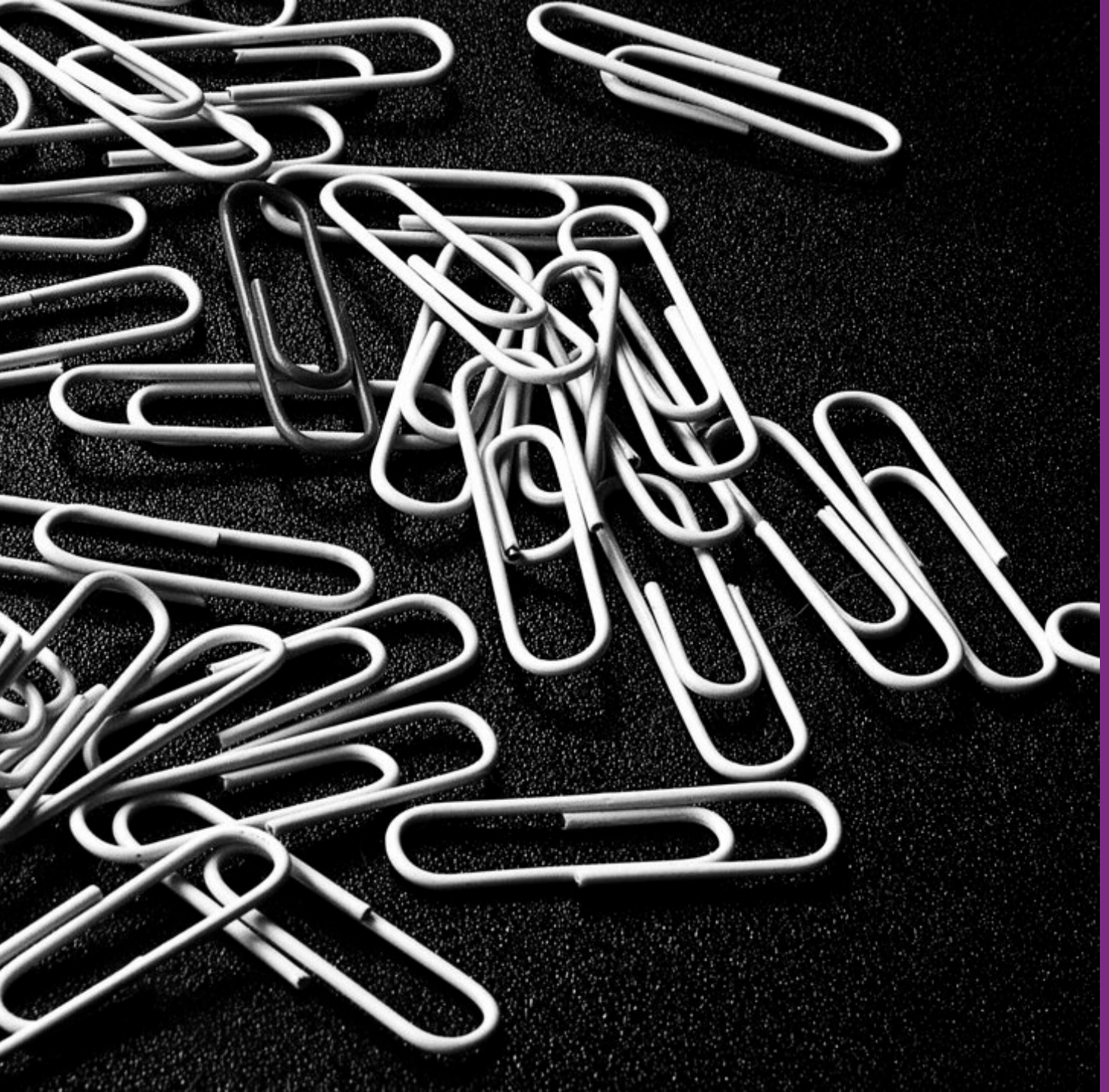
APPENDICES to findings from the WRAP (Water Resources Advisory Panel) DEEP DIVES on universal metering and water transfers

November 2021

community research

Bringing the voices of communities into the heart of organisations



1. Metering ‘Quick Quiz’
2. Initial views of metering
3. Water transfers – South Staffs
4. Water transfers - Cambridge
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1. Metering 'Quick Quiz'
Quiz Questions

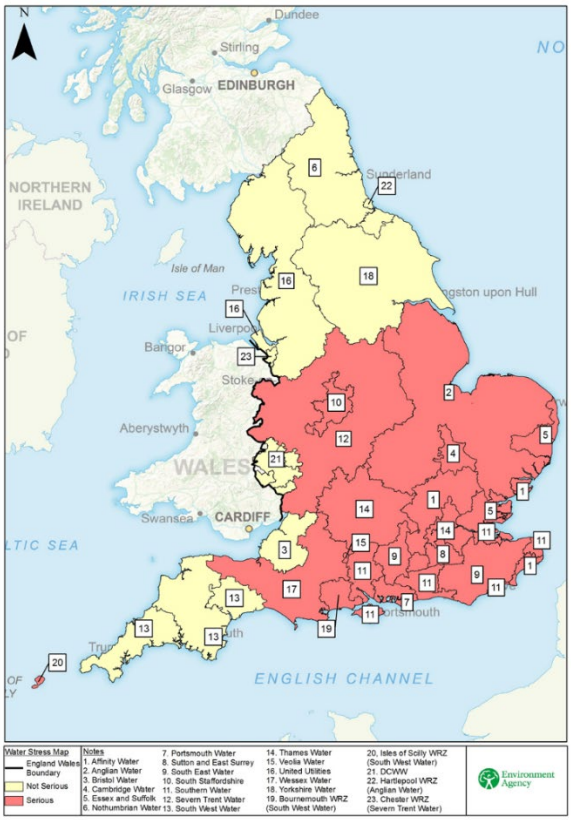
1. **Which of the following companies now supplies an area that has been classed by the government as 'seriously water stressed'? Being 'water stressed' means that the amount of water available is currently, or might in future, be less than the amount of water needed to meet customer demand.**

   - Cambridge Water – supplying the city of Cambridge and the surrounding areas
   - Anglian Water - supplying East Anglia, Lincolnshire and parts of the East Midlands
   - Portsmouth Water - supplying the city of Portsmouth and the surrounding areas
   - South Staffs Water – supplying Staffordshire and surrounding parts of the West Midlands
   - Severn Trent Water – supplying the West Midlands and East Midlands from Gloucestershire up and across to Nottingham
   - Wessex Water – supplying Dorset, Somerset and Wiltshire
   - All of the above

Correct answer: All of the above

Along with a number of other companies, in 2021 the Department for Environment, Food & Rural Affairs (DEFRA) added both South Staffs Water and Cambridge Water to a list of water companies that are classed as seriously water stressed. This means that they can consider bringing in universal metering. Universal metering is when water meters are installed at the vast majority of customer properties, with the aim of saving water by reducing the amount each person uses and making it easier to find leaks. Universal metering is sometimes known as compulsory metering.

The areas coloured red on the map below are those that are seriously water stressed and those in yellow are not seriously water stressed. All those in red have brought in or will be thinking about bringing in universal metering.



2. What percentage of household customers are on a water meter in SSW/Cam region?

- 32%
- 45%
- 52%
- 75%

The correct answer:

- 45% for SSW – which means that over 230,000 homes currently have a water meter
- 75% for Cambs – which means that over 101,000 homes currently have a water meter
- This is lower (SSW) / higher (CAM) than the national average which is just over 50%.

There is not an additional charge to fit a water meter for a customer. The cost of installing, reading water meters and replacing older ones is covered by the standing charge customers pay when they move onto a metered charge.

3. **In 2019 out of all water companies, Thames Water had the highest number of customers on a water meter in the UK. What percentage of customers was this?**

- 70%
- 81%
- 91%
- 95%

Correct answer: 91%

Thames Water, like many water companies in the South East of England already has a universal metering programme, which means they are working towards all homes having a meter fitted. This has resulted in increase in the number of metered customers from around 30% in 2013 to 91% in 2019.

4. **On average, across England and Wales, how much does a household's water use drop when a water meter is fitted. This is just an average across all types of households in terms of number of people living there:**

- It drops by 5%
- It drops by 10%
- It drops by 15%

The correct answer: 10%

All water companies share data at an aggregated level about how much water customers who switch to a meter use. An analysis of all the meter data in England and Wales, undertaken by an independent company called Artesia, shows that households with a meter use 10% less water on average once the meter is installed.

However, the analysis shows that water use behaviour appears to change over time and after a period of five years of having a meter they are only using 5% less, on average, then they were before they had a meter.

5. **All newly built homes in the UK (houses and flats) are required to be built with a water meter installed?**

- True
- False

The correct answer: True

There are currently two ways customers can be charged for the water they use at their home. One is from being on a water meter and paying for the water you use and the other, if you don't have a water meter, is from being on a fixed annual charge, called a "Rateable Value".

Since 1990, by law, all new build properties have been fitted with a water meter. Since 2021, in the South Staffs Water / Cambridge Water region all new or replacement meters come with the technology already fitted to talk to bin lorries and / or other devices, so that the company will be able to provide customers with more regular readings in the future.

If you have moved into a new build property you cannot opt to be charged using the fixed "Rateable Value" charge system – this is where you pay a fixed amount for your clean water supply and services each year based on the value set by the valuation office of your local council for your home.

6. If you move home and <u>your new home</u> <u>has a water meter fitted</u> you have the right to revert back to a fixed Rateable Value charge for your water supply?

- True
- False

Correct answer: False

In short, the law does not allow water meters to be taken out in these circumstances.

The water industry regulator, Ofwat, says: 'Customers moving into properties with water meters cannot have the meter removed and must pay for their water on a metered basis'. **A new occupier cannot ask to convert the property back to a fixed rateable value.**

However, homeowners who have asked for a meter to be installed in their existing property and then changed their minds, can go back to a fixed rateable value for their water charges. In this region, if you chose to have a meter fitted you have the option within 24 months to go back to a rateable value charge, providing that:

- This is the first time you have asked to change back to unmetered charge

- You do not intend to use water for non-essential purposes, for example, a swimming pool or a large sprinkler system.
- You still live at the property.
- **Note that the water meter is not removed**

Just under 90% of customers who opt to have a water meter, stay on metered charges and do not switch back within the 2-year period.

7. ALL tenants who are renting their home have the right to request a water meter. They do not need permission from their landlord

- True
- False

Correct answer: False
If you have a fixed-term tenancy agreement of less than six months, you must ask the landlord's permission. If your fixed-term tenancy agreement is longer than six months, you don't officially need to have your landlord's permission to get a meter fitted, but your tenancy agreement may mean you have to their permission for alterations to the property in order to have the meter fitted.

8. On average, in your area, how often do household and business customers have their water meter read by the water company?

- Once every 3 months
- Once every 6 months
- Once every 12 months

Correct answer: Once every 12 months (SSW) or once every 6 months (Cam)

On average, meters are read once every 12/6 months (depending on area) although customers can submit a meter reading that they have taken themselves at any time and send this to the company.

The frequency of the meter reading is partly due to the fact that the majority (57%) of the water meters in this area are called 'dumb meters'. This means that they have to be read by the human eye. They are not able to automatically transmit meter readings, which means a lot of resources is needed to take readings.

The lack of frequency with which meters are read could mean that some leaks that occur on the pipes customers own within their property boundaries go undetected between meter readings, as smaller leaks are generally only identified when the meter reading is higher than expected. It also means that the water company cannot offer metered customers regular tailored information and advice as they have limited data available to them about customers' water use.

However, around 43% of meters have the technology fitted to be a 'smart meter' and send readings to a vehicle or device as it passes the meter. There have recently been some trials in the South Staffs Water region using bin lorries to remotely read water meters when they go by (these are called AMR meters). All new meters fitted in your region from 2021 onward come with the technology already fitted to talk to bin lorries and / or other devices to enable more regular readings to be provided to customers in the future. To do this isn't all that easy though, as it would involve replacing/updating 10,000s of existing meters and would mean changes to the company's systems to give customers access to the more regular readings.

9. It is not always possible to put a household customer on a water meter?

- True
- False

Correct answer: True

In some instances, it is simply not possible to fit a water meter. This may be due to:

- Blocks of flats sharing water supplies meaning that it is not possible for occupants to have individual meters without everyone agreeing to move to a meter.
- The proposed location for a water meter is simply not feasible to fit and/or would be too costly to install.

In your water area it is estimated that even if universal metering was to be implemented, 2% of household customers would still be without a meter.

At the moment, where a water company is not able to fit a water meter at a customer's request on the grounds that it is not reasonably practicable or would be unreasonably expensive, the regulator Ofwat requires that the company offer the customer the choice of paying for their water on the basis of an "assessed charge". An assessed charge means a charge that estimates as closely as practicable the metered charges that would apply based on the water likely to be used at that premises.

10. Finally, some of you are taking part in this Forum as you also run a business which is billed for its water supply. In the South Staffs/Cambridge Water region, what percentage of business customers who work out of commercial properties are on a meter?

- 99.99%
- 90.99%
- 88.99%
- 56.99%

Correct answer: 99.99%

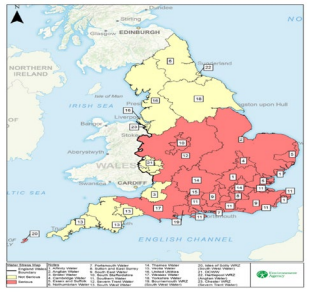
Almost all businesses have a water meter fitted at their commercial premises. The vast majority of the meters at business properties at this time are "dumb meters" which are there to allow a bill to be sent for the water used. However, some larger businesses choose to install their own metering technology to track in detail how much and where they use water as part of their day-to-day operations. From the start of 2021, any replacement or meters fitted to new commercial/business properties will be fitted with the latest technologies to allow them to be read remotely.

2. Initial views of metering: Recap of why universal metering is being considered

In the business plan agreed with the regulator Ofwat in 2019, Cambridge Water set themselves a challenging target for metering over the next 25 years. They said that they would make sure that 90% of household customers would be on a water meter by 2045, up from 75%. Virtually all businesses already have a water meter fitted.

Metering is seen as one way of reducing customer demand for water. The more people who are on water meters, the more demand could be reduced. For example, national research has shown that customers use 10% less water, on average, in the years after there meter is fitted. This difference reduces to 5% after 5 years.

At the moment, water meters are installed in all new builds. Customers can also ask for a water meter to be installed at their property. Cambridge Water does not have a policy of installing a meter when a property changes hands, which some water companies do.



However, this could change. Cambridge Water has recently been classed by government as 'seriously water stressed'. This means that it can now **consider** universal metering, where all household customers (where feasible) are placed on a water meter.

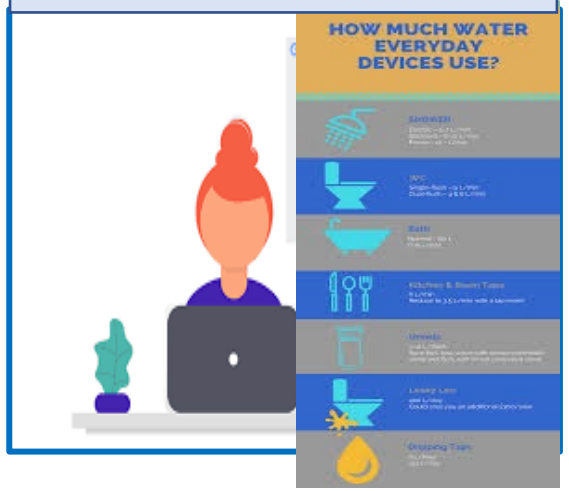
Some of the main benefits of all homes and business being on a water meter are:

Everyone pays for the amount of water they use - just like all households and businesses do for their gas and electricity usage

The company is in a better place to spot if a customer's water consumption changes suddenly, which could indicate a leak from a pipe or appliance inside or outside their property

The company has the opportunity to better understand how much water all customers are using and so understand what steps it can take to help them reduce their consumption

Meters offer the potential for customers to have more understanding of their water usage which helps them to take better decisions about how they want to use water at home.



Universal metering is likely to reduce the overall demand for water and could become even more effective as companies are able to provide more meter readings and data for customers

Also as all customers would be moved to a water meter, water companies would be able to make use of new meter technology to provide more helpful information to customers. The water company could start introducing new ways to incentivise customers to save water. For example:

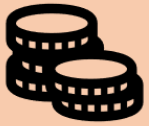
- Rewards for households AND/OR communities that use less water in times of high demand for water e.g. tariffs for low users, green vouchers, tree planting
- The water company can provide more tailored advice for individuals/communities about how to reduce their water usage.

BUT water companies need to think about how to ensure that customers are treated fairly if they move to a water meter. In particular:

- Those on lower incomes
- Those who need the certainty of a fixed bill
- Those with larger families

It is important that customers are happy with a move to universal metering. Some customers might need time to get used to the idea of being on a water meter and to change their behaviours.

Need to consider the costs involved in the widespread roll out of meters.



And remember that if there is a move to universal metering, the quicker it is rolled out the greater the cost implications might be.

3. Water transfers -Sharing water resources in South Staffs region

Main sources of water in the region...

Blithfield Reservoir

River Severn

Groundwater

60%

40%

Why it is important to think about supply options

Climate change and growing demand

Avoid water shortages and help others

Protecting the environment

Types of water transfers…..

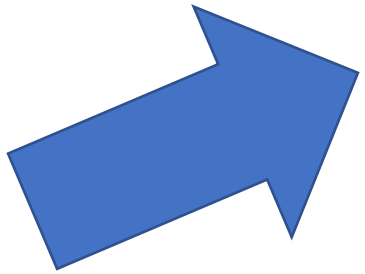
South Staffs Water

Between the areas served by the company

Between water companies within a region

Between regions of the UK

Water supplies in your region



South Staffs Water

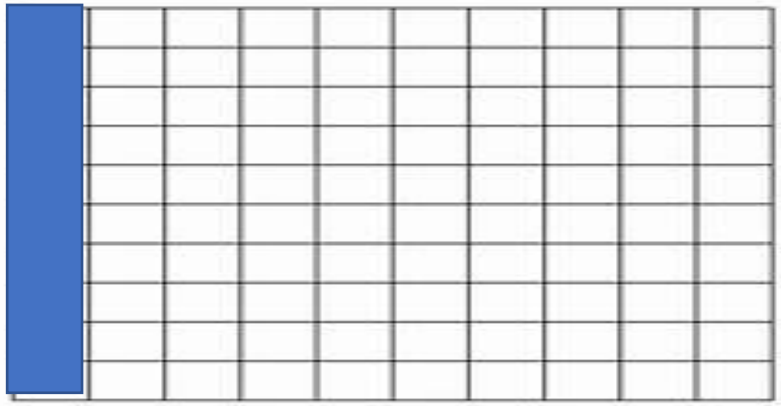
United Utilities

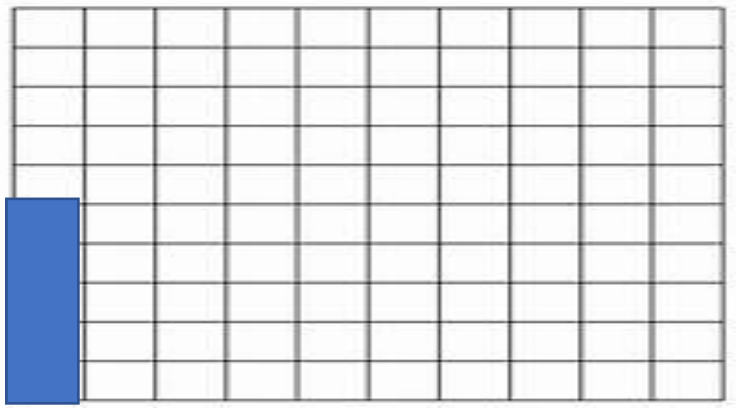
Dŵr Cymru Welsh Water

SEVERN TRENT

Water Resources West

What water transfers may mean for you






THINGS TO
CONSIDER!

Points for consideration

Ensuring a reliable water source by transferring water

Transfers reduce the chance of restrictions being placed on customers' use of water as transferring water **helps to meet demand in areas that have supply issues**	However, there is **not always a guarantee in a drought** that the water transfer can meet the customer demand for water.	Also, the **water transfer could be shut off** in times of serious drought to protect customers and the water environment of the area transferring the water.	Finally, as is the case with any water supply option, if the **pipes or canal transferring the water were to fail for some reason** (e.g. a burst) then some customers could temporarily lose their water supply.

The cost of transferring water

Using transfers means there is less need to build and maintain very large reservoirs to meet future demand for water in a region. For example, only a small reservoir might be needed compared to having to build a very large one. This means it would **normally be less costly to complete the work needed for a region to receive a water transfer.**	But the cost of the laying pipes, building pumping stations and/or work needed to make changes to a canal to transfer the water to a region would cost money – in the past, **the water company receiving the transfer of water would pay for this BUT** it might be in the future that some of the costs need to be paid for by the customers transferring the water.

Points for consideration

The environmental impact of transferring water

Less water needs to be taken from the local water environment (e.g. rivers, streams, lakes, groundwater) in more **environmentally sensitive regions.** This can help protect rivers and local wildlife.	BUT Moving water between regions is likely to produce a **higher level of carbon emissions and in the short-term** (next 5-10 years) the power needed to transfer water cannot all reliably come from renewable, clean energy.	There is **potential for invasive species to be transferred** into a region along with the water, which may damage the plants and animals found in local water environments.

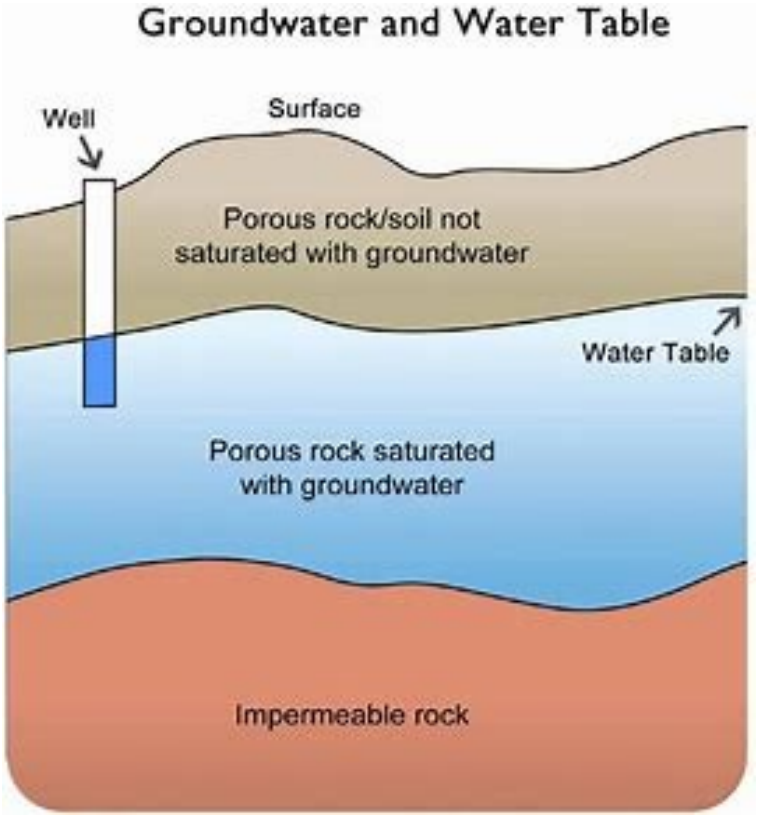
Transferring water and maintaining quality

The water being transferred into a region **could change the appearance, taste and smell of the water** that customers are currently used to. The company would need to satisfy the regulator (the Drinking Water Inspectorate) that customers would experience no deterioration in the quality of their water supply as a result of the transfer. Water transferred from rivers and canals is also usually less hard than the water taken from underground aquifers, so for some areas this could mean less limescale deposits would form on people's taps, showers, kettles and other appliances as there is more surface water used. Despite any actions the company can take, the differences in the water being transferred into the region could lead to customer complaints and people switching to use bottled water for their drinking water if they don't like the changes in their drinking water.

4. Water transfers -Sharing water resources in Cambridge Water region

Primary source of water in the Cambridge supply region

Groundwater



Why it is important to think about supply options

Climate change and growing demand

Avoid water shortages and help others

Protecting the environment

Capturing more rainfall when available

Types of water transfers…..

Cambridge Water

Between the areas served by the company

Between water companies within a region

Between regions of the UK

Water supplies in our region

Possible New Reservoir.....


THINGS TO
CONSIDER!

Points for consideration

Ensuring a reliable water source by transferring water

Transfers reduce the chance of restrictions being placed on customers' use of water as transferring water **helps to meet demand in areas that have supply issues**	However, there is **not always a guarantee in a drought** that the water transfer can meet the customer demand for water.	Also, the **water transfer could be shut off** in times of serious drought to protect customers and the water environment of the area transferring the water.	Finally, as is the case with any water supply option, if the **pipes or open waterways (e.g. canals) transferring the water were to fail for some reason** (e.g. a burst) then some customers could temporarily lose their water supply

The cost of transferring water

Using transfers means there is less need to build and maintain very large reservoirs to meet future demand for water in a region. For example, only a small reservoir might be needed compared to having to build a very large one. This means it would **normally be less costly to complete the work needed for a region to receive a water transfer.**	But the cost of the laying pipes, building pumping stations and/or work needed to make changes to a canal to transfer the water to a region would cost money – in the past, **the water company receiving the transfer of water would pay for this BUT** it might be in the future that some of the costs need to be paid for by the customers transferring the water.

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Transferring water and maintaining quality

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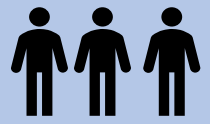
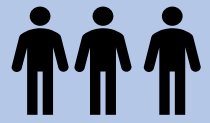
5. Feedback shared with South Staffs participants

Different ideas about how to approach the roll out of universal metering

Minimise the demand for water as quickly as possible – by picking up leaks and people using less



Prioritise customer requests for a meter

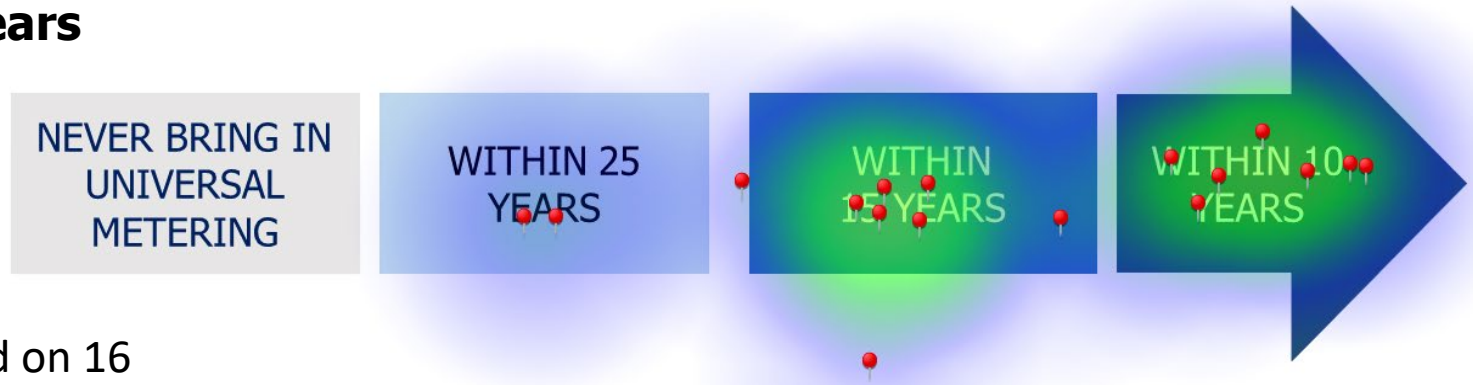


Minimise the cost of the programme

Prioritise FULL AMI smart metering

Minimise disruption to people/communities

Most wish to see universal metering rolled out in the next 10-15 years



Based on 16

Most wanted South Staffs Water to focus on fitting new smart meters at the same time as upgrading old ones (9/16 people) if rolling out universal metering. Whilst 4 saw fitting new meters as the priority and 3 people regarded upgrading old meters as the priority

8 out of 16 were happy to receive meter reads taken every quarter or every 6 months. That said 11 people were prepared to pay an extra £2.90 a year to have access to frequent meter reads (weekly/daily)

Most (13 out of 16) were prepared to pay an extra £3.50 a year (or £87.50 in total) to have universal metering completed by 2040

Priorities when thinking about water transfers

More like to agree

Less likely to agree

The reliability of my supply of water must stay the same (i.e. no change in chance of disruption to it) **1 agree, 11 strongly agree**

In the area where the water is going, the water company must have reduced leaks from pipes to a better level than the region transferring the water

That the areas water is being shared between should have similar levels of service for customers – i.e. how often hosepipe bans and other restrictions on water use might occur due to droughts

The company receiving (rather than transferring) the water should pay for the costs (e.g. pumps, laying pipes, adapting canals) to make it happen

The quality of my water supply must stay the same (e.g. taste, appearance, level of hardness/limescale, etc.)

The people in the area where the water is going must use, on average, the same or less per person than the area the water is coming from **6 agree, 4 strongly agree**

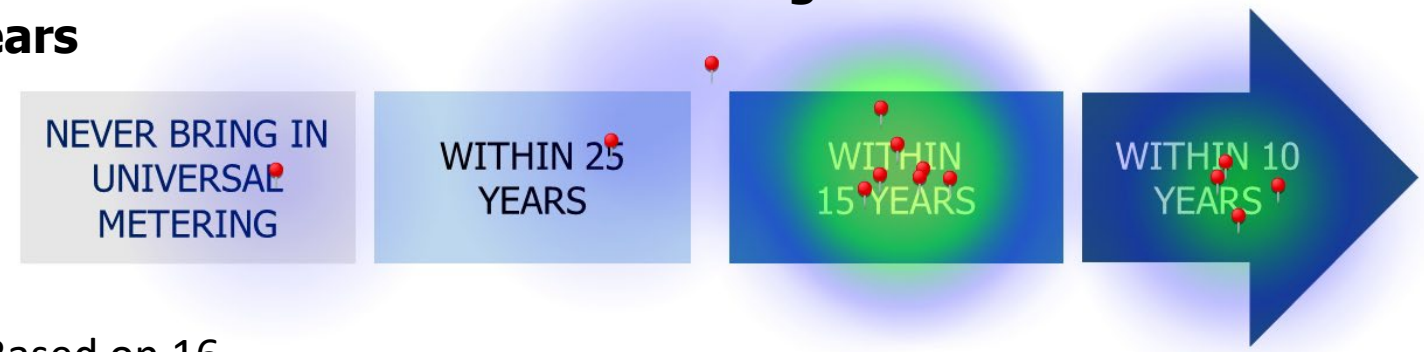
Based on 16

6. Feedback shared with Cambridge participants

Different ideas about how to approach the roll out of universal metering

- Prioritise customer requests for a meter
- Prioritise FULL AMI smart metering
- Minimise the demand for water as quickly as possible – by picking up leaks and people using less
- Minimise the cost of the programme
- Minimise disruption to people/communities

Most wish to see universal metering rolled out in the next 10-15 years



Based on 16

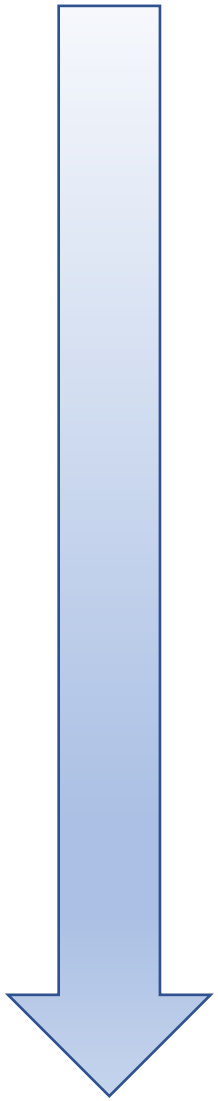
Most wanted Cambridge Water to focus on fitting new smart meters (7 people) or upgrade and fit new meters at the same time (7 people) if rolling out universal metering. Only 1 saw upgrading older meters as the priority

9 out of 16 were happy to receive meter reads taken every ever quarter or every 6 months. But half (8) were prepared to pay an extra £2.90 a year to have access to more frequent meter reads (weekly/daily)

Most (13 out of 16) were prepared to pay an extra £3.50 a year (or £87.50 in total) to have universal metering completed by 2040

Priorities when thinking about water transfers

More like to agree



Less likely to agree

That the areas water is being shared between should have similar levels of service for customers – i.e. how often hosepipe bans and other restrictions on water use might occur due to droughts **7 agree, 5 strongly agree**

The reliability of my supply of water must stay the same (i.e. no change in chance of disruption to it)

The company receiving (rather than transferring) the water should pay for the costs (e.g. pumps, laying pipes, adapting canals) to make it happen

The people in the area where the water is going must use, on average, the same or less per person than the area the water is coming from

In the area where the water is going, the water company must have reduced leaks from pipes to a better level than the region transferring the water

The quality of my water supply must stay the same (e.g. taste, appearance, level of hardness/limescale, etc.) **5 agree, 2 strongly agree**

Based on 15