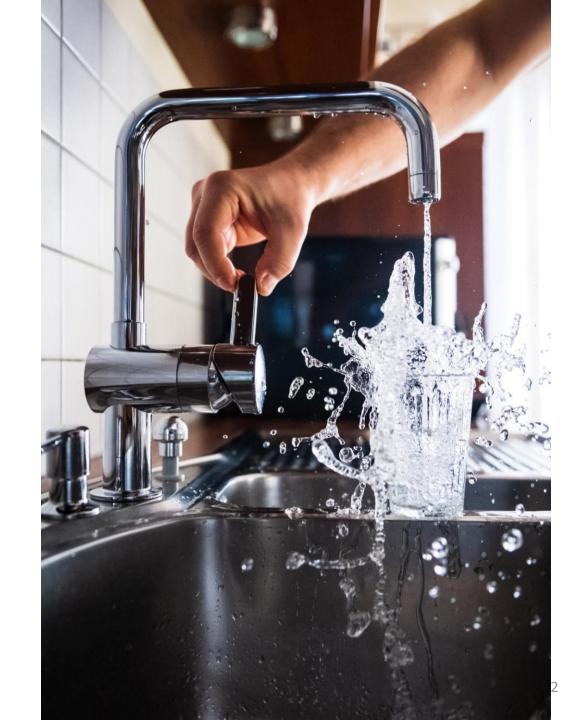


## Yorkshire Water Smart Meter Trial

Summary Report – March 2023

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## **Background and Methodology**



### Background & Context

#### **Background**

- The 'My Water Use' trial was designed to find an innovative approach to reducing consumption by making water use more tangible.
- The trial began in 2021 and consisted of:
  - Installing smart water meters in 400 homes, along with an online platform through which customers with these meters can see their usage (AMI)
  - Automatic Meter Reading for 30,000 homes to deliver similar benefits to the smart water meters (AMR).
  - A communications campaign raising awareness and encouraging engagement with water use data and water saving ideas

#### Context

- Water usage patterns during the trial period are likely to have been impacted by Covid-related lockdowns as well as 'returning to work' following the removal of measures.
- Yorkshire Water imposed water usage restrictions from 26<sup>th</sup> August to 6<sup>th</sup> December 2022 in response to the 2022 drought conditions. Water saving activity was also encouraged more widely during this period.
- These were unexpected factors impacting on water usage at the time of the trial, which makes evidencing the behavioural impact of the trial challenging. Therefore, to help understand trial success, this research focused more on customer experience of the trial.





### Research Aim & Approach

#### **Research Aims**

#### **Overall Objective:**

To understand customer experience of the trial and explore any perceived change in customer engagement with their water use.

#### **Critical Questions:**

- 1. How was the trial perceived overall?
- 2. What impact did the trial have on engagement with water use?
- 3. How effective was the communication of the trial?
- 4. How did the trial impact on perceptions of Yorkshire Water?

#### **Approach**

Mixed-method approach with:

- Online survey of trial households, with each invited to participate by letter (9th-26th February 2023)
- 3 focus groups with trial participants 2 in-person and 1 online (6<sup>th</sup>, 7<sup>th</sup> and 14<sup>th</sup> March 2023)
- Review of water use data consent sought during survey

941 households were invited to participate in the research

- 149 participated in the survey
- 11 participated in the focus groups
- 19 AMI survey respondents consented to linking their water use data to this research





### AMI and AMR survey respondent breakdown

- AMI (Advanced Metering Infrastructure) respondents were those with a smart meter with usage data collected every 15 minutes. Monthly updates on water usage were sent to these respondents via letter. They also had access to an online portal, which updated on a monthly basis, where they could monitor their own water usage online. Please note that smart meter installation was not voluntary and customers who paid by rates continued to pay by rates regardless of the trial. All AMI customers had a S2 postcode.
- AMR (Automated Meter Reader) respondents were those where their meter was automatically read via radio frequency and picked up by Yorkshire Water vans as they drove past. Vans were expected to read the meters every 6 months, but due to scheduling difficulties this expectation was not always possible to meet and usage updates could be delayed. Although less frequent, AMR customers were expected to receive updates on water usage roughly every 6 months by letter. They also had access to the online portal, but this would only update when the meter was read. Monthly data would be backfilled at this point, so although customers could view usage over the whole year, it would only be made available in line with the meter reading schedule. AMR customers were distributed throughout the wider Sheffield area, in both urban and rural locations.
- In total, 29 AMI respondents and 120 AMR respondents completed the survey.

	AMI	AMR
No. of invites sent	277	664
No. of responses	29	120
Response rate	11%	18%

• Any differences in results indicated between AMI respondents and AMR respondents are directional rather than significant and should be used with caution due to small sample base for AMI respondents.





### **Key takeaways**

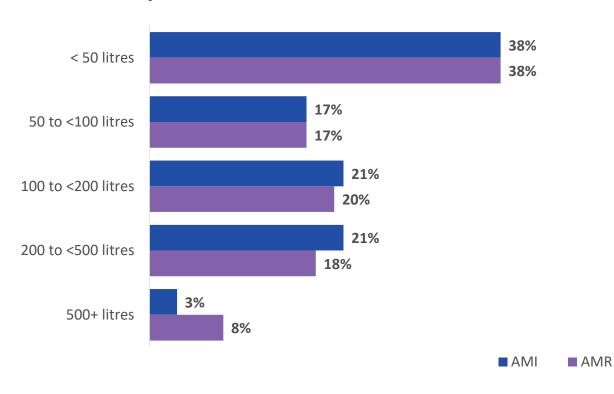
- Perceived daily water use is inaccurate, even for those who receive this information regularly via letter
- Few felt climate change affected them personally
- Most aware they have water meter but some confusion over type of meter

### Attitudes towards water usage



### Perception of household water use is largely inaccurate across AMI and AMR groups

#### Perceived daily water use



- Water UK previously reported that the majority of Brits have no idea how much water they use each day (Aug 2020), which is a trend also seen across previous Yorkshire Water research.
- The My Water Use trial delivered monthly usage data to participants in litres. This was on a more frequent basis for AMI respondents (monthly vs biannually for AMR), but this did not appear to impact on awareness of their daily usage.
- In 2022, Yorkshire Water reported that on average a person uses 133.5 litres of water per day (taken from a 3 year rolling average). Even if a household only contained one individual, the data suggests that 55% of participants likely underestimate their household usage (>100 litres).





Respondents are aware of climate change at a global level, but few acknowledge climate change impacts on them personally. Most feel that businesses are best placed to lead on climate change measures, but that everyone has a part to play

#### Climate change attitudes - % Agree

	Total	AMI (29)	AMR (120)
Businesses should do everything they can to reduce climate change	89%	100%	87%
I have noticed the impact of climate change on the world	86%	90%	85%
We should all do what we can to prevent climate change	86%	86%	86%
I am concerned about climate change	80%	83%	79%
Preventing climate change is the government's responsibility	52%	76%	46%
I am doing everything I can to prevent climate change	74%	72%	75%
I have noticed the impact of climate change on my life	59%	66%	58%





## Focus group participants believe that the public needs to take more responsibility for water conservation

- Monitoring of all utilities had become more important in recent months, due to rise in gas prices
  - Participants described monitoring their water use more carefully than they used to, despite it being relatively cheap
- A view that the general public take access to clean water for granted, and they need to take greater "personal responsibility"
  - Participants acknowledged it was easier to do this when retired or without caring responsibilities, as water conservation strategies take time and thought
- There was some discussion about whether increasing the cost of water or incentivising greater water savings would encourage conservation
  - Yorkshire Water shouldn't profit and the money should go into addressing environmental concerns instead e.g. sewage on beaches

"We abuse it [water] so much [...] If it was more expensive people would look after it more carefully" (AMR customer)

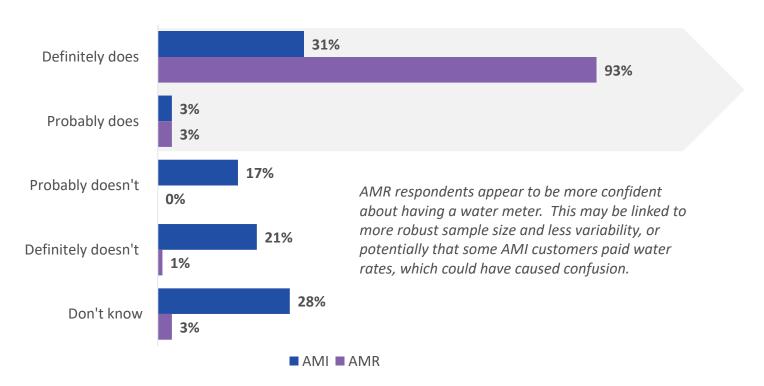
- There is a role for Yorkshire Water in raising awareness and education around water conservation, but can't be "invasive" or "preachy". They could:
  - Organise a 'fun day' around local reservoirs with awareness-raising stalls
  - Give free water butts to householders (one participant had experience of a similar scheme re. composting)
  - Target children (as "the next generation") e.g. school trips to sewage plants



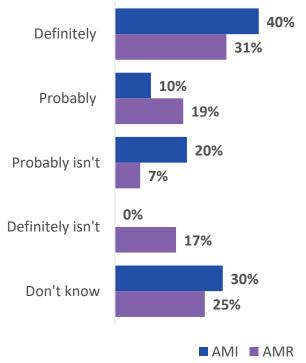


## Overall most customers (84%) are aware they have a water meter. However, there is some confusion around the type of meter they have installed

#### Customer awareness of having a meter



#### Customer awareness that their meter is a Smart Meter







## Focus group participants had limited awareness of the location of their water meter and how readings were taken

- Both AMR and AMI participants were generally aware they had a water meter
- Varied awareness of location of water meters some participants did not know where their meter was, or how to access it and their readings
- Vague awareness among some participants that Yorkshire Water took readings digitally via WiFi and "by driving down the streets" – largely gleaned by taking part in the survey
- Participants wanted more up-to-date, 'live' data about their water use – some AMR participants described receiving usage data every 6-12 months, which was too infrequent

"It'd be nice to get more up to date information on my water use, like I do with gas and electric" (AMR customer)

"I found out [Yorkshire Water] do it digitally, which I don't mind, but I wish I could access my own readings"

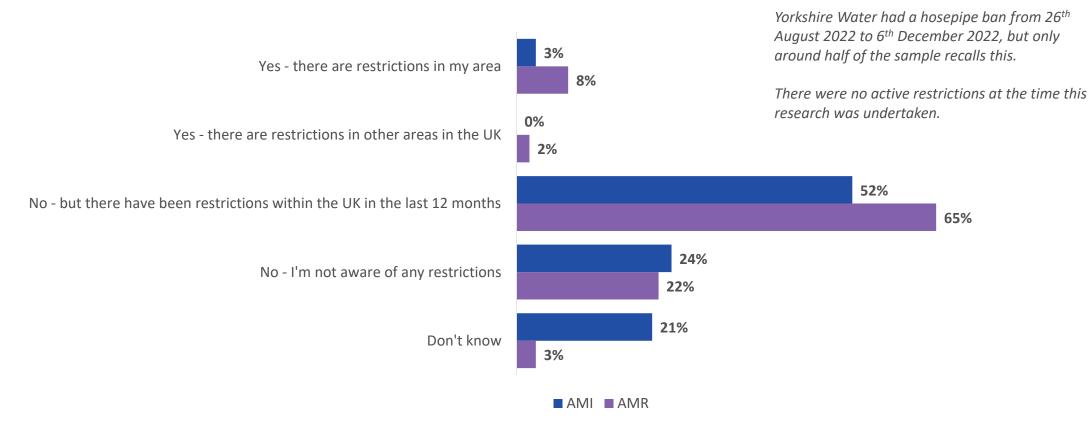
(AMR customer)





### Respondents broadly aware of water usage restrictions

#### Awareness of water use restrictions



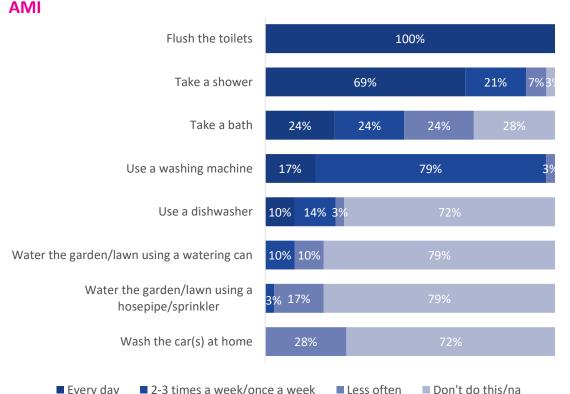




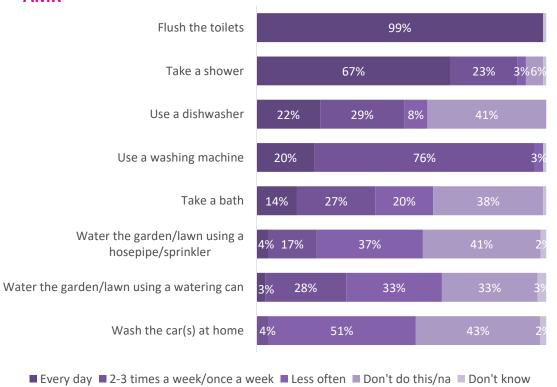
Water usage focused around in-home activities. Higher 'out of home' usage for AMR who were located throughout urban and rural Sheffield, compared to AMI who were all based close to the city centre (all S2)

#### Frequency of water usage activities

#### A B // I



#### **AMR**







Base: All AMR respondents - 120

14

### **Key takeaways**

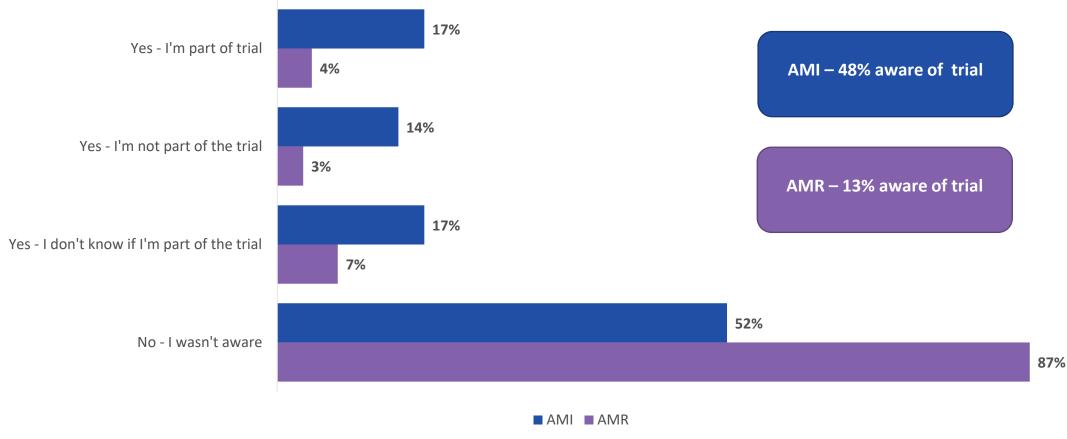
- Low trial awareness –
   particularly among AMR
   customers
- Some felt it was a new scheme rather than a trial
- Letters with water use data and water saving tips were the most recalled part of the trial

## Overall perceptions of the trial



There was low trial awareness among AMR respondents. Better awareness among AMI respondents – potentially linked to more trial communications (monthly vs every 6 months for AMR)

#### Awareness of trial







## Focus group participants had little awareness of the trial before taking part in the research

- Low awareness of overall trial among participants the trial was described as "low-key" and "subtle"
  - Vague notion of "a [Yorkshire Water] van that goes up and down the streets" among some, or that their meter was changed "a couple of years ago"
  - Some participants became aware of the trial after taking part in the survey
  - Or misunderstood it to be a new scheme in its early stages, as opposed to a trial
- Mixed recall of the 'trial introduction' and 'ongoing trial' letters
- Minimal awareness of the portal better publicity needed e.g. advertising through social media and local resident groups
- Some suspicion about what Yorkshire Water want to achieve through the trial profitmaking companies aren't usually "altruistic", so cost of water might increase

"If I'd known about it [the portal], I would have been on it, so I don't think the marketing campaign was very good" (AMR customer)

"If the point of this trial is to reduce water consumption, then [Yorkshire Water] aren't going to make as much revenue [...] I feel very cynical about it." (AMR customer)





# Recall of trial activities focuses on water use. 'Comparison' features heavily, so has potential for use in future messaging and positioning

#### Survey respondents' spontaneous recall of trial activities

"How we are doing with water usage. We are doing better than the average household. To keep efforts to save water."

"If we are using less than average and smiley faces."

"It didn't update for many months which was frustrating. It was hugely rewarding to see us move from a higher than average user to a really efficient user."

"Water use comparison. No link to cost of use."

"It's good. I am averaging using the same."

"Useful for monitoring water usage on a daily basis."

"My use was above average initially. After trying to reduce water use my usage is now well below average."

"Accessibility to data."

Calculated split.

Interesting data."

"Logging on. Checking usage.
Concern over amount."









# Spontaneous recall of trial communications was limited, but prompted recall of letters was high. This mirrored feedback gathered in the focus groups

#### Survey respondents' prompted recall of trial activities (for those aware of trial)

Activity	AMI (14)	AMR (16)
Receiving messages/letters with your water use and water saving tips	9	5
Receiving letters informing me of the trial	4	4
Being invited to use a water use portal/website	2	2
A new smart water meter being fitted for my home	1	0
None of these	4	7

AMI
All had received letters 4
times or more

AMR
3 had received letters once
and 2 could not recall if
they received a letter

AMI None had visited the portal AMR 2 had visited the portal at least once

Why?
Interested to find out more about it
Wanted to understand water use





### **Key takeaways**

- Change in water use connected with seasons
- Money was a key factor in reducing water use
- Where aware part of the trial, around a half said they had reduced water use or had tried water saving tips

### Impact of trial on engagement with water use

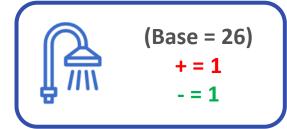


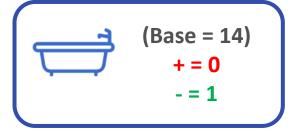
# Little change in reported water use behaviour among AMI respondents, except watering the garden, which is likely to be connected with the time of year

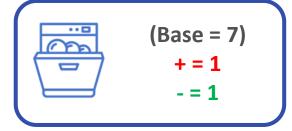
Change in frequency of water use activities where undertaken at least once a week - AMI















rather than percentages due to small base sizes and ordered based on number answering

Number of participants who increased their frequency (+)
Number of participants who decreased their frequency (-)

# Looking more closely at AMI customers who reduced their usage, saving water, energy and therefore money are key motivations for change

#### Reasons for doing household activity less – AMI

Reason doing less	Flush toilet (4)	Washing machine (5)	Shower (1)	Bath (1)	Dishwasher (1)	Watering can (3)	Hosepipe (1)
Save money		3		1	1		
Save water	2	3			1	1	1
Need to do it less		1				1	
Help environment	1	1			1	1	1
Save energy		3			1		1
Hosepipe ban							1
Found another way of doing it					1		
Other reason	2		1			2	1

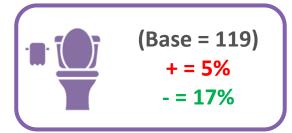
Managing the use of washing machines and dishwashers is popular to save energy, water and money; while reduction of showers and baths might see more resistance for comfort and hygiene reasons.

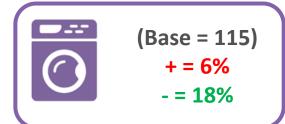


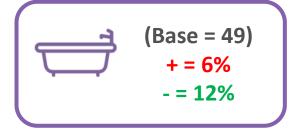


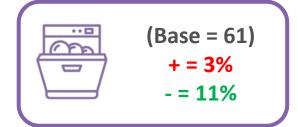
# AMR respondents show reductions in water usage across all activities – including those not affected by season

Change in frequency of water use activities where undertaken at least once a week - AMR

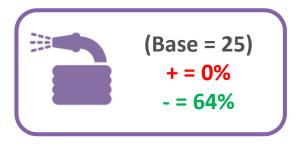












Proportion of participants who increased their frequency (+)
Proportion of participants who decreased their frequency (-)





Saving money was the biggest motivator for AMR customers who reduced their usage. To save water, energy and money, the washing machine was a more common target for behaviour change.

#### Reasons for doing household activity less - AMR

Reason doing less	Flush toilet (20)	Washing machine (21)	Shower (16)	Bath (6)	Dish- washer (7)	Watering can (25)	Hosepipe (16)
Save money	8	12	9	4	2	3	5
Save water	13	15	11	3	3	7	6
Need to do it less		1			1	5	4
Help environment	2	6	1	2	1	3	2
Save energy	2	14	10	5	4		
Hosepipe ban		1		1		1	2
Less people in household	2	2	1	1	1		
Found another way of doing it						3	2
Other reason	4		3		1	11	6

Greater variety
of behaviour
changes than
AMI, mainly
due to larger
sample sizes
and may be
linked to
greater range
of affordability
needs as well
as other
household
priorities.





## For respondents who were aware they were on a trial, making water use more prominent had a positive impact on behaviour



5 respondents remember being part of trial



3 respondents reduced water use due to trial



- Could see how much water using = 3
- Could see how much water saving = 2
- Made me think more about water use= 2
- Wanted to help environment = 2



5 respondents remember being part of trial



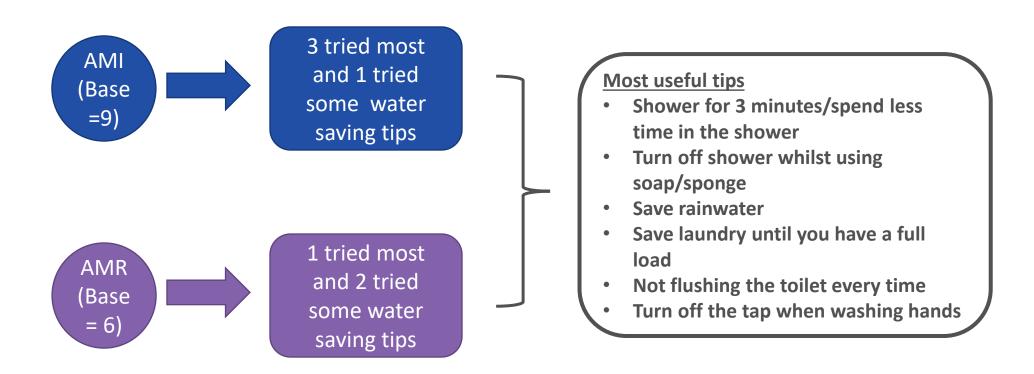
3 respondents reduced water use due to trial



- Could see how much water using = 2
- Made me think more about water use= 2
- Wanted to save money = 2
- Could see how much water saving = 1
- Wanted to help environment = 1
- Learnt new things about water use/saving = 1
- Ease of applying water saving tips = 1



### For those who had seen any trial communications, around half had tried the water saving tips, which were broadly welcomed







25, as these customers remembered communications about the trial but may not have realised they were part of the trial.

B11. How would you rate Yorkshire Water's water saving tips for ... Base: Those who had tried water saving tips - 4 AMI; 3 AMR B14. Which of the tips and ideas did you think were the most useful? Base: Those who had tried water saving tips - 4 AMI; 3 AMR

# Analysis of AMI water use showed that those charged by rates rather than by meter were more likely to have higher than average water use

- For the 19 AMI respondents who consented to link their survey data to their water use data, further analysis was undertaken where for each month from July 21 to August 22 their water use was categorised into more than average, good or great.
- 8 of these respondents were charged by water rates rather than by meter, with the rest being charged by meter and therefore what they used.
- There were 4 respondents where their water use was continuously good or great with a number of further respondents who appeared to change their water use following a letter that told them their water use was 'more than average'. As expected there was some seasonal impacts on water use.
- However, there was one respondent, charged by rates, who had continuously above average water use despite communications telling them this.
- For each of these 19 respondents the number of months 'more than average', 'good' or 'great' were calculated and then an overall average calculated for each:

Water use category	Average number of months			
	Rates	Meter		
Using more than average	5	3		
Good	4	2		
Great	6	9		





### **Key takeaways**

- Little recollection of 'trial introduction' letter = little awareness of being in the trial
- Better recall of 'ongoing trial' (data usage) letter, which appeared to impact on some customers' water use
- Use of portal was low, but was felt to have potential

### **Effectiveness of trial communication**



Low spontaneous recall of items from portal/letters among survey respondents. Where recalled, focus was on water usage.

Survey respondents' spontaneous recall of items from portal/letters

"Water usage. Better than average"

"I'm using less than an average home."

"Personal water use.
Comparison to similar
households. Paper copies only,
no way to change this."

"Being able to see how my usage has reduced."

"Initial thought was that it was incredibly poor. The information is next to useless in comparison with energy firm type data."

"My water usage being much lower than average."

"Every month they came. How much I use. Compared to other people."









# Focus group participants generally did not recall the 'trial introduction' letter, and feedback focused on improvements to clarity, brevity and layout

Feedback was spontaneous on seeing the letter during the focus groups

"I would have remembered this [if I'd seen it] because I would have been really interested – I like trackers and data" (AMI customer)

The letter looks too cluttered and busy; font too small

Use of 'exciting' works

well – it feels positive. It

should be used earlier to grab reader's attention

and make the letter more

eye-catching. For

example, 'Exciting new

Water Use tracker' as the

first heading

My Water Use tracker

A new way to see how much water you use



yorkshirewater.com

Dear

Our colleagues are working 24 hours a days, 7 days a week, 365 days a year to make sure that Yorkshire's water keeps flowing and it's waste gets taken away. This isn't always as easy as it seems.

A growing population along with climate change means there's a lot of pressure on Yorkshire's water resources. This is why we want to help our customers use less water in their homes.

So, we're trialing an exciting new way to show our customers how much water they're using.

As you're already a metered customer you may already know the benefits of using less water but, for the first time, we're offering metered customers access to the My Water Use Tracker.

The My Water Use Tracker is an exciting new tool we're trialing. It shows you a breakdown of your water use over the last six months and how it compares to other households.

#### What happens next?

You can log onto the tracker whenever you fancy. If you flip over the page you'll see your report.

For some these opening sentences feel positive.
For others, they are generic and discourage people from reading further, and off-putting as they feel like "[Yorkshire Water are] just trying to say how good they are"

The letter "promises a lot".

One AMR participant described how they would have been "disappointed" to access the portal after reading the letter, as it is not updated often enough





## Participants had a better recollection of the 'ongoing trial' letter, which was felt to look and feel different to other Yorkshire Water letters

This information was useful, and the bar chart was clear and stood out; "you can immediately see what's important [in the letter]"



Emojis effective for people with low numeracy

Clearer definitions needed for 'efficient' and 'average' homes, to make the comparison meaningful

Tips look 'generic' – a way of filling up space. It would be useful to add how much water you could save per tip "I don't care about my neighbours[' usage]! The comparison has to mean something" (AMR customer)





The portal had been used multiple times by just one focus group participant (an AMR customer). They were initially underwhelmed by it, but after 6 months thought it was more insightful



It was difficult to log in to the portal – had to call Yorkshire Water for help. It would be easier to go through Yorkshire Water's website or an app – more accessible and would also reduce suspicion of scams



Water use not updated often enough, which was "disappointing" – assumed that the portal was defunct. Ideally they wanted monthly updates. Other energy companies are better at tracking use e.g. Octopus, who provide usage data by day, week and month



Missing information and broken links gave a bad impression, but now realises this was due to it being a trial



Separate to the one focus group participant above, there were two survey respondents (both AMR) who reported using the portal, but only logged in once.

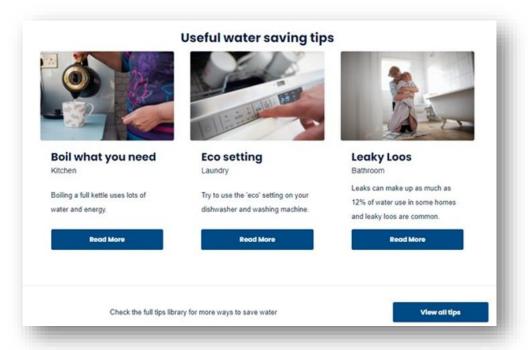




# 'My consumption history' and 'water saving tips' were useful, with only minor improvements suggested

- Spontaneous feedback on seeing portal screenshots during the focus groups
- Most useful chart helps customer troubleshoot e.g. potential leaks etc.
- Underlaying previous year's consumption would be helpful





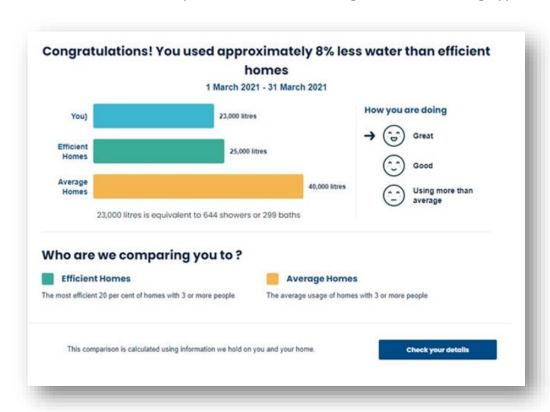
- Very useful would not have considered 'leaky loos'
- Headings and images all clear and easy to understand more eye-catching than the tips on the 'ongoing trial' letter
- The 'read more' buttons encourage you to investigate further

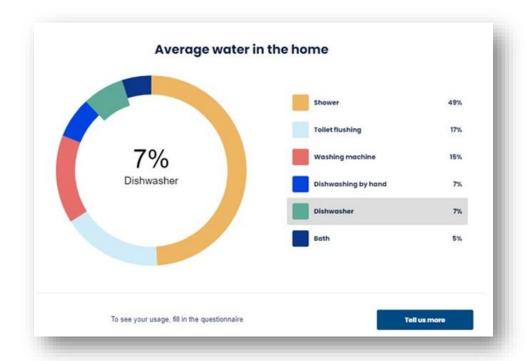




## The 'efficient homes' chart was generally well received, but the 'average water in the home' chart was less useful – definition of 'average' needs to be made clearer

- Clear and succinct definition of 'efficient' and 'average' homes were suggested by some, for the comparison to be meaningful
- Some wanted comparison to different regions and housing types





- Not clear what it's showing; a definition of 'average' homes is needed, otherwise "feels a bit pointless"
- Participants who liked this chart found it illuminating e.g. that nearly half of the total water used in the average home is through the shower – might inspire behaviour change





## Focus group participants had mixed views about portal location, but accessibility and convenience were key considerations for all



Mixed views about where the portal should be located:

- An app, to maximise speed of access, convenience, and personalisation to the consumer, while also minimising log-in issues
- Yorkshire Water website, so that everything water-related is in one place



Some participants were in favour of an email alert to say they had an update on the portal (Nest do this); others would be suspicious of potential scams



Participants identified some groups who might find the portal challenging to use:

- People with low numeracy, but "there's no simple solution to that"
- People who are not digitally literate
- People with SEND e.g. some people with dyslexia need a coloured overlay to assist with reading



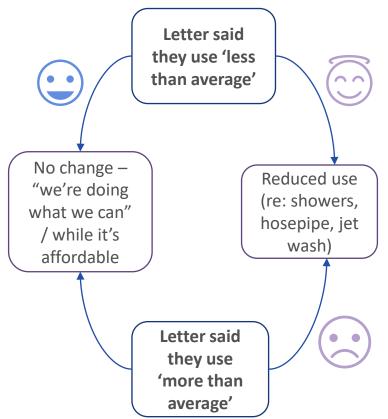


# Despite not knowing they were part of a trial, the 'ongoing trial' letters had an impact on some participants' water use

• Receiving the 'ongoing trial' letter about their water use caused participants to feel "pleased" and "smug" (less than average), or "cross" and "annoyed" (more than average)

"I've just carried on as usual [...] I am consciously careful so I was pleased that my efforts were doing something [...] It's incentivised me to carry on" (AMI customer)

"We've made a conscious effort to use less – we've more than halved our use which is really impressive! [...] We're using a lot less and our bills are cheaper" (AMR customer)







#### **Key takeaways**

- Respondents generally positive or neutral towards Yorkshire
   Water
- Limited thought had been given to perceptions of Yorkshire Water unless there had been issues
- Low usage of Yorkshire Water website but generally positive where it had been used

# Impact on perceptions of Yorkshire Water



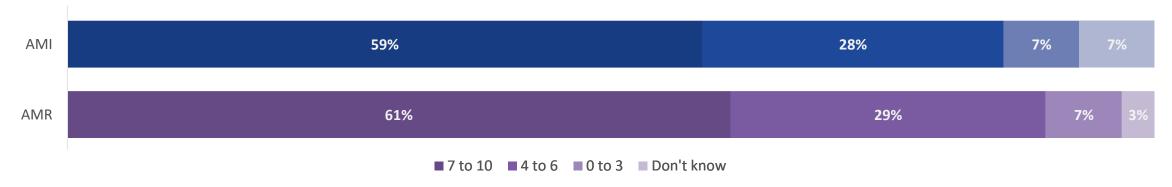
#### Survey respondents were largely positive or neutral towards Yorkshire Water

#### Perception rating of Yorkshire Water - Poor (0) to Excellent (10)

Base: All respondents - AMI 29; AMR 120



#### Satisfaction with value for money of Yorkshire Water services – Very dissatisfied (0) to Very satisfied (10)



For comparison, the February wave of the Yorkshire Water monthly tracker survey (sample size: 300) was slightly more positive and showed 85% of respondents rated Yorkshire Water 7 to 10, and 77% rated their satisfaction with value for money as 7 to 10. Please note, however, that the South Yorkshire subgroup specifically had the lowest 7 to 10 scores at 80% Perception and 75% Value for Money - still slightly higher than the trial, but does indicate a greater likelihood to score more conservatively in this region.





### Focus group participants had a range of views about Yorkshire Water

- Little consideration had been given to Yorkshire Water before the focus groups, due to lack of choice around water company
  - Perceptions ranged from:



Effective communication about upcoming works and quick response to problems e.g. leaks

"Going the extra mile" with trial 'water use' letters



Having "no issues with them"



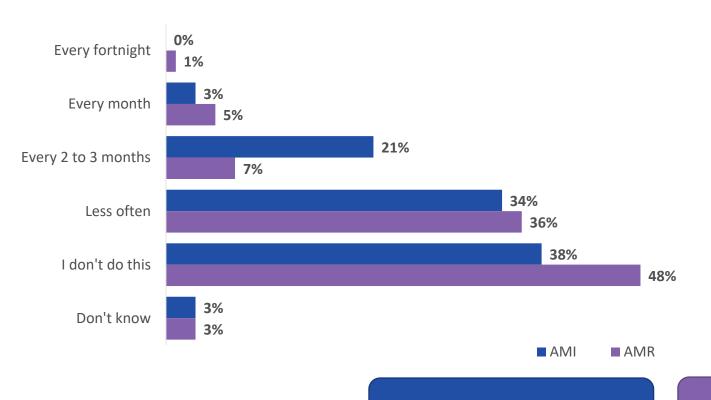
Dissatisfaction with specific incidents e.g. spam, and Yorkshire Water wanting to charge the public to park at local reservoirs





## Very low usage of the Yorkshire Water website

#### Frequency of visiting Yorkshire Water website



Reason for visiting website	AMI (7)	AMR (15)
Pay bill	3	5
Water saving ideas/tips	1	3
News about YW	2	2
Ideas on things to do	0	1
Report a problem/issue	1	0
Contact customer services	0	2
Environmental ideas/info	1	0
Another reason	3	7

AMI – 59% had visited website

AMR – 48% had visited website





### Experience of website and improvements is broadly positive for those who access it

#### **Experience rating of Yorkshire Water's website**

Reason for visiting website	Excell- ent	Very good	Good	Fair	Poor
Pay bill (8)	3	3	1	1	0
Water saving ideas/tips (4)	0	1	3	0	0
News about YW (4)	1	0	3	0	0
Contact customer services (2)	0	0	1	1	0
Ideas on things to do (1)	0	0	1	0	0
Report a problem/issue (1)	0	0	1	0	0
Environmental ideas/info (1)	0	0	0	0	1

#### Suggestions for improving Yorkshire Water website

"Clearer information on pricing. Better information on progress on water leak reduction."

"Ability to submit monthly water readings if not on smart meter."

"Remember details so that I don't have to input all my details each month."

"Ability to change household details."







**AMI** 



# **Summary and Recommendations**



### Summary



- We can't draw definitive conclusions about the impact of the trial:
  - In part because awareness of the trial was so low, particularly among AMR customers
  - Where survey respondents were aware of the trial, around half had reduced their water use
- Where survey respondents had reduced their water use, it was largely driven by cost (including saving energy and water)
  - The qualitative data highlights that cost comparison data for water usage is important to customers; improvements in data accessibility and quality might support them in reducing water usage and saving money



- Trial communications had mixed outcomes:
- Focus group participants did not recall the 'introduction' trial letter, which in part explains low portal take-up
- The 'follow-up' trial letters were more frequent, more memorable and well received (though not attributed to the trial itself). Some participants described the letters impacting on their water usage
- There were some positive reflections on the portal data, alongside suggested improvements around accessibility and content
- The survey and qualitative data show that if water saving information is given in an accessible way, in the right format, there is potential to change behaviour (see Recommendations)





#### Recommendations



 Understanding water usage trends before smart meter installation would help to demonstrate possible behaviour change under any future roll-out



- Bring water usage data more in line with what energy companies (e.g. Octopus) provide. This includes:
- Making the data easily accessible, without needing to log in/remember passwords e.g. an app, email notifications
- Ensuring the data is useful and insightful e.g. providing usage, and cost of usage, by day, week and month, and allowing comparisons by year.
- The data being accompanied by clear, compelling communications, that summarise the key messages upfront



 Ensure publicity materials about any future roll-out are clear and compelling e.g. letters that lead with information about the usage tracker, to draw customers in and encourage engagement





# **Appendix – Detailed Attitudes to Climate Change**



### Climate Change Attitudes

There is strong support across AMI and AMR customers that businesses are best positioned to lead on climate change, but that we all should do what we can to prevent climate change.

#### **AMI**

Businesses should do everything they can to reduce climate change

I have noticed the impact of climate change on the world

We should all so what we can to prevent climate change

I am concerned about climate change

Preventing climate change is the government's responsibility

I am doing everything I can to prevent climate change

I have noticed the impact of climate change on my life

■ Agree ■ Neither



#### **AMR**

Businesses should do everything they can to reduce climate change

We should all so what we can to prevent climate change

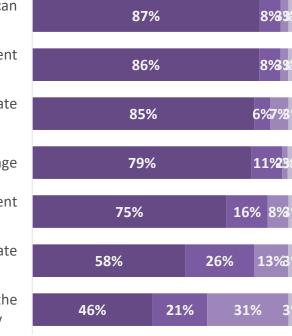
I have noticed the impact of climate change on the world

I am concerned about climate change

I am doing everything I can to prevent climate change

I have noticed the impact of climate change on my life

Preventing climate change is the government's responsibility











# **Appendix - Participant Profile**



### Response Rate

- In total, 941 households were invited to take part in the quantitative survey with 149 households doing so
- This yields an overall response rate of 16%

	Total	AMI	AMR
No. of invites sent	941	277	664
No. of responses	149	29	120
Response rate	16%	11%	18%

- 89 respondents gave consent to be contacted about further research 17 AMI and 72 AMR
- Of these 89, 16 agreed to take part in the focus groups, of which 11 turned up on the day 5 AMI and 6 AMR





# Respondent Profile – Quantitative Survey

	Trial
AMI	19%
AMR	81%

	Gender
Male	48%
Female	43%
Other	5%
Prefer not to say	3%

	Age
16 to 44	32%
45 to 64	40%
65+	26%
Prefer not to say	1%

	No. in household
One	16%
Two	47%
Three	17%
Four or more	19%
Prefer not to say	1%

	Children in household
Yes	24%
No	74%
Prefer not to say	2%

	Household type
Flat/apartment	7%
Bungalow	11%
Terraced house	17%
Semi-detached house	32%
Detached house	31%
Other	1%

	How pay for water bill
Direct debit	91%
On receipt of water bill	9%

	Tenure
Owner	80%
Shared owner	1%
Private rented	11%
Socially rented	7%
Prefer not to say	1%





# **Appendix – Detailed AMI Water Use Analysis**



## AMI water use analysis by month

Charge Type	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22
Rates	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great
Rates	More	Good	Great	Great	Great	Great								
Rates	More	Good	Good	Great	Good	Good	Great	Great	Good	Good	Great	Great	Great	More
Rates	Good	More	Good	Good	Good	Great	Great	Good	Great	Great	Great	Good	More	More
Rates	Good	Good	Good	More	More	Good	Good	More	More	More	More	Good	More	More
Rates	Good	More	Good	More	Great	More	Great	Good	Great	Great	Great	Great	Great	Great
Rates	More	More	More	More	More	More	More	More	More	More	More	More	More	More
Rates	More	More	Good	Good	More	More	More	More	Great	Good	Good	Good	Good	Good
Meter	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great
Meter	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great	Great
Meter	Good	Great	Good	Great	Good	Great	Great	Great	Great	Great	Great	Great	Great	Great
Meter	No letter	More	Great	Great	Great	Great								
Meter	Great	Great	More	Great	Great	Great	Great							
Meter	Great	Great	Great	Great	More	Great	Great	Great	Great	Great	No letter	Great	Great	Great
Meter	Great	Great	Great	Great	Great	Good	Good	Good	Great	Great	More	More	More	Great
Meter	More	More	More	Good	Good	Good	More							
Meter	Great	Good	Good	Good	Good	More	Good	More	More	More	More	More	More	More
Meter	More	More	Good	Good	More	Good	More	More	Good	Great	Great	More	More	Good
Meter	More	More	More	More	Great	More	More	Great	Great	Great	Great	Great	More	More

Those with consistent great or good water use or those where water use has improved following communication letting them know they had more than average water use





