SOUTH STAFFS WATER]?**
   PICK AS MANY AS YOU LIKE

    a. Barcelona
    b. Rome
    c. Paris
    d. Lisbon
    e. None of them

ANSWER FOR SSW: Rome and Lisbon both get more rain. **EXPLANATION:** We tend to assume that England get lots of rain but for some parts of the country (the south and east in particular) this is simply not true. You can see how average rainfall varies across the UK on this map.

ANSWER FOR CW: All of these places get more rain. **EXPLANATION:** We tend to assume that England get lots of rain but for some parts of the country (the south and east in particular) this is simply not true. The area covered by Cambridge Water is actually one of the driest parts of the country. You can see how average rainfall varies across the UK on this map.

Show map:



3. **In which year was a hosepipe ban last declared in this area?**

    a. **2018**
    b. **2012**
    c. **2003**
    d. **1991**
    e. **1976**

ANSWER FOR SSW: E 1976
ANSWER FOR CW: D 1991
EXPLANATION (BOTH): Some other areas had more recent hosepipe bans e.g. in the East of England in 2012, but this was the last time a hosepipe ban was declared in this region. 'Hosepipe bans' are now called 'temporary use bans' as they are not solely about hosepipe use any more.

4. **Over 2020-21, how much water does the average person in this area use at home per day?**

SSW		**CAMBS**	
a.	**112 litres / 197 pints per day**	**a.**	**111 litres / 195 pints per day**
b.	**122 litres / 215 pints per day**	**b.**	**121 litres / 213 pints per day**
c.	**132 litres / 232 pints per day**	**c.**	**131 litres / 231 pints per day**
d.	**142 litres / 250 pints per day**	**d.**	**141 litres / 248 pints per day**
e.	**152 litres / 267 pints per day**	**e.**	**151 litres / 266 pints per day**

ANSWER: E - In this region, in recent years, people have tended to use less than the national average. However, people are still currently using 152 litres [SWW] 151 litres [CAMBS] per day during 2020/21. This has increased from 128 litres per day the year before the pandemic started #SOUTH STAFFS WATER# 131 litres per day. #CAMBRIDGE WATER#.

EXPLANATION: To put this into context one full bath = about 80 litres. It isn't just about what you drink or cook with, for example:

- A power shower uses 13 litres per minute.
- A modern toilet uses 5 litres per flush and older toilets use 9 litres per flush for older toilets.
- Using the washing machine takes 50 litres per cycle.
- A modern dishwasher uses 14 litres per cycle.
- Even washing your hands uses 6 litres per minute with a running tap.

5. **TRUE OR FALSE: On average, in this area a person with a water meter uses 20 litres / 35 pints per day less than a person without a meter?**

    a. **True**
    b. **False**

ANSWER: False
EXPLANATION: In fact people on a meter, on average, use even less than that – they use 34 litres/60 pints [CAMBS] 40 litres/70 pints [SSW] less per day than people with no meter. Of course, some of the people who have water meters will have asked for them because they knew they didn't use much water, but it is also clear…having a meter makes people more careful about that they use. In this country over half of all households have a meter for water
SSW: In this area the figure is lower – 42%
CW: In this area the figure is higher – 75%

6. **In the last three years, what do you think has happened to the amount of water lost through leakage in this area? Has it….**

    a. **Increased**
    b. **Stayed the same**
    c. **Reduced**

ANSWER: C – Reduced
EXPLANATION: Ofwat (the water regulator) reviews and sets targets on reducing leakage and companies must report how they do against these.

SW: Over the last four years South Staffs Water has reduced the level of leakage by 9.5% and, in 2019, committed to hit a target of reducing leakage by 24% between 2020 and 2025.

CW: Over the last four years Cambridge Water has reduced the level of leakage by 11% and, in 2019, committed to hit a target of reducing leakage by 19% between 2020 and 2025.

Some leakage is inevitable. It can be caused by all sorts of things e.g., freezing temperatures, very dry conditions, traffic on roads, accidental damage during construction works, aging pipes. Leakage can't be totally eliminated and finding and fixing leaks can be very expensive and disruptive to do, particularly for smaller ones that are hard to reach. Around 70% of all leakage occurs in pipes for which South Staffs Water/Cambridge Water is responsible for maintaining; 30% come from leaks in pipes on customers' premises.

7. **What percentage of waters in the UK are classed by the Environment Agency as being in ecologically good condition - i.e. healthy and able to fully recover if damaged?**

    a. **66%**
    b. **46%**
    c. **36%**
    d. **16%**
    e. **6%**

ANSWER: 16%
EXPLANATION: Only 16% of English waters (including rivers, lakes, estuaries and seas) were classed in good ecological health in 2019, which was unchanged since 2016. Chemicals, sewage, manure, and plastic are polluting rivers. Climate change and over-use are also drying some rivers and lakes out.

8. **What is forecast to happen to the population of this area by the year 2045 (around 25 years' time)?**

    a. **It will increase by 19%/13%**
    b. **It will stay about the same**
    c. **It will decrease by 19%/13%**

ANSWER: 13% [SSW] /19% [CAMBS]
EXPLANATION:

[SSW] The population is forecast to increase by just under 13% from 1,367,500 to around 1,541,000 between 2020/1 and 2044/5. This could be sooner depending on the amount and pace of planned growth in the area.

[CAMBS] The population is forecast to increase by just under 19% from 332,300 to 394,000 between 2020/1 and 2044/5. This could be sooner depending on the amount and pace of planned growth in the area.

9. **We will now show you a series of pictures. For each set you are shown, one is of a plant or animal species that is native to this region and the**

other one that is non-native? Please tick which one you think is the native species.

a. **Floating Pennywort or Frogbit**
b. **Signal Crayfish or White Clawed Crayfish**
c. **Giant hogweed or Queen Anne's lace**
d. **Topmouth Gudgeon or Minnow**

Native vs invasive.pptx

ANSWER: Images of invasive species to be shown.

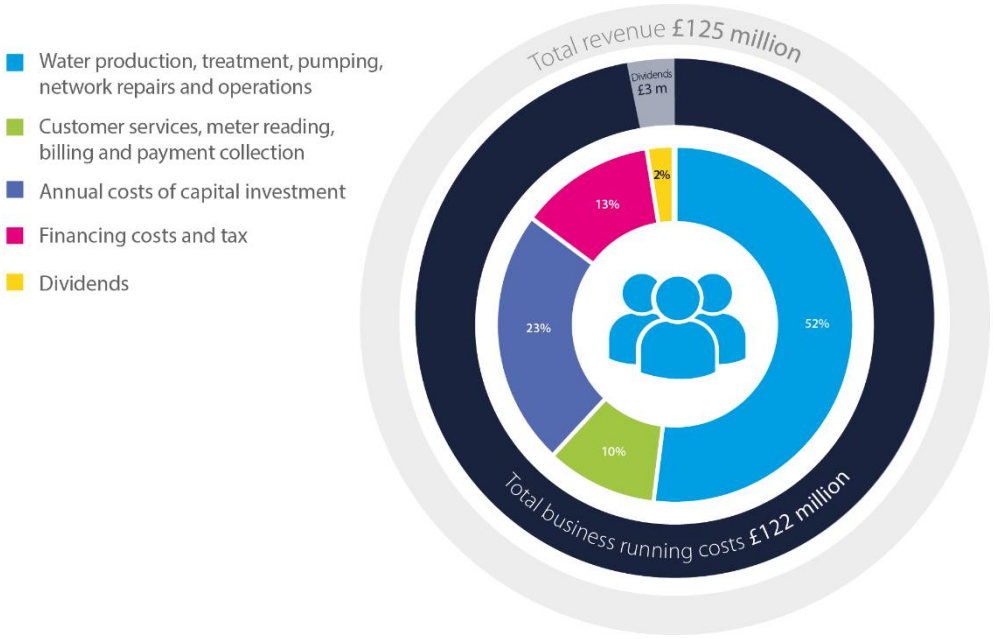
EXPLANATION: Sometimes animals or plants that are not native can damage the natural environment and local habitats – for example, you have probably heard of Japanese Knotweed. Removal of invasive species prevents further damage and protects native species. But to remove these invasive species often requires a significant amount of effort and resources, that often needs to be repeated over a number of years. Water companies can work with other organisations to help remove invasive species.

10. **What proportion of your company's annual expenditure, which is funded by customers' bills, is spent on payments to their shareholders?**

a. **2%**
b. **5%**
c. **10%**
d. **12%**

ANSWER: A, 2%

EXPLANATION:



Water companies have limits set by the regulator Ofwat on the amount of money/dividends they can pay to share-holders in recognition of the fact that supplying water is not like other profit making businesses. Most of us cannot choose our supplier and water is a basic essential service too, so companies cannot make as much profit as they like for their shareholders.

The diagram shows how Cambridge Water/South Staffs Water use the money from customers' bills during the period 2020/21. Just over half of the money is spent on actually supplying water, 10% on customer services and billing and the rest on large investments to improve the service, tax and paying back interest on any loans. 2% (or £2 out of every £100) is returned to shareholders in the form of dividend payments.

3: PRINCIPLE STATEMENTS

Principles – we will return to these questions at the end when you have learned more but we'd like to get your initial reaction to some key dilemmas / balances in terms of the company's general approach to planning and where you stand on each of them:

Sliders where people indicate where the balance should lie between:

Investing more now for the long-term future		Keeping customer bills as low as possible
Preparing for the worst-case scenarios (for example investing so the water system can cope with extreme weather conditions such as droughts)		Wait and see what happens and react as needed
Trying new approaches and innovations to find solutions to challenges		Sticking to tried and trusted approaches that are proven to work
Spreading any costs to mantain and improve the service equally amongst all customers		Those who directly benefit from investments pay more for them (for example, local residents who might benefit from improvements to a nearby river etc. pay more on their bills to cover the cost of that work)
Looking after the needs of the natural environment first, by not taking too much water out of rivers/streams or underground sources		Ensuring all customers have all the water they want to use at an affordable price
Communicating with customers to persuade them to conserve water		Managing customers' water usage through measures such as metering, tariffs that increase as people use more water and imposing restrictions (such as hose pipe bans)
Spreading any costs to maintain and improve the service equally amongst all customers, regardless of how much water they use		Ensuring those who use the most water pay more for it
Spreading any costs to maintain and improve the service equally amongst all customers		Limiting what those who are struggling financially will pay (so those who are able to, pay more)
Doing more to reduce the amount of leakage from pipes even if it costs customers more		Keeping customer bills as low as possible
Doing more to reduce the company's 'carbon footprint' (the		Keeping customer bills as low as possible

amount of carbon dioxide the company adds to the atmosphere through its operations) – even if it costs customers more		

4: PRIORITISATION STATEMENTS

Sorting Exercise – Here are some things that could be a priority for your water company, please sort them into categories based on what's most important to you –

Top priority, Medium priority, Low priority

Max of 4 can go into any category.

1. Providing reliable clean drinking water to peoples' taps
2. Managing the environmental impact of supplying drinking water, for example thinking about how much water is taken from rivers and other sources
3. Providing schemes to lower water bills to help people on low incomes who struggle to afford them
4. Planning & investing for the longer term to keep services reliable, despite the impacts of climate change on the amount of rainfall and more demand for water from a bigger population
5. Keeping bills as low as possible today and into the future
6. Providing support, advice and/or incentives to customers to help them use less water
7. Giving excellent customer service, such as responding quickly to queries
8. Reducing leakage in the network of pipes owned by the company
9. Looking after the needs of vulnerable customers (e.g. the elderly or disabled) who may struggle to access vital water services – e.g. for example, delivering bottled water if the water is cut off or braille bills
10. Running a sustainable business that reduces the environmental impact of its operations - for example, reducing carbon emissions, waste that goes to landfill and single use plastics

Drought severity

How low are groundwater levels?	What restrictions might be used?	Cambridge Water's service level Current level
Low	**Level 2 - Temporary use ban' (aka hosepipe ban)**   	**1 in 20 years**
Very low	**Level 3 - 'Non-essential use ban' for businesses**   	**1 in 50 years**
Severe	**Level 4 – 'Emergency drought order' (aka standpipes and rota cuts)**  	**1 in 200 years**

Drought severity

How low are groundwater levels?	What restrictions might be used?	South Staffs Water's service level Current level
Low	**Level 2 - Temporary use ban' (aka hosepipe ban)**   	**1 in 40 years**
Very low	**Level 3 - 'Non-essential use ban' for businesses**   	**1 in 80 years**
Severe	**Level 4 – 'Emergency drought order' (aka standpipes and rota cuts)**  	**1 in 200 years**

6: ENVIRONMENT AGENCY
TARGET INFORMATION

Levels of service

The Environment Agency (the regulator who oversees this area) has recently told water companies to work together regionally to meet demand for water and that all companies MUST put in place plans **by 2040** to reduce the need for rota cuts and standpipes to no more than **once in every 500 years** on average.

Why should this matter to you? You won't be around in 500 years!
Well another way of thinking about it is that water companies have to plan for a severe drought that has a 1 in 500 chance of happening this year.

That is a lot more likely than the odds of winning the National Lottery (1 in 45 million) or being struck by lightening (1 in 1.2 million)!

It is a bit less likely than having twins (1 in 250) or being ambidextrous – able to write with both hands (1 in 100)!

What could be done to help customers save water?

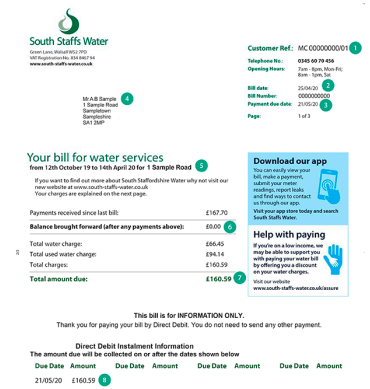
Educate and encourage people to save water by running advertising campaigns, giving information in bills, and offering programmes in schools.

Give people **personalised advice and free devices** that save water

Fund community projects for villages, towns and other communities who find ways to use less water

Fit more **water meters** – they could even be made compulsory.....

Use **special tariffs** to encourage efficient use of water, like some mobile phone tariffs



...and install "smart meters" so that the company and/or customers can read them more often so that charts of water usage over time by each room in the house and any outside spaces can be provided

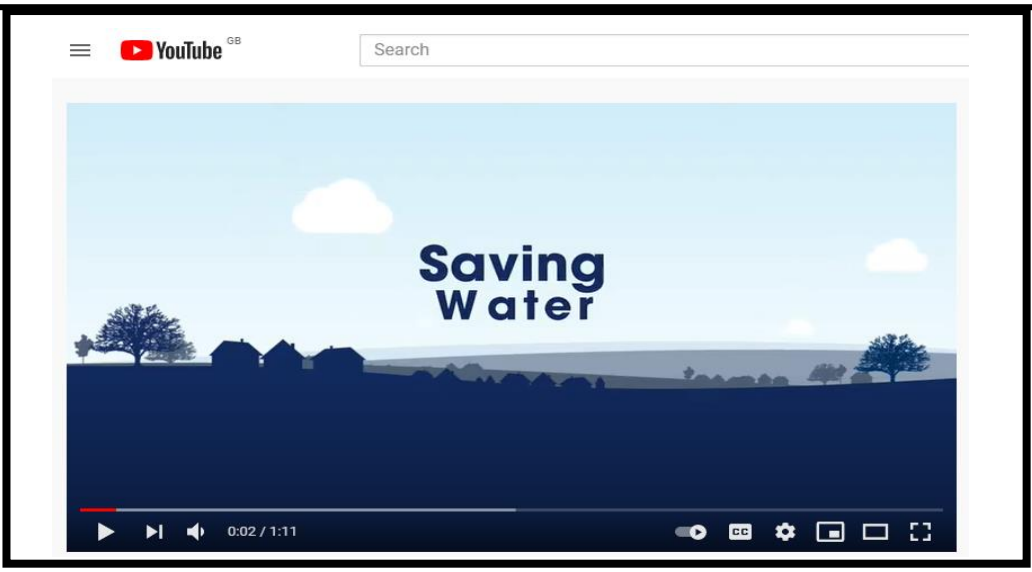
Cambridge Water

Reducing demand

Reduce leakage by 50% by the year 2050 (the national target)

Impact on water resources available	
Cost per mega litre of water	£££
How **quickly** could this happen	Long term
Impact on the **environment** - reduction in treatment and pumping of water reduces carbon emissions	Positive
Main disruption - traffic issues for the public as more roads are dug up	Traffic & noise

Reducing demand



Reduce customer consumption through education / advice campaigns

Impact on water resources available	
Cost per mega litre of water	££
How **quickly** could this happen	Short term
Impact on the **environment** - reduction in treatment and pumping of water reduces carbon emissions	Positive
Main disruption for the public – receiving communications and being asked to change their habits	Little disruption

Reducing demand

Reduce customer consumption through compulsory metering

Impact on water resources available	💧💧
Cost per mega litre of water	£
How **quickly** could this happen	Medium term
Impact on the **environment** - reduction in treatment and pumping of water reduces carbon emissions	Positive
Main disruption for the public – meter installations at properties and increased bills for some	Meter installations

Reducing demand

Imposing regular restrictions: e.g. annual use of more temporary use bans, increased tariffs once consumption goes over a certain amount

Impact on water resources available	
Cost per mega litre of water	£
How **quickly** could this happen	Medium term
Impact on the **environment** - reduction in treatment and pumping of water reduces carbon emissions	Positive
Disruption for the public – people won't have water for some uses at certain times	Restricted water use

Cambridge Water

Increasing supply

Take (abstract) more water from underground sources (boreholes / aquifers)

Impact on water resources available	
Cost per mega litre of water	££
How **quickly** could this happen	Medium term
Impact on the **environment** – may damage health of water sources and taking more water increases carbon emissions	Negative
Main disruption for the environment - potential damage to local water environment / impact on biodiversity	Local environ-ment

Increasing supply

Recycle more water – rain water/ and grey water (wastewater from baths, showers, washing machines, dishwashers and sinks)

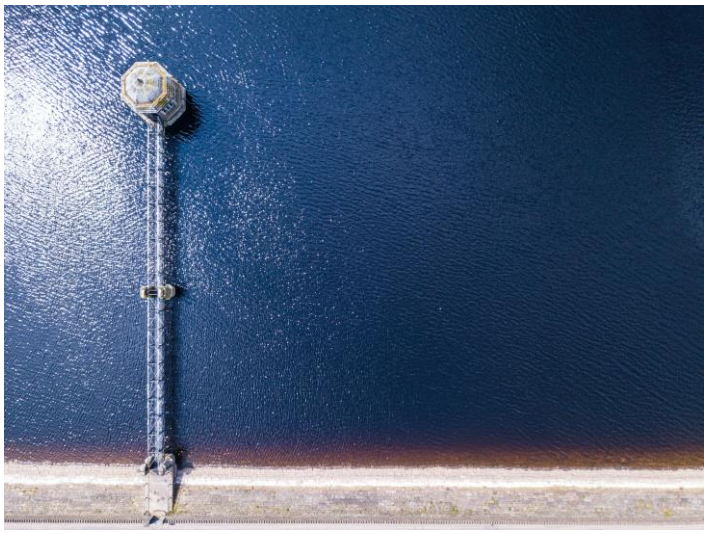
Impact on water resources available	
Cost per mega litre of water	££££
How **quickly** could this happen	Medium term
Impact on the **environment** - reduction in treatment and pumping of water reduces carbon emissions	Positive
Main disruption for the public – installing new equipment	Little disruption

Increasing supply

Recycle effluent water - treated water being put back into rivers to increase river flows

Impact on water resources available	
Cost per mega litre of water	£££
How **quickly** could this happen	Short term
Impact on the **environment** - reduces carbon emissions, but may impact on health of water sources	Mixed
Main disruption for the environment - potential damage to local environment / impact on biodiversity and running the works	Local environ-ment

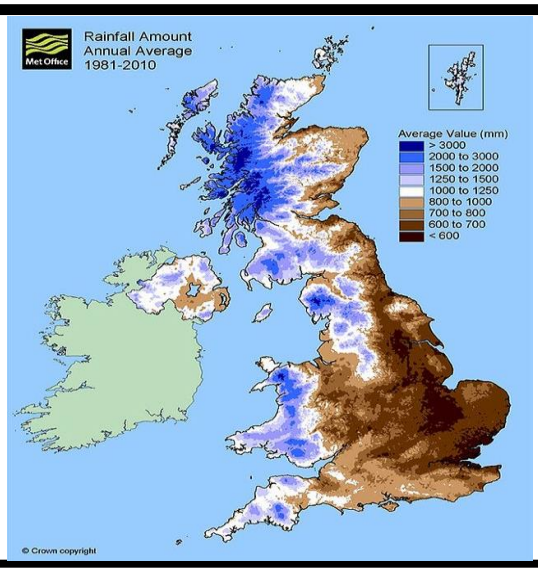
Increasing supply



Increase storage capacity – through large projects (e.g. build new reservoir)

Impact on water resources available	💧💧💧
Cost per mega litre of water	££££
How **quickly** could this happen	Long term
Impact on the **environment –** loss of local biodiversity when built and increased carbon emissions, but means less water is taken from most water sources in the area	Mixed
Main disruption for the public & environment – initial build disruptive, but then helps provide flood relief, new natural space and biodiversity gains.	Initial build

Increasing supply



Trade (bring water in) from another water company / region in the country

Impact on water resources available	💧💧💧
Cost per mega litre of water	££
How **quickly** could this happen	Medium term
Impact on the **environment** – potential to spread non-native species; more carbon emissions to pump water, but means less water is taken from most water sources in the areas	Mixed
Main disruption for the environment – construction of pipes/new networks to move water may impact on local environment / biodiversity	Local environ-ment

South Staffs Water

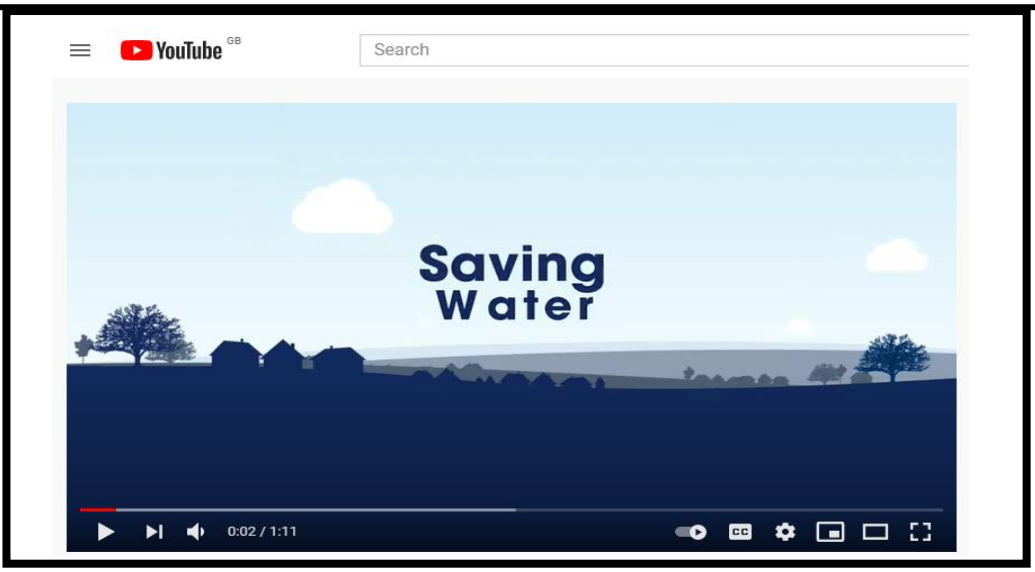
Reducing demand

Reduce leakage by 50% by the year 2050 (the national target)

Impact on water resources available	💧💧💧
Cost per mega litre of water	£££
How **quickly** could this happen	Long term
Impact on the **environment** – reduction in treatment and pumping of water reduces carbon emissions	Positive
Main disruption - traffic issues for the public as more roads are dug up issues for the public	Traffic & noise

South Staffs Water

Reducing demand



Reduce customer consumption through education / advice campaigns

Impact on water resources available	
Cost per mega litre of water	££
How **quickly** could this happen	Short term
Impact on the **environment** - reduction in treatment and pumping of water reduces carbon emissions	Positive
Main disruption for the public – receiving communications and being asked to change their habits	Little disruption

South Staffs Water

Reducing demand

Reduce customer consumption through compulsory metering

Impact on water resources available	💧💧
Cost per mega litre of water	£
How **quickly** could this happen	Medium term
Impact on the **environment** - reduction in treatment and pumping of water reduces carbon emissions	Positive
Main disruption for the public – meter installations at properties and increased bills for some	Meter installations

South Staffs Water

Reducing demand

Imposing regular restrictions: e.g. annual use of more temporary use bans, increased tariffs once consumption goes over a certain amount

Impact on water resources available	💧💧
Cost per mega litre of water	£
How **quickly** could this happen	Medium term
Impact on the **environment** - reduction in treatment and pumping of water reduces carbon emissions	Positive
Disruption for the public – people won't have water for some uses at certain times	Restricted water use

South Staffs Water

Increasing supply

Take (abstract) more water from rivers and streams

Impact on water resources available	
Cost per mega litre of water	££
How **quickly** could this happen	Medium term
Impact on the **environment** – may damage health of water sources and taking more water increases carbon emissions	Negative
Main disruption for the environment - potential damage to local environment / impact on biodiversity	Local environ - ment

South Staffs Water

Increasing supply

Take (abstract) more water from underground sources (boreholes / aquifers)

Impact on water resources available	💧💧
Cost per mega litre of water	££
How **quickly** could this happen	Medium term
Impact on the **environment** – may damage health of water sources and taking more water increases carbon emissions	Negative
Main disruption for the environment - potential damage to local water environment / impact on biodiversity	Local environ-ment

South Staffs Water

Increasing supply

Recycle more water – rain water/ and grey water (wastewater from baths, showers, washing machines, dishwashers and sinks)

Impact on water resources available	
Cost per mega litre of water	££££
How **quickly** could this happen	Medium term
Impact on the **environment** - reduction in treatment and pumping of water reduces carbon emissions	Positive
Main disruption for the public – installing new equipment	Little disruption

South Staffs Water

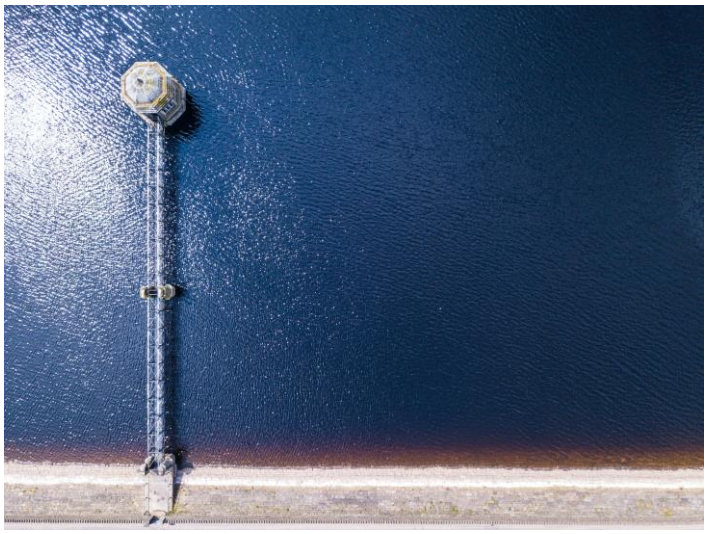
Increasing supply

Recycle effluent water - treated water being put back into rivers to increase river flows

Impact on water resources available	💧💧
Cost per mega litre of water	£££
How **quickly** could this happen	Medium term
Impact on the **environment -** reduces carbon emissions, but may impact on health of water sources	Mixed
Main disruption for the environment - potential damage to local environment / impact on biodiversity and running the works	Local environ-ment

South Staffs Water

Increasing supply

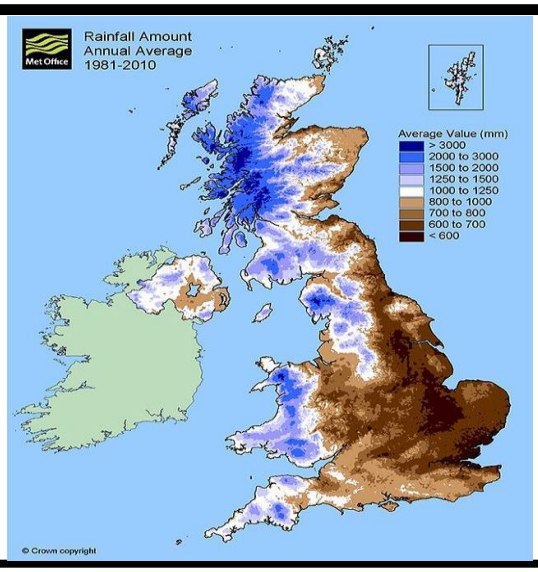


Increase storage capacity – through making existing Blithfield reservoir bigger

Impact on water resources available	💧💧
Cost per mega litre of water	£££
How **quickly** could this happen	Medium term
Impact on the **environment –** impact on local biodiversity when expanded and increased carbon emissions, but means less water is taken from most water sources in the area	Mixed
Main disruption for the public & environment – initial build disruptive, but then helps provides more flood relief, and long-term biodiversity gains.	Initial build

South Staffs Water

Increasing supply



Trade (bring water in) from another water company / region in the country

Impact on water resources available	💧💧💧
Cost per mega litre of water	££
How **quickly** could this happen	Medium term
Impact on the **environment** – potential to spread non-native species; more carbon emissions to pump water, but means less water is taken from most water sources in the areas	Mixed
Main disruption for the environment – construction of pipes/new networks to move water may impact on local environment / biodiversity	Local environ-ment

Level 1

Water levels will not worsen

Company works out how to do this despite climate change and other challenges

Reduce customer demand to make up for taking less water from rivers and streams

Level 2

Rivers and streams identified for improvement

Company works out how to improve water levels

New demand and supply options to make up for taking less water from rivers and streams

Level 3

All suitable rivers identified

Work with others in the area to agree a plan

Detailed ecological surveys support the decisions

New demand and supply options to make up for taking less water from rivers and streams