



Thames Water
Customer Voices

PR24 enhancement case deep dives

June 2023

Report prepared by Verve





Background and Methodology

Background and methodology (1)

Setting the scene for the PR24 Enhancement cases

- Thames Water is conducting a PR24 engagement programme in order to understand what customers (communities and stakeholders) want from their water and wastewater service, and how they feel about proposed future improvements and investments. The customer insights will shape Thames Water's 2025-2030 Business Plan
- Foundational research was completed in 2021, and follow up research was conducted throughout 2022, which discussed in detail what customers want from Thames Water and what their core expectations are
- This is the next phase of PR24 customer research, the **objective** of which was to gain feedback on investment proposals in 8 specific enhancement cases, specifically to assess the customer need and/or preferred options for each:
 1. Basement flooding (reported from **page 28**)
 2. Security and Emergency Measures Direction (reported from **page 39**)
 3. Major water supply interruptions (reported from **page 51**)
 4. Rethinking rivers (reported from **page 65**)
 5. Sewer infiltration (reported from **page 75**)
 6. Sewer flooding (reported from **page 87**)
 7. Sewage treatment growth (reported from **page 99**)
 8. Bathing water (reported from **page 107**)

Background and methodology (2)

How Verve approached these topics: An online community, quantitative survey and telephone interviews

- This report covers a summary of the main findings from all eight enhancement case topics

Qualitative approach: We conducted two online communities – one for water topics, one for waste topics - that ran from April 17th- May 4th 2023

- For each community, we gathered a broadly representative sample of Thames Water customers (including Future bill payers and non-households)
- Over the course of each community, customers were presented with carefully developed material that highlighted the issues under scrutiny, the challenges Thames Water faces in these areas and the investment propositions for tackling them
- This approach meant that customers were able to provide us with considered views on the investment proposals (including potential bill impacts in many cases), and vote on their preferred options for investment
- At the close of each community, customers were asked to rank each topic they'd reviewed in order of priority by which Thames Water should be making improvements. These results are presented in the executive summary

Quantitative approach: We conducted one online survey that ran from April 20th - May 4th 2023 and one phone survey that ran from April 28th – May 26th 2023

- For the online survey, we interviewed three different groups: households, non-households and Future bill payers.
- For households and non-households we set specific quotas to ensure the samples were representative of Thames Water customers
- Customers were presented with cut-down versions of 5 topics (3 water and 2 waste from the qualitative communities) and asked to assess their importance and preference towards actions Thames Water could take
- At the end of the survey, customers ranked all 8 topics on priority, including the remaining 3 from the qualitative communities
- For the phone survey, we interviewed customers who qualified as 'digitally excluded'
- The phone survey was the same as the online survey, except the case descriptions were cut-down slightly to fit with the phone interview methodology

Methodological considerations (1): Online communities

Online communities remove social pressure found in interviews/focus groups and grant participants ample time to digest reading materials

Benefits of this methodology

- Online communities can give a voice to individuals that may not have normally had the time or ability to take part in an in-person focus group or workshop, for instance those that work full time, have family commitments, certain disabilities, financial issues or language barriers.
- They also allow customers to express themselves more freely without the social pressure of a focus group scenario
- Comprehension of complex topics can be aided because participants can view and review stimulus material at their own pace, allowing them time to digest and reflect on information, without the pressure to answer immediately
- Household participants were recruited from Thames Water's Customer Voices panel and some would have been 'informed' by prior research activities at an earlier stage of the planning process, covering similar issues and the concept of planning for the future

Limitations to this methodology

- Although the base size for this research is high for qualitative research, it is not statistically robust (although the outputs still give a good steer on the direction of opinions)
- Excludes people with no access to the internet
- As with all research, customers can only react to the information shown; care must be taken to ensure materials are clear and unbiased

What we did to negate these limitations

- Stimulus materials were cognitively tested by Verve employees (not those working on the project) to ensure all materials were easily understood
- We soft launched the qualitative community to ensure participants clearly understood the context of each enhancement case, Thames Water's over arching goal and the relative pros and cons of each proposal
- Upon reading each piece of information, customers had an opportunity to reject/question it
- Quantitative phone research was conducted with 92 digitally excluded customers, to obtain views of people with no access to the internet

Methodological considerations (2): Quantitative survey and telephone interviews

Quantitative surveys provide statistical robustness

Benefits of this methodology

- Provides statistical robustness: The base sizes used for the quantitative portion of this study allows us to ensure that most demographic groups assessed had large enough base sizes for statistical analysis (over 50 people)
 - Households: N=1000 – confidence level: 95% margin of error: approx.3%
 - Non-Households N=204 – confidence level: 95% margin of error: approx.7%
 - Future bill payers N=51 – confidence level: 95% margin of error: approx. 14%
 - Digitally Excluded: N=92 – confidence level: 95% margin of error: approx. 10%
- Ability to set strict quotas to ensure the sample is representative of Thames Water customers
 - This also includes participants with no access to the internet
 - Any group with a base under 50 will be considered small

Limitations to this methodology

- As there is no direct communication with respondents, there was no way to ask if they understood the questions/topics
- Due to this limitation - we conducted a larger soft launch than typical, launching to 75 households, and 25 non-households
- For future bill payer analysis - for water topics, the base size for Future bill payers in dual water/waste areas was too small for analysis (n=28). We analysed the data for the total sample vs dual usage areas, and found the results were consistent for all groups. Given the consistency of the data, we have reported on all Future bill payers (n=51) regardless of area, in order to have a large enough base to report on
- There isn't the same degree of anonymity in telephone interviews, and so participants were more likely to provide answers they thought would be favourable to the interviewer (known as the interviewer effect)

What we did to negate these limitations

- For the soft launch, we calculated the average survey time to complete, and then removed anyone who sped through the survey (0.3 times faster than the median)
- We checked the drop rate for all questions to ensure that no one was stopping or dropping at the enhancement case evaluation section, which would indicate frustration or lack of understanding
 - We saw only 1 of the 75 households in the soft launch leave the survey in the enhancement case evaluation section, and none from non-household
- We checked the raw data of the soft launch to ensure everything was working correctly. We identified one problem with the allocation of region, and updated the scripting
- To minimise interviewer effect, the digitally excluded segment interviews were carried out over the phone as opposed to in person

Verve's declaration that this research observes Ofwat's standards for high quality research

Ofwat's minimum standards for high quality research	How we met these standards
Useful and contextualised	This research was used to inform the development of Thames Water's investment plans for the period of 2025-2030 and ensure these align with customer's expectations. The current enhancement cases were developed from previous customer insight and so this research falls into a wider body of insight gathering aimed to understand what customers want from Thames Water in the near and longer term.
Neutrally designed	To ensure the materials were clear, Verve employees not involved in the project cognitively tested all of the stimulus materials. We soft launched the online community to ensure that if any confusion arose, we would be able to adjust stimulus accordingly. The order of topics was also randomised in the qualitative and quantitative surveys. Care was taken to ensure that materials were framed neutrally. For example, for the basement flooding enhancement case, details pertaining to the magnitude of harm (death, insurance claims, and an example of how an old person could drown) was removed for consistency with how other enhancement cases were portrayed. For the quantitative online survey, we conducted a soft launch study of 100 people, and monitored for speed of completion and any questions that were causing people to drop out or stop the survey, which we used as a proxy for respondent comprehension.
Fit for purpose	We used a qualitative and quantitative methodology to fully meet the objectives of this research. Statistically robust data from the quantitative research was used to sense check the interpretation of the qualitative insights, including differences between segments. The online community approach allowed participants to express themselves without the social pressure of a focus group/workshop scenario. Comprehension of some of the complex topics discussed was also helped because participants could view and review stimulus material at their own pace, allowing them time to digest and reflect on information. We ensured that questions and stimulus in both the qualitative and quantitative surveys used plain English for maximum comprehension.
Inclusive	We captured a wide range of household, non-household and future customers to ensure all customer groups had their say in both the quantitative and qualitative elements of the project. We made sure we had a representative sample of Thames Water customers in the quantitative survey, using demographic and firmographic quotas for the Thames Water area, including household quotas on ethnicity, vulnerability and digital exclusion. The methodologies used allowed for inclusivity, the online community allowed individuals to have a voice where other methods may have restricted this, and the quantitative research included both online and telephone methodologies to ensure digitally excluded customers were involved.
Continual	Thames Water's research and engagement programme is continuous. The findings from this research will be used in conjunction with previous and future insights to inform Thames Water's day-to day service delivery and business plan in the short and long term.
Independently assured	All research was carried out Verve, an independent research and insight consultancy. Thames Water's Customer Challenge Group reviewed and gave feedback on the research methodology and initial drafts of the research materials.
Shared in full with others	The full report and stimulus materials will be shared with other water companies via a SharePoint site and with the general public via Thames Water's website.
Ethical	All research conducted by Verve is in line with Market Research Society Code of Conduct.

Qualitative Research sample for Wastewater online community

This research was designed to capture the diversity of Thames Water's customer base

Household customers (Customer Voices-68)

Customer Groups	Count
Household customers (Thames Water Customer Voices panel)	68
Future bill payers (recruited externally)	7
Non-household customers (recruited externally)	20

- 95 customers took part in the research and 81* customers completed all questions
- We aimed to match specific demographics of participants with that of the Thames Water customer base, see next page
- **Customer Voices** - Thames Water's online research community of over 1,000 household customers, designed to be representative of all customers. It was formed in June 2021 using Panelbase as a recruitment source, with a small number of customers signing up via Thames Water's website and social media posts.
- **Future bill payers (18-24 year olds, non-bill payers)** – Recruited via BEAM Qual recruitment. Views from this cohort were sought, given that decisions made now will impact on their future, both in terms of service delivery and impacts of climate change
- **Non-household customers** – Recruited via BEAM Qual recruitment. Views from this cohort were sought, because even though they don't pay bills directly to Thames Water, their water and wastewater service is still provided directly by Thames Water (and hence impacts their bill)

*Sewer Treatment Growth (91), Bathing Water (91), Rethinking Rivers (89), Sewer Flooding (86), Sewer infiltration (81)

Demographics	number
Gender	
Male	27
Female	41
Age	
18-24	2
25-34	12
35-44	21
45-54	17
55-64	9
65+	7
Social grades	
ABC1	44
C2DE	24
Ethnicity	
White	39
BAME	28
Prefer not to say	1
Vulnerability status	
Vulnerable	9
Service type	
Clean & Waste	41
Waste only	27
Location	
London	47
Thames Valley & Home Counties	21

Future bill payers (7)

Demographics	Number
Gender	
Male	2
Female	5
Social grades	
ABC1	7
C2DE	0
Ethnicity	
White	5
BAME	2
Service type	
Clean & Waste	0
Waste only	7

Non-household customers (20)

Demographics	Number
Number of employees	
0-10	12
11-49	8
Service type	
Water reliant	11
Non-water reliant	7
Unknown	2

Qualitative research: original quotas vs. sample obtained (across household, future and non-household customers): Wastewater Community

Wastewater community – quotas

Demographic		Demographic	
Male	50	ABC1	60
Female	50	C2DE	40
18-24 Future bill payers	10	White	35 London 35 TW Counties
25-34	20	BAME	25 London 5 TW Counties
35-44	20	Vulnerable (even mix of health and financial)	20
45-54	20	Non-vulnerable	80
55-64	15	Clean/waste	65
65+	15	Waste only	35
London	60	Non household customers under 10 employees	15
Thames Valley & Home Counties	40	Non household customers 10+ employees	5

Wastewater community - Sample

Demographic		Demographic	
Male	40	ABC1	70
Female	55	C2DE	25
18-24 Future bill payers	7	White	39 London 19 TW Counties
18-24	2	BAME	29 London 8 TW Counties
25-34	15	Vulnerable (even mix of health and financial)	9
35-44	26	Non-vulnerable	86
45-54	25	Clean/waste	41
55-64	13	Waste only	54
65+	7	Non household customers under 10 employees	12
London	68	Non household customers 10+ employees	8
Thames Valley & Home Counties	27		

N.B., There is a lower than quota-ed representation of 65+, C2DE and vulnerable customers: This is due to the inclusion of non-household customers and future bill payers who skew against these demographics, These groups also have lower engagement rates with long form online communities

Qualitative Research sample for Water online community

This research was designed to capture the diversity of Thames Water’s customer base

Customer Groups	Count
Household customers (Thames Water Customer Voices panel)	53
Future bill payers (recruited externally)	8
Non-household customers (recruited externally)	19

- 80 customers took part in the research and 77* answered all questions
- We aimed to match specific demographics of participants with that of the Thames Water customer base, see next page
- **Customer Voices** - Thames Water's online research community of over 1,000 household customers, designed to be representative of all customers. It was formed in June 2021 using Panelbase as a recruitment source, with a small number of customers signing up via Thames Water's website and social media posts.
- **Future bill payers (18-24 year olds, non-bill payers)** – Recruited via BEAM Qual recruitment. Views from this cohort were sought, given that decisions made now will impact on their future, both in terms of service delivery and impacts of climate change
- **Non-household customers** – Recruited via BEAM Qual recruitment. Views from this cohort were sought, because even though they don't pay bills directly to Thames Water, their water and wastewater service is still provided directly by Thames Water (and hence impacts their bill)

*SEMD (80), Basement flooding (79), Major water supply interruptions (77)

Household customers (Customer Voices (53))

Demographics	Number
Gender	
Male	28
Female	25
Age	
18-24	2
25-34	11
35-44	12
45-54	10
55-64	12
65+	6
Social grades	
ABC1	40
C2DE	13
Ethnicity	
White	34
BAME	19
Vulnerability status	
Vulnerable	10
Service type	
Clean & Waste	53
Location	
London	39
Thames Valley & Home Counties	14

Future bill payers (8)

Demographics	Number
Gender	
Male	4
Female	4
Social grades	
ABC1	6
C2DE	2
Ethnicity	
White	3
BAME	5
Service type	
Clean & Waste	8

Non-household customers (19)

Demographics	Number
Number of employees	
0-10	12
11-49	7
Service type	
Water reliant	9
Non-water reliant	10

Qualitative research: original quotas vs. sample obtained (across household, future and non-household customers): Water Community

Water community - quotas

Demographic	
Male	50
Female	50
18-24 Future bill payers	10
25-34	20
35-44	20
45-54	20
55-64	15
65+	15
London	70
Thames Valley & Home Counties	30

Demographic	
ABC1	60
C2DE	40
White	40 London 25 TW Counties
BAME	30 London 5 TW Counties
Vulnerable (even mix of health and financial)	20
Non-vulnerable	80
Clean/waste	100
Non household customers under 10 employees	15
Non household customers 10+ employees	5

Water community - Sample

Demographic		Demographic	
Male	46	ABC1	65
Female	34	C2DE	15
18-24 Future bill payers	8	White	42 London 10 TW Counties
18-24	2	BAME	21 London 7 TW Counties
25-34	12	Vulnerable (even mix of health and financial)	10
35-44	22	Non-vulnerable	70
45-54	16	Clean/waste	80
55-64	14	Non household customers under 10 employees	12
65+	6	Non household customers 10+ employees	7
London	63		
Thames Valley & Home Counties	17		

N.B., There is a lower than quota-ed representation of 65+, C2DE and vulnerable customers: This is due to the inclusion of non-household customers and future bill payers who skew against these demographics, These groups also have lower engagement rates with long form online communities

Quantitative research: original quotas (weighted sample) vs sample obtained (unweighted)

Weighted Totals **Unweighted Totals**

Household (online)

n = 1000 (80%)

Age groups

18 - 24	n = 130	n = 124
25 - 34	n = 190	n = 205
35 - 44	n = 190	n = 213
45 - 54	n = 170	n = 171
55 - 64	n = 140	n = 133
65+	n = 180	n = 154

Gender

Male	n = 480	n = 480
Female	n = 520	n = 520

Ethnicity and location

White	n = 670	n = 724
London	n = 340	n = 413
Thames Valley	n = 330	n = 311
BAME	n = 330	n = 276
London	n = 260	n = 227
Thames Valley	n = 70	n = 49

Segment

AB	n = 280	n = 293
C1	n = 320	n = 347
C2	n = 140	n = 130
DE	n = 260	n = 230

Disability

Disability	n = 270	n = 290
Non-disability	n = 730	n = 710

Service type

Clean/Waste	n = 640	n = 687
Waste only	n = 360	n = 313

Non-household (online)

n = 204

Location

London	n = 137	n = 137
Thames Valley	n = 67	n = 67

Sector

Construction	n = 33	n = 34
Wholesale	n = 29	n = 32
Accommodation	n = 14	n = 13
Service	n = 96	n = 72
Public Org	n = 18	n = 28
Other	n = 14	n = 14

No of employees

> 10 Employees	n = 184	n = 132
< 10 Employees	n = 20	n = 72

Future bill payer (online)

n = 51

Age groups

18 - 24	n = 51
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Gender

Male	n = 4
Female	n = 46

Ethnicity

White	n = 25
BAME	n = 26

Disability

Disability	n = 20
Non-disability	n = 31

Digitally excluded (phone)

n = 92

Age groups

18 - 24	n = 0
25 - 34	n = 0
35 - 44	n = 1
45 - 54	n = 2
55 - 64	n = 6
65+	n = 73
Unknown	n = 10

Gender

Male	n = 42
Female	n = 46
Unknown	n = 4

Internet access/use

Internet access at home, but 'narrow' user	n = 54
Internet access but not at home and 'narrow user'	n = 1
Don't have internet access	n = 37
Don't know	n = 0



Context: Perception of Thames Water and
media coverage at time of research

Research Context: When this research was carried out there was widespread media coverage on the cost-of-living crisis and pollution of rivers and coastal waters

Cost-of-living crisis

- The cost-of-living crisis is front of mind for many customers
- Many are feeling the financial strain and are concerned about rising bills

River pollution

- Many are concerned about chemicals and pollution contaminating rivers due to widespread media coverage on this topic
- Public action, such as signing petitions calling for change and action, to rectify the issues have been making headlines

River pollution caused by water company sewage overflows

- Sewage overflows have been in the public eye for some time
- Many are concerned about how this may affect rivers and other natural surroundings

All different customer groups believe that Thames Water take their work seriously and are a responsible company. Future bill payers are significantly more likely to think of Thames Water as acting altruistically (i.e., less agree they only care about profits)

Statements about Thames Water (Top 2 Box)

	Household	Non-Household	Future Bill Payer	Digitally Excluded
Thames Water take providing an essential service seriously	64%	71%	59%	80%
Thames Water are a responsible company	58%	64%	69%	68%
Thames Water invest in new ways to improve their service, preparing us well for the future	55%	60%	47%	57%
Thames Water take ownership of their customer problems	53%	52%	49%	52%
Thames Water take care of the environment	50%	53%	59%	57%
Thames Water only care about profits	50%	53%	29% ▼	52%
Thames Water listen to their customers to better understand their needs	49%	53%	55%	55%
Thames Water play an active role in the community they work in	48%	47%	61%	47%

THAMES WATER ENHANCEMENT CASE, MAY 2023.

Q19. To what extent do you agree or disagree with these statements about Thames Water?

Base: Total (n=1255), Households (n=1000), Non-Households (n=204), Future bill payers (n=51), Digitally Excluded (n=92)

▲ ▼ Significant difference at 95% conf. level.

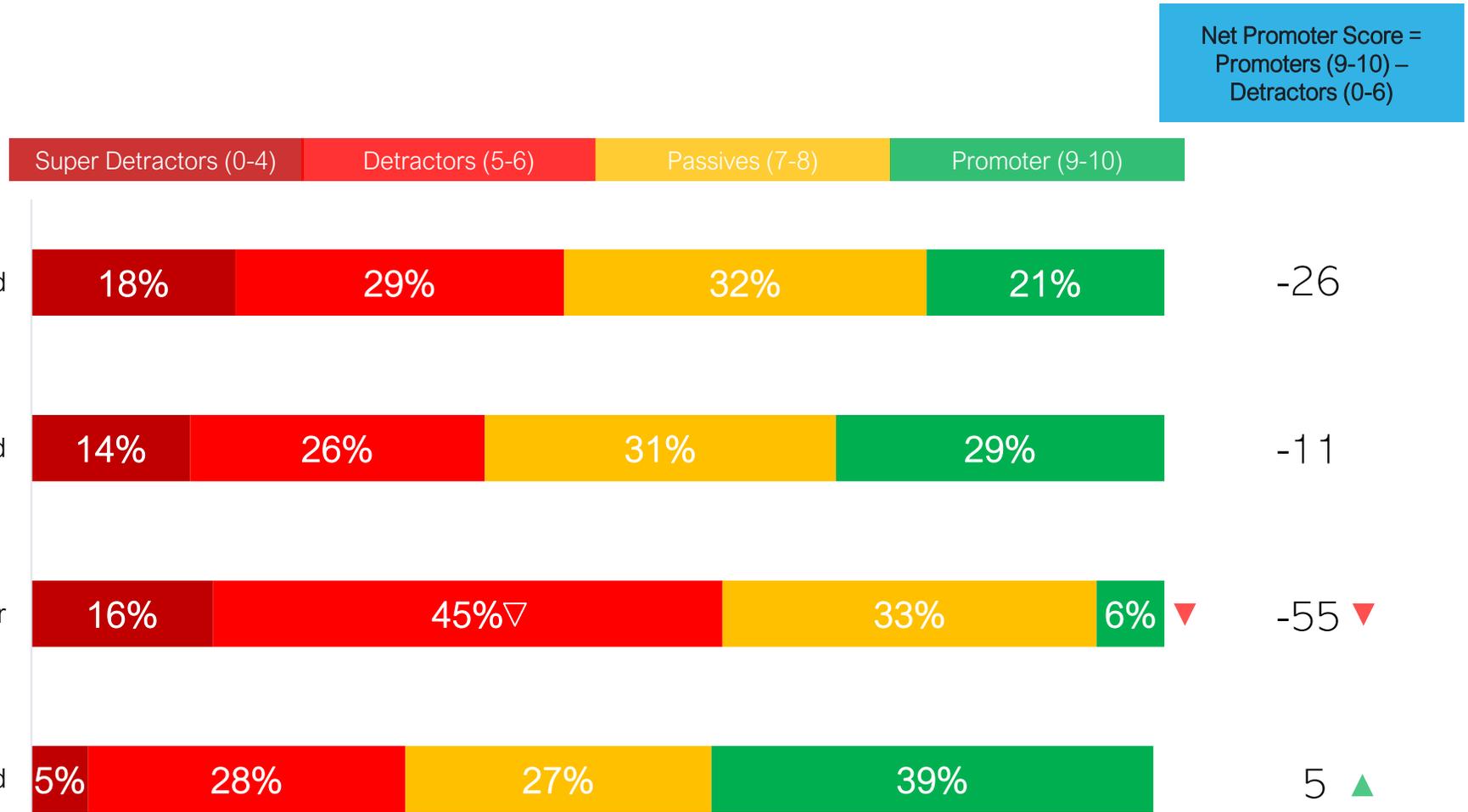
The majority of all different customer groups trust Thames Water to provide water and wastewater services, especially non-household customers

Statements about Thames Water (Top 2 Box)	Household	Non-Household	Future Bill Payer	Digitally Excluded
I trust Thames Water to provide water and wastewater services	68%	76%	69%	84%
It's easy to deal with Thames Water	55%	58%	63%	67%
Thames Water is a fair and honest company	54%	51%	51%	66%
I have a good relationship with Thames Water	51%	52%	39%	55%

Around six in ten customers have experienced a service issue in the last few years - some experiencing issues related to the enhancement cases being discussed in this research

Issues experienced	Total sample	Household	Non-household	Future bill payer	Digitally excluded
Had no water or low water pressure	25%	23%	34%	29%	25%
Had a leak on my property	15%	14%	16%	18%	4%
Reported a leak in the road	13%	13%	16%	4%	9%
Water tasted/looked funny	13%	12%	18%	12%	8%
Issues paying the bill	13%	13%	12%	10%	7%
Made a complaint	11%	10%	13%	14%	7%
Went on a meter	10%	9%	19% ▲	2%	22% ▲
Seen pollution in a local river	10%	10%	11%	8%	13%
Had water from a burst water pipe flood your house or garden	6%	6%	5%	10%	5%
Been swimming in a local river	4%	4%	4%	0%	0%
Had sewage flood your house or garden	3%	3%	5%	2%	2%
None of the above	37%	38%	31%	41%	41%

Across the board, likelihood to recommend is low, particularly for Future bill payers. The digitally excluded sample are significantly more likely to recommend Thames Water than the other sample groups



Net Promoter Score = Promoters (9-10) – Detractors (0-6)

 35-44 year olds are the most likely to be promoters of Thames Water

THAMES WATER ENHANCEMENT CASE, MAY 2023.
 Q18- If you were able to choose your water provider, how likely is it that you would recommend Thames Water to a friend or family member?
 Base: Households (n=1000), Non-Households (n=204), Future bill payers (n=51), Digitally Excluded (n=92)

▲ ▽ Significant difference at 95% conf. level.



Executive summary:
Common findings and prioritisation
of the 8 enhancement cases

Common findings: customers are broadly supportive of the 8 enhancement cases

Across all of the topic areas, customers are generally supportive of Thames Water's proposed enhancement cases

- While many of the issues presented to customers are already known to them (such as sewer flooding), there are areas that are harder to comprehend, for example:
 - The reasons why there is currently a risk of major water interruptions and how this risk has culminated
 - The reasons why the wastewater network and water network need attention now, specifically why has Thames Water not been more proactive and invested more in these networks in the past?
 - Customers ideally want Thames Water's longer term 2050 goals to be met sooner. They'd like to learn more about what would be needed to pursue a faster timeline (disruption and impact on bill) to decide if it's worth it

All proposed enhancement cases proposed are supported by customers, although there are caveats that cut across all topics:

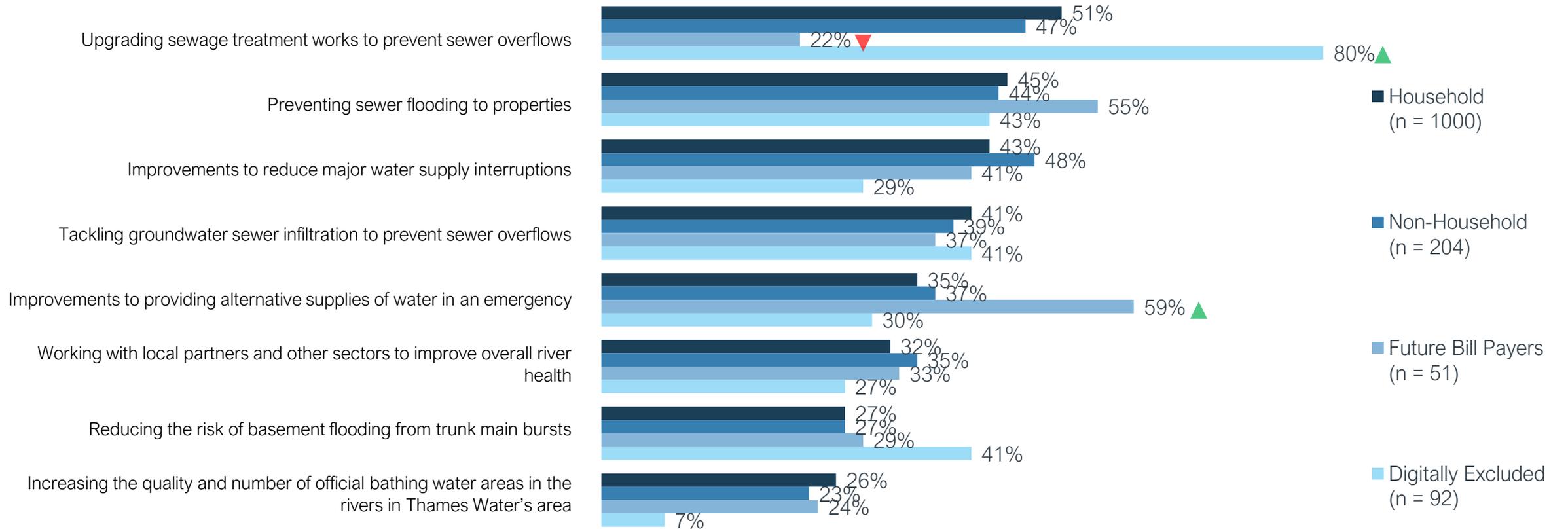
- **Greater transparency on how the projects would be funded:** Customers generally believe that there has been historic underinvestment in the water/wastewater network, and that it is unfair in principle that customers exclusively foot the bills of these enhancements. Customers want to know what proportion of the enhancement costs they are funding. This would then allow the large cohort who 'somewhat agree' with the various case plans to lean more strongly in favour of Thames Water's proposals, or disapprove of them due to how they are funded
- **The number of people that an investment will benefit:** Not all enhancements would benefit all customers equally (such as bathing water and basement flooding); there is lower support for these cases
- **The extent to which an initiative can guarantee results:** For initiatives that have less of a track record of proven success (sewage lining system, wetlands and working with partners to improve river health) customers would like assurance these are very likely to work and should these not work, there are effective back up plans in place

Prioritising the initiatives

- At the close of the qualitative and quantitative studies participants ranked enhancement cases in terms of the priority they feel Thames Water should give to improving each
- In the quantitative online and telephone survey all eight enhancement cases were ranked, based on a high-level description of each (five of the topics were discussed in more detail before this point: sewer flooding, sewer infiltration, major water supply interruption, basement flooding and emergency water supplies)
- In the qualitative online communities just the enhancement cases which had been discussed were ranked, so the 5 wastewater cases or the 3 water cases. Findings here should be taken as indicative only, as the base sizes for each individual community were relatively low

Upgrading sewage treatment works and preventing sewer flooding to properties are the most important issues to households, non-households and the digitally excluded group. Future bill payers see upgrading sewage treatment works as less important and water supplies in an emergency as more important than others

What should Thames Water prioritise to improve?



THAMES WATER ENHANCEMENT CASE, MAY 2023

Q. Alongside the issues that you have been discussing over the past few days, Thames Water has several other initiatives that they are aiming to achieve in the future, over and above the main provision of your water and sewerage services.

All these initiatives could have a positive impact on improving both service and the environment, but they could also impact on your annual bill.

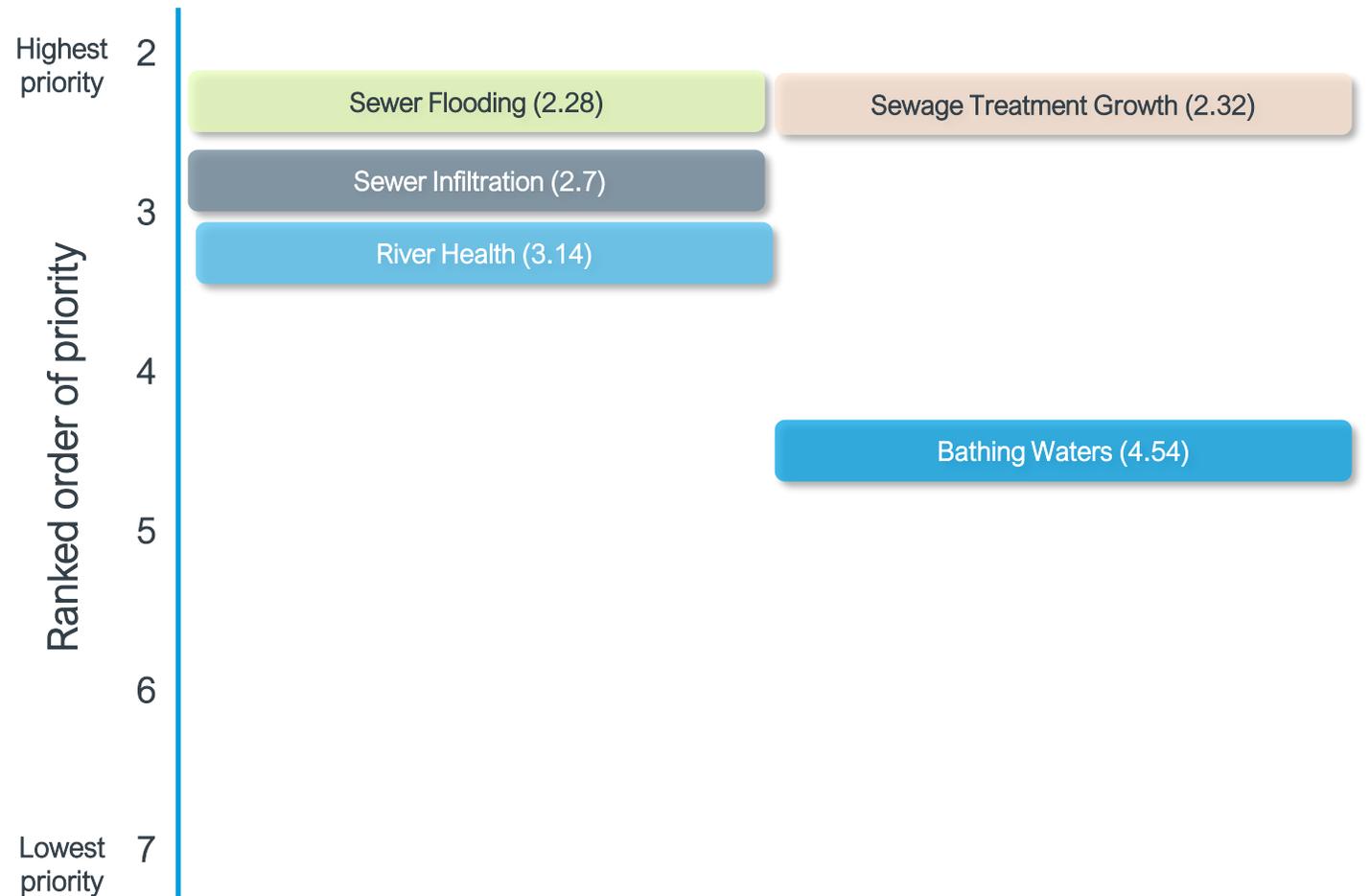
Please look at this list of the main extra initiatives that Thames Water could undertake over 2025-2030 (and beyond) and rank them in order of priority you think Thames Water should give them, for instance where you think Thames Water need to make the most improvements.

So, the most important initiative for Thames Water to tackle should be no 1 and the least important initiative for them to tackle should be no 8.

Of the 5 wastewater topics tested, preventing sewer flooding and upgrading sewage treatment works are given highest priority

- The combination of media coverage coupled with concerns about lower water quality leads customers to generally conclude that 'sewer flooding' and 'sewage treatment growth' should be most prioritised for improvement
- Sewer infiltration is also highly prioritised due to the concern that contamination to water and surrounding areas will harm wildlife, the natural environment and lower the quality of life of customers
- Customers believe that improving river health is just as important as the issues highlighted above. However, this is acknowledged as a long-term project that requires collaboration with partners
- Improving the status of Thames Water's bathing water and designating more bathing waters is viewed as positive to local communities and wildlife. However, it is ultimately seen as a 'nice to have' as many customers will not directly benefit from these bathing waters

Based on 89 responses from the Waste Water Community



Q. Now we've discussed all 5 topics, please could you rank them in order of how important you feel they are for Thames Water to improve. So 1st - what you think is the most important thing to improve, to the 5th, the least important thing to improve.

Caution, the figures on this page are based on a relatively small qualitative sample size, they are shown to indicate the direction of sentiment only

Of the 3 water topics tested, 'Major water supply interruption' was given the highest priority because of the perceived threat to a reliable and safe supply of water for many customers

- Customers generally want Thames Water to prioritise improving major water supply interruptions as they see a reliable and safe supply of clean water as Thames Water's most important role
- Basement flooding and Security & Emergency Measures are interpreted as essential works that directly protect the lives of customers and so, achieve a near identical prioritisation score
- Basement flooding is generally easier for customers to understand than security and emergency measures direction, which may account for why it has a slightly higher prioritisation score



Based on 80 responses from the Water Community

Q. Now we've discussed all 3 topics, please could you rank them in order of how important you feel they are for Thames Water to improve. So 1st - what you think is the most important thing to improve, to the 3rd, the least important thing to improve.

Caution, the figures on this page are based on a relatively small qualitative sample size, they are shown to indicate the direction of sentiment only

There are minimal differences in opinion between different customer groups, and this is because (for slightly different reasons) they are aligned in that they want Thames Water to implement all these enhancements as soon as possible

Why are there minimal differences between customer groups?

- When looked at in isolation, all customer groups generally report a similar level of importance per enhancement case
- This is because every case is generally seen as either personally salient to them or is underpinned by what is widely regarded as an ethical obligation of Thames Water (protecting customers from harm)
- All customer groups therefore generally share the same rationale of wanting Thames Water to implement enhancements as quickly as possible
- Older participants want to benefit from the proposed enhancements within their lifetime
- Future bill payers and vulnerable customers are concerned these problems will be exacerbated, and want quick and decisive action to take place
- Likewise, non-households believe that from a return on investment perspective, investing more now will be cheaper in the long run, and ultimately, cause less disruption than if these issues receive minimal funding now
- All customer groups generally had the following thought process while reviewing each enhancement case: *1. It looks like Thames Water have not invested enough here. How have they let this happen? 2. It looks like Thames Water are being more proactive now. Great! Is it possible to achieve these results sooner? What would the relative cost of that look like? 3. I am willing to incur a small financial sacrifice for the greater good. Are Thames Water? i.e., how much of the initiatives are being funded directly through increased bills?*
- There are instances when nuances between the different customer groups arise, and these are documented as and when they occur. The next slide highlights the key differences between customer groups

Differences between customer groups

Households

- There was little to no difference in scores when comparing the households sample type to the rest of the sample types

Non-households

- There was little to no difference in scores when comparing the non-households sample type to the rest of the sample types

Future bill payers

- Future bill payers were significantly less likely to prioritise sewage treatment upgrades, but more likely to prioritise SEMD
- Future bill payers were significantly less likely to believe that Thames Water only care about profit, however they had the lowest advocacy score (NPS) of all customer types

Digital excluded

- The digitally excluded sample were significantly more likely to deem all the cases as important than all the other sample types
- This group also had the highest advocacy score (NPS) of all groups

(NB: This could be caused by the fact that this group were taken through the survey by a phone interviewer and perhaps more likely to provide positive answers - what they thought the interviewer wanted to hear)

Gender

- Males were significantly more likely to deem SEMD as very important than females
- Males were significantly more likely to give priority to reducing sewer overflows by increasing the size of sewerage treatment works

Age

- The 35-44 year age group were the most likely to be promoters of Thames Water
- The 65+ age group were significantly more likely to deem major water supply interruptions, sewer infiltration and sewer flooding as very important

Ethnicity

No significant differences

Company Size

No significant differences

Disability

No significant differences

Location

No significant differences

Industry

No significant differences

Service Type

No significant differences



Water Topics





Basement flooding

Executive summary: Basement flooding

Customer concerns about basement flooding

- Generally, customers who do not have basements are not personally concerned about basement flooding, because they will not be directly impacted by this
- However, all different customer groups generally agree that Thames Water have an ethical obligation to protect impacted customers, and therefore, believe it is important to implement proactive measures to avert basement flooding
- Customers are initially surprised at the current amount of basement flooding, and want to know how Thames Water has allowed this threat to escalate
- Customers also want to avert basement flooding because of the wider disruption repairing the trunk mains causes (traffic disruptions) and think if this is left unchecked these disruptions will only become more frequent
- Basement flooding is more important among digitally excluded (90%), households (85%) and non-households (86%) than future bill payers (67%)

Customer reactions to Thames Water's proposed approach

- Customers believe that replacing trunk mains is a viable and proactive solution to effectively protect customers from basement flooding
- Replacing trunk mains has 58% support from households, 56% support from non-households and 63% support from future bill payers, and was by far the most supported solution from digitally excluded customers with 89% support
- However, they want to know how much disruption will occur between 2030-2050. For example, after 2000 trunk mains are replaced by 2030, some want to know how many more replacements need to be carried out and how will this impact them
- Customers are less supportive of slip lining trunk mains. Many equate this with a short-term reactive approach which may be ineffective due to the strain on the network from rising climate change and rising population. However, they recognise its usefulness in minimising disruption when paired with replacing trunk mains
- All customers generally agree that the bill impacts are negligible

Customer support for Thames Water's proposed approach

- All different customer groups generally support Thames Water's plan to replace high risk mains to protect 2,000 basements by 2030, with the rest being completed by 2050
 - Most customers strongly support the plan: They believe Thames Water's approach here is strategically well thought out in that proactive measures (replacing trunk mains) address the root of the problem and pragmatic solutions (slip lining) ensures there is not too much disruption
 - Some customers somewhat support the plan: They support Thames Water's commitment but want to better understand the amount of disruption that will occur. They also want assurance slip lining is not going to be the primary method of tackling basement flooding
 - Few customers somewhat oppose the plan: While they appreciate there is work to be done here, they think this issue is less important and would prefer Thames Water focus on other initiatives first

Context

1. Firstly, customers were informed about what a trunk main is, where they are located and what role they play within the wider water network
2. Customers were then informed of the consequences of these pipes bursting and how Thames Water have previously handled trunk main bursts
3. Customers read about the Finsbury Park case study
4. Finally, customers read about the 60,000 household basements at risk and how this number could double by 2050

What are trunk mains and why can they cause basement flooding?

Trunk mains are the 'motorways' of the water pipe network and carry a large quantity of water at high pressure. Thames Water's trunk mains average over 100 years old and make up a tenth of the water network.

Trunks mains are often located under main roads and can be close to homes and businesses.

So if these pipes burst, they could flood properties with basements very quickly. It can take just 30 minutes for an entire basement to be flooded, leaving no time for emergency services to help. This could potentially put peoples lives at risk if they were unable to leave basements quickly.

Some households have needed to be relocated for over a year as a result of the damage from such flooding, and some businesses have had to stop trading for similar amounts of time.

Thames Water pay insurance claims to those impacted by trunk main bursts, the average claim is £43,000.

Case study: In 2019, an iron trunk main from 1894 burst near Finsbury Park, London. 100 basements were flooded and 45 households needed to be rehoused.

A burst trunk main



A flooded basement



1

What is currently done about trunk main bursts?

Before 2020 Thames Water generally only replaced trunk mains after they burst. Since then more investment has gone into replacing trunk mains that are most at risk of bursting – so the mains are replaced before they burst and cause any damage.

Thames Water do other things to make sure the risk of bursts is as low as possible:

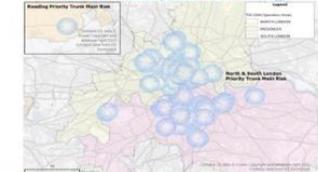
- Monitoring the condition of trunk mains, alerting of any potential failures
- Identifying, monitoring and repairing leaks that might eventually cause a trunk main to burst
- Checking and repairing the valves on trunk mains

Currently, almost 60,000 household basements are still identified as being at some risk from a trunk main burst in the Thames Water region, these are mostly in London, with some in Reading. This means more trunk mains still need to be replaced, and if nothing is done the risk of basement flooding could almost double by 2050.

Basement floods caused by trunk main bursts



Map of areas with basements at risk from trunk main bursts (London and Reading)



2

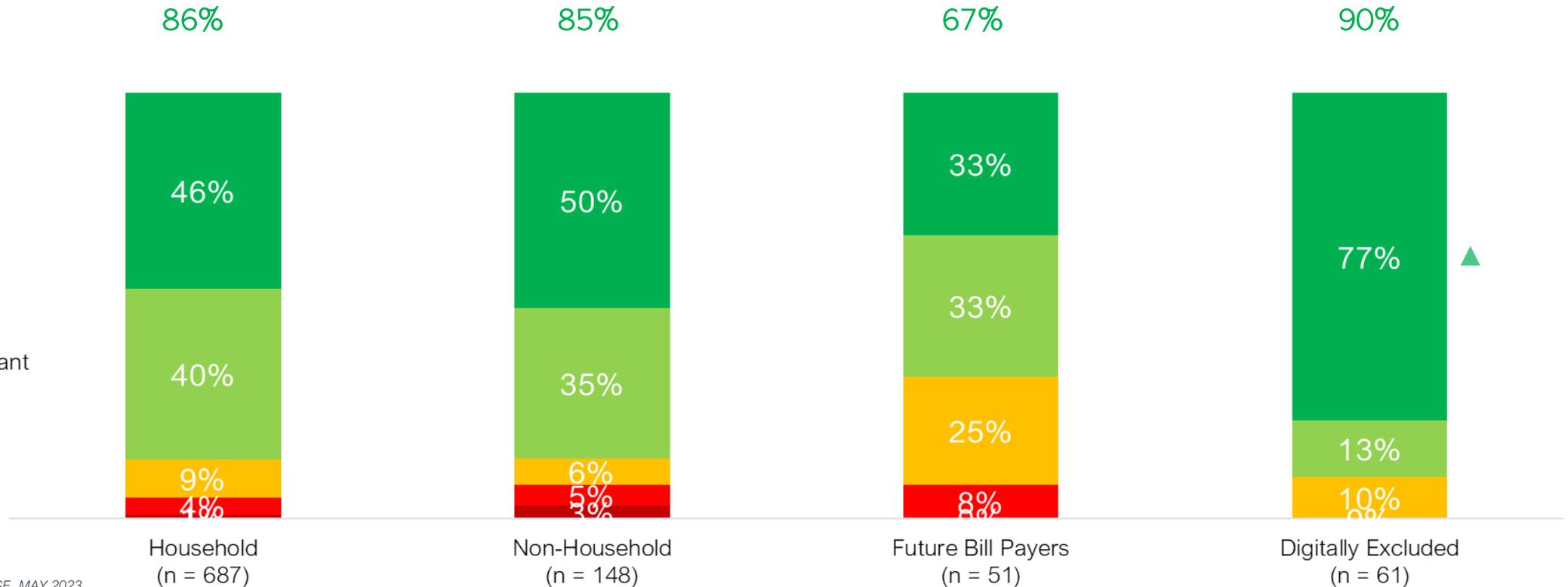
Households, non-households and the digitally excluded place similar levels of importance on basement flooding improvement. Future bill payers see this topic as less important to them

Water Customers – Households, Non-households and digitally excluded
All Customers – Future bill payers*

(Top 2 Box):

Important

- Very important
- Somewhat important
- Not Sure
- Not very important
- Not at all important



THAMES WATER ENHANCEMENT CASE, MAY 2023.

G1- How important or not important is this to you that Thames Water make improvements to basement flooding from trunk main bursts?

*All Future bill payers included due to small base size when looking at dual usage areas only – Not stat tested to other groups

▲ Significant difference at 95% conf. level.

Most customers are not overly concerned about the issue because they won't be directly impacted by this, but still want Thames Water to take action to avoid disruptive repairs

Although customers are not generally concerned about basement flooding, they believe Thames Water have an ethical obligation to protect customers who may be impacted by this

- While customers are surprised about the current risk of basement flooding, many believe this won't directly impact them
- However, they believe that it is essential Thames Water protects its customers and want to see proactive measures put in place to mitigate basement flooding

Customers also want to avert basement flooding because of the wider disruption that repairing the trunk mains causes

- Many believe if the network is not updated, these disruptions (increased traffic, noise and pollution) will only become more frequent

If you want a very selfish answer, I'm totally unconcerned (about Basement flooding etc). The reason being I live in an area of very high ground from which the City of London appears to be in a 'Valley.'

Male, non-household customer, Accountant, 1-10 employees, London

On a personal note, it is not something that concerns me but for those 60,000 with basements it is a huge concern and worry.

Male, 35-44, C1, White, London

I am familiar with the issue and its effect as there have been mains bursts locally. I also know someone affected, the costs and hardship justify priority both emotionally and financially

Male, 65+, AB, White, London

Context: Customers then assessed Thames Water's proposed initiatives to reduce the risk of basement flooding

- Customers were then informed of Thames Water's plan to replace high risk trunk mains and protect 2,000 basements by 2030
- Customers were then introduced to two solutions to basement flooding; trunk main replacement and trunk main slip lining
- Customers were informed of the impact this would have on their bill between 2025-2030 and were told that the bill increases shown were just for this one issue and that the inflation had also not been included in the costs shown

How can Thames Water improve the risk of basement flooding?

Thames Water plan to replace high risk trunk mains to protect 2,000 basements by 2030, with the rest being replaced by 2050. Two methods have been identified to make the risky trunk mains safer. A combination of these will be used to meet Thames Water's targets.

Trunk main replacement	
What is this?	An old length of mains pipe is put out of action and replaced by a new pipe
Benefits	More flexibility over the type, size and positioning of the new trunk main
Drawbacks	Requires roads to be dug up, usually more expensive and more disruptive to the local community

Trunk main 'slip lining'	
What is this?	A smaller pipe is pulled through the inside of a larger existing main
Benefits	Usually less expensive and less disruptive to the local community with smaller scale road works needed to fit the pipes
Drawbacks	Could cause a restriction to the water flow. May need to be replaced with a larger pipe in future anyway due to population growth

Additional cost to average annual bills for all customers for investing in these methods to improve the risk of basement flooding

2025-30	£1 a year
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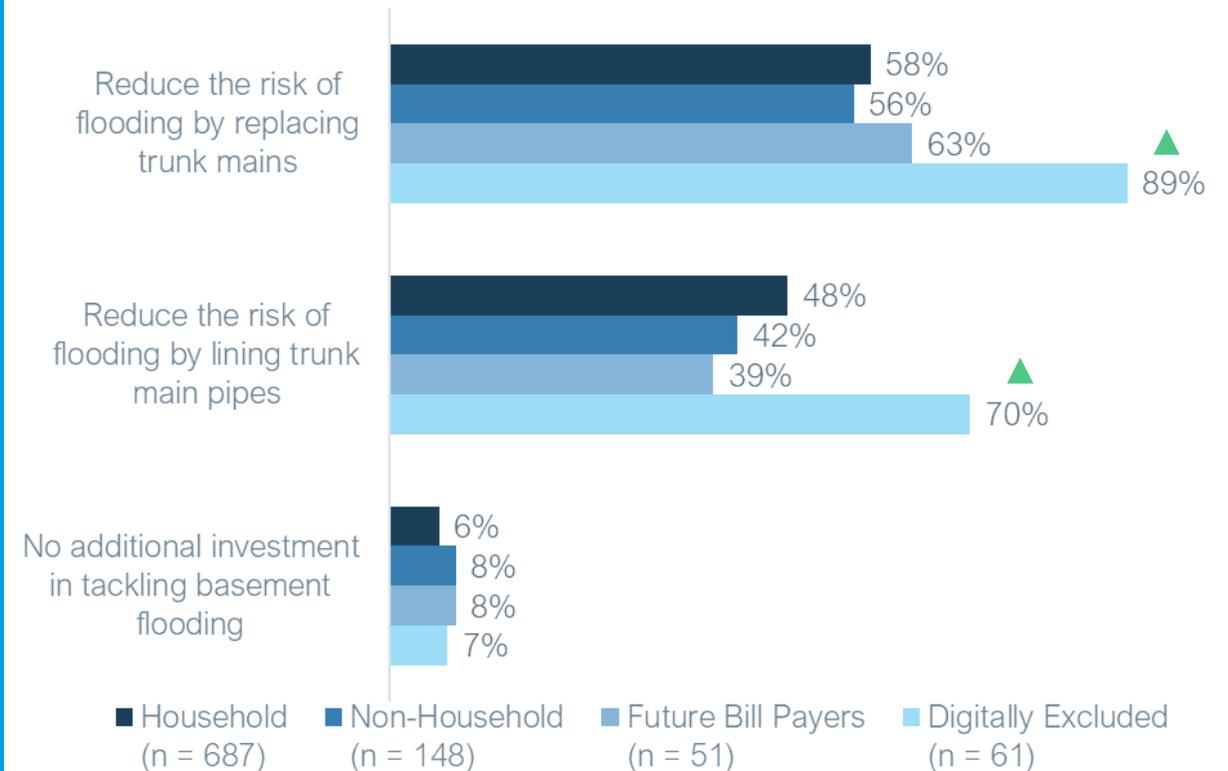
3

All customer groups agree that replacing trunk mains should be Thames Water's top priority to reduce basement flooding

- All different customer groups agree that replacing trunk mains should be a bigger priority over lining trunk main pipes
- This is because customers generally equate replacing trunk mains as proactively and directly addressing the risk of basement flooding
- Those that want to reduce the risk of flooding by slip lining trunk mains believe this is an easy to implement short-term solution i.e., 'let's do the easy stuff first'
- A minority felt there should be no additional investment in tackling basement flooding
- Future bill payers have a strong preference for replacing trunk mains. They reason they will inevitably inherit this issue, and so, are motivated to directly address the underlying cause of basement flooding

Water Customers – Households, non-households and digitally excluded
All Customers – Future bill payers*

Support for different investment options



G2. Which, if any of Thames Water's proposals do you support for reducing the risk of basement flooding from trunk main bursts?

*All Future bill payers included due to small base size when looking at dual usage areas only - Not stat tested to other groups

▲ ▼ Significant difference at 95% conf. level.

Customers want reassurance that Thames Water's approach will not cause significant long-term disruption and will address the underlying cause of basement flooding

Common questions:

- Some question why more preventative measures haven't been put into place
- Customers want to know how much disruption will occur between 2025-2030 and how much will occur between 2030-2050

What this means for Thames Water:

- Customers want reassurance that Thames Water's approach will directly address the underlying cause of basement flooding
- Thames Water need to set expectations of how much disruptions will occur in terms of extra traffic, noise and short-term carbon emissions

I don't think enough has been done historically as disasters like the one in Finsbury Park could have been avoided if they had renewed the pipes sooner.

Female, non-household customer, Business owner, 1-10 employees, London

Although it could've been addressed earlier, we do not know what the circumstances were for Thames Water.

Female, 55-64, AB, White, Slough/Wycombe/Aylesbury

Less frequently asked questions:

- Some want to know how frequently slip lined trunk mains would need to be replaced and want reassurance that Thames Water are factoring in the extra strain/ potential delays due to climate change and a growing population

What this means for Thames Water

- Customers want reassurance that the chosen approach is not one of convenience and that Thames Water's commitment will be realised

There is a risk of water restriction, additionally population growth will put more (pressure on the) capacity of pipe work.

Female, 35-44, DE, White, London

It's always hard to judge on these large projects with future timelines. Delays often occur.

Female, 25-34, C1, White, London

Trunk main replacement is seen as a viable approach that tackles the underlying cause of basement flooding but some are concerned about disruption and the cost

Support for this initiative: *Trunk main replacement (Old pipes are put out of action and replaced by a new pipe)*

Replacing trunk mains is perceived as a proactive and direct approach that will protect customers from basement flooding. Some want greater clarity on how disruptive and costly this will be



Perceived strengths?

- For many, this is seen as directly addressing the underlying cause of basement flooding
- Many reason that it is inevitable the pipe will either burst or need to be replaced, and therefore it is only logical to proactively replace pipes

Perceived drawbacks?

- Some customers are concerned this solution will be very disruptive to water supplies and roads
- Customers note it is unfortunate that it is an expensive solution to implement

In their own words

This seems the obvious solution. Remove what is broken or wearing and replace with new pipes that can be better positioned according to the buildings that have been built since the original pipes went in.

Male, non-household customer, Business owner, 1-10 employees, London

I would approve of plans to some extent but the idea of 30 years of road work and digging is quite rattling.

Female, Future bill payer, C1, BAME, London

Trunk main slip-lining is considered a quicker and a more affordable option, yet customers believe it is reactive and ineffectual

Support for this initiative: *A smaller pipe is pulled through the inside of a larger existing main*

Some customers support this option in combination with trunk main replacement, believing it will act as a buffer to control disruption. However, many question the longevity of slip-lining in isolation



Perceived strengths?

- Customers feel slip-lining is a great approach to reduce and minimise disruptions whilst trunk main replacement is being carried out
- Customers are glad this solution is cheap to implement

Perceived drawbacks?

- Some customers are uncertain if this is effective, believing that a growing population and climate change may warrant quicker trunk main replacements than originally intended (making this obsolete)
- Customers are concerned this solution may incur more costs in the future

In their own words

On the face of it, with less disruption I think people may favour this. However, I see that this option as more of a quick fix which in the long term may need replacing or rectifying.

Female, 25-34, C1, BAME, Kennet Valley

I think slipping feels like more of a stop gap and putting off the problem and think they should just go for it and do a proper replacement.

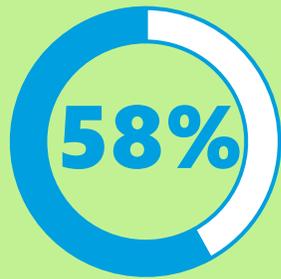
Male, non-household customer, Electrician, 1-10 employees, London

It is the same as putting a plaster over a hole, it will need replacing in the future at a much higher cost even though the disruption is less today it will be worse in the future .

Female, 55-64, DE, White, London

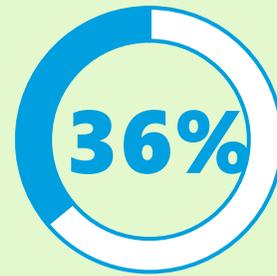
94% support improving the risk of basement flooding but would like more details on the level of disruption and how slip-lining will be used in tandem with replacing trunk mains

46 customers strongly support Thames Water's plans in this area



- These customers believe the approach will directly tackle the issue and limit disruption

29 customers somewhat support Thames Water's plans in this area



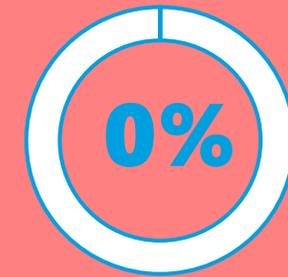
- These customers support Thames Water's commitment but want to understand how much disruption will occur
- Some would like more detail of how slip-lining will be deployed

5 customers somewhat oppose Thames Water's plans in this area



- These customers largely see basement flooding as an issue of secondary importance
- They believe Thames Water should prioritise other initiatives (eg: sewer flooding) before addressing this

0 customers strongly oppose Thames Water's plans in this area



- No customers strongly opposed the plans to tackle basement flooding



Security and Emergency Measures Direction

Executive summary: Security and Emergency Measures Direction

Customer concerns about alternative sources of water in an emergency

- Generally customers had not previously considered what an emergency event might be; this caused some concern when such situations were outlined to them
- However, most customer groups agree that Thames Water have a responsibility to provide customers with water if supplies are disrupted, and feel it is important that emergency measures are in place to secure access to water resources. While almost everyone considers this important from households (88%), non-households (90%) and the digitally excluded (93%), this is especially important among future bill payers (82%), who consider this to be their top priority (see page 22)
- Currently customers are surprised that Thames Water are legally obligated to only provide supplies to 1.5% of Thames Water customers and want to know how Thames Water will ensure all customers are protected and provided access to alternate water sources
- Water reliant non-household customers are concerned about how Thames Water will support the operation of their business if disruptions span over a long time

Customer reactions to Thames Water's proposed approach

- Customers understand the need to increase the number of water tankers to secure water supply in the event of an emergency
- However, there are questions about how water will be distributed evenly amongst customers. For example, for the straight to tap for option, some want to know how water usage will be monitored and distributed fairly to each household/non-household
- Customers are less supportive of bottled water and collecting water themselves. Some feel bottled water isn't a sustainable approach but acknowledge the single-use plastics would only be used during a crisis. Others are unsure of how they would be able to carry large volumes of water by themselves, especially if customers are more vulnerable
- Convenience also plays a major role in the measures put in place when facing an emergency water outage, with the priority placed on water being pumped into their taps (support from 50% of households, 54% of non-households, 53% of future bill payers and 77% of the digitally excluded)
- Most customers agree that the bill impacts are reasonable but some question having to pay for a supply of bottled water

Customer support for Thames Water's proposed approach

- All different customer groups generally support Thames Water's plan to put in place these emergency alternative water supply measures
 - Many customers strongly support the plan: They want to feel reassurance that Thames Water will secure water supplies in times of necessity and mitigate large scale disruption as much as possible
 - Many customers somewhat support the plan: They support Thames Water's responsibility to supply customers with water but want to understand how water resources will be fairly distributed and protected when an emergency situation occurs
 - Few customers somewhat oppose the plan: While they support the efforts put into place, these customer need more rationale of bill increase, especially for option 3 (increased bottled water stocks), which would create additional plastic waste
 - 1 customer strongly opposes the plan: This customer doesn't feel the need to have protective measures in place as they have little concern an emergency event would impact them individually

Context

1. Firstly, customers were informed about what emergency water supplies are and shown examples of when emergency supplies would be needed
2. Customers then read about what Thames Water has previously done to mitigate challenges to water supplies during these emergency scenarios
3. Customers were then informed about the change in the law in 2022, that states Thames Water must supply 1.5% of customers with alternative water sources of water
4. Customers were then told that Thames Water's current method of providing bottled water will not be enough to meet this legal requirement

Alternative water supplies in an emergency

On very rare occasions the water network can experience significant problems resulting in large amounts of people being without a water supply for several days. For example:

- A major disruptive event like a terrorist attack
- Environmental challenges like droughts
- Power supply or major equipment failure at a water treatment works
- A large trunk main bursting

Thames Water does all it can to prevent these emergency situations impacting the water supply, but if water is stopped it must ensure customers have an alternative safe supply of water. Legally alternative sources of water needs to be made available to **1.5% of Thames Water's population**, around 185,000 people.

10 litres of water per person should be provided for the first 5 days of the emergency and then 20 litres per day after that. (That's 5, then 10 bottles of the size in the photo on this page - per person per day). For comparison, Thames Water customers currently use an average of 150 litres of water per person per day which includes cooking, washing, cleaning and toilet flushing.

The legal amount of people to be provided with water in an emergency used to be 0.5%, it changed to 1.5% in 2022, so Thames Water now need to prepare for providing many more customers with emergency supplies of water.

Currently in these situations Thames Water give out bottled water to customers through collection stations (at car parks for example). Bottled water is also hand delivered to vulnerable customers.

With the increased legal number, bottled water alone will not be enough to provide water supplies to everyone, as there is only ever a certain amount of bottled water stocked in the country.



Learning about these emergency events is a surprise to customers and causes concern about their potential impact

For many customers it is difficult to gauge what these scenarios might be like, having had no prior experience

- Customers are worried about the enormity of disruption these emergency situations could cause, but as they are 'very rare' the sense of urgency is lower than that of other issues

Some non-household customers are very concerned about the impact on business operations

- For water reliant businesses, non-household customers want to know how their needs will be prioritised as well as the longer-term impacts such a situation might have

Some customers feel Thames Water's approach doesn't go far enough and feel more responsibility should be taken to protect *all* customers

- The legal responsibility to provide 1.5% of the Thames Water population with alternate water supplies, causes concern for some that they won't be properly protected

Customers want reassurance that Thames Water has put protective measures in place, especially as the population continues to grow

- Customers acknowledge that population growth and climate change will continue to exacerbate this issue and so there is concern that if no action is taken this could leave many without water

I am unclear on the importance of this as I don't know the true risk of these situations occurring in the near future.

Female, 25-34, C1, White, Slough/Wycombe/Aylesbury

It has got me thinking and would like to see a clear plan in the event of a water emergency into how they would manage and compensate non-household customers.

Male, non-household customer, Operational manager, 10+ employees, Swindon/Oxford

I'm very surprised that Thames have a duty to only 185,000 during an emergency when I am sure their customer base is much more. How do I know if I will be protected?

Male, non-household customer, Salon owner, 1- 10 employees, London

I think it is important that these changes are made as soon as possible so that we are prepared rather than waiting for the emergency to happen before we take action.

Male, 25-34, C1, White, London

Many customers have questions around the logistics of emergency water distribution

- **Most common concerns/ questions:**

After learning about emergency water supplies, this causes some concern for many customers who had not previously considered such scenarios. Most customers want to know how well protected their access to water will be and whether there will be enough for the essential running of the household. Some are also concerned about how they would make do with a more limited supply

- **What this means for Thames Water:**

Previously customers were unaware about the need for emergency water supplies and so if this is to be publicly communicated it needs to include considerable reassurance that people will get what they need

- **Lesser concerns/ less frequently asked questions:**

Customers are concerned about how Thames Water will adapt to population growth and the implications of climate change as the demand and pressure on the water system increases

- **What this means for Thames Water**

Although Thames Water has shared its current protocol for supplying water in times of emergencies, customers want to know how it will adapt to further external challenges

What happens to its remaining customers in times of need? I'm concerned that with there not being enough bottled water how will Thames Water be able to manage in the event of emergency?

Female, 18-24, C1, White, London

It is surprising that you are only given 10 to 20 litres per day given the average use is 150 litres so I would expect that some accompanying information on how to save water and remain hygienic during this time would be provided in this event.

Male, 25-34, AB, White, London

The increase in population and customer base in the distribution area is likely to become more of a problem in the future given the finite availability of the supply and the increased domestic and industrial use per head of population. More development means more supply requirements which requires very close co-operation between the development planners and the water suppliers to avoid shortages in the future.

Male, 65+, AB, White, Slough/Wycombe/Aylesbury

Households and Non-Households both consider alternative supplies of water in an emergency important. Future bill payers saw this as the most important topic to them overall (see page 22)



Males are significantly more likely to deem the security and emergency measures directions as very important than females.

Water Customers – Households, non-households and digitally excluded All Customers – Future bill payers*

(Top 2 Box):

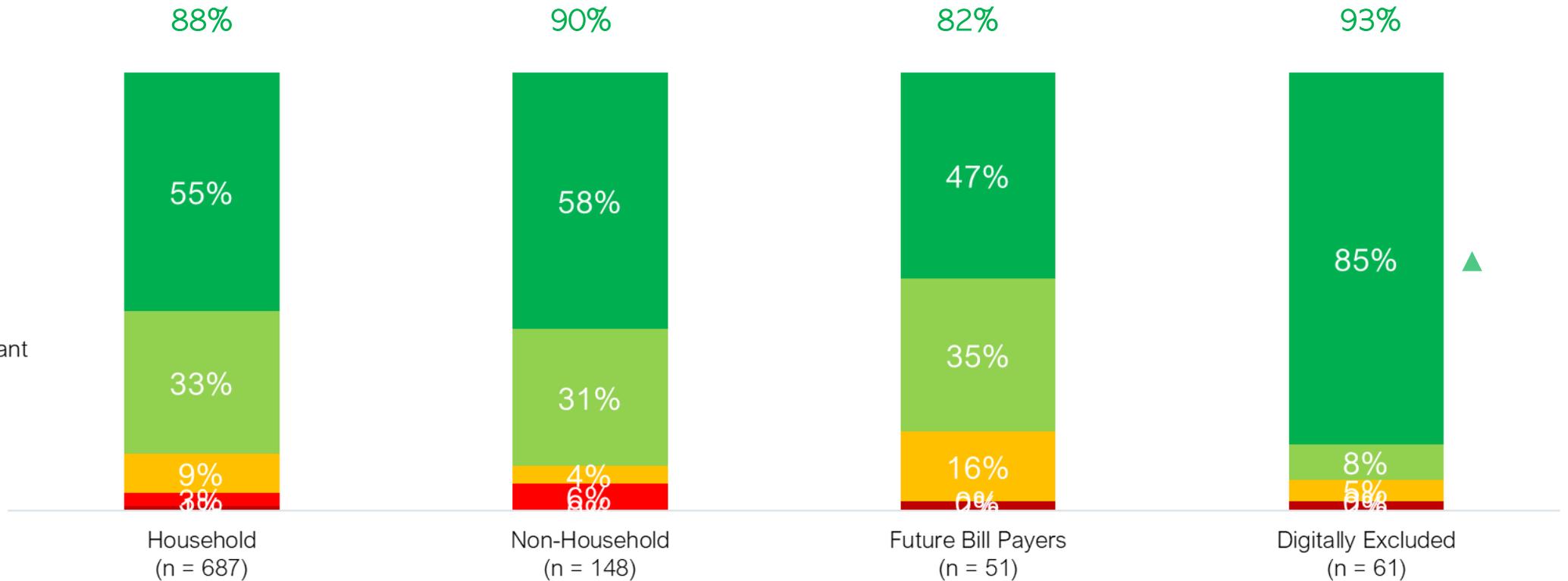
Important
■ Very important

■ Somewhat important

■ Not Sure

■ Not very important

■ Not at all important



THAMES WATER ENHANCEMENT CASE, MAY 2023.
F1- How important or not important is this to you that Thames Water make improvements to providing alternative supplies of water in an emergency?

*All Future bill payers included due to small base size when looking at dual usage areas only – Not stat tested to other groups

Context: Customers were presented with 3 alternate water supply options proposed by Thames Water

- Customers were introduced to three different options on how Thames Water would provide water in an emergency, either via water tanker or bottled water reserves
- Customers were informed of the impact these options would have on their bill between 2025-2030 and were told that the bill increases shown were just for this one issue and that the inflation had also not been included in the costs shown
- **N.B.**, The option for increasing stocks of bottled water bottled has more negatives than the other two options, which could have potentially influenced participants in their assessment and choice of the options presented

How can Thames Water prepare for the increased level of alternative water supplies if an emergency happens?

Option	Benefits and drawbacks	Additional annual cost to customers from 2025-30
Increase the number of water tankers Thames Water has, from 11 to 50, and these could bring in water from another area and pump it through water pipes to people's taps	+Convenience of water from the tap +No single use plastic bottles -Customers need to be told to use as little as possible to prevent this source running out (if paddling pools were being filled for example)	£5.50 a year
Increase the number of water tankers Thames Water has, from 11 to 50, and these could bring in water from another area and park up near houses and businesses so customers could go to these to fill up their own containers with water	-Sources of water will be closer to those in need +No single use plastic bottles -Not as convenient as having water supply to the tap	£5.50 a year
Stocks of bottled water could be increased and these could be delivered to central locations like supermarket car parks, so customers can collect bottles by car. Vulnerable customers would still have bottled water delivered to their door	+Tried and tested method for distributing water -A lot of plastic waste -Not ideal for those less mobile or without cars -Not enough to go around if emergency continues for several days -Cost of storing and moving the bottled water -Limited shelf life of bottled water	£6.50 a year



Water tanker

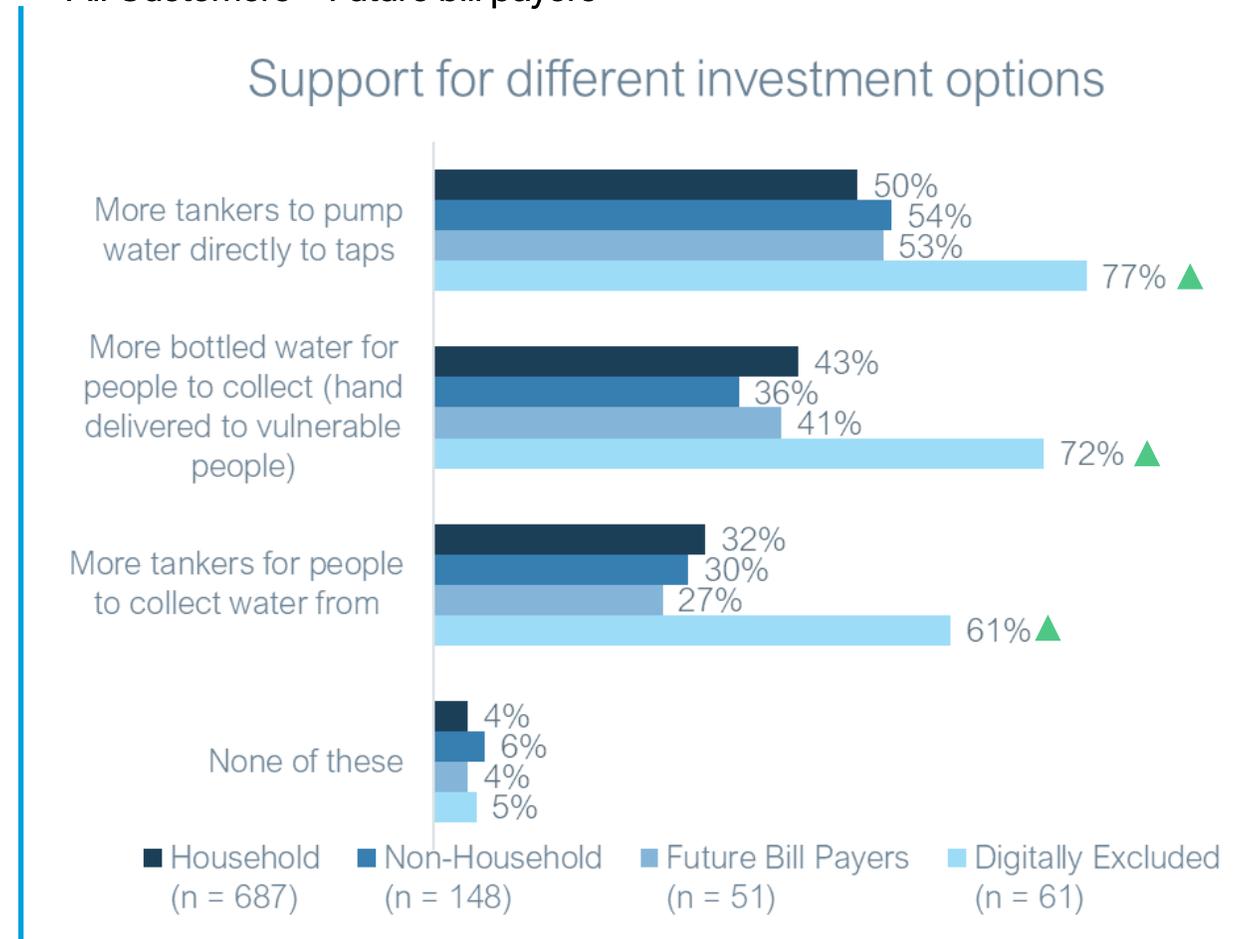


Bottled water station

All different customer groups share the sentiment that more tankers (increased from 11 to 50) should be deployed to ensure that the entire area experiencing water outages is catered for

- The non-household and Future bill payers samples displayed the highest level of support for more tankers to pump water directly into taps. Non-households may place higher importance on the potential disruption (perhaps driven by the financial consequences of not having access to a resource that is critical for them in running their businesses)
- Convenience plays a major role in the measures put in place when facing an emergency water outage. This is evident by the high percentage of customers giving priority to water being pumped into their taps. The other options involve them having an interruption in their daily routine and having to take action to get water
- A small minority of customers indicated that none of these interventions are needed in the event of an emergency water outage

Water Customers – Households, non-households, and digitally excluded
All Customers – Future bill payers*



F2. Which, if any of Thames Water's proposals do you support for providing alternative supplies of water in an emergency?

*All Future bill payers included due to small base size when looking at dual usage areas only – Not stat tested to other groups

▲ ▼ Significant difference at 95% conf. level.

Increasing the number of water tankers from 11 to 50 to supply the network is the most popular option due to convenience; customers see this as the least disruptive option

Support for approach: *increasing the number of water tankers from 11 to 50 to supply water direct to taps*

Customers support this option due to the perceived minimal disruption it will have. Not only is it a cheaper option than the bottled water approach, but it also provides more flexibility to customers and the way they choose to use water



Low support

Moderate support

High support

Perceived strengths?

- It is of prime importance to have easy access to water during an emergency event
- Customers see this as the most convenient option and less disruptive, as water is received straight into household taps

Perceived drawbacks?

- Some customers are unsure how Thames Water will ensure water is evenly distributed given that it will be available through the taps
- non-household customers are particularly concerned about how this will be managed logistically
- There is some concern that not everybody will use this limited supply responsibly

In their own words

Option 1 seems the best solution as it would cause me the least amount of effort to obtain water as I receive it directly through my own tap.

Female, non-household customer, Office manager, 10+ employees, London

From a business point of view I would like to understand how they would help given we need a much larger degree of water to operate.

Male, non-household customer, Operational manager, 10+ employees, Oxford/Swindon

I personally don't like the first option with the water being supplied through the pipes, because I don't feel that customers can be trusted to reduce their usage.

Male, 35-44, C2, White, Slough/Wycombe/Aylesbury

Customers filling up their own containers from (increased number of) water tankers is seen as an acceptable approach but not ideal for some less physically able customers

Support for approach: *increasing the number of water tankers from 11 to 50 for customers to collect water*

Water usage can be monitored more effectively with this option but is less convenient, as the responsibility to secure water supplies is put onto the customer



Low support

Moderate support

High support

Perceived strengths?

- This option is seen as both fair and less expensive than the bottled water option
- Customers feel reassured that water supplies can be checked and distributed more evenly across the customer base

Perceived drawbacks?

- This is less convenient for vulnerable customers and customers that don't have the capability to take large volumes of water
- There is also concern over where these tankers will be located, and how accessible they will be
- non-household customers are mainly concerned about the practicalities of accessing this water in a way that helps them keep their businesses operational – many rely on a constant supply such as in a kitchen

In their own words

I have a slight preference for Option 2 given that people can't necessarily be trusted to restrict their own water usage within their homes (as we know from droughts and hosepipe bans etc).

Female, 25-34, AB, White, London

The second option would not help a lot of people as they would need to man handle large amounts of heavy water containers to their home, not a great idea for the disabled, sick and elderly.

Male, 65+, AB, White, Slough/Wycombe/Aylesbury

Having to collect supplies of water from a distant location from our business is discouraging. As a catering business constant water supply is critical to operate our kitchens.

Male, non-household customer, Operational manager, 10+ employees, Oxford/Swindon

Few support Thames Water providing (larger stocks of) bottled water; given the other options possible

Support for approach: *increasing the stock of bottled water for customers to collect*

Customers are surprised to learn that Thames Water are handing out single-use plastic bottled water in these emergency situations as it isn't a sustainable solution and doesn't consider the long-term environmental implications



Low support

Moderate support

High support

Perceived strengths?

- Some feel in an emergency situation, this option would be necessary as access to water is paramount
- Customers value the extra care offered to more vulnerable households with the door-to-door delivery service
- This options allows water usage and distribution to be monitored more effectively to ensure customers are only getting their allocated amount per day

Perceived drawbacks?

- Being environmentally conscious and aware is of high importance to most customers and so many can't support this plan
- This is the most expensive option and as customers are less keen on using plastic bottles the bill increases seem less reasonable

In their own words

Option 3 does have some weight to it, in an emergency I'm afraid sustainability isn't important.

Male, non-household customer, Business owner, 10+ employees, London

I don't support the third solution at all. It costs the most and doesn't really seem like much of a solution to me at all. It still has customers living out of plastic bottles.

Female, 25-34, C2, White, Slough/Wycombe/Aylesbury

It's an essential service but I suspect it could be done for a lot less by enlisting the help of the supermarkets or water bottlers rather than storing bottled water yourself.

Male, 35-44, AB, White, London

90% support the plans for alternative water in an emergency

40 customers strongly support Thames Water's plans in this area



- Despite the unpredictability of when emergency water supplies may be needed, access to water is imperative
- Customers value the reassurance that measures have been and will be put into place for such scenarios

32 customers somewhat support Thames Water's plans in this area



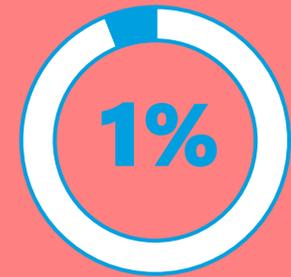
- These customers are concerned about the potential amount of plastic waste produced from additional bottled water stocks
- Customers also need a clearer outline of how water supplies would be distributed as there is some concern about whether they will all have equal access

7 customers somewhat oppose Thames Water's plans in this area



- Customers want more clarity around how bill increases are calculated; especially as bottled water is a less sustainable solution

1 customer strongly opposes Thames Water's plans in this area



- As this customer hasn't experienced an emergency event, securing alternative water supplies is not a priority to them, in comparison to other challenges that are more important



Major water supply interruptions

Executive summary: Major water supply interruptions

Customer concerns about major water supply interruptions

- All different customer groups (especially non-households) believe that to go longer than 2 days without water is unacceptable
- 90% of households, 92% of non-households, 95% of the digitally excluded and 80% of future bill payers see this topic as important
- The supporting examples of Honor Oak and Earley lead customers to conclude that immediate action is required

Customer reactions to Thames Water's proposed approach

- Many customers support Thames Water's rationale of prioritising the biggest risk to supply interruptions as the best possible value for customers. Customers also appreciate that Thames Water has also considered environmental impacts in its decision making
- Customers are encouraged by the proposed actions at Honor Oak and North Leigh, they believe that Thames Water have displayed diligence in exploring other options and agree with the guiding rationale behind these approaches
- However, they'd like assurance that the cost-effective approaches, are also long-term solutions that directly tackle the underlying issues that could lead to a major supply interruption
- Most see the approach of 'more investment up front' as a necessity because of a belief that Thames Water are behind schedule and need to 'catch up' to ensure the biggest threats to a water supply interruption are resolved as soon as possible. At least half of all customer groups (households – 57%, non-households – 57%, future bill payers – 59%, digitally excluded – 79%) support quicker improvements
- However, as customers are concerned about the amount of disruption this will cause, they support Thames Water's commitment to have a more secure water network by 2050 (i.e., after the most serious threats are resolved, they are happy for a more even investment approach between 2030-2050)

Customer support for Thames Water's proposed approach

- All different customer groups support Thames Water's plan to improve major water supply interruptions:
 - Most customers strongly support the plan: They believe that Thames Water has been transparent and proposed proactive solutions that mitigate the threat of a major water supply interruption
 - Many customers somewhat support the plan: They support Thames Water's commitment but want to understand how much disruption will be caused. They also want greater transparency on how this will be funded
 - Few customers somewhat oppose the plan: They don't believe customers shouldn't exclusively be funding this approach, and strongly believe other sources of funding should be found

Context: Customers were informed about the causes and risk of major water supply interruptions. They were also told about Thames Water's commitment to mitigate this risk

- Customers were informed about what causes major water supply interruptions and how this could impact customers
- Customers were then told what Thames Water are doing to mitigate the likelihood of a major water supply interruption and that Thames Water's ambition is to develop a more secure water network for customers by 2050, where no customers experience a water supply interruption greater than 2 days, once in a lifetime
- Customers were then shown two examples of water supply risk (Honor Oak Water Booster Station and Earley Water Booster Station). These highlighted the consequences of Thames Water not investing in these areas

Major water supply interruptions - what is the problem?

- The water network - treatment works, pumps and pipes - are all connected.
- Thames Water's water supply network can sometimes experience breakdowns leading to customers having no water, this is called a supply interruption. Often water supply is restored quickly as water can be moved around the network.
- However sometimes there are single points of failure, where, if a certain piece of equipment fails, it would stop the entire system from working and would stop water getting to customers.
- Some of these equipment failures are so big that Thames Water is unable to prevent the supply interruption to customers, even through recovery efforts such as providing bottled water to them.
- Thames Water believe that a customer experiencing two consecutive days of no water once in their lifetime would be unacceptable. This would be considered a **major water supply interruption**.
- Thames Water has identified particular equipment that could cause major supply interruptions, with no water for more than 2 days, once in a lifetime. One example of an equipment failure like this could mean over a million customers without water for up to 6 months.
- Thames Water regularly maintains its equipment to make sure the risk of these failures is as low as possible. However maintenance alone is not enough to stop these failures happening.
- The risk of major supply interruptions could also grow in future, particularly with increasing incidents of extreme weather because of climate change, making equipment more likely to fail more frequently.
- Thames Water's ambition is to develop a more secure water network for customers by 2050, where **no customers experience a water supply interruption greater than two days, once in a lifetime**.
- Thames Water plans to reduce all known major supply interruption risks by 2050, starting in 2025.

Example of electrical equipment which could be damaged by flooding, causing a large supply interruption



350 Olympic sized swimming pools worth of customer water are at risk of being stopped every year, from facilities/equipment/pipes that might breakdown

This is the same as 3 million customers' daily water use or 1.25 million properties being without water

1

Examples of major water supply interruption risks

Here are two examples of risks that Thames Water propose to improve by 2030

Honor Oak Water Booster Station and Reservoir (London)

- There are 8 different risks at this site which could cause it to fail, including flooding, power supply failure and failure of pumps
- Thames Water is already doing work at Honor Oak to reduce the likelihood of failure but flooding and other risks are outside its control
- If this site fails:
 - 450,000 customers would be without water for 2 weeks
 - An emergency situation for London could be announced with public services called in to support
 - Thames Water's stock of bottled water would run out in half a day. It would need over 4 million litres of alternative water supplies through 92 bottled water stations
- Thames Water has assessed this could happen once every 5 years
- In the next five years Thames Water wants to build more pumps so that when the booster station fails, it can still get water to customers while it fixes the problem



Earley Water Booster Station (Berkshire)

- The pumps at this site are failing, but they cannot be repaired or maintained without closing the site. With the site closed there is no other way to get water to customers and a major supply interruption would occur
- If this site fails:
 - 61,000 customers would be without water for 6 months
 - Thames Water's stock of bottled water would run out in less than 3 days. It would need over 600,000 litres of alternative water supplies through 12 bottled water stations
- Thames Water has assessed this could happen once every 10 years
- In the next five years Thames Water wants to build temporary pumps to allow for the existing pumps to be maintained and fixed



2

Context: Customers then assessed Thames Water's 3 possible approaches to protect customers from water supply interruptions

- Customers were told about Thames Water's rationale for 13 solutions that cumulatively, will remove 23 of the largest major supply interruption risks
- Customers were shown two examples of how Thames Water's rationale mapped onto reality in the preferred solutions for Honor Oak Water Booster Station and North Leigh Reservoir
- Customers were finally shown 3 investment approaches: 1. No extra investment 2050 2. Even investment to 2050 and 3. More investment up front, and what would happen by 2050 for each of these options
- Customers were informed of the impact these options would have on their bill between 2025-2030 and were told that the bill increases shown were just for this one issue and that the inflation had also not been included in the costs shown

How Thames Water plan to tackle the problem

- Between 2025-2030, Thames Water want to remove 23 of the largest major supply interruption risks
- A total of 163 solutions were considered, from which 13 solutions were chosen. Thames Water considered best value for customers and whether the solutions could solve more than one risk. Environmental impacts were also considered.
- 13 solutions were chosen by:
 1. Firstly, selecting the solution that **reduced the risk of a major supply interruption** (two consecutive days of no water once in a customers lifetime)
 2. Secondly, selecting the **lowest cost** option

Examples of solutions and how they were chosen:

Honor Oak Water Booster Station and Reservoir (London)	North Leigh Reservoir (Oxfordshire)
<p>The problem:</p> <ul style="list-style-type: none"> • The site is a single point of failure and if it fails 450,000 customers would be without water for 2 weeks • There are 8 different risks at this site which could cause it to fail <p>Preferred solution:</p> <p>36 solutions were considered and 1 was found that could solve 7 different risks on site:</p> <ul style="list-style-type: none"> • Installing a new set of pumps next to Honor Oak which could be used as a back up if the site had a pump failure • This solution reduces the risk of a major supply interruption and was the lowest cost for customers <p>Example of rejected solution:</p> <ul style="list-style-type: none"> • Environmental options such as installing a sustainable urban drainage system at the site to absorb flood water • These solutions were rejected as there is not enough space at the site to create drainage for the potential flood water 	<p>The problem:</p> <ul style="list-style-type: none"> • North Leigh reservoir has two parts and it is not possible to empty just one part for inspections to be made. The reservoir's water quality inspections are overdue so there is a risk of water quality problems which could result in the whole reservoir being shut <p>Preferred solution:</p> <ul style="list-style-type: none"> • Replace a nearby water pipeline and pump station to allow for a reliable backup supply when the reservoir is emptied for inspection • 9 solutions were considered and this was the only solution which reduced the risk of a major supply interruption <p>Example of rejected solution:</p> <ul style="list-style-type: none"> • Building a third part to the reservoir • This solution was rejected as there is not enough land to build a third part on and there would be higher chemical costs across the life of this solution. This may cost more to customers in the long-term

3

How Thames Water plan to tackle the problem

Using the methods of choosing best solutions that we've just spoken about, there are 3 overall approaches Thames Water could take to tackle the risks of water supply interruption, with different impacts on cost, time and improvement

Approach	What happens by 2030	What happens by 2050	Additional average annual cost to customers 2025-30
No extra investment to 2050	No additional customers protected from water supply interruptions	4,500 Olympic sized swimming pools worth of water supply would have been stopped , the same as 40 million customers' daily water use	£0 a year
Even investment to 2050	Protects 190 Olympic sized swimming pools worth of water supply from being stopped, the same as 1.7 million customers' or 710,000 properties daily water use	Protects 2,640 more Olympic sized swimming pools worth of water supply than the no investment approach, the same as 23 million customers' daily water use	£1 a year
More investment up front	Protects 250 Olympic sized swimming pools worth of water supply from being stopped, the same as 2.2 million customers' or 920,000 properties daily water use	Protects 3,100 more Olympic sized swimming pools worth of water supply than the no investment approach, the same as 27 million customers' daily water use	£6 a year

4

All customer groups think it is important to reduce major water supply interruptions

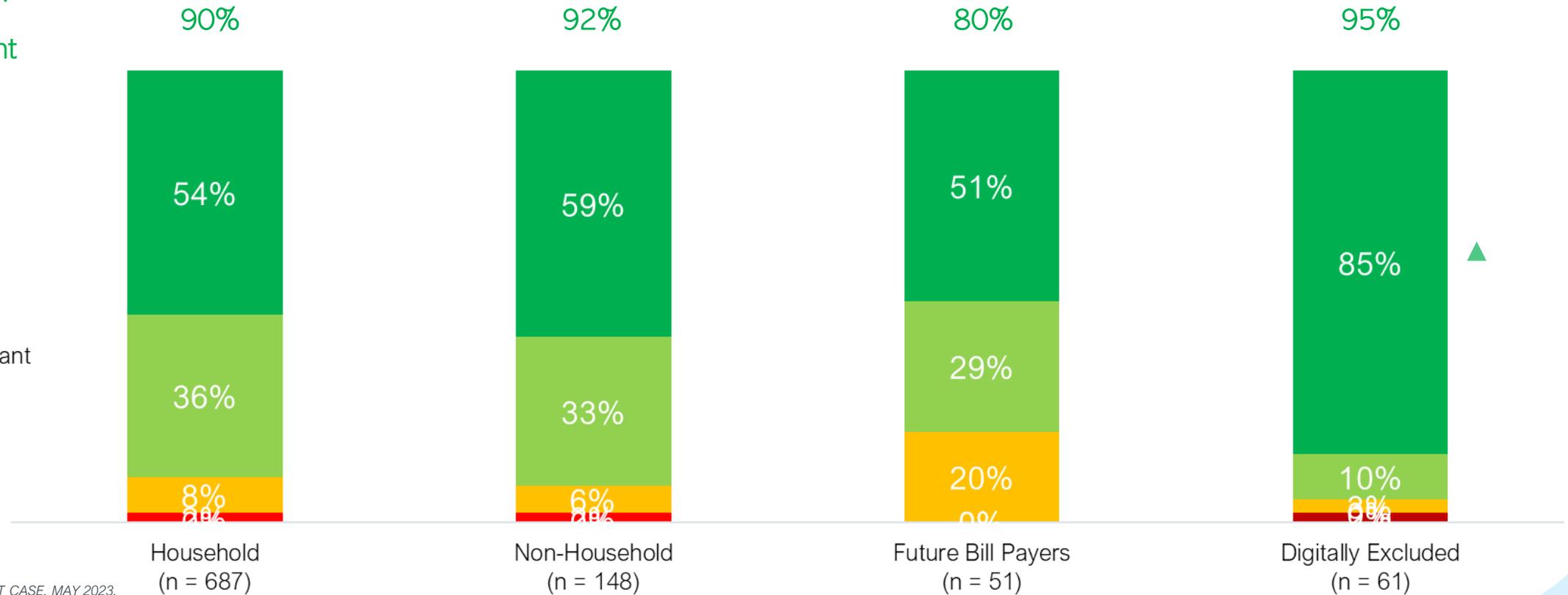


The 65+ age group participants are significantly more likely to view the improvements to reduce major water supply interruptions to be very important

Water Customers – Households, Non-Households and Digitally Excluded All Customers – Future bill payers*

(Top 2 Box):

- Very important
- Somewhat important
- Not Sure
- Not very important
- Not at all important



THAMES WATER ENHANCEMENT CASE, MAY 2023.
E1- How important or not important is this to you that Thames Water make improvements to reduce major water supply interruptions?

*All Future bill payers included due to small base size when looking at dual usage areas only – Not stat tested to other groups

▲ Significant difference at 95% conf. level.

All different customer groups are surprised and concerned at the amount of water currently at risk from a major supply interruption, they want Thames Water to rectify this imminently

All different customer groups are concerned about the current risk of a major water supply interruption (especially non-households)

- All customers generally see a reliable source of clean water as a fundamental job of Thames Water and something that should be a guarantee in a country as wealthy as England
- Many therefore believe that on principle, even 2 days without water would be unacceptable
- The amount of water at risk from a major supply interruption is alarming for All different customer groups. Many think that they wouldn't be able to wash, cook, clean and use the bathroom if this happened

The supporting examples of Honor Oak and Earley lead customers groups to conclude immediate action is required but there some concerns about the amount of disruption

- These examples were interpreted by customers as evidence that Thames Water has not been proactive enough at dealing with this issue/ the amount of current risk is too high
- However, they are reassured that Thames Water have identified major sites like this and have imminent solutions to mitigate the risks at these sites
- Customers expect these works to cause significant disruption, and so support Thames Water's commitment to develop a more secure network by 2050, but expecting the most serious threats to be dealt with imminently

A major water outage is not something I've experienced or thought about before...I would be very concerned about what could happen if Thames Water don't improve in this area...it would severely affect people's quality of life.

Male, 25-34, AB, BAME, London

I think access to drinking water is a basic human right that should be guaranteed, so for me the prospect of going without this for 2 whole days is really alarming.

Female, 25-34, AB, White, London

My expectations have remained the same. I have always expected a consistent supply of water, that is Thames Water's job and the service I pay for.

Female, 25-34, C1, White, Slough/Wycombe/Aylesbury

I think Thames Water should do whatever they can to reduce the risk of supply interruptions. It makes sense to prevent issues before they happen whenever possible, and usually ends up cheaper in the long run anyway.

Male, 25-34, C2, White, London

Customers support Thames Water's preferred solution for both case studies but want reassurance that the solutions are not short-term fixes

All different customer groups support the rationale of selecting a low-cost option that immediately reduces risk of supply interruptions. They believe Thames Water have done diligent work to ensure the most effective solutions have been chosen in both case studies

Honor Oak Case Study

- Customers believe Honor Oak exemplifies a strategic approach that effectively tackles most of the risks while being cost effective

I agree with the solution at Honor Oak Park as it tackles 7 out of the 8 risks at the centre, it also takes into the cost for Thames Water customers. Even though the solution to install sustainable drainage was rejected I like how the environment was a considered factor.

Female, 18-24, C1, White, London

- However, many want reassurance Thames Water will also directly address the cause (believing this to be old pipes that should also be replaced)

I support the idea of using one solution to fix many risks in the area but I do think we need to replace many old pipes that are at risk of bursting

Male, 35-44, AB, White, London

North Leigh Reservoir Case Study

- Customers strongly support the actions taken by Thames Water here because it is the only one that would reduce the risk of supply interruption

They answered their own question, by saying the option chosen is the **ONLY** one that reduced the risk of a supply interruption.

Male, non-household customer, business owner, 1-10 employees, London

- Customers also really like this approach because it also removes the risk of supply interruption for future generations

So yes, I agree with North Leigh solutions, because it is a long-term solution

Male, 55-64, C1, BAME, London

Customers want greater clarity on how many Thames Water initiatives in this area are long term solutions and how they will be funded

Most common concerns/ questions:

- Many customers believe that the high level of risk of a major water supply is due to aging pipes that need to be replaced
- They want assurance that in the pursuit of 'cost effectiveness', Thames Water's initiatives are also factoring in how to preserve the integrity of the water network in the long term

What this means for Thames Water:

- Customers are concerned with the current level of risk in the system and want to make sure that Thames Water will invest in solutions that tackle the root of the issue (aging pipes)

Lesser concerns/ less frequently asked questions:

- Customers want clarity on how this enhancement is funded, as they believe the work that needs to be done is vast in scope, and that funding should be acquired from multiple sources (government funding and from Thames Water's profits)

What this means for Thames Water

- Customers want assurance that they are not exclusively 'footing the bill'.
- The general thinking is 'If I am going to have less money in my pocket, so should Thames Water. We are in this together'

Would it not be a wiser solution to repair/improve the existing 'single point of failure' issue that is fundamental to this site? I do agree with the proposed solution, all I am saying is that could there not be a scenario where the exhibiting station could have improvement works carried out, without causing any water supply disruptions occurring.

Male, non-household customer, Managing director, 10+ employees, London

This surely can't all be financed by the customers of the water company, How much money if at all is the water company and the government putting into this project?

Funding of this could be a problem if it just relies on the customer finances. They need the appropriate government and water company funding.

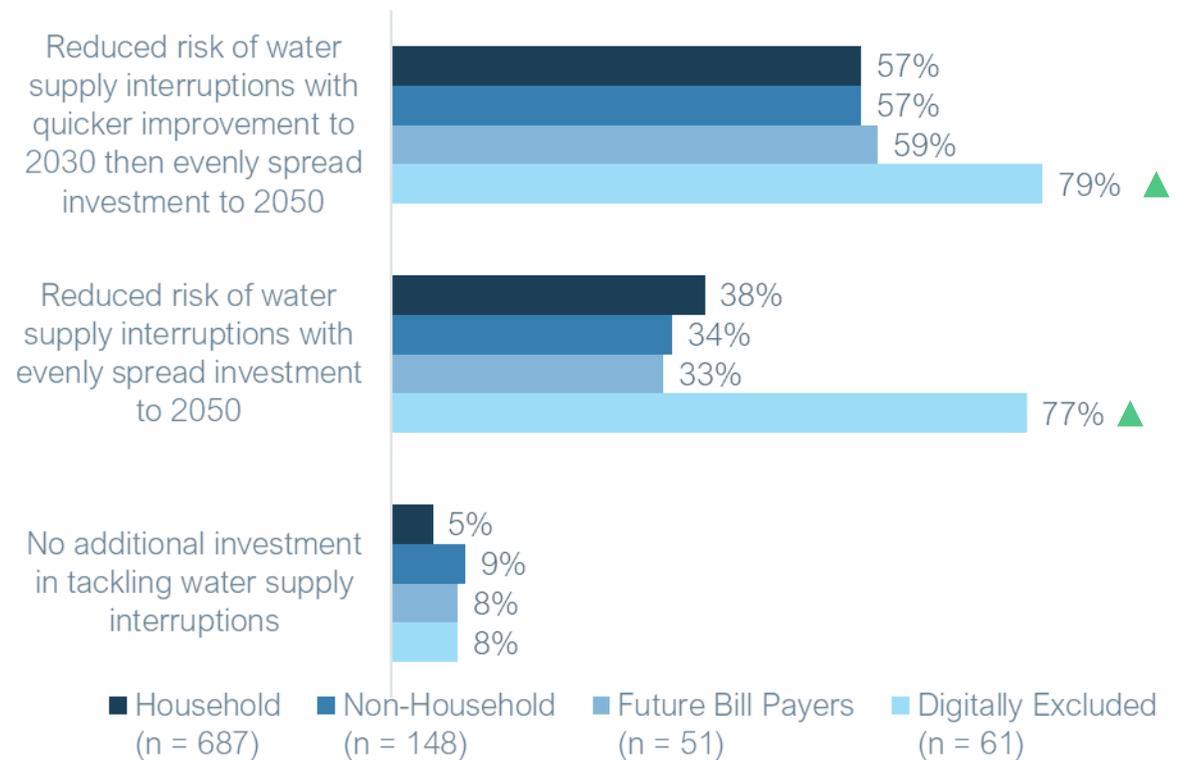
Male, 55-64, C1, BAME, London

The majority of all customers would prefer quicker improvements to be made by 2030 followed by evenly spread investments to 2050

- The majority of all customer groups are uncomfortable with the amount of water at risk from a major supply interruption, and so would ideally want Thames Water to make quicker improvements by 2030
- Future bill payers have the strongest preference to quicker improvements to 2030. As with basement flooding, they are acutely aware it is they who will inherit this problem
- More than one third of customers see the value in reducing the risk of water supply interruptions with evenly spread investments to 2050. This is seen as an acceptable approach by many due to the reduced cost and disruption that would occur
- 9% of non-household customers and 8% of future customers indicated that no additional investments should be made. Customers with this viewpoint believe that funding should be acquired elsewhere (tax or direct from Thames Water's profit)

Water Customers – Households, non-households, and digitally excluded**
All Customers – Future bill payers*

Support for different investment options



E2. Which, if any of Thames Water's proposals do you support for reducing major water supply interruptions?

*All Future bill payers included due to small base size when looking at dual usage areas only – Not stat tested to other groups

**For the digitally excluded sample this question was asked as a multiple mention question

▲ ▼ Significant difference at 95% conf. level.

Many customers feel that quicker improvements to 2030 with an evenly spread investment to 2050 is the optimal approach, but want to know the level of disruption this will cause

Support for approach: *Reduced risk of water supply interruptions with quicker improvements to 2030 then evenly spread investment to 2050*

Many conclude that this is the ideal option, and that they would personally be ok with the £6 per year increase to expedite significantly lowering the risk of water supply interruptions. However, they want to know more details about what the disruption will entail, and how this money is invested

Low support

Moderate support

High support

Perceived strengths?

- This solution is seen as significantly lowering the risk of a major water supply occurring within the shortest timeframe possible
- Many like that the post 2030-2050 phase of this as well, believing that the most urgent threats have been mitigated, and this allows Thames Water to continue to protect customers while minimising disruption

Perceived drawbacks?

- Significant short-term disruption. Many want more details about what this will look like
- Some note that there appears to be a diminished return on investment compared with the £1 evenly spread investment

In their own words

I would opt for the 'More invest up front' plan as it is clear that the benefits are proportionally much higher in comparison to the other proposed plans.

Male, non-household customer, Managing director, 10+ employees, London

I think they should start right away, it seems that the longer they leave it, the worse it will become and it may get so worse that it is beyond repair.

Female, 18-24, C1, White, London

I don't think the approach that has a £6 per year bill increase is acceptable considering it is a 500% increase over the £1 per year approach for just a 32% increase in protection of water supply.

Male, 45-54, AB, BAME, London

Some customers find an evenly spread investment until 2050 acceptable, believing it will minimise disruption, but many worry it may end up being more costly in the long run

Support for approach: *Reduced risk of water supply interruptions with evenly spread investment until 2050*

Many see this approach as acceptable. They appreciate that the increase to customer bills (£1 per year) is more affordable for many families and that minimal disruption will occur. However, some feel that the amount of water at risk is already excessive, and are concerned this approach is too slow, and may be more costly in the long run



Perceived strengths?

- A negligible bill increase for customers
- Minimal disruption
- Some note that the £1 per year investment has a greater ROI compared to the £6 per year investment

Perceived drawbacks?

- Many feel that significant short-term investment is needed to effectively address the greatest risks to the water supply.
- May be more costly in the long run

In their own words

I think the disruption has to be spread out over a longer period of time as my business cannot afford for huge, long disruptions to effect it or cause large losses to my revenue.

Female, non-household customer, Business owner, 10+ employees, London

Deferring costs to the longer term is not a really viable strategy when future costs are unknown especially given the example of current massive increases in energy supply costs. In this case a higher initial cost makes much more sense.

Male, 65+, AB, White, London

All different customer groups generally don't support no additional investment in tackling water supply interruptions because they believe this work is a fundamental duty of Thames Water

Support for approach: *No additional investment in tackling water supply interruptions*

Support is very low for this option because customers believe that Thames Water have a fundamental duty to ensure customers receive a reliable supply of clean water. They conclude that not investing in this area would be a direct contradiction to protecting customers



Perceived strengths?

- Customers struggling to pay bills will have one less bill increase to worry about
- As many see this as fundamentally important, some speculate that perhaps the government would fund this instead of customers

Perceived drawbacks?

- Major disruptions to the water network will lower the quality of life for many customers
- Fundamentally important work to ensure customers continue to receive a reliable source of clean water would be in jeopardy. Many see this is unacceptable

In their own words

I'm finding things unaffordable as they are. There needs to be government investment in such a vital service. Consumers and businesses pay huge amounts of tax and to pay our taxes (as a business, corporation tax, VAT, business rates etc.), it is just ridiculous.

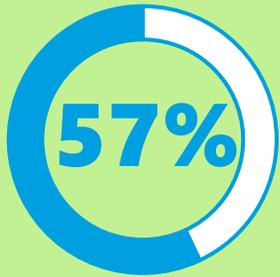
Female, non-household customer, Business owner, 1-20 employees, London

The lowest cost option is not always the best solution to a problem... The age of the Thames Water network is ancient and long overdue replacement - as a result the pipes are failing.

Female, 55-64, AB, White, Slough/Wycombe/ Aylesbury

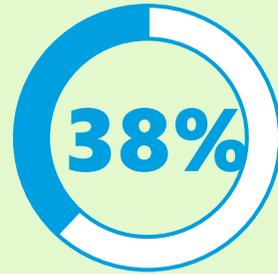
All customer groups support Thames Water's approach to major water supply interruptions; they want assurance that minimum disruption will occur

44 customers strongly support Thames Water's plans in this area



- They believe that Thames Water has been transparent and proposed proactive solutions to mitigate the threat of a major water supply
- They also believe that the work here is inevitable and will be even more costly if not carried out imminently

29 customers somewhat support Thames Water's plans in this area



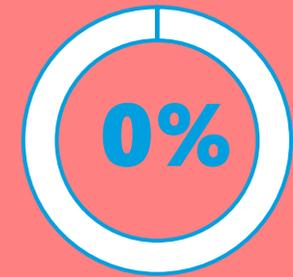
- They support Thames Water's commitment but want to understand how much disruption will be caused and greater transparency on how this will be funded
- They also want to ensure that 'cost effective' doesn't equate with short term fixes that don't directly address the underlying cause of supply interruptions

4 customers somewhat oppose Thames Water's plans in this area



- They don't believe customers should exclusively be funding this approach, and strongly believe other sources of funding should be found

0 customers strongly oppose Thames Water's plans in this area



- No customers strongly opposed Thames Water's plan to tackle major water supply interruptions



Wastewater Topics



Rethinking rivers

Executive Summary: Rethinking rivers

Customer Concerns about river health

- All different customer groups are surprised and concerned about river health in the Thames Water basin
- The prevalent concern across all different customer groups is that if river health is not improved this could damage public health in the form of lower quality drinking water. There is also a concern that wildlife may be harmed
- This is an emotive topic that conjures imagery of polluted water, and so all different customer groups' stance is generally: 'fix this as quickly as possible'

Customer reactions to Thames Water's proposed approach

- Many customers support Thames Water's commitment to have no river pollution by 2050 and to form partnerships in 27 river catchment areas by 2035, believing that due to the scale of the problem, these are realistic goals
- However, most want to clarify that Thames Water's plan was built on the rationale of improving river health as quickly as possible
- Some want more detail on how partnering with environmental organisations would work in practice and want assurance there will be no unforeseen delays and increased costs to customer bills
- Customers generally view Thames Water's two approaches to improving river health as a complimentary holistic plan
- Customers see working with partners as the more environmentally impactful option and tend to prefer this, but also want to see the direct immediate action from Thames Water

Customer support for Thames Water's proposed approach

- All different customer groups almost unanimously support Thames Water's plan to improve river health:
 - Most customers strongly support the plan: They agree with the methods and timelines proposed by Thames Water
 - Some customers somewhat support the plan: These customers found the timings acceptable but not ideal. They want to view options of an accelerated timeline and assurance there is no risk of timings lagging
 - Few customers somewhat oppose the plan: This person thought the proposed timelines were too slow

Context: Customers read the challenges of improving river health, how Thames Water plans to improve this, and were shown an example of Thames Water's approach in action

1. Customers were informed of the challenges of maintaining river health, and that 94% of water bodies in the Thames river basin have a 'less than good' ecological status
2. Customers were told that by 2050 Thames Water aim to 1. Have no river pollution from untreated sewage discharges 2. Will improve the quality of sewage discharges 3. Reduce the amount of water taken from some sensitive rivers for treatment to drinking water
3. Customers were told how Thames Water can improve river health, specifically that Thames Water plan to form partnerships with relevant organisations from other sectors in a river catchment so they can share skills, ideas and other resources
4. Customers were told that from 2025-2030, Thames Water plans to increase these partnerships from 3 to 14 Smarter Water Catchment areas out of 27 catchment areas in total for the region, and then increase to 27 by 2035
5. Customers then reviewed an example (Headstone Manor Wetlands) of how working in partnerships improves river health

River health – what is the challenge?

Of the 501 water bodies in the River Thames basin 94% have a 'less than good' ecological status

The Environment Agency have identified that Thames Water is responsible for about a third of the problems seen in the rivers in our area, more than any other group contributing to the problem (see chart).

Thames Water will take a leading role to address the poor quality of rivers in its area, making improvements to problems it has caused through its water and sewage processes, and also working with other groups to help them solve their problems.

By 2050 Thames Water aim to have no river pollution from untreated sewage discharges, to improve the quality of treated sewage discharges and also to reduce the amount of water taken from some sensitive rivers for treatment to drinking water.

With factors like a growing population and continued climate change, if Thames Water make no changes now there would be a risk to the future health of rivers as well as to other aspects of the water and sewage service.

Reason	Percentage
Water Industry	31%
Domestic General Public	26%
Industry	19%
Agriculture and land management	15%
Other	5%
Recreation	2%
Urban and transport	1%

Figure 1: Reasons for less than good river water quality status in the Thames River Basin
Source: Thames Water analysis of Environment Agency data

How can Thames Water improve river health?

- Thames Water's 'Rethinking Rivers' plan focuses on river catchments - areas split up by which river their rainwater drains to.
- Thames Water plan to form partnerships with relevant organisations from other sectors in a river catchment so they can share skills, ideas and other resources, to make improvements to river health.

Since 2020 Thames Water have tested this catchment partnership approach, called Smarter Water Catchments, in three areas across the region, the rivers Chess (Buckinghamshire), Crane (West London) and Evenlode (Oxfordshire).

This approach has proven successful in making improvements to rivers that Thames Water could not have achieved alone:

- Generating £4.20 of partnership funding for every £1 of Thames Water investment in urban areas
- Generating £1.90 of partnership funding for every £1 of Thames Water investment in rural areas
- Thames Water has worked with 138 organisations (eg. charities, community groups, councils, businesses and government agencies) and 46 landowners

From 2025-2030 Thames Water plans to increase from 3 to 14 Smarter Water Catchment areas out of 27 catchment areas in total in the region, and then increase to all 27 by 2035. This allows for this new way of working to be gradually changed, and for the network of partners to be developed

The river catchment areas in the Thames Water region

Working with partners to improve river health: Example: Headstone Manor Wetlands, West London

Headstone Manor Wetlands suffered from repeat pollution and also had a high risk of flooding neighbouring properties.

Thames Water formed a partnership with several groups including the Environment Agency and Crane Valley Partnership. Together, projects were designed and funded to:

- Provide a flood storage system
- De-silt a 14th century moat
- Create bends and shallower areas for the waterway
- Construct a sediment pond and reed bed system
- Refresh the surrounding park area

As a result:

- 60 homes now protected from flooding
- The reduced flood risk also reduced pollution, which meant improvements to the wetland and surrounding environment for plants and wildlife
- Also, improvements for the local community with nearly all park visitors agreeing the improved space enhanced their quality of life

Customers think that the river health in the River Thames Basin is very important to address and are reassured by Thames Water's commitment and plan to improve river health

Many customers are concerned about river health in the River Thames Basin

- All different customer groups are concerned that if this issue was left unchecked, it may pose a threat to public health, primarily through lower quality drinking water
- There is also widespread concern that further damage to river health will adversely impact wildlife

Many customers support Thames Water's commitment to have no river pollution by 2050 and to form partnerships in 27 river catchment areas by 2035

- Customers think the target of no river pollution from untreated sewage by 2050 is acceptable given the scale of the problem at present
- However, many want clarity if this represents the earliest achievable date as ideally they'd like to see this work completed as fast as possible (especially true of Future bill payers)

Customers also feel that the approach of working with partners is a good idea due to extra funding, resources and expertise

- Customers support the roll out of partnerships in catchment areas (3 to 14 by 2030 and 27 by 2035)
- The commitment is also supported because it does not impact customer bills

I'm really concerned about the situation because we can already see the effects of climate change, and if we don't act now, we won't have clean water by 2050.

Female, 25-34, C2, White, London

I agree that they should increase the Smarter Water Catchment numbers as something needs to be done urgently, I wonder if they could increase it at a faster rate?

Female, non-household customer, Company secretary, 10+ employees, London

I am always of the mind that 'as soon as possible' is much better than 'by year' - setting an end date implies that there isn't as much of a hurry to do our best for our waterways. I agree that the water catchments should increase (preferably now)

Female, 25-34, C1, White, Waste only (Affinity)

I think I am very surprised by the issues that come up and the extent of them. I am very concerned about the level of pollution and I think it shouldn't be allowed really.

Male, 18-24, AB, White, Kennet Valley

Customers would like reassurance that Thames Water's plan will improve river health as quickly as possible and that there won't be unforeseen costs and delays

Most common concerns/ questions:

- Some are worried that the current health of rivers may already be a public health risk and want this resolved as soon as possible. Customers want reassurance that the 2050 goal of zero river pollution represents a rationale of resolving the issue of river pollution as quickly as possible

What this means for Thames Water:

- Customers are satisfied with the short to medium term plan of forming partnerships from 2025-2030 on the assumption Thames Water is doing everything in its power to expedite improving river health

I appreciate Thames Water's plans for the area. Are they really that ambitious, considering they have given themselves 27 years to achieve this?

Male, non-household customer, Sole Trader, 10+ employees, Waste-only (Affinity)

I appreciate it takes time, but the timeline Thames Water have in mind is too long. The full 27 should be achieved in 2024 with a view to all being set up and ready to go from the start of 2025.

Male, 35-44, AB, BAME, London

Lesser concerns/ less frequently asked questions:

- Some are concerned that partnering with these other organisations at scale may incur unforeseen delays and additional costs
- Some also want greater clarity on what the catchments will achieve

What this means for Thames Water

- Customers want to be kept up to date on Thames Water's progress in this area

I am not sure if the consumer has to pay anything more towards the bills but if they do then I would like to know how much. I think it is something that needs to be tackled.

Female, 18-24, White, London

I need to understand in more detail how the water catchment areas are actually beneficial. I would like to see reports on what actions have taken place and the actual results of the change in the quality of the water.

Male, non-household customer, business owner, 10+ employees, London

Context: Customers then assessed two potential approaches to improve river health

- Customers were shown how Thames Water can lead improvements in river health and informed that the smarter water catchments approach is a new way of working and that it has no additional cost to customers
- Customers reviewed two potential approaches with benefits and drawbacks for each option:
 - Thames Water works alone to improve river health, and only works on problems it is responsible for (customers viewed 3 benefits and 3 drawbacks)
 - Thames Water works with other local environmental and community groups, to improve river health on all problems, including those not caused by Thames Water (customers viewed 4 benefits and 2 drawbacks)
- N.B.**, The option of Thames Water working with other environmental agencies has more listed more benefits and less drawbacks compared to the other option, which could have potentially influenced participants in their assessment

How can Thames Water lead improvements in river health?

The Smarter Water Catchments approach is a new way of working, **with no additional cost to customers**. Partnership solutions to improve river health would only be started if those projects were the same or better value to customers than solutions where Thames Water could build, expand or repair sewer pipes and sewage treatment facilities (as we've spoken about or will speak about elsewhere in this community).

Approach	Examples of improvements	Benefits	Drawbacks
Thames Water works alone to improve river health, only on problems that it is responsible for	<p>Mainly 'grey' building solutions where pipes, facilities and equipment are built, expanded or repaired.</p> <p>For example, to provide more room in the sewage network for treating large volumes of sewage and rainwater which has entered the system:</p> <ul style="list-style-type: none"> Building new or larger sewer pipes Building new or larger storm tanks at treatment works 	<ul style="list-style-type: none"> + Quick to build + Tried and tested ideas that are proven to work + Short time to see benefits 	<ul style="list-style-type: none"> - Costly and not easy to expand again if needed in future - Carbon emissions and chemicals used - May not lead to improved river health due to other contributions to pollution (agriculture for example)
Thames Water works with other local environmental and community groups, to improve river health, on all problems, including those not caused by Thames Water	<p>A mixture of natural 'green' and 'grey' building solutions. Typically smaller projects.</p> <p>For example, to absorb excess rainwater and prevent it from entering sewers:</p> <ul style="list-style-type: none"> Increasing porous paving and green spaces in built up areas Increased reed beds and vegetation by rivers 	<ul style="list-style-type: none"> + Can be expanded to meet future needs + Considers problems caused by other sectors not just Thames Water + Working with other sectors to share knowledge, skills and the cost of schemes + More chance of improved river health and environmental benefits 	<ul style="list-style-type: none"> - Not a tried and tested approach - May take longer to see improvements, waiting for plants to become established

Generally, customers see the value in Thames Water working with partners and directly addressing issues within their area, but overall, place greater value in working with partners



Working with partners: The preferred option because of perceived greater environmental benefits

- This is because it is seen as having a greater chance of yielding the greatest environmental benefit, which customers interpret as 'higher water quality'

Working alone: Seen as a much-needed short term solution that would pair well with working with partners

- While many think this is not viable in isolation, all different customer groups want to see an immediate short-term solution in place that has been 'tried and tested'
- This is therefore primarily viewed as a complimentary approach to working with partners

I believe that partnership working would be the best approach as there seem to be more environmental benefits at reduced costs...I would like to see partnerships established but I think it may be necessary for Thames Water to have some schemes where they work alone to get faster results. My preference is for partnership working but only if results are achieved quickly.

Female, 65+, C1, White, Slough/Wycombe/Aylesbury

All different customer groups strongly support the approach of working with environmental partners believing it will effectively improve river health

Support for approach: *Thames Water works with other local environmental and community groups to improve river health, on all problems, including those not caused by Thames Water*

Working with partners has high support from all different customer groups. Many see this as a proactive approach that will improve river health significantly. Because this is untested in some river catchments, customers agree with Thames Water's rationale to gradually implement this approach.



Low support

Moderate support

High support

Perceived strengths?

- Better for the environment in the long run due to extra resources and expertise to tackle everything damaging river health
- No customer bills increase

Perceived drawbacks?

- Some note that in many areas, these partnerships are untested, and might not be as effective as originally hoped
- Customers want to see contingencies in place to ensure Thames Water adhere to their commitments in this area

In their own words

I think working with partners is better as it will deal with other contributory factors that are also responsible for the rivers and will be more efficient in the long term.

Female, non-household customer, Company secretary, 10+ employees, London

There seems to be a lot of projection and uncertainty in how effective the actions may take. I would like to see more definitive outcomes or at least there be better and more decisive possible actions.

Male, 35-44, C1, BAME, London

Customers generally support Thames Water working in areas it is responsible as long as this is not done in isolation, because they want to see immediate improvements to river health

Support for approach: *Thames Water works alone to improve river health, only on problems that it is responsible for*

All different customer groups generally support Thames Water working to improve river health as long as this is not done in isolation. Customers are unsure how much their bill would increase if this option were to be deployed but in principle, think that a tried and tested and immediately effective solution is needed to improve river health alongside longitudinal initiatives



Perceived strengths?

- All different customer groups interpret this as a tried and tested solution with immediate environmental impact, few focus on the line that reads 'may not lead to improved river health'
- Perceived as easier to plan and manage

Perceived drawbacks?

- Unknown extra cost to customer bills is a big detractor for many
- Some believe this is too reactionary/ business as usual and ultimately, will not fix the issue of poor river health

In their own words

I do agree that Thames Water should increase their Smarter Water Catchments. The Headstone Manor Wetlands resulted in many positive outcomes and so expanding the catchment will hopefully result in more areas experiencing the same positive outcomes.

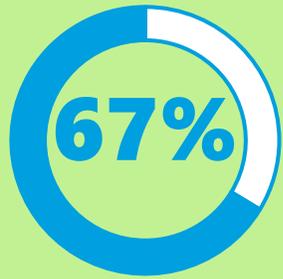
Female, Future bill payer, C1, BAME, London

I feel that the approach where Thames Water acts alone would be a quicker process and will provide new sewage pipes that could deal with the excessive amount of sewage produced in society, I feel that a larger costs would be applied to the consumer.

Female, C1, BAME, Waste only (Sutton & East Surrey)

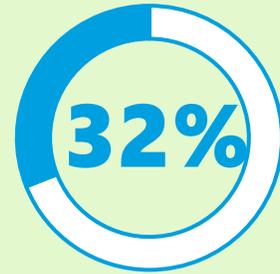
99% support Thames Water's plan for improving river health, though ideally some would like to see Thames Water be even more ambitious here

60 customers strongly support Thames Water's plans in this area



- These customers believe that Thames Water's goals of reducing river pollution by 2050 and the methods to get there in the short and medium term are admirable and realistic given the scale of the problem at present

28 customers somewhat support Thames Water's plans in this area



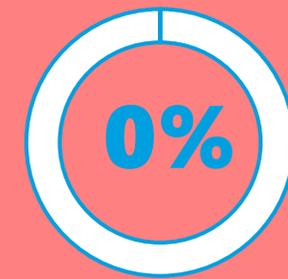
- These customers support Thames Water's methods to improve river health
- However, they want Thames Water to stop river pollution before 2050 and would also like Thames Water to implement partnerships in all catchments before 2035 if possible

1 customer somewhat opposes Thames Water's plans in this area



- This customer believed that the timings proposed by Thames Water were not fast enough, and that Thames Water is being too conservative here

0 customers strongly oppose Thames Water's plans in this area



- No customers strongly opposed Thames Water's plan to improve river health



Sewer infiltration

Exec summary: Sewer Infiltration

Customer concerns about groundwater sewer infiltration

- All different customer groups are surprised at the number of sewer spills that occur as a result of groundwater sewer infiltration
- They are concerned that the contamination to water and surrounding areas will harm wildlife and the natural environment and lower the quality of life of customers (some believe foul smelling streets may lead to them feeling forced to move home)
- Customers want more reassurance that Thames Water's enhancement will take climate change and a rising population into consideration
- 91% of households, 88% of non-households and 90% of the digitally excluded say this is important to address, with 78% of future bill payers seeing this as important

Customer reactions to Thames Water's proposed approach

- Many customers support Thames Water's goal in the short and long term to address groundwater sewer infiltration. They believe action needs to be taken imminently to protect customers and the environment, and believe that Thames Water are doing all they can to expediate these enhancements
- Increasing the size of sewage treatment works is widely seen as the only tried-and-tested solution, but some believe it is inevitable these will need be expanded again in the future
- Sewer lining is a popular idea due its balance between innovative technology and low maintenance; some question its reliability though
- Increasing the size of sewage treatment works has the most consistent support across the three approaches proposed by Thames Water with 82% of the digitally excluded, 52% of households, 50% of non-households and 41% of future bill payers supporting this option
- Customers appreciate the sustainable aspect of creating wetlands but have some concern how widespread this solution can be applied and that it has not been tested at scale

Customer support for Thames Water's proposed approach

- Almost all customers support Thames Water's goal and proposed approaches to prevent groundwater sewer infiltration but there are concerns about the longevity and reliability of the proposed enhancements
 - Most customers strongly support the plan: These customers strongly support Thames Water's approach to meet government targets in the short and long term. The costs are seen as negligible in comparison to the positive impacts the plans can bring
 - Some customers somewhat support the plan: These customers support Thames Water's end goal but would prefer Thames Water to achieve this as soon as possible. There are some concerns about lack of testing for sewage system lining and wetlands
 - Few customers somewhat oppose the plan: These customers do not believe that Thames Water will be able to achieve their end goal because two of the approaches are 'experimental'

Context

1. Customers were informed about what groundwater sewer infiltration is and how it takes place, as well as the risks of it happening
2. Customers then read about what Thames Water is currently doing about groundwater sewer infiltration
3. Customers were told that Thames Water has a target to reduce sewage overflows but that they would need to find new ways to tackle groundwater infiltration into sewers to achieve this
4. Customers also had the opportunity to re-read a background document summarising information about wastewater from the first day of the research

What is groundwater sewer infiltration?

- Groundwater sewer infiltration occurs when the water that is naturally in the ground (known as the water table) rises, this typically happens following periods of rainfall and enter the sewers from the surface through manhole covers, or through the ground by forcing its way through any cracks and joints in the pipe (sewers are not designed to be watertight).
- The risk of groundwater sewer infiltration happening increases after prolonged rainfall, during this time the infiltrated groundwater takes up room (capacity) in the sewer so less normal sewage can be carried.
- Too much groundwater in sewers can lead to sewage spilling into rivers through storm overflows, or sewage could flood onto public land.
 - In the wettest years, groundwater sewer infiltration causes about a quarter of all Thames Water's overflows into rivers.
- Changing weather patterns, as a result of climate change, could lead to more groundwater entering sewers in the future, meaning more untreated sewage could overflow into rivers.
- A governmental Environment Act states that all sewage storm overflows must have fewer than 10 spills a year by 2050.
- For Thames Water, currently 4,000 spills a year are linked to groundwater sewer infiltration.

Groundwater sewer infiltration (through the cracks and joints of a sewer pipe)



A storm overflow



1

What is currently done about groundwater sewer infiltration?

- When sewers are full with groundwater and sewage, Thames Water deal with this by pumping out the excess into tankers and transferring it to Sewage Treatment Works. Sometimes a fleet of tankers are needed 24 hours a day for weeks or even months, as groundwater continuously enters the sewer system.
- Tankers cause disruption to customers and communities through noise, air pollution, traffic congestion and wear and tear on the roads they travel on.
- Thames Water also make use of temporary treatment units in areas where tankering is not possible due to either limited access or too much flow to take away by tanker. The temporary treatment unit deals with the excess groundwater and sewage from the sewer and treats it (similar to a Sewage Treatment Works but not to the same standard) before it overflows into a river or waterway.
- These approaches will continue to be used in the future, unless a more permanent solution is found. But neither is able to keep up with the risk posed by groundwater sewer infiltration in the long term, particularly considering population growth and climate change.
- Thames Water has a target to reduce sewage overflows and this will be virtually impossible to meet without using new ways to tackle groundwater infiltration into sewers.

A tanker, used to remove excess groundwater and sewage from a full sewer



A temporary treatment unit used to treat excess groundwater and sewage then return this to a river



2

Customers then assessed Thames Water's proposed initiatives to tackle groundwater sewer infiltration

- Customers were introduced to 3 possible approaches to tackle groundwater sewer infiltration
- Customers were informed of the impact these options would have on their bill between 2025-2030 and were told that the bill increases shown were just for this one issue and that the inflation had also not been included in the costs shown

How can Thames Water improve groundwater sewer infiltration?

Thames Water have a number of ideas to tackle groundwater sewer infiltration from 2025 to 2030, concentrating firstly on areas where storm overflow spills could impact the most sensitive rivers. This will allow the most successful ideas to be developed and continued beyond 2030, so that by 2050 the level of sewage overflows into rivers should be much lower, meeting government targets. Here are three of the ideas to tackle groundwater sewer infiltration:

Idea	What is this?	Benefits and drawbacks	Addition to average annual bill 2025-2030
Increasing the size of sewage treatment works	As an alternative to stopping groundwater getting into the sewers, sewage treatment works could be made bigger. Groundwater would still get in though, so there is a cost to pumping and treating the groundwater flow in addition to the upgrade cost	<ul style="list-style-type: none"> + Will resolve 1,279 current sewage and groundwater spills by 2030 + Once built, this idea would work immediately to prevent spills caused by groundwater infiltration and create room for when groundwater levels are high - New construction and may need to be expanded again in the future, if the climate gets wetter, resulting in a higher carbon footprint than other ideas - Once built, higher day-to-day costs to treat additional flows 	£0.50 a year
Sewerage system lining	Lining or sealing sewer pipes and manholes that are at most risk from groundwater infiltration, to prevent the infiltration getting into the system	<ul style="list-style-type: none"> + Will resolve 1,279 current sewage and groundwater spills by 2030 + Once installed, would work quickly to prevent spills at the source of the problem, as the full capacity of the pipes is restored, and wouldn't need to be upgraded again - Some minor disruption while pipe sealing is done - roads wouldn't need to be dug up but there may be some traffic disruption for short periods while workers access the sewers - Approach, suppliers and installers of this technology have had limited testing so far. Thames Water would need to test this approach to make sure it works well before continuing 	£1 a year
Wetlands	Developing natural reed beds near to sewer storm overflows that help convert excess flow of sewage and groundwater to be made safer for the river as the plants filter any pollution	<ul style="list-style-type: none"> + Will resolve 1,168 current sewage and groundwater spills by 2030 (fewer than the other ideas as not all places are suitable for this sort of development) + Easy to construct, provides natural space with improved biodiversity for the environment and improved wellbeing for river visitors and communities living nearby - Approach only tested at one other location in the UK. It's likely this approach would take longer to establish before it starts fully treating sewage overflow, whilst plants get established - If the climate gets wetter and overflows of groundwater and sewage are more than predicted then the wetlands might need to be expanded or different plants added 	£2 a year

3

Households and non-households see making improvements to groundwater sewer infiltration as very important, future bill payers are less likely to think this is very important

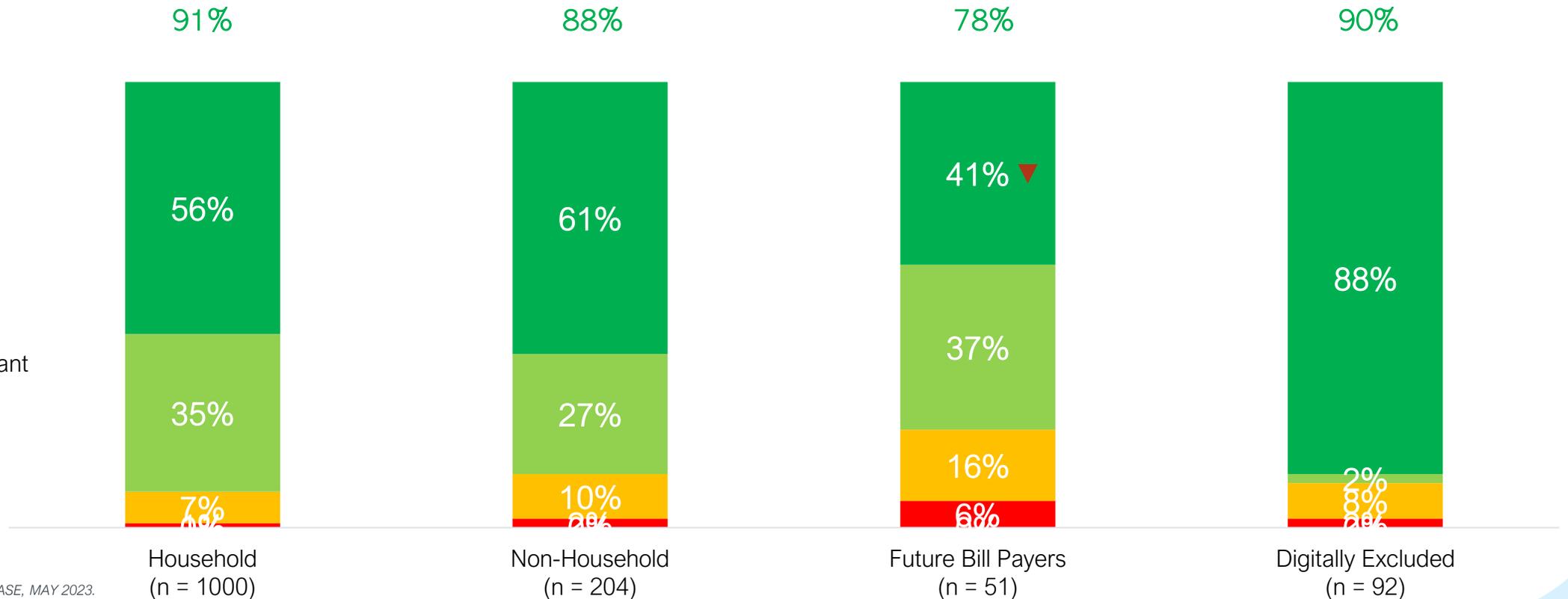


The younger age groups (18-34) are less likely to view the improvements to groundwater sewer infiltration as very important. The 65+ age group are significantly more likely to view this as very important

(Top 2 Box):

Agree

- Very important
- Somewhat important
- Not Sure
- Not very important
- Not at all important



THAMES WATER ENHANCEMENT CASE, MAY 2023.
 D1- How important or not important is it to you that Thames Water make improvements to groundwater sewer infiltration to prevent sewer overflows?

▲ ▼ Significant difference at 95% conf. level.

Customers are concerned about groundwater infiltration because of its contamination of local habitats and walkways; they want this to be resolved urgently

Many customers are surprised by the scale of the spills and concerned about damage to the environment and local communities

- Most had some prior knowledge of the issue from news stories, but many were still surprised by the number of spills annually
- They are concerned that this could have an adverse impact on wildlife and the natural environment
- Customers are also concerned about the impact of foul-smelling streets (having to move home for example) and disruption that would occur to fix faulty pipes

Many customers support Thames Water's commitment because they believe groundwater infiltration needs to be prevented as soon as possible

- The idea that climate change and population growth will only exacerbate the issue, leads all different customer groups to urge rapid action
- They generally believe Thames Water's approach is designed to be as impactful as quickly as possible

Most recognise the need for more innovative and sustainable methods to be developed to tackle sewer infiltration at source

- Many believe the situation has arisen because Thames Water has been overly reactive with regards to its approach to maintain the wastewater network

I'm surprised by how many groundwater infiltration spills a year TW are accountable for and that this is around a quarter of all overflows in some years.

Female, 25-34, AB, White, London

I am extremely concerned if no action is undertaken as it will get worse and worse with the effects of climate change. Nature can't afford to wait around on this topic.

Male, 35-44, C1, BAME, Slough/ Wycombe/ Aylesbury

...from an environmental point of view I feel concerned. Wildlife will be affected. And our natural environment can be contaminated

Female, 35-44, C1, BAME, Waste only (Affinity)

[More spills] would be a sad outcome for the surrounding communities and could drive people to move away from their homes if they did not want to experience this.

Female, 18-24, C1, BAME, London

The only thing that surprises me really is the noise and traffic congestion that tankers apparently cause. I am not sure why this should be an issue when Thames Water are dealing with essential works.

Male, non-household customer, Sole trader, 1-10 employees, Waste only (Affinity)

Thames Water can increase customer confidence in their commitment by providing evidence of infrastructure investment to demonstrate long-term planning

- **Most common concerns/ questions:**

Customers are concerned that wastewater infrastructure will degrade over time, and perhaps more quickly than Thames Water anticipates, due to climate change and population growth

- **What this means for Thames Water:**

Thames Water need to demonstrate their proposed solutions address the underlying cause of groundwater sewer infiltration and are considering the future strain on the network

- **Lesser concerns/ less frequently asked questions:**

Some customers are concerned that the proposed methods of sewage system lining and Wetlands appear to not have been widely tested

They want assurance there will be no unforeseen damage to the environment or complications within the wider network as a result of implementing these enhancements

- **What this means for Thames Water**

Customers don't understand how the overall water cycle is managed to prevent groundwater sewer infiltration or why 'untested' measures are viable. Illustrative diagrams and further information could help customers feel better informed

I am a little concerned that if no improvements are made, the "temporary" treatment units are going to need to be converted into permanent ones, and we will only be seeing more tankers travelling our roads trying to cope with an ever-increasing problem.

Female, 25-34, C1, White, Waste only (Affinity Water)

...[It] seems like TW is just firefighting rather than actually trying to solve the issue by plugging gaps and fixing leaks which lead to infiltration.

Female, 25-34, C1, White, London

This information confuses me slightly; one of the previous plans mentioned allowing rainfall to enter the water table through permeable roads, but surely this would increase the risk of sewer infiltration as mentioned here. Unless this has been accounted for, I can see things getting complicated.

Female, 25-34, C1, White, Waste only (Affinity Water)

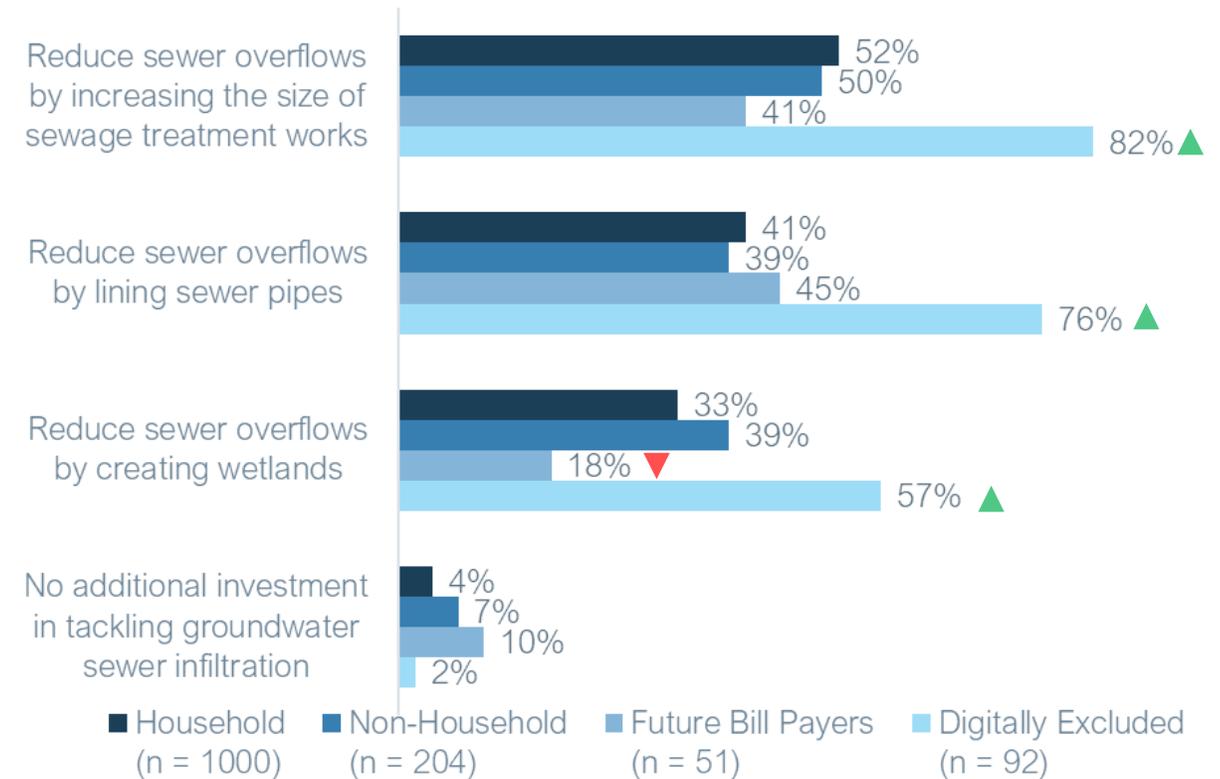
If land is affected could it have a knock on effect on agriculture?

Female, 25-34, C1, White, London

Customers generally want Thames Water to prioritise increasing the size of sewage treatment works (seen as the immediately impactful solution) and then line sewer pipes (the long-term solution)

- Increasing the size of sewage treatment works has the most consistent support across the three approaches proposed by Thames Water
- This is because it is seen as the most reliable approach that lowers sewer infiltration
- However, many think it is not viable in isolation because it is inevitable these pipes will need to be replaced
- There is also considerable support for lining sewer pipes because it is perceived as an innovative solution with lasting term benefits, and likely doesn't need to be upgraded
- There is moderate support for reducing overflows by creating wetlands (Future bill payers were significantly less likely to prioritise creating wetlands) because it has not been tested at scale and is only applicable in certain areas

Support for different investment options



D2. Which, if any of Thames Water's proposals do you support for improving groundwater sewer infiltration?

Increasing the size of sewage treatment works is widely seen as the only tried-and-tested solution but some believe it is inevitable these will need be expanded again in the future

Support for approach: *Increase size of sewage treatment works*

Increasing the size of sewage treatment works has high support because of its reliability. However, customers generally believe these works are likely to need further enhancement in future, and so, should be complimented with a long-term solution



Perceived strengths?

- It is a tried and tested means of reducing groundwater infiltration
- Initial set-up costs are lower than the other proposed initiatives
- Negligible bill impact

Perceived drawbacks?

- Sewage treatment works will most likely need to be increased further in future, making this idea appear like more of a stop-gap
- The construction may also cause disruption and negatively impact local communities

In their own words

I would prefer the first idea as this is what Thames Water is doing at the moment by expanding and building new tunnels.

Female, non-household customer, Business owner, 1-10 employees, Waste only (Affinity)

Increasing the size of treatment works is probably inevitable anyway; why not do it now?

Female, 25-34, C1, White, Waste only (Affinity)

Having to adapt the construction to accommodate the climate in the future and the higher day-to-day costs isn't that sustainable.

Female, non-household customer, Property Director, 1-10 employees, Waste only (Sutton & East Surrey)

Sewage system lining is a popular due its balance between innovative technology and low maintenance; some question its reliability

Support for approach: *Sewage system lining*

Sewage system lining has high support because it is seen as innovative and addresses the issue of infiltration at the source, with minimal maintenance. Some see it as the most cost-effective approach. However, some question its reliability and some are wary this is a relatively untested approach



Perceived strengths?

- It needs less maintenance and upgrading over time so overall costs lower
- Low level of disruption to communities
- Highly effective as it prevents over 1200 spills without needing further upgrading
- It addresses the root issue of infiltration into pipes

Perceived drawbacks?

- Some were concerned that the lining had not been tested enough, especially with the risk of leaks

In their own words

The sewage lining system stood out for me as it doesn't require upgrading in the future and not too much disruption to road users.

Female, 45-54, C2, BAME, London

It seems to be the fastest and most effective as it would solve 1279 spills without needing to upgrade down the line or have continuous maintenance costs.

Male, 35-44, C1, BAME, Waste only (Affinity)

It hasn't had enough testing to see how it works, I would rather see further testing before it being rolled out.

Female, 45-54, DE, White, London

Wetlands offer a sustainable and innovative solution, but there are concerns that they are too locally specific to implement on a wide enough scale and are also untested at scale

Support for approach: *Wetlands*

Wetlands have moderate support; most customers recognise their environmental and social benefit, but some are sceptical about the breadth of their application



Low support

Moderate support

High support

Perceived strengths?

- Seen as the most environmentally sustainable option; customers value the benefits to local wildlife and habitats
- Customers also value the positive benefits to communities by creating new spaces to engage with nature

Perceived drawbacks?

- Some were sceptical about how widely wetlands could be implemented as a solution to groundwater infiltration, as they could only be introduced into specific local areas
- Some also thought wetlands would take longer to set up and longer to see the benefits compared to other options

In their own words

I think this option has multiple benefits, not only will it absorb excess water from heavy rainfall but also is a natural space for the community to appreciate.

Male, 35-44, DE, White, Waste only (Essex & Suffolk Water)

The wetlands just doesn't seem to be established enough to rely on solely and would take longer to see the benefits.

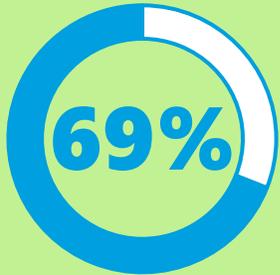
Female, 25-34, AB, White, London

There are not always enough spaces in the country for a wetland to be. If further flooding occurs, they may need to extend the wetland or add more plants.

Female, 35-44, C1, BAME, Waste only (Sutton & East Surrey)

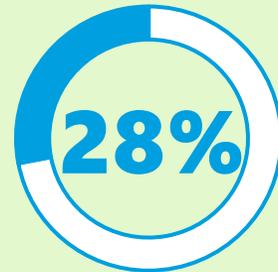
97% support Thames Water's plans on preventing sewer infiltration, although a few have concerns about the effectiveness of the proposed enhancements

56 customers strongly support Thames Water's plans in this area



- These customers strongly support Thames Water's approach to meet government targets in the short and long term
- The costs are seen as negligible in comparison to the positive impacts the plans can bring

23 customers somewhat support Thames Water's plans in this area



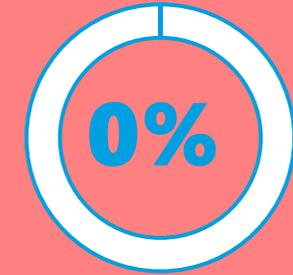
- These customers support Thames Water's end goal but would prefer Thames Water achieve this as soon as possible
- There are some concerns about lack of testing for sewage system lining and wetlands

2 customers somewhat oppose Thames Water's plans in this area



- These customers do not believe that Thames Water will be able to achieve their end goal because 2 of the approaches are 'experimental'

0 customers strongly oppose Thames Water's plans in this area



- There is no strong opposition from customers to Thames Water's plans



Sewer flooding

Executive Summary: Sewer flooding

Customer concerns about sewer flooding

- The idea of customers properties flooding with sewage disgusts and concerns many
- They feel it is part of Thames Water's essential duties to protect customers, and expect Thames Water to make significant investments to protect customers from this
- The vast majority of all customer groups believe that sewer flooding is important to address (58% of households and non-households and 82% of the digitally excluded think this is very important to address)

Customer reactions to Thames Water's proposed approach

- Ending sewer flooding by 2050 is generally seen as the most economically viable option, but many believe Thames Water are capable of a more ambitious target
- Despite the higher upfront costs and acknowledgment of increased disruption, customers preferred ending sewer flooding over all the other alternatives
- Only 5% of customers across all sample types said that no additional investment is needed on tackling sewer floods
- Only 10% of customers across all sample types said that sewer flooding should be eliminated by 2065

Customer support for Thames Water's proposed approach

- Many support Thames Water's proposed approach to end sewer flooding by 2050, but ideally, would like to see this achieved by 2040:
 - Most customers strongly support the plan: These customers are very concerned about the harm to public health and damage to property caused by sewer flooding. They think the proposals will effectively reduce sewer flooding and want to see this achieved by 2040, if not sooner
 - Many customers somewhat support the plan: These customers support Thames Water's approaches to reduce sewer flooding but don't think its optimal. They think Thames Water should set a more ambitious goal (complete the work by 2040 at the latest) and should not fund the project solely out of raising customer bills
 - Few customers somewhat oppose the plan: These customers are opposed to the plan on principle, believing that Thames Water should be using its profits to fund these improvements. Some are also strongly against this because they want a faster timeline in place to address these challenges
 - 1 customer strongly opposes the plan: This customer believes Thames Water plans take too long to implement. They believe the adverse effects of climate change will have exacerbated the problem significantly by then, rendering the proposed solution void

Context

1. Customers were informed about what sewer flooding is and the risks of it occurring
2. Customers were told that Thames Water is planning to make improvements to the sewer network so that there is no sewer flooding of customer properties by 2050 (*except when caused by very heavy rainfall with a less than 1 in 50 chance of happening per year*)
3. Customers also had the opportunity to re-read a background document summarising information about wastewater from the first day of the research

What is sewer flooding?

- Sewer flooding in properties and gardens can happen when the sewer system becomes full and overflows due to blockages or too much rainwater.
- About 1,200 properties each year experience sewer flooding.
- Sewer flooding will likely increase in future due to added pressure on the sewer network from an increasing population and climate change.
- There is currently a 1 in 50 chance per year for approximately 180,000 properties to experience sewer floods caused by rare heavy rainfall storms.
- If no additional investment is made to prevent sewer flooding by 2050, there would be a significant increase in the number of properties at risk of sewer flooding.
- If Thames Water invest now, this could limit the impact of population growth and climate change on the risk of flooding in the future.
- Thames Water is planning to make improvements so there is no sewer flooding of customer properties by 2050, except where it's caused by a very rare heavy rainfall storm (less than 1 in 50 chance of happening per year). In other words, making the sewer network more resilient to floods or 'future proofing' it, to keep customers safe and give them the service they want.

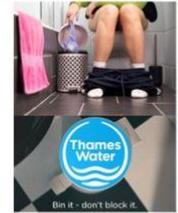


Customers then assessed Thames Water's proposed initiatives to improve sewer flooding

- Customers were introduced to 3 methods that Thames Water propose to use to meet the target of no sewer flooding by 2050
- Customers then read about one of the methods to achieve this (Sustainable Urban Drainage) and were also provided examples to clarify what this looks like in practice
- Customers were also shown 4 approaches with different timelines and impacts to customer bills over time to meet the target of no sewer flooding. They were told that the bill increases shown were just for this one issue and that the inflation had also not been included in the costs shown

How will Thames Water improve sewer flooding?

- Thames Water will reduce the risk of sewer flooding by:
 1. Building more storage space within the sewer network to cope with additional sewage and rainwater
 2. Using natural solutions to absorb rainwater instead of it entering sewers, such as porous paving and green spaces in built up areas
 3. Customer education to prevent blockages, reminding them what not to flush down the loo or put down the sink
- Here's a method that Thames Water are developing further to help meet the target of **no sewer flooding by 2050** (except from very rare heavy rainfall storms with less than 1 in 50 chance of happening per year). It's called **Sustainable Urban Drainage**, it helps slow down or prevent rainfall entering sewers so they don't overflow.



Example of customer education

Examples of Sustainable Urban Drainage:

- Roof gardens that absorb and store rainfall
- Channels in roads and pavements that divert rainfall into gravel or grass areas along roads or by properties
- Porous paving surfaces that let rainwater drain into the water table underneath

Extra benefits: having green areas in built up areas, creating habitat for wildlife
Drawbacks: ongoing maintenance required (by the local council typically)



Example of sustainable urban drainage

What can Thames Water do to improve sewer flooding?

Using Sustainable Urban Drainage and other methods, Thames Water could tackle the goal of no sewer flooding (except from very rare, heavy rainfall storms) over different timescales.

Approach	Additional average annual cost to customers							
	2025-30	2030-35	2035-40	2040-45	2045-50	2050-55	2055-60	2060-65
No additional investment By 2050 there would be a significant increase in the number of properties at risk of sewer flooding, compared to if investments to improve were started now	£0	£0	£0	£0	£0	£0	£0	£0
Meet the goal by 2040 Invest in improvements so that there is no sewer flooding of customer properties by 2040 (except from very rare heavy rainfall storms with less than 1 in 50 chance of happening per year)	£3	£49	£130	£168	£134	£107	£85	£85
Meet the goal by 2050 Invest in improvements so that there is no sewer flooding of customer properties by 2050 (except from very rare heavy rainfall storms with less than 1 in 50 chance of happening per year)	£3	£6	£18	£58	£133	£175	£140	£140
Meet the goal by 2065 Invest in improvements so that there is no sewer flooding of customer properties by 2065 (except from very rare heavy rainfall storms with less than 1 in 50 chance of happening per year)	£3	£8	£23	£52	£76	£94	£106	£106

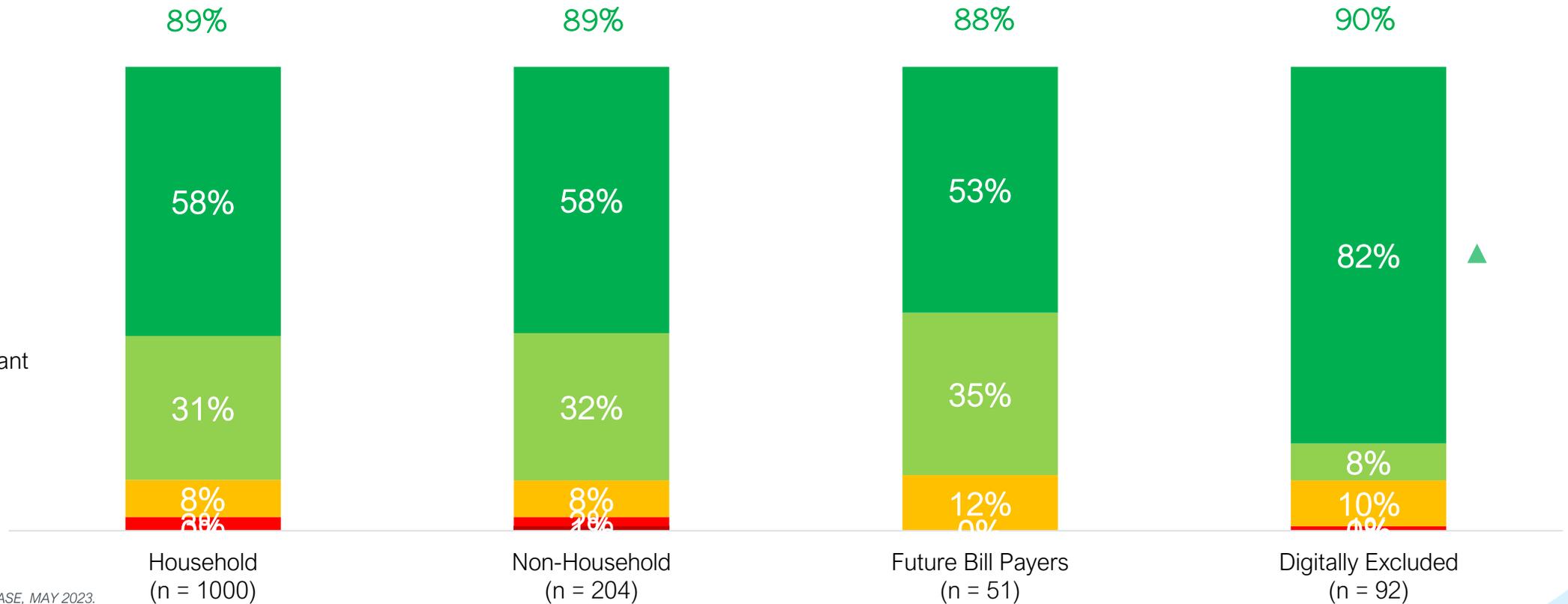
The majority of all different customer groups believe that sewer flooding is very important to address



The 65+ year old group are statistically significantly more likely to deem the fixing of sewer flooding as very important, more than all other age groups.

(Top 2 Box):

- Important
- Very important
- Somewhat important
- Not Sure
- Not very important
- Not at all important



THAMES WATER ENHANCEMENT CASE, MAY 2023.
 C1- How important or not important is it to you that Thames Water make improvements to prevent sewer flooding to properties?

▲ ▼ Significant difference at 95% conf. level.

All different customer groups have concerns about sewer flooding, they believe it is essential for Thames Water to address this issue

Customers are surprised at how many properties are at risk from sewer flooding and want this resolved imminently

- The idea of customers properties flooding with sewage disgusts and concerns many
- They feel it is part of Thames Water's essential duties to protect customers, and expect Thames Water to make significant investments to protect customers from this
- Many mentioned they would be "upset" if Thames Water chose not to complete the upgrades. Others mentioned it would be "unacceptable"

Many customers are concerned how much sewer flooding will occur between 2025 and 2050 and want to know in more detail how much disruption these works will cause

- Some are concerned that climate change and a rising population may require more work than Thames Water anticipates, which may delay the end goal further
- Customers generally believe a lot of overdue maintenance is required, and that it should be Thames Water's responsibility to carry out these works, i.e., customers shouldn't incur a large bill increase to fund vital works

The timelines Thames Water is working towards are so far (25years)...I would have expected a more pro-active immediate approach to improve the system.

Female, non-household customer, Restaurant owner, 1-10 employees, London

It is hugely important that Thames Water are taking steps and acting to prevent sewer flooding. It would almost be negligent if they won't be taking appropriate action.

Female, non-household customer, Property director, 10+ employees, Waste only (Sutton & East Surrey)

As a company who control a very large area [of] sewer systems, I believe that Thames Water have a great responsibility to prevent or minimise sewer flooding.

Female, 18-24, C1, White, Waste only (Affinity)

I appreciate everything has a cost, but I am considering more and more as an option the possibility to make water company back to the government control. We pay for every single improvement!

Male, 45-54, unspecified white background, Clean and Waste, (London)

Customers are most likely to question the planned timescale of improvements, as a result of their concern about the health and environmental impacts of continued flooding

- **Most common concerns/ questions:**

The most common questions are around the rationale behind the 25-year timescale to reduce sewer flooding. Customers want to understand why Thames Water has given itself this timeline, as most would want improvements to be made more quickly to reflect the risk of increasing damage over time

- **What this means for Thames Water:**

Thames Water should provide an accessible explanation of the timescale for planned improvements, in order to demonstrate how factors like cost and available technology affect current timelines to reduce sewer flooding

- **Lesser concerns/ less frequently asked questions:**

Customers mentioned concerns about public health and how sewer flooding could present a serious health hazard and contribute to a rise in disease. There were also concerns about potential impacts on wildlife and the psychological toll imposed by damage to people's homes

- **What this means for Thames Water**

Thames Water needs to demonstrate awareness and empathy around the psychological and environmental impacts of sewer flooding in public communications. Thames Water should emphasise how planned methods to reduce sewer flooding will prioritise local people and environments

It appears an ambitious aim, but it must be achievable otherwise why set it? It also begs the question that if Thames can aim to end sewage flooding across its entire network within 25 years, why hasn't this been done earlier?

Female, 55-64, DE, BAME, London

I'm disappointed in Thames Water's ambition to end sewer flooding in 25 years because I believe they could do it much sooner.

Male, 25-34, AB, White, London

Leaked sewage is a serious health hazard to humans and livestock and wildlife. This puts pressure on other services like the NHS or animal welfare and the environmental agencies.

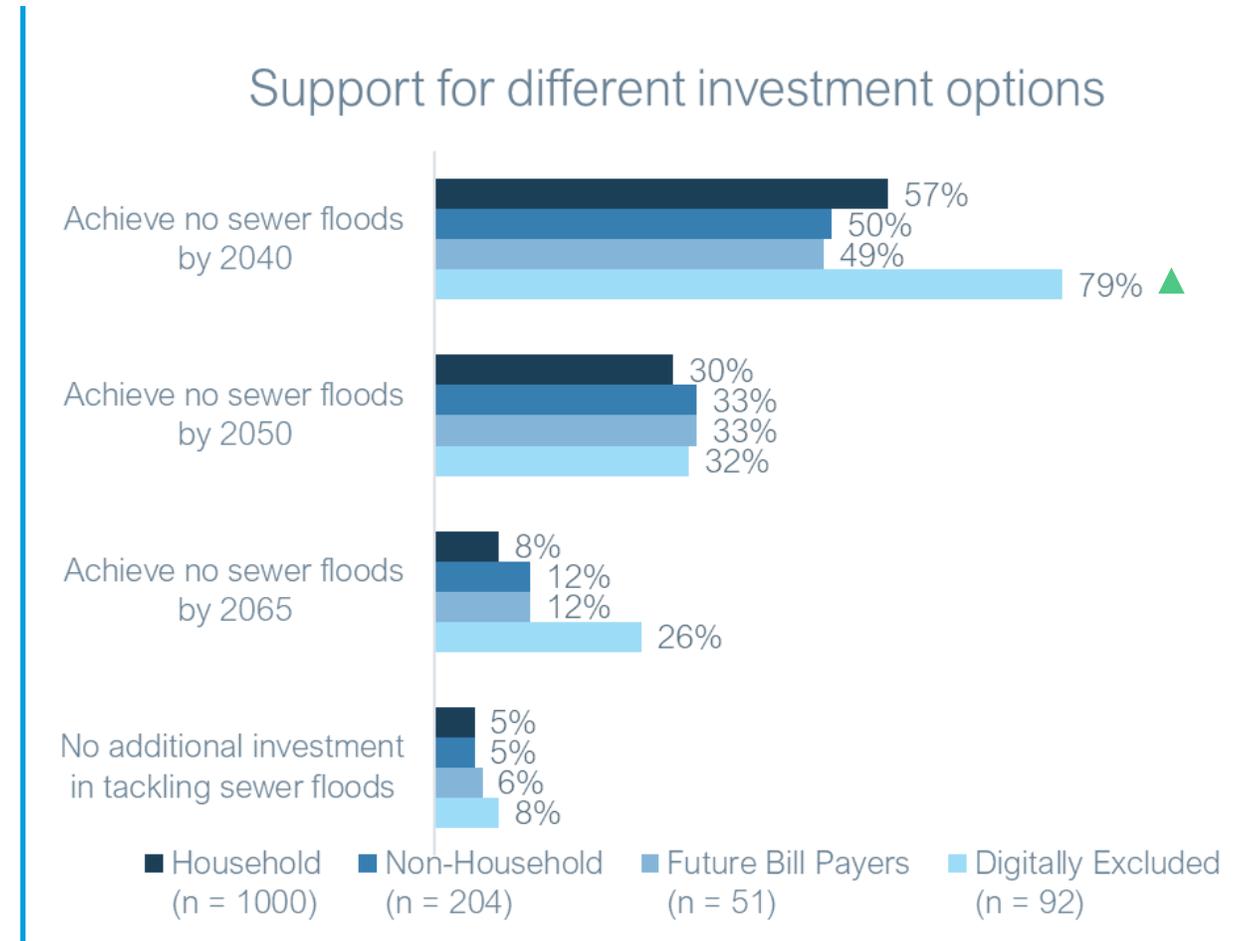
Female, 65+, AB, White, Waste only (South East)

I think it's extremely important they do everything they can to prevent it from happening. It could cause significant property damage and create a lot of distress.

Male, 35-44, C1, BAME, Waste only (Affinity)

All different customer groups would generally prefer that Thames Water achieves no sewer flooding by 2040; very few believe that achieving this beyond 2065 is acceptable

- All of the different sample types indicate that sewer floods should be completely eradicated by 2040, households having the highest priority for getting it done by this time
- Only 8% overall said that sewer flooding should be eliminated by 2065
- The urgency of eliminating sewer flooding by 2040 is significantly driven by males in the 65+ age group, more than all the other age groups
- Only 5% of customers across all different sample types said that no additional investment is needed on tackling sewer floods



C2. Which, if any of Thames Water's proposals do you support for improving sewer flooding to properties?

For the digitally excluded sample this question was asked as a multiple mention question

▲ ▼ Significant difference at 95% conf. level.

All customer groups generally want to end sewer flooding by 2040 but there are some concerns about the amount of disruption this will cause and its impact on customer bills

Support for approach: *Invest in improvements so that there is no sewer flooding of customers by 2040 (except from very heavy rainfall storms):*

Customers generally believe that immediate action is required to rectify what is perceived as an underinvestment in critical works that protect customers



Perceived strengths?

- More intense investment in the short term will help address the historic underinvestment in this area
- Protects as many customers as quickly as possible, from the extremely unpleasant event of sewer flooding

Perceived drawbacks?

- Higher level of disruption
- Higher up-front cost seen as damaging to families who are struggling financially
- Some feel the odds of this happening are relatively low, and so feel its not a priority

In their own words

I prefer the 2040 option because, although it will cost more now, the goal will be reached sooner, and the bills will be less in the future compared to the other options.

Female, 35-44, AB, BAME, London

1 in 50 chance per year is quite low. Investing now doesn't seem too much of a high priority.

Male, 35-44. AB, BAME, Clean and Waste, London

Ending sewer flooding by 2050 is generally seen as the most economically viable option, but many believe Thames Water are capable of a more ambitious target

Support for approach: *Invest in improvements so that there is no sewer flooding of customers by 2050 (except from very heavy rainfall storms)*

Customers generally accept this timeline but believe that Thames Water should ideally be more ambitious. However, many trust that this timeline as been created to ensure bill impacts and disruption are kept to a manageable level



Perceived strengths?

- Less disruption
- The most economically viable for customers while ensuring the critical work is carried

Perceived drawbacks?

- Takes a long time to end what is seen by many as unacceptable risk to customers

In their own words

I think it is good to have the sustainable urban drainage in place. I think the bill increases make sense, but more needs to be justified at each level, in terms of the breakdown costs involved. I think I prefer the 2050 goal, as this seems the most feasible and in a good time frame.

Female, 25-34, AB, BAME, Kennet Valley

I'm disappointed in Thames Water's ambition to end sewer flooding in 25 years because I believe they could do it much sooner.

Male, 25-34, AB, White, London

Customers generally see no investment or enacting their goal by 2065 as unethical; a few older participants would opt for these options because they will not benefit from the work

Support for approaches: *Invest in improvements so that there is no sewer flooding of customers by 2065 (except from very heavy rainfall storms) and no additional investment*

Many customers believe that to ignore or implement investment over a long period of time will put too many customers at risk. Few take the perceived strengths of this initiative seriously



Perceived strengths?

- Some older participants believe this will allow funding to be diverted to more immediately impactful enhancements they will benefit from
- Less disruption
- Less bill impact

Perceived drawbacks?

- Contradicts what many perceive to be a core duty of Thames Water: to protect customers. Many see this as easily trumping the perceived strengths

In their own words

If I'm being selfish, I'd prefer the 2065 option because the greatest increase will happen when I'm no longer around!...I really don't think this is a priority. There are other things that are more important for me to justify my bills being increased.

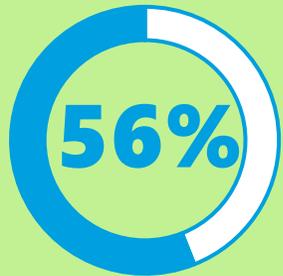
Female, 55-64, AB, White, Slough/ Wycombe/ Aylesbury

This is a horrible problem, and I'm surprised that in a first world country we still have these issues.

Male, 35-44, AB, BAME, Kennet Valley

90% support the plan to prevent sewer flooding, but many would want the improvements to be implemented by 2040, and for Thames Water to help fund this

48 customers strongly support Thames Water's plans in sewer flooding



- These customers are very concerned about the harm to public health and damage to property caused by sewer flooding
- They think the proposals will effectively reduce sewer flooding and although they want to see this achieved by 2040, they appreciate there is a lot to do, and so 2050 is also acceptable

29 customers somewhat support Thames Water's plans in sewer flooding



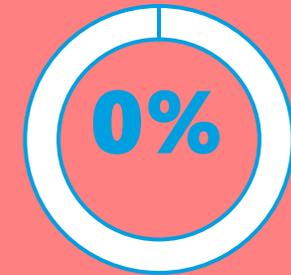
- These customers support Thames Water's approaches to reduce sewer flooding but don't think it's optimal
- They think Thames Water should set a more ambitious goal (complete the work by 2040 at the latest) and should not fund the project solely out of raising customer bills

8 customers somewhat oppose Thames Water's plans in sewer flooding



- These customers are opposed to the plan on principle, believing that Thames Water should be using its profits to fund these improvements
- Some are also strongly against this because they want a faster timeline in place to address these challenges

1 customer strongly opposes Thames Water's plans in sewer flooding



- This customer believes Thames Water plan takes too long to implement
- They believe the adverse effects of climate change will have exacerbated the problem significantly by then, rendering the proposed solution- void

Caution, the percentages on this page are based on a relatively small qualitative sample size, they are shown to indicate the direction of sentiment only



Sewage treatment growth

Executive summary: Sewage Treatment Growth

Customer Concerns about sewage entering rivers

- All different customer groups are very concerned about raw sewage entering rivers (storm overflows). They are concerned that this sewage will lower the water quality, which in turn could endanger people, wildlife and the environment
- All different customer groups believe that due to the inevitable strain on the wastewater network via climate change and a rising population, proactively upgrading the sewer network is essential

Customer reactions to Thames Water's proposed approach

- Customers believe that building new treatment facilities and installing new equipment will effectively mitigate the issue of sewage entering rivers in these high-risk areas. They also appreciate that the bill impacts to customers are negligible
- However, customers want to better understand how nearby residents will be impacted by the works (the amount of extra noise and traffic that will ensue)
- Some customers also want to understand how much the issue of sewage entering rivers will be prevented by this enhancement, so they can better judge if they feel Thames Water is doing enough or needs to do more to prevent storm overflows
- There is also a common request for greater transparency on how this approach will be funded, as many feel that Thames Water should at least partly fund this from their own profits (particularly true of Future bill payers)

Customer support for Thames Water's proposed approach

- All different customer groups almost unanimously support Thames Water's plan to upgrade the sewage network across 13 sites between 2025 and 2030:
 - Most customers strongly support the plan: They see this as essential work with a realistic timeline and appreciate the bill impacts are negligible
 - Many customers somewhat support the plan: These customers support the plan but want more details on the level of disruption caused, and the overall contribution to solving the issue of storm overflows. Some want to know if this will be exclusively funded by a raise in customer bills
 - Few customers somewhat oppose the plan: They oppose this on ideological grounds, believing that customers should not pay for this enhancement

Context

Customers were informed:

- What sewage treatment is
- The process behind this
- That due to a rising population and climate change, there is greater risk of raw sewage (often diluted with rainfall) entering rivers through storm overflows
- Customers were also shown a visual example of a sewage treatment works and a storm overflow

What is sewage treatment?

Sewage treatment is the process of taking wastewater and removing solids and bacteria from it, so the water solution can be released safely back into rivers, preventing water pollution. The process is as follows:



As our population grows and our climate changes (more severe and sudden rainfall for example), sometimes there isn't enough room at Sewage Treatment Works to treat all the wastewater and rainwater that finds its way there. This can result in raw sewage (often diluted with rainfall) entering rivers through storm overflows. This can cause pollution to rivers and a hazard to plant, animal and human life.

Mogden Sewage Treatment Works, West London



A storm overflow



Customers are very concerned about raw sewage entering rivers because of the harm it causes to people, wildlife, and the environment; they see it as a top priority to address

All different customer groups are very concerned about raw sewage entering rivers

- Many believe that this practice will negatively impact customers by lowering the quality of water, which could be harmful to their health
- Customers are also concerned that polluted water could kill wildlife, and damage the environment
- When customers are told about the future demands of the system (climate change and a rising population) their concern intensifies, as many are aware of negative media coverage of Thames Water's performance in this area

All different customer groups believe proactively preventing storm overflows should be a major priority for Thames Water

- Customers believe that preventing storm overflows equates with protecting customers, wildlife and the environment, and view this as an essential function of any water company
- Customers therefore struggle to understand a scenario in which Thames Water does not take proactive measures to prevent sewage entering rivers

I would get horrified if they did not upgrade things since the problem will only worsen over time...

Female, 45-54, AB, BAME, London

It is not acceptable to not improve the sewage and wastewater systems as they do not currently comply with government targets.

Female, 65+, C1, White, Slough/Wycombe/ Aylesbury

I cannot imagine a scenario where you could decide not to upgrade the sewage system. At the very least we know that more people will be relying on this system over the next 50 years and right now it has insufficient capacity.

Male, 45-54, AB, White, London

It would be unacceptable to existing customers, and future generations, if 'nothing' was done to improve facilities...

Female, 55-64, DE, White, London

Context: Customers then assessed Thames Water's proposed initiatives to better manage sewage treatment

- Customers were introduced to the proposed enhancement of upgrading 13 sewage treatment works between 2025 and 2030
- Customers were informed of the impact this would have on their bill between 2025-2030 and were told that the bill increases shown were just for this one issue and that the inflation had also not been included in the costs shown
- Finally, customers were told that if no improvements are made, there will be more sewage overflows entering rivers in these areas, especially at times of heavy rainfall

How can Thames Water improve sewage treatment works?

Thames Water have identified 13 sewage treatment works that will need to be upgraded or expanded between 2025 and 2030 because of increased housing developments in these areas.

*Culham (Oxfordshire)	*Chalgrove (Oxfordshire)
*Arborfield (Berkshire)	*Andoversford (Gloucestershire)
*Didcot (Oxfordshire)	*Cassington (Oxfordshire)
*Wheatley (Oxfordshire)	*Bicester (Oxfordshire)
*Wantage (Oxfordshire)	*Stansted Mountfitchet (Essex)
*Basingstoke (Hampshire)	*Caddington (Bedfordshire)
*Aylesbury (Buckinghamshire)	

The upgrades would involve new treatment facilities and equipment being built and installed within the sewage treatment works. This might cause additional traffic and noise levels for the local community whilst construction takes place. It might also mean some houses are closer to the treatment works as it expands.

The impact on average customer bills to cover this investment would be £1.50 a year from 2025 to 2030.

The impact of making no improvements would be more sewage overflows entering the rivers in these areas, especially at times of heavy rainfall.



The illustration shows a green landscape with a river. On the left, there are several houses with brown roofs and blue roofs, connected by a road. On the right, there is a sewage treatment plant with several large circular tanks and a building. The river flows from the top right towards the bottom right.

Customers strongly support the upgrading of 13 sewage treatment works because they believe this will effectively mitigate sewage entering rivers in a realistic timeframe

Support for approach: *Thames Water will upgrade or expand 13 sewage treatment works between 2025 and 2030*

Support for this initiative is very strong with many feeling it's part of Thames Water's core responsibilities. Some customers place their trust in Thames Water because they are perceived to be the experts in this field, others do so as they feel the company is legally obligated to follow through with these enhancements



Low support

Moderate support

High support

Perceived strengths?

- Customers believe it is essential for sewer treatment works to be upgraded due to a rising population and climate change
- Customers feel that the approach of targeting areas most in need is sound
- They also believe Thames Water has the expertise to competently build the assets needed to reduce storm overflows significantly

Perceived drawbacks?

- Some customers are concerned about the disruption these enhancements will cause in the local area

In their own words

Seems to be able to help the issues caused by the increased housing and therefore increase water waste. ...it will help the environmental risk of the floods and water contamination over a large area.

Female, Future bill payer, C1, White, London

The works to be carried out will cause disruption. Also, , these new sewage works will be so very close to the new houses. Can this be healthy?

Female, 35-44, C1, BAME, London

Customers want to know exactly what the disruptions will mean for the local communities, and reassurance there will be no delays in implementing this enhancement

Most common concerns/ questions:

- Customers anticipate prolonged disruption and want to know what this will look like
- Customers want to know if planning permission is received for these sites, as they are concerned obtaining this may incur delays and extra cost
- Customers want greater clarity on how these enhancements will contribute to the overarching issue of storm overflows, to get a better idea of how impactful this is

What this means for Thames Water:

- Thames Water should reassure customers that the timeline will be honoured, and that disruption will be kept to a minimum.
- Thames Water should also communicate what other initiatives are in place to reduce storm overflows

There are several reasons why Thames Water may not be able to accomplish this in the stated time. Oftentimes large infrastructural government projects are plagued with red tape, delays and cost overruns.

Male, Future bill payer, C1, White, London

I always feel when new plans are proposed that some tailoring takes place before they are implemented.

Male, 35-44, DE, White, Waste only (Sutton & East Surrey)

Lesser concerns/ less frequently asked questions:

- Some customers want to know if this would be exclusively funded by an increase in customer bills (especially Future bill payers)

What this means for Thames Water

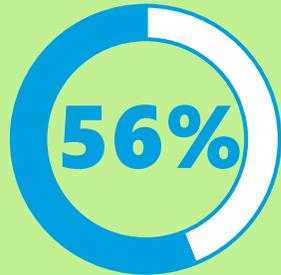
- Thames Water need to provide a more detailed breakdown of bill costs, with inflation included

I don't mind paying a little bit more for improvements... I usually get a bill with very little information about what is going on, so I don't feel engaged at all.

Male, 65+, C1, White, Waste only (Affinity)

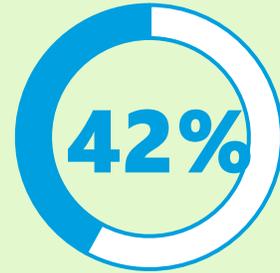
98% support Thames Water's plan because it is seen as a realistic and cost-effective approach to mitigate sewer flooding

51 customers strongly support Thames Water's plans in this area



- These customers believe Thames Water's approach will effectively mitigate sewer flooding in high-risk areas at a negligible cost for customers

38 customers somewhat support Thames Water's plans in this area



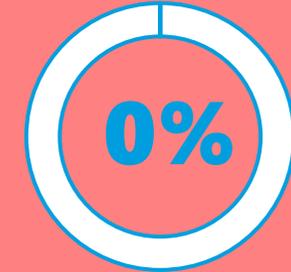
- These customers support the approach but want greater transparency on:
 1. The level of disruption that this will cause for residents
 2. How much sewage flooding this will prevent
 3. If this is funded exclusively from customer bills

2 customers somewhat oppose Thames Water's plans in this area



- These customers oppose the approach because they believe Thames Water should find other ways to fund the project that doesn't rely on increasing customer bills

No customers strongly oppose Thames Water's plans in this area



- There is no strong opposition to Thames Water's sewer-treatment enhancement plans



Bathing water

Executive Summary: Bathing Water

Customer Concerns about the quality of bathing water

- All different customer groups are disappointed that the water quality in Wolvercote is poor and believe this is largely due to sewer spills
- They believe Thames Water has not invested enough in the wastewater network and that there is detriment to plants and wildlife. They also value the mental health benefits to the community of having good quality bathing water
- However, they admit it is a secondary concern. They are much more concerned about poor water quality in rivers that Thames Water extracts water from, believing this could lower the quality of their drinking water

Customer reactions to Thames Water's proposed approach

- Most customers welcome Thames Water's plan to improve the water quality at Wolvercote to 'excellent' and support the designation of more bathing waters
- This is primarily because they feel the bill impacts for the positive environmental and societal improvements are negligible
- However, some feel resources are better allocated to higher priority issues that could negatively impact the quality of drinking water (sewage overflows in rivers that water is extracted from)
- Some want transparency in how much Thames Water will contribute to these enhancements and believe on principle, that Thames Water should fund at least part of these initiatives since they have underinvested in the past

Customer support for Thames Water's proposed approach

- Many support Thames Water's proposed approach to protect wildlife and provide local communities with enhanced health and wellbeing. Those who oppose feel more pressing concerns, like climate change, leaks, sewerage spills, and general network maintenance, should take precedence:
 - Many customers strongly support the plan: These customers believe that the bill impacts associated with protecting local wildlife/plants and improving the quality of life for residents is negligible
 - Many customers somewhat support the plan: These customers support the plan but feel it is not a priority
 - Few customers somewhat oppose the plan: Those who oppose feel more pressing concerns, like sewerage spills, and general network maintenance, should take precedence and don't like the idea of paying for an improvement they will not directly benefit from
 - Few customers strongly oppose the plan: These customers strongly oppose customer paying for this, and feel there are more pressing issues for Thames Water to address

Context

1. Customers were informed about what a designated bathing water area is
2. They were then told that Wolvercote Mill stream near Oxford was the first designated bathing water in a river within the Thames Water area and that after quality testing, it was classified as 'poor'
3. Customers were finally told that the status of designated bathing water may be lost if water quality tests fail for 3 years out of 5

What are designated bathing water areas?

- Designated bathing waters are areas of coastal or inland waterways that get tested for bacteria to let people know how safe it is for them to swim there. Local groups can apply to the Department for Environment, Food & Rural Affairs to have a stretch of water officially designated as a bathing water.
- In 2022 Wolvercote Mill stream near Oxford became the first designated bathing water in a river within Thames Water's area. The Oxford Rivers Project had applied for this designation with Thames Water supporting by monitoring water quality in the area.
- Later in 2022 after the first swimming season of water quality testing, the Wolvercote Mill stream was classified as 'poor'.
- The status of designated bathing water may be lost if water quality tests continue to fail for 3 years out of 5.



Thames Water's live map of storm discharges (sewage spills)



Source: Bathing water quality (data.gov.uk)

Customers then assessed Thames Water's proposed initiatives on improving and creating more designated water bathing areas

- Customers were informed how Thames Water propose to maintain their designated bathing water area to reach 'excellent' status
- Customers were also shown information on having seven more designated bathing water areas by 2030
- Customers were informed of the impact these options would have on their bill between 2025-2030 and were told that the bill increases shown were just for this one issue and that the inflation had also not been included in the costs shown

How can Thames Water improve to retain their designated bathing water area?

- Thames Water has an ambition to improve the water quality at Wolvercote Mill stream so the bathing water status is kept there. Thames Water would like to go beyond just 'sufficient' quality though (which is the minimum required to retain the bathing water status), and aim for 'excellent', the highest cleanest class of river water. This would require investment to reduce sewage spills or reduce the impact of sewer spills, by improving nearby sewage pipes and treatment works and/or by using natural ways of reducing river pollution.

The investment to get to an 'excellent' standard at Wolvercote Mill stream, by preventing sewage spills in the area would add 4p a year to average annual bills for all customers from 2025-30



2

How can Thames Water improve to gain further designated bathing water areas?

- Meanwhile, more and more swimming groups across the UK are applying for their local stretch of river to be designated as a bathing water. Potentially there could be 7 more designated areas in the Thames Water area by 2030.
- Thames Water plans to support any such application by supplying water quality tests, and it would also aim for the water quality to be at least 'sufficient', meeting minimum standards. This would require investment to reduce sewage spills or reduce the impact of sewer spills, by improving nearby sewage pipes and treatment works and/or by using natural ways of reducing river pollution.

The investment needed to support these extra applications in this way would add £1 a year to average annual bills for all customers from 2025-30



3

Customers are disappointed that the quality of water at Wolvercote is 'poor'; they want this improved as long as it is not prioritised over other initiatives (e.g. reducing sewer flooding)

All customer groups are disappointed that the water quality in Wolvercote is poor and believe this is largely due to sewer spills

- Many customers are aware that Thames Water has had some form of negative press coverage on the practice of sewer spills
- They see the practice of sewer spills as the cause of the poor water quality in Wolvercote
- They believe Thames Water has not invested enough in the wastewater network and are disappointed Wolvercote is in poor condition

They believe that it would be a shame for the community to lose the mental health benefits of the bathing water area, and for plants and wildlife to perish, but admit it's a secondary concern

- They are much more concerned about poor water quality in rivers that Thames Water extracts water from, believing this could lower the quality of their drinking water
- Those who either swim or have friends and family that swim in rivers, etc are much more likely to have a higher concern for this issue
- However, as most customers will not directly benefit from this bathing water area, they admit they are not personally concerned about this

There have been several instances of sewage polluting the River Thames in the past few years and obviously this has serious implications for the health of the river and all of its users (human, animal and plant). I suspect that Thames Water has again failed to make the necessary investments.

Female, 45-54, DE, White, Waste only (Sutton & East Surrey)

As long as plants and wildlife can survive, it doesn't need to be clean for humans as we source water from different places.

Female, 18-24, C1, BAME, London

It would be a terrible shame if they don't improve the standards and they become unsafe to swim in. I do have friends that swim in local lakes.

Female, non-household customer, Salon owner, 1-10 employees, London

Drinking water supply should be prioritised over bathing water.

Female, 55-64, C1, White, Slough/ Wycombe/ Aylesbury

Customers welcome what they perceive as negligible bill impacts, but want to know what proportion of the proposed enhancement is being funded by Thames Water profits

Most common concerns/ questions:

- Some feel that the underlying cause (attributed as sewer spills) of poor-quality bathing water is due to Thames Water not historically investing enough money in the wastewater network
- Customers support Thames Water's plan to improve the number and quality of bathing water areas and although they think the bill impacts (£1.04 per year in total) are negligible, they want to know what proportion of this project is being funded by Thames Water

What this means for Thames Water:

If Thames Water provides greater context into how customer bills have been historically distributed towards initiatives aimed at protecting customers from sewer spills, it will likely elicit greater support

Lesser concerns/ less frequently asked questions:

- Some are concerned about the environmental and wildlife impacts if bathing waters are not maintained and/or improved

What this means for Thames Water

- Thames Water may find more support for these plans if more detail is given on the positive environmental and wildlife impacts that will arise from an improvement in bathing water quality

...I would be relatively comfortable paying a higher bill if changes were being made and the impact was visible. There's nothing worse than paying more for something that doesn't change/improve...

Female, 25-34, C1, White, Waste only (Affinity)

Just as we are discussing price rises what about the extortionate shareholders payouts every year ...it should be reduced payouts rather than price increases. Thames Water need to improve the water quality of the Thames full stop.

Male, 35-44, C1, BAME, Slough/ Wycombe/ Aylesbury

...I believe we are duty-bound to ensure those creatures/plants that need water as a place to live/survive... do not have their world damaged by humans.

Female, 55-64, AB, White, Slough/ Wycombe/ Aylesbury

The works to be carried out will cause disruption. Also, , these new sewage works will be so very close to the new houses. Can this be healthy?

Female, 35-44, C1, BAME, Waste only (Essex & Suffolk)

All different customer groups generally support improving the water quality at Wolvercote Mill and designation of more bathing waters but largely view these enhancements as 'nice to have'

Support for approach: *Improve water quality at Wolvercote Mill to 'excellent' by reducing sewage spills in the area and support application of 7 more designated bathing water areas by 2030, aiming for water quality to be at least 'sufficient'*

Many support both approaches for the same reasons: the benefits to wellbeing, the environment, and wildlife. However, some are opposed to funding something they won't directly benefit from and that other issues should take precedence



Low support

Moderate support

High support

Perceived strengths?

- Enhanced well being for local communities
- Protects environment and wildlife
- Negligible bill impacts on customers

Perceived drawbacks?

- On principle, some don't think customers should exclusively fund an enhancement that will only benefit some, and one in which the underlying cause is due to a historic lack of funding (i.e. 'Thames Water needs to take some responsibility here')
- Some don't support customers being asked to pay for this plan
- Others feel there are more pressing issues (sewage overflows in rivers that water is extracted from) needs to take precedence

In their own words

If it's that small amount on annual bills, then I am up for it. It's a small price to pay if it comes as guaranteed to keep swimming areas free from sewage spillage.

Female, non-household customer, Office manager, 1-10 employees, Waste only (Affinity)

[Supported] for ecological reasons and enhanced quality of life.

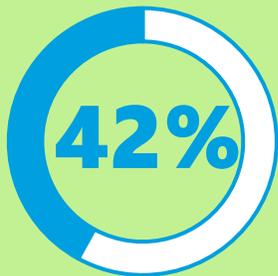
Male, non-household customer, MD, 1-10 employees, Waste only (Affinity)

...I wouldn't support it increasing for this reason bathing waters aren't a priority right now

Female, 55-64, DE, White, London

82% support Thames Water's approach because of the increased wellbeing of nature and residents; some feel these are 'nice to haves' and so not a priority

38 customers strongly support Thames Water's plans for bathing water quality



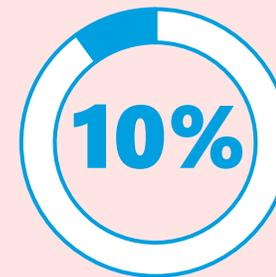
- These customers believe that the bill impacts associated with protecting local wildlife/plants and improving the quality of life for residents is negligible

36 customers somewhat support Thames Water's plans bathing water quality



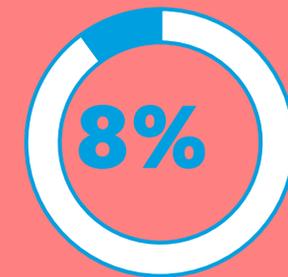
- These customers support the approach but view it as a 'nice to have' and believe there are more pressing issues that should take precedent
- Some question if customers (especially those outside of the areas that will benefit) should fund this

9 customers somewhat oppose Thames Water's plans bathing water quality



- Those who oppose feel more pressing concerns, like sewage spills and general network maintenance, should take precedence and don't like the idea of paying for an improvement they will not directly benefit from

8 customers strongly oppose Thames Water's plans bathing water quality



- These customers strongly oppose customer paying for this, and feel there are more pressing issues for Thames Water to address



Appendix



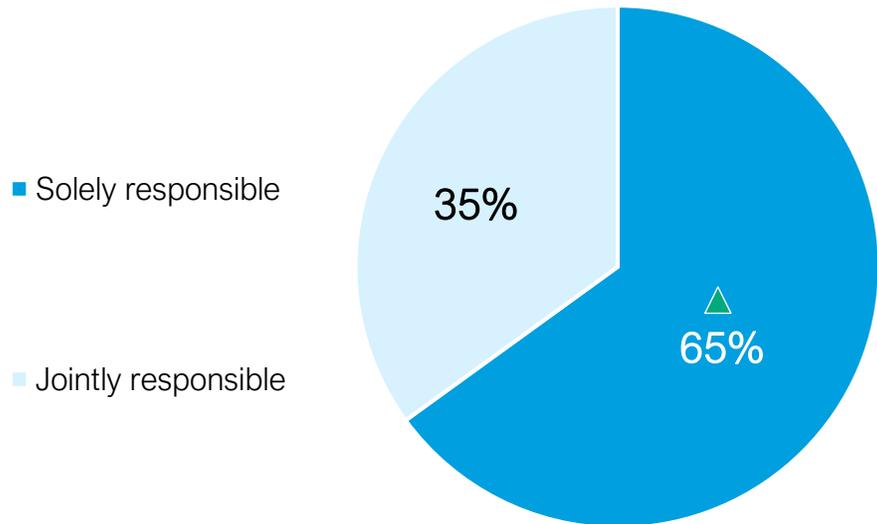
Quantitative survey - Demographic profiling

Account holder responsibility

The majority of participants are responsible for their own accounts, for households and non households.

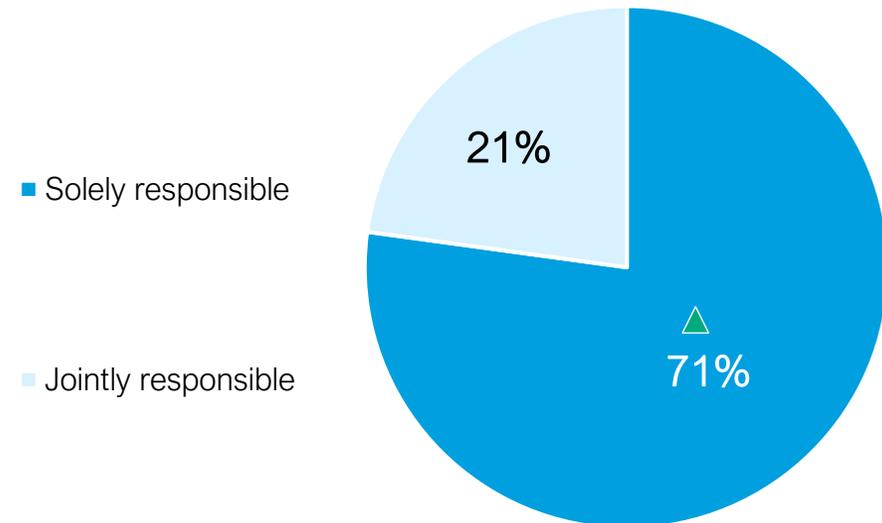
Household
n = 1000

Are you the person responsible for paying your water and sewage bill for your household?



Non-household
n = 204

Which of the following best describes your level of responsibility for managing the supply of water and wastewater services at your organisation's property?



THAMES WATER ENHANCEMENT CASE, MAY 2023.

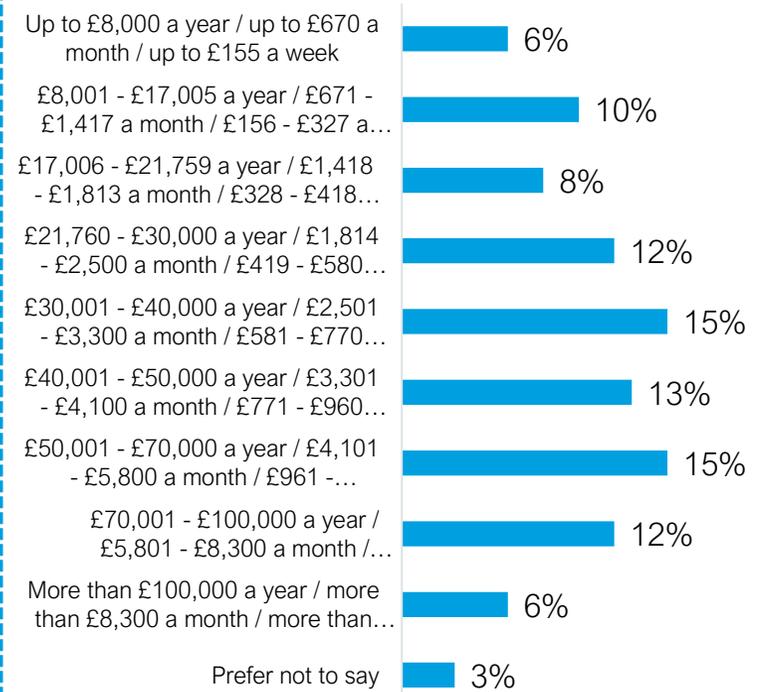
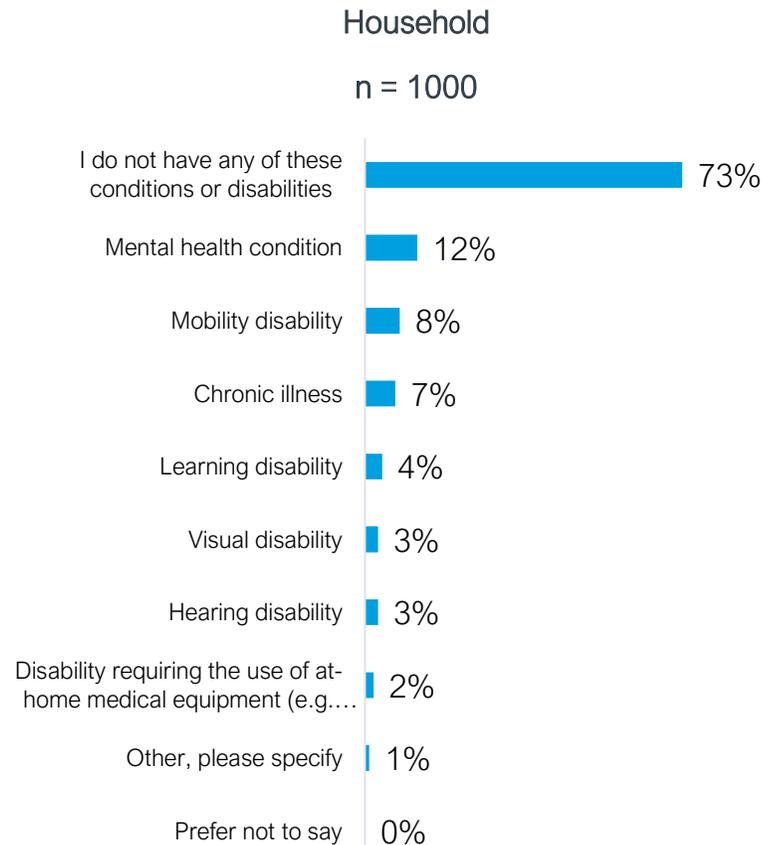
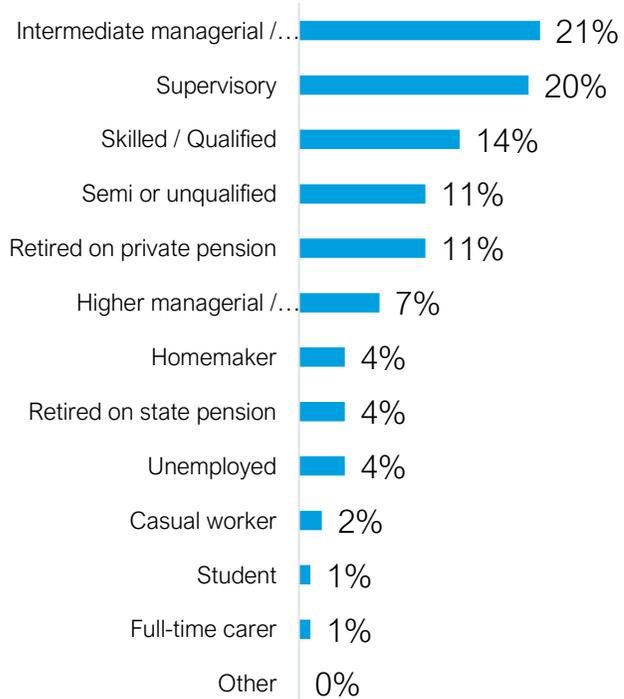
Q5. Are you the person responsible for paying your water and sewage bill for your household? Q7. Which of the following best describes your level of responsibility for managing the supply of water and wastewater services at your organisation's property?

Base: Households (n=1000), Non-households (n=204)

▲ ▼ Significant difference at 95% conf. level.

Household customers

More than half of the participants are skilled or qualified workers with an average household income of between £21,760 - £70,000 a year.



THAMES WATER ENHANCEMENT CASE, MAY 2023.

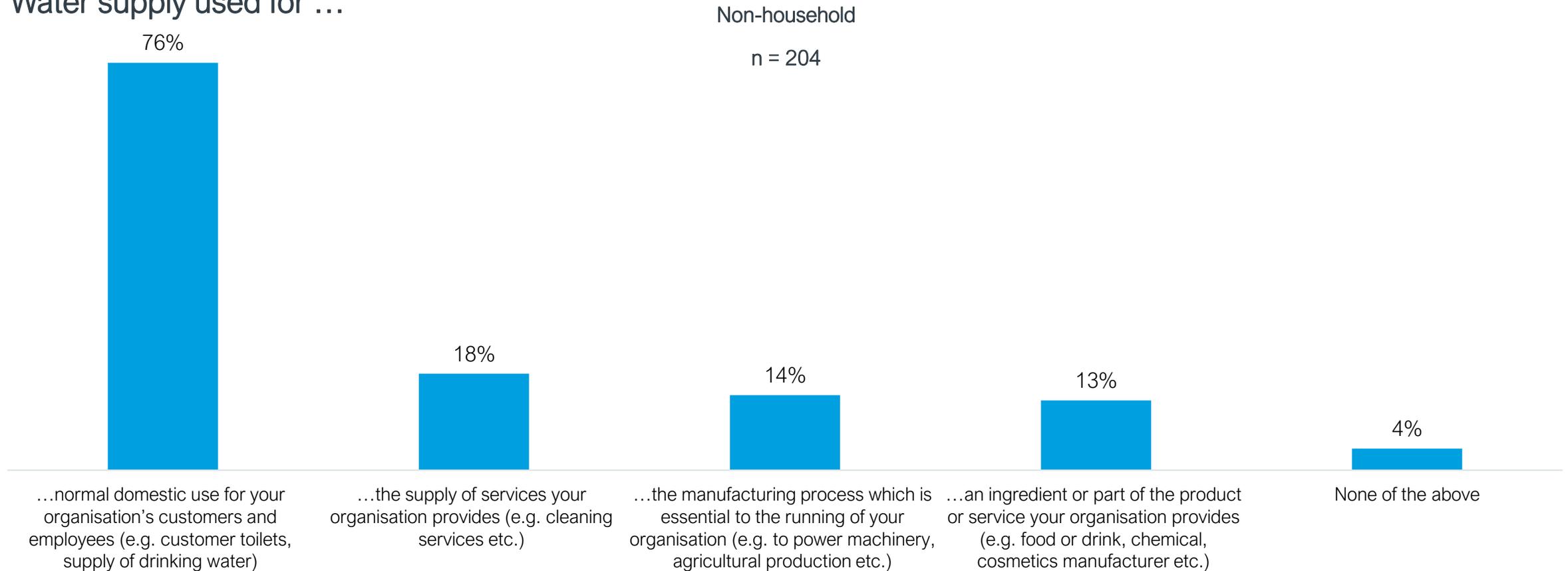
Q12. Which of the following best describes your employment role? Q14. Do you consider yourself or anyone within your household to be officially disabled defined by the Equality Act 2010 as having 'A physical or mental impairment which has a substantial and long-term adverse effect on a person's ability to carry out day-to-day activities'? Q15. What is the combined gross income of your household? By this we mean how much money do all the people in your household have coming in, before Tax and National Insurance deductions. We would like you to include any benefits received or benefits paid directly to your landlord as part of your rent (e.g. Housing benefit)

Base: Households (n=1000)

Non-household customers

Around a quarter of non-households use water for more than domestic-style use (e.g manufacturing process, ingredients, part of their service)

Water supply used for ...



THAMES WATER ENHANCEMENT CASE, MAY 2023.

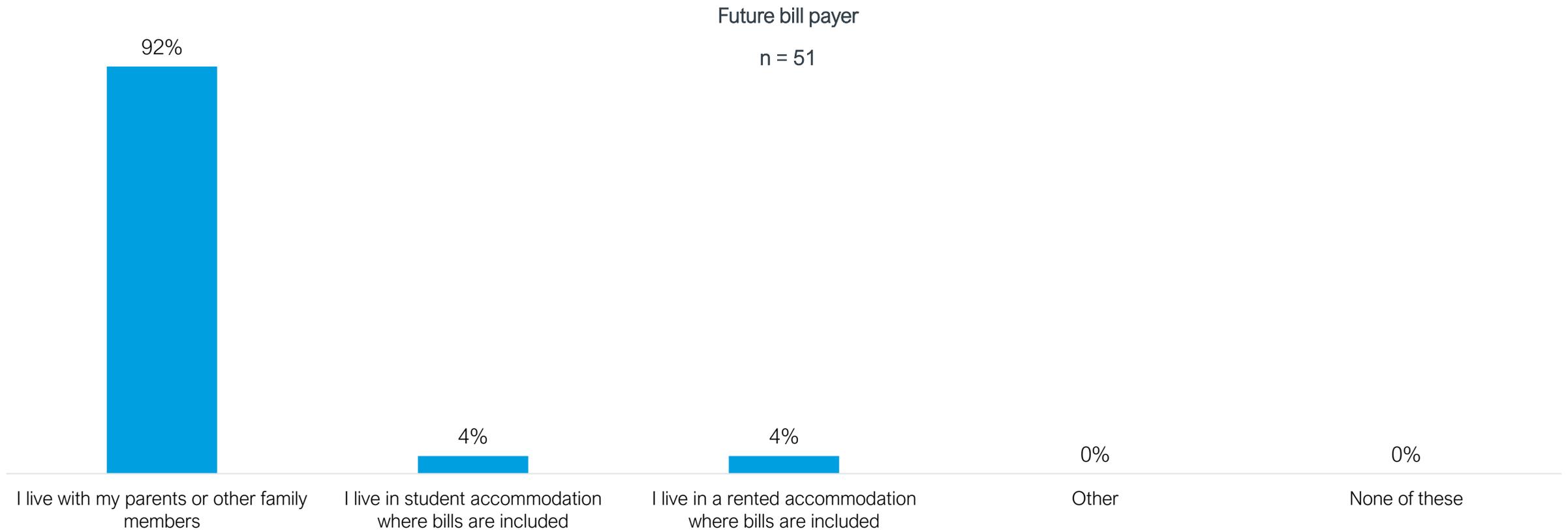
Q11. Which of the following options apply to you, in relation to the supply of water to your business?

Water is vital for...

Base: Non-households (n=204)

Future bill payers

About 9 in 10 future bill payers currently live with their parents or other family members.



Household customer demographics

Vulnerability in household	Unweighted total
Mobility disability	84
Chronic illness	73
Mental health condition	127
Mobility disability and chronic illness	157
Hearing disability	35
Visual disability and mobility disability	117
None	710

Ethnicity	Unweighted total
White British	724
White and Asian	19
White and Black African	8
White and Black Caribbean	14
Black African	34
Black British	31
Black Caribbean	24
Indian	58
Pakistani	23
Chinese	10
Bangladeshi	17
Asian other	19
Black other (not specified)	1
Not stated	18

THAMES WATER ENHANCEMENT CASE, MAY 2023.

Q14. Do you consider yourself or anyone within your household to be officially disabled defined by the Equality Act 2010 as having 'A physical or mental impairment which has a substantial and long-term adverse effect on a person's ability to carry out day-to-day activities'? If yes, which of the following disabilities do you consider yourself or anyone within your household to have? Please select all that apply.

Q13. Which ethnic group do you consider you belong to?

Base: Households (n=1000)

Household customer locations

Region	Unweighted total
London	640
<i>North East London</i>	53
<i>North West London</i>	130
<i>South East London</i>	111
<i>South West London</i>	127
<i>Central North London</i>	77
<i>Central South London</i>	52
<i>Lee Valley</i>	90
Thames Valley and Home Counties	360
<i>Central Bedfordshire, Buckinghamshire, Slough, Luton</i>	54
<i>Hertfordshire</i>	9
<i>Oxfordshire, Swindon, Wiltshire, Gloucestershire, Warwickshire</i>	83
<i>Surrey</i>	80
<i>West Berkshire, Reading, Wokingham, Bracknell Forest, Windsor Maidenhead, Hampshire, West Sussex</i>	133
<i>Essex and Thurrock</i>	1



Research materials



Community screener



Enhancement Case Insight

RECRUITMENT SCREENER
VERSION NUMBER 2

VERVE
Energising Insight

22 March 2023

VERVE

Thames Water
Customer Voices



Scripting specifications			
Job code	7436	Enhancement Case Insight	Qualitative community
Market and Languages	UK		
Sample source	<input type="checkbox"/> Panel <input type="checkbox"/> Client List <input type="checkbox"/> 3rd Party <input type="checkbox"/> Open link	If 'Client List', specify pipe ins	All customers: Clean + waste customers only and waste-only
Stimulus path	n/a		
Scripting topic	n/a		
Member Sat Gc	n/a		

Screening invitation email

Subject line	Have your say on your future water supply
Pre header	Take part in research about the future of your water and wastewater services
<p>Hi {FirstName},</p> <p>We are looking for people to take part in our latest research project where we are asking for members to give their opinions on important water and wastewater topics.</p> <p>The research will involve logging into an online platform where we will ask you to read some information about how Thames Water propose to handle a range of different water and wastewater challenges for the future. You will then provide feedback on what this means to you as a customer, your community and the Thames Water area.</p> <p>The research will take place between Tuesday 11th and Monday 24th April and will include 5 to 7 days worth of activities, we anticipate that it will take a maximum of 20 minutes each day to complete all of the activities.</p> <p>It is a great opportunity to have your say on important water issues but also, everyone who takes part will receive a £50 Voucher Express voucher that can be used at a range of high street and online stores. Places are limited so click here to complete a short questionnaire to register your interest.</p> <p>[Take part button]</p> <p>Kind regards</p> <p>Customers voices team</p>	

Energising Insight

Enhancement Case Insight - 3 Jun 23

VERVE

Thames Water
Customer Voices



SAMPLE CRITERIA:

Wastewater community - requirements

Demographic	
Male	50
Female	50
16-24 Future Bill Payers	10
25-34	20
35-44	20
45-54	20
55-64	15
65+	15
London	60
Thames Valley & Home Counties	40

Demographic	
ADCC1	60
C2DC	40
White	25 Lond 25 TV
BAME	25 Lond 25 TV
Vulnerable (even rate of health and financial)	20
Non-vulnerable	60
Clean/home	65
Waste only	20
Non household customers under 10 employees	15
Non household customers 10+ employees	5

Energising Insight

Enhancement Case Insight - 3 Jun 23



Water community - requirements

Demographic	
Male	50
Female	50
10-24 Future Bill Payers	50
25-24	30
25-44	30
45-54	30
55-64	15
65+	15
London	70
Thames Valley & Home Counties	30

Demographic	
AGC1	60
CJDC	40
White	40 Lond 25 TV
QAMC	30 Lond 5 TV
Vulnerable (vies rltz of health and financial)	30
Non-vulnerable	30
Clean/unsafe	100
Non household customers under 10 employees	15
Non household customers 10+ employees	5

Intro

Thank you for your interest in taking part in our research on the future of your water and wastewater services.

Please click below to get started.

SECTION A – SCREENING

PIPE IN FROM CUSTOMER VOICES

- Gender
- Age
- London/ Thames Valley & Home Counties
- WRZ and NON-WRZ
- Vulnerable
- NPS
- Social Grade
- Ethnicity

A8K ALL – Single Code – DO NOT RANDOMISE

A1a. We are looking for people to take part in research which will involve logging into a text-based community and completing some activities. The activities will involve reading information about the future of your water and wastewater services and some of the improvements that could be made.



The community will be live from Tuesday 11th and Friday 24th April, there will be 5 to 7 days' worth of activities and we anticipate that it will take a maximum of 20 minutes each day to complete **all** of the activities.

If you are selected and complete all the activities, you will receive a £90 Voucher Express voucher for your time. We will let you know by Thursday 6th April if you have been chosen to take part.

Are you willing and available to take part?

1. Yes, I am free, and I'd like to take part.
2. No, I cannot take part **GO TO END/SCREENOUT TEXT**

A8K ALL – Single Code – DO NOT RANDOMISE

A1b. The online community will be hosted by our trusted third-party supplier, Recollective.

Please note that your email address will be shared with Recollective, **in order** for you to be invited to join the community. Comments, activity results, **videos** and images you choose to upload/share during the community will be held on the Recollective platform for 3 months. To read **Recollective's** privacy policy, please click here **Recollective** (<https://recollective.com/privacy>)

We may also share comments, videos and images with Thames Water which will be used to help them make decisions on their future plans. You can read their privacy policy [here](https://www.thameswater.co.uk/legal/privacy-policy) <https://www.thameswater.co.uk/legal/privacy-policy>.

Are you happy for us to share your details with Recollective and in addition share any video and image content you share with Thames Water for research purposes only?

1. Yes, I am happy for you to share my details and any comment / video / image contact I upload **GO TO Q1**
2. No, I am not willing for you to share my details and any comment / video / image contact I upload. **(This means you will not be able to take part in this research) GO TO END/SCREENOUT TEXT**

Please note that there are a activities in this community, but you will be able to submit these as your answers in these ways if you wish.

A8K ALL – MULTICODE – DO NOT RANDOMISE

Q1. The research will be conducted on an online platform – what device are you likely to use to complete the research if you are selected? **(Tick all that apply)**

1. Smart phone
2. Tablet
3. Laptop/PC
4. None of the above **(ANCHOR, EXCLUSIVE, SCREEN OUT)**

A8K ALL- MULTICODE- RANDOMISE

Q2. Have you experienced any of the following related to your water company in the last few years?

1. Issues paying the bill
2. Went on a meter
3. Had no water or low water pressure
4. Reported a leak in the road



5. Had a leak on my property
6. Water tasted/looked funny
7. Had sewage flood your house or garden
8. Had water from a burst water pipe flood your house or garden
9. Made a complaint
10. Been swimming in a local river
11. Seen pollution in a local river

A8K ALL – SINGLE CODE

Q3a. To what extent do you agree or disagree with these statements about Thames Water?

Please select one answer.

TOP BREAK 8, RANDOMISE

- a) Thames Water listen to their customers to better understand their needs
- b) Thames Water take care of the environment
- c) Thames Water invest in new ways to improve their service, preparing us well for the future
- d) Thames Water take ownership of their customer problems
- e) Thames Water only care about profits
- f) Thames Water are a responsible company
- g) Thames Water take providing an essential service seriously
- h) Thames Water play an active role in the community they work in

DOWNBREAK 8/ SINGLE CODE

1. Strongly agree
2. Slightly agree
3. Neither agree nor disagree
4. Slightly disagree
5. Strongly disagree

Q3b. Please indicate the extent to which you agree or disagree with the following statements that other people have made about Thames Water.

TOP BREAK 8, RANDOMISE

1. I trust Thames Water to provide water and wastewater services
2. It's easy to deal with Thames Water
3. I have a good relationship with Thames Water
4. Thames Water is a fair and honest company

DOWNBREAK 8/ SINGLE CODE

1. Strongly agree
2. Slightly agree
3. Neither agree nor disagree
4. Slightly disagree
5. Strongly disagree

A8K ALL, OPEN END, FORCED

Q4. Tell us in a couple of sentences about your thoughts on saving water in your home.

We'll need a few details from you to set you up on our community platform if you are selected. Please complete the details below.



ASK ALL, OPEN TEXT

C3b. Finally, please choose a username to use for the duration of the pop-up community. You can choose whichever username you like, but please be sure not to make it something that identifies you personally. Use a combination of your first and last name.

Don't worry about remembering your username: we will confirm it if you take part in the community. We'll also be sure to amend any usernames that identify you personally, to protect your identity. OPEN TEXT BOX.

SCREEN OUT CONDITION: I'm afraid you don't qualify for this study but please keep an eye out for new projects coming soon.

Closing text

Thank you for your interest. If you are chosen to take part, we will contact you via email by Thursday 6th April.



**EMAIL TO SEND TO SUCCESSFUL RESPONDENT
WE'LL NEED A SEPARATE EMAIL FOR THE WATER AND WASTEWATER CUSTOMER**

WATER INVITE

Subject line	Future water services online community
Pre header	We would like you to take part in our research
Hi (FirstName),	
Thank you for your interest in taking part in our research for Thames Water about future water services. We are pleased to tell you that we have selected you to take part in the online community.	
The community will open on Tuesday 11 th April and will stay open until Monday 24 th April with 5 days worth of activities which we estimate will take up to 20 minutes each day and so there is plenty of time to complete all of the activities.	
During the research we will ask you to read some information on the future of your water services and some of the improvements that could be made. We want you to feedback your thoughts on what it means to you as a customer, your community and the whole Thames Water catchment.	
On completion of all the activities you will receive a £50 Voucher Express voucher.	
Your community moderators will be Ronan, Emily, Maggie and Maggie – experienced qualitative researchers from consumer insight agency Verve.	
If you have any questions about this community or the goal of this research project, please send an email to Ronan at R.Hegarty@addderve.com or Emily at E.Tufton@addderve.com .	
If you have any questions about the incentive offered for this project or when it will be sent, please contact us at daire@vervevoices.co.uk	
To let us know that you are going to take part in the research, please click the link below and set up your profile. If you do not set up your profile by Friday 14 th April we will assume that you no longer wish to take part and will offer your place to someone on the reserve list	
Thank you again for helping us with this project and we look forward to meeting you in the community	
Thanks Customer Voices Team	



WASTEWATER INVITE

Subject line	Future wastewater services online community
Pre header	We would like you to take part in our research
Hi (FirstName),	
Thank you for your interest in taking part in our research for Thames Water about future wastewater services.	
We are pleased to tell you that we have selected you to take part in the online community.	
The community will open on Tuesday 11 th April and will stay open until Monday 24 th April with 7 days' worth of activities, which we estimate will take up to 20 minutes and so there is plenty of time to complete all of the activities.	
During the research we will ask you to read some information on the future of your wastewater services and some of the improvements that could be made. We want you to feedback your thoughts on what it means to you, your community and the whole Thames Water catchment.	
On completion of all the activities you will receive a £50 Voucher Express voucher.	
Your community moderators will be Ronan, Emily, Maggie and Maggie – experienced qualitative researchers from consumer insight agency Verve.	
If you have any questions about this community or the goal of this research project, please send an email to Ronan at R.Hegarty@addderve.com or Emily at E.Tufton@addderve.com .	
If you have any questions about the incentive offered for this project or when it will be sent, please contact us at daire@vervevoices.co.uk	
To let us know that you are going to take part in the research, please click the link below and set up your profile. If you do not set up your profile by Friday 14 th April we will assume that you no longer wish to take part and will offer your place to someone on the reserve list	
Thank you again for helping us with this project and we look forward to meeting you in the community	
Thanks Customer Voices Team	



Waste Water Community discussion guide



ENHANCEMENT CASE INSIGHT – WASTEWATER

POP-UP COMMUNITY DISCUSSION GUIDE FOR WASTE
WATER

VERVE
Energising Insight

2 JUNE 2025

VERVE

About this project

As Thames Water builds its Business Plan it has identified some topics gaps in insight needed to demonstrate how customers feel about various enhancement cases and where they would prioritise investment. The topics covered are complex and it is likely that most customers are unaware of these issues or of what is required to solve these challenges. Therefore, a methodology that allows participants space to learn and form educated opinions is required.

A pop-up community using a deliberative approach to educate participants so they can make an informed judgement on the topics of Water and Wastewater Requirements:

- Sewage treatment growth
- Infiltration reduction
- Sewer flooding resilience
- Improving river health
- Enhancing bathing waters

Research Objectives

The overall objective is to get customer opinion on how Thames Water intends to address current network challenges and if there is [wastewater](#) to fund them. There are specific objectives tied to the different Enhancement Case:

Sewage treatment growth:

- Ascertain if customers support the criteria/principles Thames Water have used, to select the types of schemes and programme of solutions to improve the sewer network.
- Ascertain if customers support Thames Water selected programme of solutions.

Infiltration reduction:

- Which of the three potential solutions (if any) do [customers](#) support:
 1. Refining sewers
 2. Increasing storage capacity
 3. Increasing treatment

Sewer flooding resilience:

- Do customers want to spend more not to mitigate the forecast impact of growth and climate change on flooding on our network in the future.

Improving river health:

- Rethinking rivers: Is there explicit support for the alternative collaborative approach to delivering Thames Water environmental outcomes instead of delivering the current programme?
- Wider environmental outcomes: Do customers support us considering best value actions that are not the absolute cheapest available but offer additional environmental benefits?

Enhancing bathing waters:

- Inland bathing waters: Do customers support going above 'sufficient' towards 'excellent' for the one additional bathing water area being created, and achieving a 'sufficient' level of quality at sites that are designated, even if Thames Water don't promote them?

VERVE

Welcome Page

Homepage welcome text

Hello and welcome to our community!

Welcome... Over the next few [days](#) we want to share some information on the wastewater network that removes sewage and other wastewater from homes and businesses and ask your views on how you think Thames Water should manage that system in the future. We want to understand your views as a bill paying customer.

Future bill payer welcome placeholder- Over the next few days we want to share some information on the wastewater network that removes sewage and other wastewater from homes and businesses and ask your views on how you think Thames Water should manage that system in the future. We know you don't pay bills right now but please base your answers as though you would be (because you may have to in the [not-too-distant future!](#))

Business customer welcome placeholder- Over the next few days we want to share some information on the wastewater network that removes sewage and other wastewater from homes and businesses and ask your views on how you think Thames Water should manage that system in the future. We want to understand your views as a business customer. Please also note that you will see mentions of customer bills and future [bill](#) impacts throughout this research. These are based on average annual household water and wastewater bills (E496 currently) rather than business bills, so the values could be different for your [business's](#) [capacity](#). So for the purposes of this research, please think about the [principle](#) of any bill increases mentioned, which will be on top of the average household bill.

Before we begin, we thought it would be important to tell you a bit more about this research:

Every five years, water and sewerage companies take part in a Price Review. They plan out the activities they will undertake over a five-year period to deliver the service that customers expect, and any impacts on the bill that those activities might have. These activities range from delivering customer services, managing the water and sewerage networks, reducing carbon emissions, and making a difference in local communities (including the natural environment such as rivers). These five-year plans are presented to Ofwat, the water and sewerage industry regulator, which has the power to accept or reject each company's plans and proposed bill impacts. The current Price Review covers activities planned for the period 2025-2030.

Water and sewerage companies must [consult](#) with their customers about their plans and reflect this in their [plans](#).

Thames Water is committed to improve its network to better meet the needs of customers now and in the future. Thames Water have identified a [range](#) of potential improvements to better manage the water and sewerage networks (including repairs and [replacements](#)).

	<p>This research is about one element of Thames Water's price review, specifically the wastewater and sewage network. We are looking for your feedback on Thames Water's plans in this area. All of your feedback will be taken account of within a report written by Verve, and decisions about what course of action Thames Water may take will be influenced by your comments.</p> <p>There will be some information to show you along the way, and we'd ask you to read this carefully. We'd like you to understand the information presented so that you are able to give an informed view, while considering the issues involved.</p>
Moderator Intro	<p>"Hello, we are the researchers you'll be speaking to! We are really looking forward to meeting you and getting started with some great new activities! If you have any questions or need to get in touch with us, please drop us a line here and we'll get back to you as soon as we can."</p>

Discussion guide

Task details	Text
<p>Day 1- The Wastewater Network and You</p>	
<p>An Introduction to the Wastewater Network</p> <p>Day(s) & order: 1.1</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Firstly, we want to remind you of the area that Thames Water serves and to show you how the wastewater network operates, from sewage and wastewater leaving homes and businesses right through to it being treated and returned safely to rivers and other waterways.</p> <p>You are being asked to give some early input into how potential improvements to this network could benefit customers and the wider environment.</p> <p>We will be:</p> <ul style="list-style-type: none"> Sharing with you some information about what can happen when the sewage network becomes overwhelmed and potential improvements to ensure this is prevented as much as possible. You will see some potential options to improve the network and you will discuss what you would favour and why. <p>(Day 1 811m shown here)</p> <ul style="list-style-type: none"> We'd now like you to answer the following question: Are there any specific challenges in the wastewater network that you are aware of at present? What are they? Have you heard or read anything about wastewater networks and the treatment of sewage in recent times? Do you have any concerns in this area? And what would you like to see Thames Water do to address these concerns?

<p>Introduction to sewers and why issues occur in the network</p> <p>Day(s) & order: 1.2</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Now that you have learned about what happens to sewage and wastewater when it leaves your property, we want to show you some more information about how sewers work and why sewer flooding and storm overflows happen.</p> <p>(Day 1 811m shown here)</p> <ul style="list-style-type: none"> What are your first impression of the problems that can be caused by sewer flooding and storm overflows? Which of the types of incidents above do you think Thames Water should focus on preventing most? Why do you say that?
<p>1.8 Impacts of sewer flooding and overflow,</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Now that we have learned about the sewer network and how it can flood and overflow, we are going to show what this means for customers, WJL16 and the natural environment</p> <p>(Day 1 811m shown here)</p> <ul style="list-style-type: none"> Which of the types of incidents above do you think Thames Water should focus on preventing most? Why do you say that?
<p>Day 2- Sewage Treatment Growth (TOPIC 8 TO BE SHOWN IN DIFFERENT ORDER 8 PER CUSTOMER)</p>	
<p>Title: Current issues of sewage treatment</p> <p>Day(s) & order: 2.1</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Today we are going to talk about potential upgrades to the sewage system to make sure that it can prevent storm overflows and sewer spills at present and in the future. You will learn:</p> <ul style="list-style-type: none"> What a sewage treatment growth upgrade is and information on the 13 sites that Thames Water believe are in most need of an upgrade. We have also attached a PDF of everything you learned in day 1 should you need to refer to it while discussing this topic. <p>(Sewage treatment+ day 1 811m shown here)</p> <ul style="list-style-type: none"> What are your reactions to this information? Does anything surprise you? How would you feel if Thames Water decided not to upgrade the sewage network? Is it acceptable or unacceptable to customers, WJL16 and the wider environment? Talk us through your reasoning here. Do you have any concerns about implementing sewage treatment growth upgrades in the 13 sites?
<p>Title: Proposed enhancements to better manage sewage treatment</p> <p>Day(s) & order: 2.2</p> <p>Allocation: e.g. All</p>	<p>(Sewage treatment 811m shown here)</p> <ul style="list-style-type: none"> What are your initial reactions to this plan? How important/not important is it to you that Thames Water make this improvement from 2025? Why? Do you trust that Thames Water will be able to do this? Why/why not? <p>For context, the average household water and wastewater bill for Thames Water customers is currently £456 (so that amount may be higher or lower</p>

<p>Task type: Private individual responses (forum discussions)</p>	<p>for different customers, depending on things like having a water meter or being a business customer).</p> <p>Please also keep in mind that the bill costs we're showing are just for this one issue. Other changes to bills from 2025 to 2030 could see an additional £38 per year to maintain and improve the day-to-day water and wastewater service. On top of this, it could cost up to another £28 per year if Thames Water makes further improvements to the water and wastewater service for the longer term (see Day 3 the improvements mentioned in this research).</p> <p>Finally, inflation is not included in the future costs shown.</p> <ul style="list-style-type: none"> How do you feel about the bill increase? Do you think it's worth it based on everything you've read? Is there anything unclear about this, or anything else you'd like to know that would help you make a better-informed opinion about this?
<p>Title: Your conclusion on Thames Water's proposed enhancements to enhance sewage treatment</p> <p>Day(s) & order: 2.3</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Overall, after considering the benefits and costs for you as a customer, do you support or oppose Thames Water's proposal in this area?</p> <p>(Sewage treatment 811m shown here)</p> <ol style="list-style-type: none"> I strongly support the plan. I somewhat support the plan. I somewhat oppose the plan. I strongly oppose the plan. <ul style="list-style-type: none"> Please tell us the reasons for your answer.
<p>Day 3- Infiltration Reduction (TOPIC 8 TO BE SHOWN IN DIFFERENT ORDER 8 PER CUSTOMER)</p>	
<p>Title: Current issue of sewer infiltration</p> <p>Day(s) & order: 3.1</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Today we are going to talk about current issues of groundwater sewer infiltration and what Thames Water proposes to do to protect the sewer system for the future.</p> <p>Please read the attached information to learn:</p> <ul style="list-style-type: none"> The predicted amount of sewer overflows in the future and the disruption this will cause if Thames Water do not make changes. Thames Water's commitment to rapidly reduce sewer overflows by investing in future technology. We have also attached a PDF of everything you learned in day 1 should you need to refer to it while discussing this topic. <p>(Infiltration+ day 1 811m shown here)</p> <ul style="list-style-type: none"> What are your reactions to this information? Does anything surprise you? Do you think Thames Water should be taking these incidents seriously or not? Do you think Thames Water have historically done enough to minimise this issue or not? Why/why not?

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	<ul style="list-style-type: none"> How do you feel about Thames Water's commitment here? Does it feel about right, too much or not enough? Is there anything else you think Thames Water should be doing? How concerned or unconcerned are you about what could happen if Thames Water don't make improvements in this area? Why?
<p>Title: Proposed enhancements to better manage sewer infiltration</p> <p>Day(s) & order: 3.2</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Now, we'd like you to review three ideas that Thames Water could invest in to reduce sewer overflows in future.</p> <p>(Infiltration slim shown here)</p> <ul style="list-style-type: none"> Overall, how do you feel about the timescale proposed to solve this problem? Does it feel about right, too quickly or too slow? Is there anything else you think Thames Water should be doing? <p>For context, the average household water and wastewater bill for Thames Water customers is currently £456 (so that amount may be higher or lower for different customers, depending on things like having a water meter or being a business customer).</p> <p>Please also keep in mind that the bill costs we're showing are just for this one issue. Other changes to bills from 2025 to 2030 could see an additional £38 per year to maintain and improve the day-to-day water and wastewater service. On top of this, it could cost up to another £28 per year if Thames Water makes further improvements to the water and wastewater service for the longer term (see here), the improvements mentioned in this research).</p> <p>Finally, inflation is not included in the future costs shown.</p> <p>For each option please tell us:</p> <ul style="list-style-type: none"> What are your first impressions of this? Do you trust that Thames Water will be able to do this? Why/why not? How do you feel about the bill increase? Do you think it's worth it based on everything you've read? Do you approve of this part of the plan? Why/ why not?
<p>Title: Your preference on Thames Water's proposed enhancements to enhance sewer infiltration</p> <p>Day(s) & order: 3.3</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>(Infiltration slim shown here)</p> <ul style="list-style-type: none"> If Thames Water was to use just one of those ideas to tackle groundwater sewer infiltration, which would you choose? Why? Why not the other two ideas?
<p>Title: Your conclusion on Thames Water's proposed enhancements to</p>	<p>Overall, after considering the benefits and costs for you as a customer, do you support or oppose Thames Water's plans to invest in reducing groundwater sewer infiltration?</p>

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<p>enhance sewer infiltration</p> <p>Day(s) & order: 3.4</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>(Infiltration slim shown here)</p> <ol style="list-style-type: none"> I strongly support the plan. I somewhat support the plan. I somewhat oppose the plan. I strongly oppose the plan. <p>Please tell us the reasons for your answer.</p> <p>Thank you for all your input today! We'll see you tomorrow for the next set of questions.</p>
<p>Day 4- Sewer Flooding Resilience (TOPIC & TO BE SHOWN IN DIFFERENT ORDER & PER CUSTOMER)</p>	
<p>Title: Current issues around Sewer flooding</p> <p>Day(s) & order: 4.1</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Today we will discuss how the sewer network could be made more resilient to sewer flooding.</p> <p>Please read the materials to learn:</p> <ul style="list-style-type: none"> What is sewer flooding and what causes it. How many people are impacted by sewer flooding at present. What have Thames Water historically done to minimise this and due to population growth and climate change, if they don't improve in this area, how many could be impacted by sewer flooding in future. We have also attached a PDF of everything you learned in day 1 should you need to refer to it while discussing this topic. <p>(Sewer flooding- day 1 slim shown here)</p> <ul style="list-style-type: none"> What are your reactions to this information? Does anything surprise you? Do you think Thames Water have historically done enough to minimise this issue? Why/ why not? How important (or not) is it that Thames Water acts to prevent sewer flooding? How concerned or unconcerned are you about the impacts of what could happen for customers if Thames Water don't improve in this area? Why? What is your view of Thames Water's ambition to end sewer flooding in 25 years? Do you think this is realistic? Why/ why not?
<p>Title: Future proofing the network</p> <p>Day(s) & order: 4.2</p> <p>Allocation: e.g. All</p> <p>Task type: Mini polls</p>	<p>We are now going to provide you with some information on how Thames Water propose to prevent sewer flooding for the future. Please read the attached information to learn:</p> <ul style="list-style-type: none"> Methods used to prevent sewer flooding, focusing on a method that could be developed further in the future. How different timings to reduce sewer flooding could impact your bill. <p>(Sewer flooding slim shown here)</p>

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	<ul style="list-style-type: none"> What do you think about the current methods used to reduce sewer flooding, and the sustainable urban drainage method that could be developed further? How important/not important is it to you that Thames Water make this improvement from 2025? Why? Do you trust that Thames Water will be able to do this? Why/why not? <p>For context, the average household water and wastewater bill for Thames Water customers is currently £456 (so that amount may be higher or lower for different customers, depending on things like having a water meter or being a business customer).</p> <p>Please also keep in mind that the bill costs we're showing are just for this one issue. Other changes to bills from 2025 to 2030 could see an additional £38 per year to maintain and improve the day-to-day water and wastewater service. On top of this, it could cost up to another £28 per year if Thames Water makes further improvements to the water and wastewater service for the longer term (see here), the improvements mentioned in this research).</p> <p>Finally, inflation is not included in the future costs shown.</p> <ul style="list-style-type: none"> What do you think about the current methods used to reduce sewer flooding, and the sustainable urban drainage method that could be developed further? How important/not important is it to you that Thames Water make this improvement from 2025? Why? Do you trust that Thames Water will be able to do this? Why/why not? How do you feel about the bill increases over the years for each option? Do you think it's worth it based on everything you've read? Which of the 4 approaches do you prefer and why? How do you feel about paying more now on your bill to stop sewage flooding in the future? Do you think it's fair? Talk us through your reasoning here.
<p>Title: Your conclusion on Thames Water's proposed enhancements to end sewer flooding</p> <p>Day(s) & order: 4.3</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Overall, after considering the benefits and costs for you as a customer, do you support or oppose Thames Water's overall proposal to end sewer flooding by 2050 except where it's caused by a rare heavy rainfall storm?</p> <p>(Sewer flooding slim shown here)</p> <ol style="list-style-type: none"> I strongly support the plan. I somewhat support the plan. I somewhat oppose the plan. I strongly oppose the plan. <p>Please tell us the reasons for your answer.</p>
<p>Day 5- Improving River Health (TOPIC & TO BE SHOWN IN DIFFERENT ORDER & PER CUSTOMER)</p>	

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<p>Title: Issues with river health and a review of Thames Waters plan</p> <p>Day(s) & order: 5.1</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Today we are going to talk about improving the health of rivers. Please read the attached information to learn:</p> <ul style="list-style-type: none"> A recap of current issues with river health. Why Thames Water wants to improve its approach to better protect rivers now and in the future, including what will happen to rivers if Thames Water do not improve here. Thames Water's plan to improve rivers and what improvements they propose to make, including working with partners to make the plans a reality. We have also attached a PDF of everything you learned in day 1 should you need to refer to it while discussing this topic. <p>(Improving river health+ day 1 ctm shown here)</p> <ul style="list-style-type: none"> What are your reactions to this information? Does anything surprise you? How concerned or unconcerned are you about what could happen if Thames Water don't improve in this area? Why? What is your view of Thames Water's ambition in this area? Do you agree or disagree that Thames Water should increase their Smarter Water Catchments (working with partners) from 3 to 14 of their catchment areas by 2030? Why/why not? Do you agree or disagree that Thames Water should increase their Smarter Water Catchments (working with partners) to all 27 areas by 2035?
<p>Title: How do you feel about the pacing of the plan</p> <p>Day(s) & order: 5.2</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>We are now going to present you with two approaches that Thames Water could take to improving river health – working on its own or working with partners.</p> <p>(River health ctm shown here)</p> <ul style="list-style-type: none"> What are your reactions to the two approaches to making improvements to rivers – the approach where Thames Water acts alone and the partnership approach? Which approach do you prefer and why? Why not the other approach? Is there anything unclear about this, or anything else you'd like to know that would help you make a better-informed opinion about this?
<p>Title: Your conclusion on Thames Water's proposed enhancements to improving river health</p> <p>Day(s) & order: 5.3</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Overall, after considering the benefits for you as a customer, do you support or oppose Thames Water's proposal to improve river health by increasing their Smarter Water Catchment partnerships?</p> <p>(River health ctm shown here)</p> <ol style="list-style-type: none"> I strongly support the plan. I somewhat support the plan. I somewhat oppose the plan. I strongly oppose the plan. <p>Please tell us the reasons for your answer.</p> <p>Thank you for all your input today! We'll see you tomorrow for the next set of questions.</p>
<p>Day 5- Improving Bathing Waters (TOPIC & TO BE SHOWN IN DIFFERENT ORDER & PER CUSTOMER)</p>	

VERVE

<p>Title: Issues with bathing water quality and review of Thames Waters plan</p> <p>Day(s) & order: 6.1</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Today we will be discussing bathing water. Specifically:</p> <ul style="list-style-type: none"> What bathing water areas are in the Thames Water area and what their current status is. What Thames Water do to protect bathing water areas and why a designated bathing water area might fall below satisfactory levels. We have also attached a PDF of everything you learned in day 1 should you need to refer to it while discussing this topic. <p>(Bathing+ day 1 ctm shown here)</p> <ul style="list-style-type: none"> What are your reactions to this information? Does anything surprise you? Do you think Thames Water have historically done enough in this area? Why/ why not? How concerned or unconcerned are you about what could happen if Thames Water don't improve in this area? Why? Do you or your friends or family ever swim in rivers?
<p>Title: Should Thames Water help create more designated bathing waters?</p> <p>Day(s) & order: 6.2</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Please read the material to learn about how Thames Water could potentially do more to retain and gain more designated bathing waters and the costs of doing this.</p> <p>(Bathing ctm shown here)</p> <ul style="list-style-type: none"> Do you think Thames Water should aim to retain its current designated bathing water area? Why/why not? Do you think Thames Water should aim to improve the quality of water at the current bathing water area from poor to excellent? <p>For context, the average household water and wastewater bill for Thames Water customers is currently £456 (so that amount may be higher or lower for different customers, depending on things like having a water meter or being a business customer).</p> <p>Please also keep in mind that the bill costs we're showing are just for this one issue. Other changes to bills from 2025 to 2030 could see an additional £38 per year to maintain and improve the day-to-day water and wastewater service. On top of this, it could cost up to another £28 per year if Thames Water makes further improvements to the water and wastewater service for the longer term (scroll to the improvements mentioned in this research).</p> <p>Finally, inflation is not included in the future costs shown.</p> <ul style="list-style-type: none"> How do you feel about the bill increase to improve the current bathing water designation to excellent? Is it worth it based on everything you've read? Do you think Thames Water should help support more designated bathing waters in future? Why/ why not? How do you feel about the bill increase to support more designated bathing waters in the next 5 years? Is it worth it based on everything you've read? Is there anything unclear about this, or anything else you'd like to know that would help you make a better-informed decision about this?
<p>Title: Your conclusion on Thames Water's proposed enhancements to</p>	<p>Overall, after considering the benefits and costs for you as a customer, do you support or oppose Thames Water's proposed improvements in this area?</p> <p>(Bathing ctm shown here)</p>

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<p>Improving bathing water quality</p> <p>Day(s) & order: 6.3</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<ol style="list-style-type: none"> I strongly support the plan. I somewhat support the plan. I somewhat oppose the plan. I strongly oppose the plan. <p>Please tell us the reasons for your answer.</p> <p>Thank you for all your input today! We'll see you tomorrow for the next set of questions.</p>
<p>Title: What activities should take priority (Scripting note: Fix position)</p> <p>Day(s) & order: 6.4</p> <p>Allocation: e.g. All</p> <p>Task type: Mini Polls</p>	<p>Now we've discussed all 5 topics, please could you rank them in order of how important you feel they are for Thames Water to improve. See 1st - what you think is the most important thing to improve, to the 5th, the least important thing to improve.</p> <p>(STIM recap of each enhancement and impact on bills)</p> <ol style="list-style-type: none"> Sewage treatment works growth Groundwater sewer infiltration reduction Sewer flooding to customer properties River health Designated bathing water areas <ul style="list-style-type: none"> Please tell us briefly why you think they should prioritise the two most important improvements that you have ranked above.

Reminder email

<p>Short email sent to incomplete to remind them to take part</p>	
<p>Subject line: Reminder: the community is waiting for you!</p>	<p>Just a quick reminder to let you know that we have activities ready and waiting for you in the community! We'd love to hear from you, so please log in and let us know your thoughts!</p>

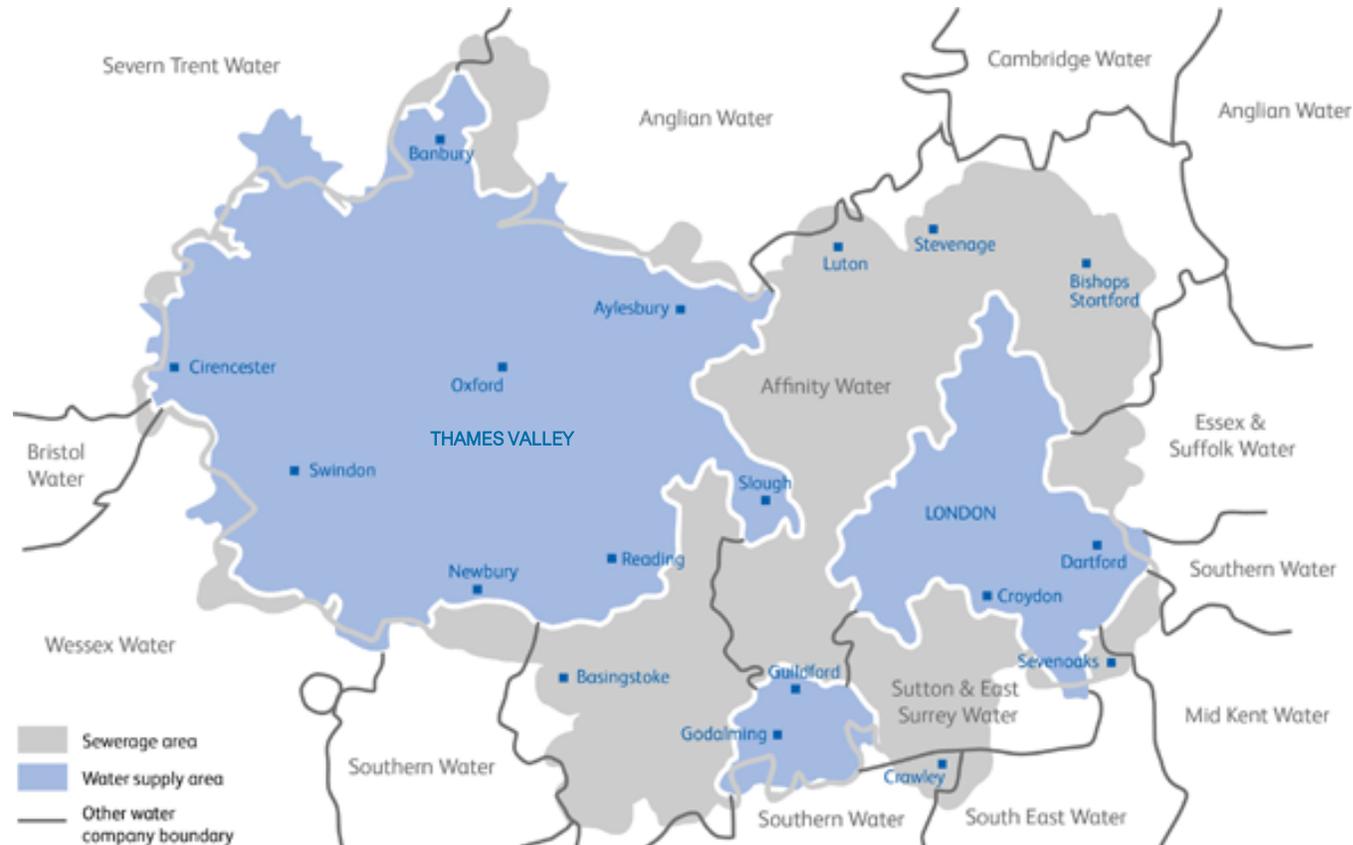


Waste Water Community stimulus



Day 1.1

Thames Water is the UK's largest water and wastewater services provider



10 million
water
customers

15 million
wastewater
customers

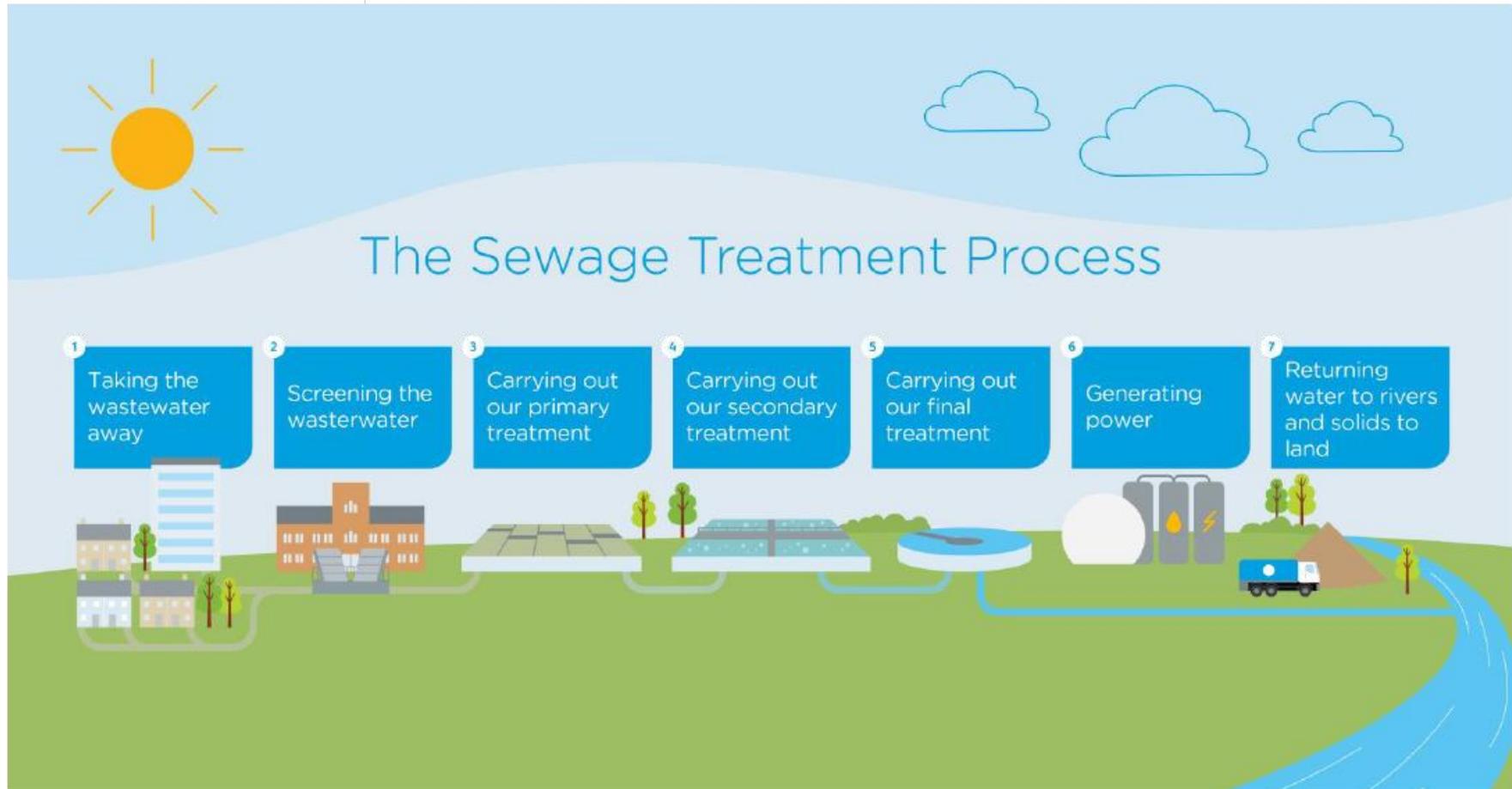
Thames Water treats almost 5 billion litres of sewage a day

The Sewage Treatment Process

As well as delivering safe, clean and reliable water to you, we also need to take it away once you've used it. When you empty the bath, flush the toilet or use your washing machine, it's our job to make sure that all that used water – what we call wastewater – is treated and returned safely into rivers.

In some areas, including central London, surface water and sewage mix together before being treated at our sewage works.

Did you know? We manage over 68,000 miles of sewers, 5,235 pumping stations and 1.48 million manholes across our region.





Day 1.2

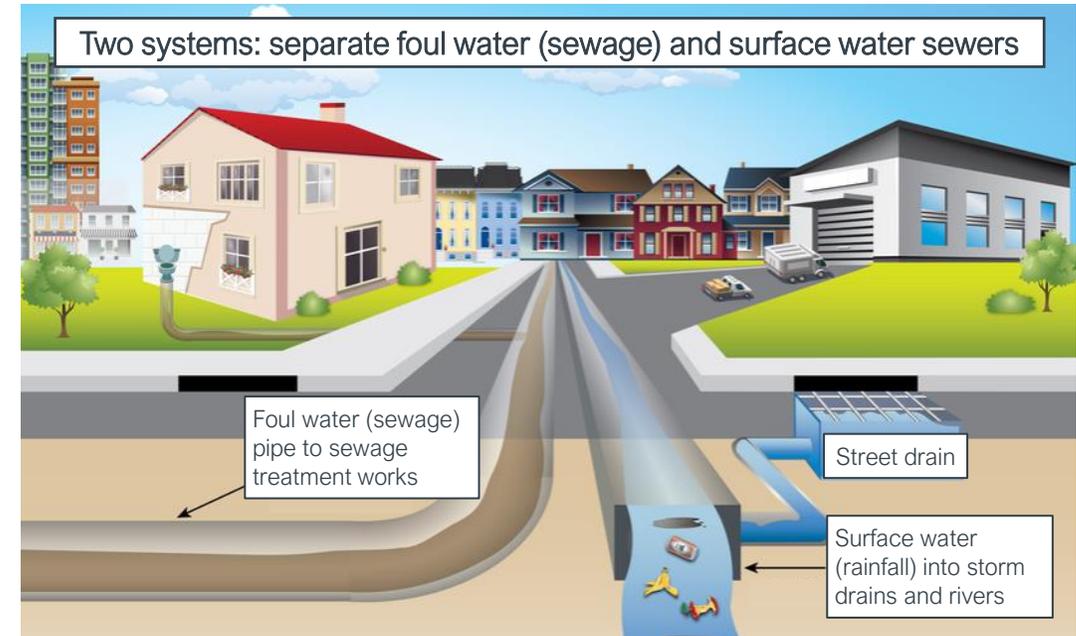
Some facts about the sewerage/wastewater network:

- Thames Water's sewerage network consists of 68,000 miles of sewers, 351 sewage treatment works, 4,780 sewage pumping stations and 1.2 million manholes
- This network handles both:
 - **Sewage (or 'foul') water** – water that comes from bathrooms, kitchens and washing machines; it contains bacteria that can be harmful to health
 - **Surface water** – rain water that runs off from roofs, gutters, ponds and driveways; in comparison to sewage water it is relatively clean
- Parts of the network are very old and have been in operation since the 1800s.
- **In almost all cases (95%),** sewage and surface water are transported by **separate pipes/sewers**



An example of separate sewers:

- As a reminder, **in most cases**, sewage and surface water are transported by **separate pipes or sewers**
- An examples of **separate sewers** can be seen here:
 - **Sewage water** is transported directly to a sewage treatment works
 - **Surface water** flows into storm drains and eventually back to rivers and waterways



Source: adapted from www.alexandriava.gov

Sewage treatment works

- Sewage treatment works exist to **treat sewage wastewater**, removing solids and bacteria to the point at which it is **safe to return to rivers and waterways**
 - Sewage treatment works receive sewage water from the separate and combined sewers
 - They also receive sewage water diluted with surface water from combined sewers following wet weather
- On dry days this works as intended, and sewage water is treated and returned safely to rivers and other waterways
- On wetter days the system can sometimes get overwhelmed with surface rainwater, and so occasionally diluted sewage water can spill over into rivers and other waterways
 - The likelihood of this happening is also affected by increases in population and more unpredictable weather, including more severe and sudden rainfall



Mogden Sewage Treatment Works, West London

Storm overflows

- As well as the overflows we've already described from combined sewers, excess surface rainwater can sometimes cause overflows at sewage treatment works and sewage pumping stations.
- During particularly heavy rainfall the capacity of **sewers, sewage treatment works and pumping stations** can become overwhelmed and sewage diluted with surface rainwater occasionally spills over into rivers or onto roads and public spaces.
- In some circumstances such overflows, or 'spills', are **legally permitted**, where excess surface rainwater has entered the system.
- Spills are not legally permitted where they are caused by sewer blockages, damaged or collapsed sewers or malfunctions at pumping stations or treatment works. Thames Water has been fined in the past when this has occurred.
- Nationally sewage spills due to storm overflows account for **4% of the reasons why rivers are not in good environmental condition*** (Agriculture is the largest reason)



Press release

Thames Water fined £4 million after 30 hour waterfall of sewage discharge

Thames Water has now accrued £32.4m in fines since 2017 for 11 cases of water pollution.

From: [Department for Environment, Food & Rural Affairs](#) and [Environment Agency](#)

Published 19 November 2021

*Source: The Environment Agency, September 2021
(taken from Water UK's 21st Century Rivers report)

Sewer inundation

- Inundation happens where a river floods and the flood water covers an area where Thames Water have manhole covers to access their sewers. These **manhole covers are not water-tight** so river water can get in. At peak flow of a river flood a single manhole can let in the **equivalent of 200 homes' wastewater**.
- Manholes are not water-tight because they need to provide an escape for the build up of dangerous corrosive gases in the sewer pipes.



Groundwater infiltration

- Groundwater infiltration is when water that is in the ground naturally (known as the water table) can either rise up after rainfall and overflow into sewers, or force its way into the sewers through cracks and joins in the pipe.
- The chances of this happening increases during heavy rainfall.
- This means that the sewer capacity is reduced so sewers can carry less sewage during heavy rainfall.
- This sometimes leads to sewage spills into rivers and sewage floods onto public land.





Day 1.3

Sewer flooding can have a significant impact on customers:

- Sewer flooding can cause damage to properties and buildings and customers may have to move out of their properties for months whilst repairs are carried out.
- Repairs can also be very expensive for customers or their insurance companies. If claiming on insurance, premiums are likely to increase and may make it more difficult to get insurance in the future. It may be more difficult to sell the property in the future.
- Personal or business possessions could be damaged or have to be replaced entirely.
- Sewer flooding can be extremely distressing for those impacted by it. It may impact health and wellbeing.



Sewage 'spills' (overflows) can sometimes have a significant impact on rivers, wildlife and the environment:

- When sewage spills into rivers, it can have a range of impacts from no impact at all to a severe impact.
- In a small amount of cases (less than one in a hundred) a sewage spill can have very damaging effects:
 - It can cause illness and death for animals and plant life in and around rivers.
 - It can also cause illnesses in humans if they are swimming or undertaking other activities exposing them to the water, such as canoeing and kayaking
- In many cases sewage spills can have little environmental impact as rivers are typically flowing quickly and strongly with excess rainwater anyway.

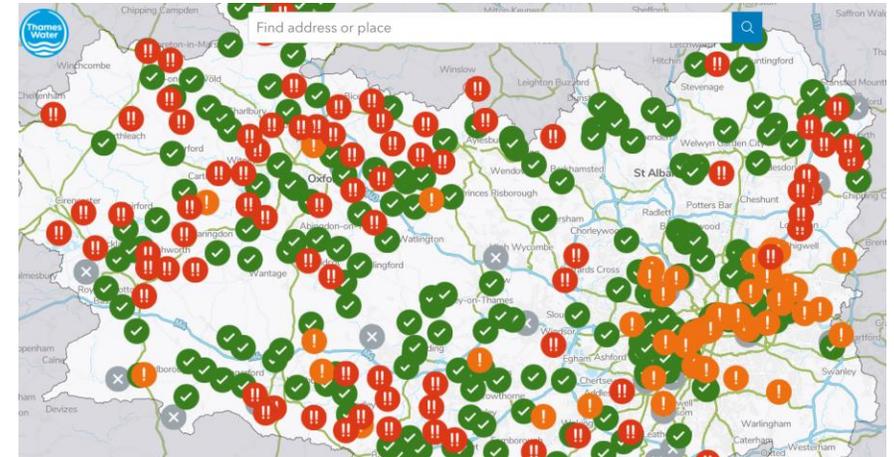




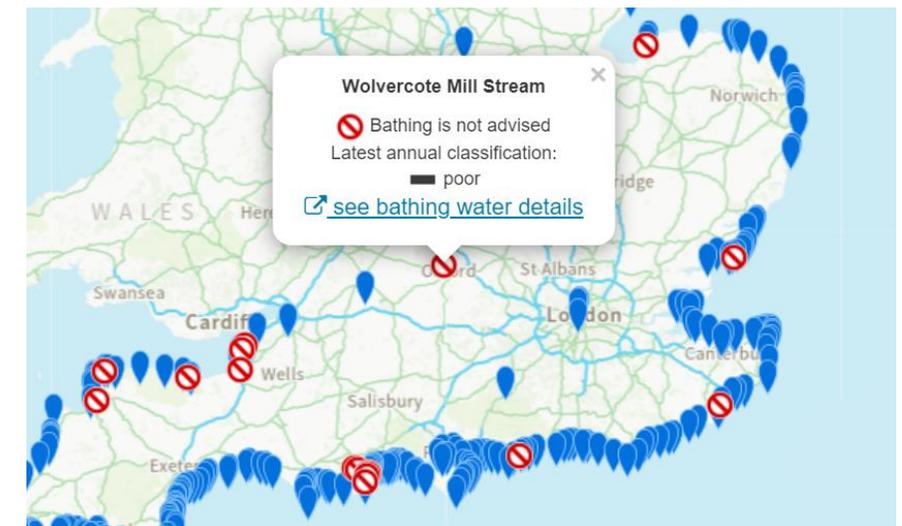
Bathing Water Stimulus

What are designated bathing water areas?

- Designated bathing waters are areas of coastal or inland waterways that get tested for bacteria to let people know how safe it is for them to swim there. Local groups can apply to the Department for Environment, Food & Rural Affairs to have a stretch of water officially designated as a bathing water.
- In 2022 Wolvercote Mill stream near Oxford became the first designated bathing water in a river within Thames Water's area. The Oxford Rivers Project had applied for this designation with Thames Water supporting by monitoring water quality in the area.
- Later in 2022 after the first swimming season of water quality testing, the Wolvercote Mill stream was classified as 'poor'.
- The status of designated bathing water may be lost if water quality tests continue to fail for 3 years out of 5.



Thames Water's live map of storm discharges (sewage spills)



Source: Bathing water quality (data.gov.uk)

How can Thames Water improve to retain their designated bathing water area?

- Thames Water has an ambition to improve the water quality at Wolvercote Mill stream so the bathing water status is kept there. Thames Water would like to go beyond just 'sufficient' quality though (which is the minimum required to retain the bathing water status), and aim for 'excellent', the highest cleanest class of river water. This would require investment to reduce sewage spills or reduce the impact of sewer spills, by improving nearby sewage pipes and treatment works and/or by using natural ways of reducing river pollution.

The investment to get to an 'excellent' standard at Wolvercote Mill stream, by preventing sewage spills in the area would add 4p a year to average annual bills for all customers from 2025-30



How can Thames Water improve to gain further designated bathing water areas?

- Meanwhile, more and more swimming groups across the UK are applying for their local stretch of river to be designated as a bathing water. Potentially there could be 7 more designated areas in the Thames Water area by 2030.
- Thames Water plans to support any such application by supplying water quality tests, and it would also aim for the water quality to be at least 'sufficient', meeting minimum standards. This would require investment to reduce sewage spills or reduce the impact of sewer spills, by improving nearby sewage pipes and treatment works and/or by using natural ways of reducing river pollution.

The investment needed to support these extra applications in this way would add £1 a year to average annual bills for all customers from 2025-30





Sewage Treatment Growth Stimulus

What is sewage treatment?

Sewage treatment is the process of taking wastewater and removing solids and bacteria from it, so the water solution can be released safely back into rivers, preventing water pollution. The process is as follows:



As our population grows and our climate changes (more severe and sudden rainfall for example), sometimes there isn't enough room at Sewage Treatment Works to treat all the wastewater and rainwater that finds its way there. This can result in raw sewage (often diluted with rainfall) entering rivers through storm overflows. This can cause pollution to rivers and a hazard to plant, animal and human life.

Mogden Sewage Treatment Works, West London



A storm overflow



How can Thames Water improve sewage treatment works?

Thames Water have identified 13 sewage treatment works that will need to be upgraded or expanded between 2025 and 2030 because of increased housing developments in these areas.

- *Culham (Oxfordshire)
- *Arborfield (Berkshire)
- *Didcot (Oxfordshire)
- *Wheatley (Oxfordshire)
- *Wantage (Oxfordshire)
- *Basingstoke (Hampshire)
- *Aylesbury (Buckinghamshire)
- *Chalgrove (Oxfordshire)
- *Andoversford (Gloucestershire)
- *Cassington (Oxfordshire)
- *Bicester (Oxfordshire)
- *Stansted Mountfitchet (Essex)
- *Caddington (Bedfordshire)

The upgrades would involve new treatment facilities and equipment being built and installed within the sewage treatment works. This might cause additional traffic and noise levels for the local community whilst construction takes place. It might also mean some houses are closer to the treatment works as it expands.

The impact on average customer bills to cover this investment would be £1.50 a year from 2025 to 2030.

The impact of making no improvements would be more sewage overflows entering the rivers in these areas, especially at times of heavy rainfall.





Sewer Flooding Stimulus

What is sewer flooding?

- Sewer flooding in properties and gardens can happen when the sewer system becomes full and overflows due to blockages or too much rainwater.
- About 1,200 properties each year experience sewer flooding.
- Sewer flooding will likely increase in future due to added pressure on the sewer network from an increasing population and climate change.
- There is currently a 1 in 50 chance per year for approximately 180,000 properties to experience sewer floods caused by rare heavy rainfall storms.
- If no additional investment is made to prevent sewer flooding by 2050, there would be a significant increase in the number of properties at risk of sewer flooding.
- If Thames Water invest now, this could limit the impact of population growth and climate change on the risk of flooding in the future.
- Thames Water is planning to make improvements so there is no sewer flooding of customer properties by 2050, except where it's caused by a very rare heavy rainfall storm (less than 1 in 50 chance of happening per year). In other words, making the sewer network more resilient to floods or 'future proofing' it, to keep customers safe and give them the service they want.



How will Thames Water improve sewer flooding?

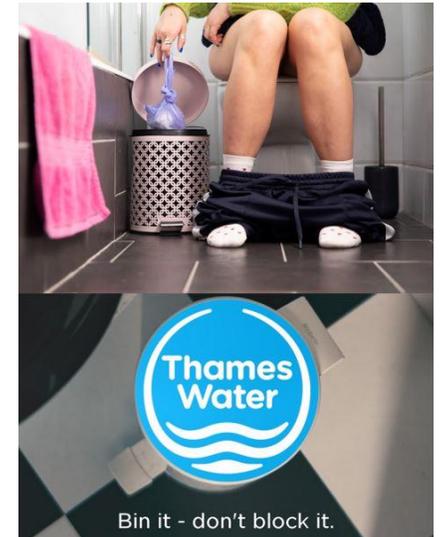
- Thames Water will reduce the risk of sewer flooding by:
 1. Building more storage space within the sewer network to cope with additional sewage and rainwater
 2. Using natural solutions to absorb rainwater instead of it entering sewers, such as porous paving and green spaces in built up areas
 3. Customer education to prevent blockages, reminding them what not to flush down the loo or put down the sink
- Here's a method that Thames Water are developing further to help meet the target of **no sewer flooding by 2050** (except from very rare heavy rainfall storms with less than 1 in 50 *chance of happening per year*). It's called **Sustainable Urban Drainage**, it helps slow down or prevent rainfall entering sewers so they don't overflow.

Examples of Sustainable Urban Drainage:

- Roof gardens that absorb and store rainfall
- Channels in roads and pavements that divert rainfall into gravel or grass areas along roads or by properties
- Porous paving surfaces that let rainwater drain into the water table underneath

Extra benefits: having green areas in built up areas, creating habitat for wildlife

Drawbacks: ongoing maintenance required (by the local council typically)



Example of customer education



Example of sustainable urban drainage

What can Thames Water do to improve sewer flooding?

Using Sustainable Urban Drainage and other methods, Thames Water could tackle the goal of no sewer flooding (except from very rare, heavy rainfall storms) over different timescales.

Approach	Additional average annual cost to customers							
	2025-30	2030-35	2035-40	2040-45	2045-50	2050-55	2055-60	2060-65
No additional investment By 2050 there would be a significant increase in the number of properties at risk of sewer flooding, compared to if investments to improve were started now	£0	£0	£0	£0	£0	£0	£0	£0
Meet the goal by 2040 Invest in improvements so that there is no sewer flooding of customer properties by 2040 (except from very rare heavy rainfall storms with less than 1 in 50 chance of happening per year)	£3	£49	£130	£168	£134	£107	£85	£85
Meet the goal by 2050 Invest in improvements so that there is no sewer flooding of customer properties by 2050 (except from very rare heavy rainfall storms with less than 1 in 50 chance of happening per year)	£3	£6	£18	£58	£133	£175	£140	£140
Meet the goal by 2065 Invest in improvements so that there is no sewer flooding of customer properties by 2065 (except from very rare heavy rainfall storms with less than 1 in 50 chance of happening per year)	£3	£8	£23	£52	£76	£94	£106	£106



Sewer Infiltration Stimulus

What is groundwater sewer infiltration?

- Groundwater sewer infiltration occurs when the water that is naturally in the ground (known as the water table) rises, this typically happens following periods of rainfall and enter the sewers from the surface through manhole covers, or through the ground by forcing its way through any cracks and joints in the pipe (sewers are not designed to be watertight).
- The risk of groundwater sewer infiltration happening increases after prolonged rainfall, during this time the infiltrated groundwater takes up room (capacity) in the sewer so less normal sewage can be carried.
- Too much groundwater in sewers can lead to sewage spilling into rivers through storm overflows, or sewage could flood onto public land.
 - In the wettest years, groundwater sewer infiltration causes about a quarter of all Thames Water's overflows into rivers.
- Changing weather patterns, as a result of climate change, could lead to more groundwater entering sewers in the future, meaning more untreated sewage could overflow into rivers.
- A governmental Environment Act states that all sewage storm overflows must have fewer than 10 spills a year by 2050.
- For Thames Water, currently 4,000 spills a year are linked to groundwater sewer infiltration.

Groundwater sewer infiltration (through the cracks and joints of a sewer pipe)



A storm overflow



What is currently done about groundwater sewer infiltration?

- When sewers are full with groundwater and sewage, Thames Water deal with this by pumping out the excess into tankers and transferring it to Sewage Treatment Works. Sometimes a fleet of tankers are needed 24 hours a day for weeks or even months, as groundwater continuously enters the sewer system.
- Tankers cause disruption to customers and communities through noise, air pollution, traffic congestion and wear and tear on the roads they travel on.
- Thames Water also make use of temporary treatment units in areas where tankering is not possible due to either limited access or too much flow to take away by tanker. The temporary treatment unit deals with the excess groundwater and sewage from the sewer and treats it (similar to a Sewage Treatment Works but not to the same standard) before it overflows into a river or waterway.
- These approaches will continue to be used in the future, unless a more permanent solution is found. But neither is able to keep up with the risk posed by groundwater sewer infiltration in the long term, particularly considering population growth and climate change.
- Thames Water has a target to reduce sewage overflows and this will be virtually impossible to meet without using new ways to tackle groundwater infiltration into sewers.

A tanker, used to remove excess groundwater and sewage from a full sewer



A temporary treatment unit used to treat excess groundwater and sewage then return this to a river



How can Thames Water improve groundwater sewer infiltration?

Thames Water have a number of ideas to tackle groundwater sewer infiltration from 2025 to 2030, concentrating firstly on areas where storm overflow spills could impact the most sensitive rivers. This will allow the most successful ideas to be developed and continued beyond 2030, so that by 2050 the level of sewage overflows into rivers should be much lower, meeting government targets. Here are three of the ideas to tackle groundwater sewer infiltration:

Idea	What is this?	Benefits and drawbacks	Addition to average annual bill 2025-2030
Increasing the size of sewage treatment works	As an alternative to stopping groundwater getting into the sewers, sewage treatment works could be made bigger. Groundwater would still get in though, so there is a cost to pumping and treating the groundwater flow in addition to the upgrade cost	<ul style="list-style-type: none"> + Will resolve 1,279 current sewage and groundwater spills by 2030 + Once built, this idea would work immediately to prevent spills caused by groundwater infiltration and create room for when groundwater levels are high – New construction and may need to be expanded again in the future, if the climate gets wetter, resulting in a higher carbon footprint than other ideas – Once built, higher day-to-day costs to treat additional flows 	£0.50 a year
Sewerage system lining	Lining or sealing sewer pipes and manholes that are at most risk from groundwater infiltration, to prevent the infiltration getting into the system	<ul style="list-style-type: none"> + Will resolve 1,279 current sewage and groundwater spills by 2030 + Once installed, would work quickly to prevent spills at the source of the problem, as the full capacity of the pipes is restored, and wouldn't need to be upgraded again – Some minor disruption while pipe sealing is done - roads wouldn't need to be dug up but there may be some traffic disruption for short periods while workers access the sewers – Approach, suppliers and installers of this technology have had limited testing so far. Thames Water would need to test this approach to make sure it works well before continuing 	£1 a year
Wetlands	Developing natural reed beds near to sewer storm overflows that help convert excess flow of sewage and groundwater to be made safer for the river as the plants filter any pollution	<ul style="list-style-type: none"> + Will resolve 1,168 current sewage and groundwater spills by 2030 (fewer than the other ideas as not all places are suitable for this sort of development) + Easy to construct, provides natural space with improved biodiversity for the environment and improved wellbeing for river visitors and communities living nearby – Approach only tested at one other location in the UK. It's likely this approach would take longer to establish before it starts fully treating sewage overflow, whilst plants get established – If the climate gets wetter and overflows of groundwater and sewage are more than predicted then the wetlands might need to be expanded or different plants added 	£2 a year



Rethinking Rivers Stimulus

River health – what is the challenge?

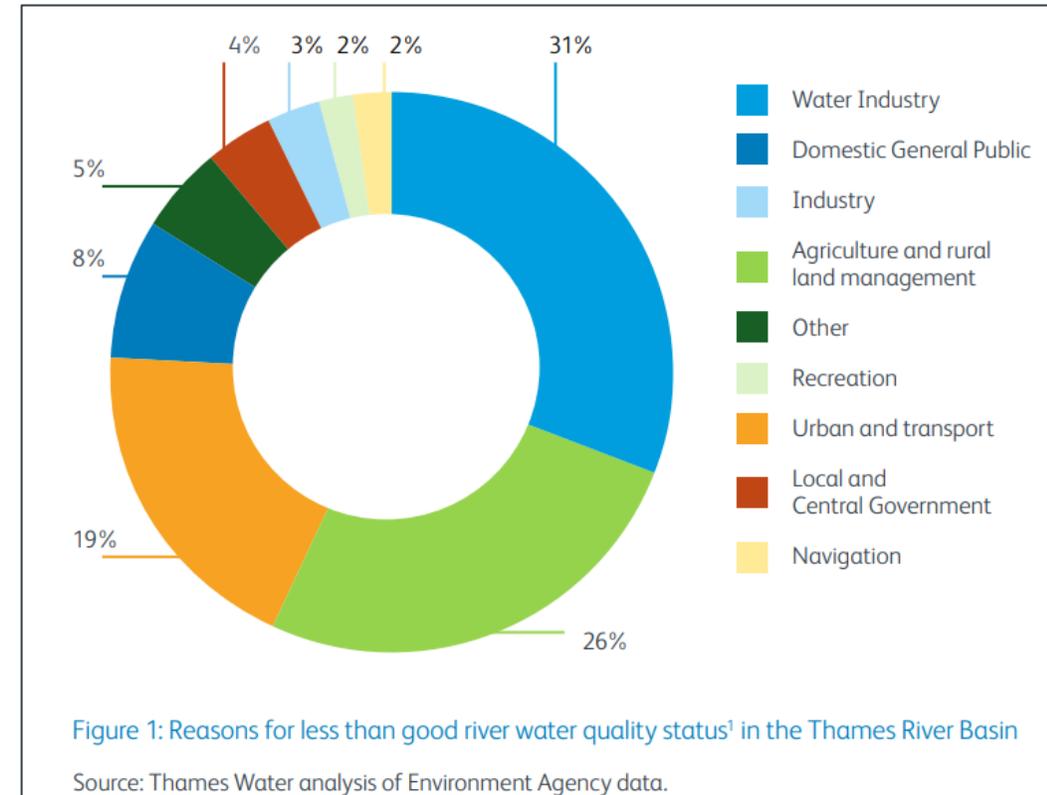
Of the **501** water bodies in the River Thames basin **94%** have a 'less than good' ecological status

The Environment Agency have identified that Thames Water is responsible for about a third of the problems seen in the rivers in our area, more than any other group contributing to the problem (see chart).

Thames Water will take a leading role to address the poor quality of rivers in its area, making improvements to problems it has caused through its water and sewage processes, and also working with other groups to help them solve their problems.

By 2050 Thames Water aim to have no river pollution from untreated sewage discharges, to improve the quality of treated sewage discharges and also to reduce the amount of water taken from some sensitive rivers for treatment to drinking water.

With factors like a growing population and continued climate change, if Thames Water make no changes now there would be a risk to the future health of rivers as well as to other aspects of the water and sewage service.



¹Good ecological status is a measurement for assessing the health of the water environment, based on water flow, habitat and biological quality tests

How can Thames Water improve river health?

- Thames Water's 'Rethinking Rivers' plan focuses on river catchments - areas split up by which river their rainwater drains to.
- Thames Water plan to form partnerships with relevant organisations from other sectors in a river catchment so they can share skills, ideas and other resources, to make improvements to river health.

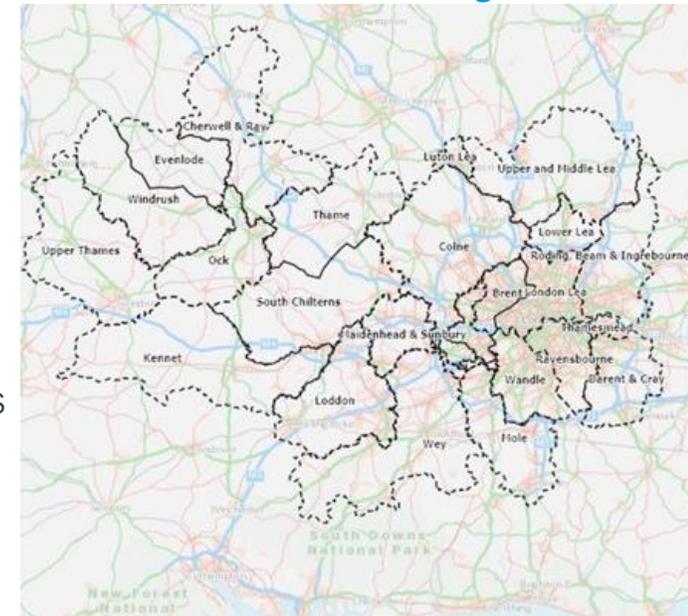
Since 2020 Thames Water have tested this catchment partnership approach, called Smarter Water Catchments, in three areas across the region, the rivers Chess (Buckinghamshire), Crane (West London) and Evenlode (Oxfordshire).

This approach has proven successful in making improvements to rivers that Thames Water could not have achieved alone:

- Generating £4.20 of partnership funding for every £1 of Thames Water investment in urban areas
- Generating £1.90 of partnership funding for every £1 of Thames Water investment in rural areas
- Thames Water has worked with 138 organisations (eg: charities, community groups, councils, businesses and government agencies) and 46 landowners

From 2025-2030 Thames Water plans to increase from 3 to 14 Smarter Water Catchment areas out of 27 catchment areas in total in the region, and then increase to all 27 by 2035. This allows for this new way of working to be gradually changed, and for the network of partners to be developed

The river catchment areas in the Thames Water region



Working with partners to improve river health:

Example: Headstone Manor Wetlands, West London

Headstone Manor Wetlands suffered from repeat pollution and also had a high risk of flooding neighbouring properties.

Thames Water formed a partnership with several groups including the Environment Agency and Crane Valley Partnership. Together, projects were designed and funded to:

- Provide a flood storage system
- De-silt a 14th century moat
- Create bends and shallower areas for the waterway
- Construct a sediment pond and reed bed system
- Refresh the surrounding park area

As a result:

- 60 homes now protected from flooding
- The reduced flood risk also reduced pollution, which meant improvements to the wetland and surrounding environment for plants and wildlife
- Also, improvements for the local community with nearly all park visitors agreeing the improved space enhanced their quality of life



How can Thames Water lead improvements in river health?

The Smarter Water Catchments approach is a new way of working, **with no additional cost to customers**. Partnership solutions to improve river health would only be started if those projects were the same or better value to customers than solutions where Thames Water could build, expand or repair sewer pipes and sewage treatment facilities (as we've spoken about or will speak about elsewhere in this community).

Approach	Examples of improvements	Benefits	Drawbacks
Thames Water works alone to improve river health, only on problems that it is responsible for	<p>Mainly 'grey' building solutions where pipes, facilities and equipment are built, expanded or repaired.</p> <p>For example, to provide more room in the sewage network for treating large volumes of sewage and rainwater which has entered the system:</p> <ul style="list-style-type: none"> • Building new or larger sewer pipes • Building new or larger storm tanks at treatment works 	<ul style="list-style-type: none"> + Quick to build + Tried and tested ideas that are proven to work + Short time to see benefits 	<ul style="list-style-type: none"> - Costly and not easy to expand again if needed in future - Carbon emissions and chemicals used - May not lead to improved river health due to other contributions to pollution (agriculture for example)
Thames Water works with other local environmental and community groups, to improve river health, on all problems, including those not caused by Thames Water	<p>A mixture of natural 'green' and 'grey' building solutions. Typically smaller projects.</p> <p>For example, to absorb excess rainwater and prevent it from entering sewers:</p> <ul style="list-style-type: none"> • Increasing porous paving and green spaces in built up areas • Increased reed beds and vegetation by rivers 	<ul style="list-style-type: none"> + Can be expanded to meet future needs + Considers problems caused by other sectors not just Thames Water + Working with other sectors to share knowledge, skills and the cost of schemes + More chance of improved river health and environmental benefits 	<ul style="list-style-type: none"> - Not a tried and tested approach - May take longer to see improvements, waiting for plants to become established



Final day

Recap of the 5 topics we've discussed [WASTE]

Issue	Thames Water's proposals for improvement	Additional average annual cost to customers from 2025-30
Groundwater sewer infiltration	Groundwater sewer infiltration happens when water naturally in the ground rises after prolonged rainfall and can enter sewer pipes through cracks and joints. The groundwater takes up room in the sewer so less normal wastewater can be carried, this could lead to sewage spilling into rivers through storm overflows. Thames Water has a number of ideas to tackle this so they can meet targets for reduced storm overflows, for example increasing sewage treatment work sizes, lining sewer pipes and creating natural wetlands.	£0.50 to £2
Sewer flooding to customer properties	Sewer flooding can happen when the sewer system becomes full and overflows due to blockages or too much rainwater. Thames Water is planning to make improvements so there are no sewer floods on customer properties by 2050, except where it's caused by a rare heavy rainfall storm. This could also be done sooner or much later than 2050, which would impact how much extra goes on the bill over time.	£3
Sewage treatment works growth	13 sewage treatment works have been identified as needing an upgrade or expansion by 2030 because of increased housing developments in those areas. This will help prevent storm overflows into rivers in those areas, as there will be more room at the treatment works to treat extra sewage and rainfall.	£1.50
Designated bathing water areas	A government body designates official bathing water areas based on water quality for safe swimming. Thames Water's one bathing water is currently at 'poor' status and the aim is to improve river quality there to 'excellent' through improvements to the nearby sewage network. There could be seven more bathing waters designated in the Thames Water area by 2030, which they'd aim to get to at least 'sufficient' status.	£0.04 = 1 area excellent £1 = 7 areas sufficient
River health	The Environment Agency identified Thames Water as a large contributor to problems in the rivers in their area. So Thames Water are aiming to have no river pollution from sewage spills by 2050 as well making as other improvements to river health. To help achieve this they plan to expand an idea they've been testing called Smarter Water Catchments – forming partnerships with organisations local to different river catchments to share skills, ideas and resources to make improvements to river health using a mix of building and repair projects and more nature based green projects. They propose expanding from 3 test areas to 14 water catchments (out of 27 in total) by 2030.	No cost to customers
TOTAL		£6 to £7.50

As well as these costs, please remember there could be other additional costs to your bill (on top of what you currently pay) from 2025 to 2030. For example:

- Maintain and improve the day-to-day water & wastewater service to meet customer needs and expectations = **£38** per year
- Make further improvements or reduce the chance of things going wrong in future for the water service and wastewater service (other than the 5 improvements above) = **£27.50 to £29** per year



Water Community discussion guide



ENHANCEMENT CASE INSIGHT – WATER

POP-UP COMMUNITY DISCUSSION GUIDE

V1

VERVE
Energising Insight

2 JUNE 2025

VERVE

About this project

As Thames Water builds its Business Plan it has identified some gaps in insight needed to demonstrate how customers feel about various enhancement cases and where they would prioritise investment. The topics covered are complex and it is likely that most customers are unaware of these issues or of what is required to solve these challenges. Therefore, a methodology that allows participants space to learn and form educated opinions is required.

A pop-up community using a deliberative approach to educate participants so they can make an informed judgement on the topics of Water and Wastewater Requirements:

- Water supply resilience
- Security Measures & Security Direction
- Basement flooding from trunk mains

Research Objectives

The overall objective is to get customer opinion on how Thames Water intends to address challenges and if there is [support](#) to fund them. There are specific objectives tied to the different Enhancement Case:

Water supply resilience:

- Is there customer support for the criteria/principles used and factors Thames Water have considered to select the types of schemes and programme of solutions to improve resilience.
- Acceptability of the scale of the plan for the enhancement case and ascertain customer expectations over time for the unplanned interruption to supply.

Security & Emergency Measures Direction (customers will see this as 'Emergency Water Supplier')

- Customer feedback on how Thames Water provides customers with alternative water supply during major supply interruption events i.e., customer collects bottled water in own vehicle from a local centre vs tankering.

Basement flooding from trunk mains:

- Customer support on the need for this investment specifically to address the Health & Safety risk of basement flooding (primarily in London).
- Customer support on the solution of trunk main rehabilitation as the only viable solution to address this need.

• Welcome Page	
Homepage welcome text	<p>Hello and welcome to our community!</p> <p>Over the next few days we want to share some information on the drinking water network and ask your views on how you think Thames Water should manage that system in the future. We want to understand your views as a bill paying customer.</p> <p>"Future bill payer welcome placeholder"- Over the next few days we want to share some information on the drinking water network and ask your views on how you think Thames Water should manage that system in the future. We know you don't pay bills right now but</p>

VERVE

	<p>please base your answers as though you would be (because you may have to in the not-too-distant future!)</p> <p>"Business customer welcome placeholder"- Over the next few days we want to share some information on the drinking water network and ask your views on how you think Thames Water should manage that system in the future. We want to understand your views as a business customer. Please also note that you will see mentions of customer bills and future bill impacts throughout this research. These are based on average annual household water and wastewater bills (£496 currently) rather than business bills, so the values could be different for your business, to really, say for the purposes of this research, please think about the principle of any bill increases mentioned, which will be on top of the average household bill.</p> <p>Before we begin, we thought it would be important to tell you a bit more about this research:</p> <p>Every five years, water and sewerage companies take part in a Price Review. They plan out the activities they will undertake over a five-year period to deliver the service that customers expect, and any impacts on the bill that those activities might have. These activities range from delivering customer services, managing the water and sewerage networks, reducing carbon emissions, and making a difference in local communities (including the natural environment such as rivers). These five-year plans are presented to Ofwat, the water and sewerage industry regulator, which has the power to accept or reject each company's plans and proposed bill impacts. The current Price Review covers activities planned for the period 2025-2030.</p> <p>Water and sewerage companies must consult with their customers about their plans and reflect this in their plans.</p> <p>Thames Water is committed to improve its network to better meet the needs of customers now and in the future. Thames Water have identified a range of potential improvements to better manage the water and sewerage networks (including repairs and replacements).</p> <p>This research is about one element of Thames Water's price review, specifically the water network. We are looking for your feedback on Thames Water's plans in this area. All of your feedback will be taken account of within a report written by Verve, and decisions about what course of action Thames Water may take will be influenced by your comments.</p> <p>There will be some information to show you along the way, and we'd ask you to read this carefully. We'd like you to understand the information presented so that you are able to give an informed view, while considering the issues involved.</p>
Moderator intro	<p>"Hello, we are the researchers you'll be speaking to! We are really looking forward to meeting you and getting started with some great new activities! If you have any questions or need to get in touch with us, please drop us a line here and we'll get back to you as soon as we can."</p>

Discussion guide

Task details	Text
Day 1- The Water Network and you	
<p>Title: Introduction to the Water Network</p> <p>Day(s) & order: 1.1</p> <p>Allocation: e.g. All</p> <p>Task type: Private Individual responses (forum discussions)</p>	<p>Welcome!</p> <p>You are being asked to give some early input into Thames Water's proposals to enhance the water network. Today we'd like to begin by providing you with an overall view of Thames Water's role in managing the water network.</p> <p>(Day 1 8tim)</p> <p>Do you have any comments on this information?</p>
<p>Title: Challenges facing the network</p> <p>Day(s) & order: 1.2</p> <p>Allocation: e.g. All</p> <p>Task type: Private Individual responses (forum discussions)</p>	<p>Now we'd like you to review some challenges facing the water network. Please note we won't really be covering water leakage in this community. We know how important that topic is to customers though and we have covered it in other customer research.</p> <p>(Day 1 8tim)</p> <ul style="list-style-type: none"> What are your first impression of these problems in the water network? What would you want to see Thames Water prioritise in improving the water network? Why do you say that?
<ul style="list-style-type: none"> Day 2- Alternative water supplies in emergencies (TOPICS TO BE SHOWN IN DIFFERENT ORDERS PER CUSTOMER) 	
<p>Title: Current issues of the emergency water supplies</p> <p>Day(s) & order: 2.1</p> <p>Allocation: e.g. All</p> <p>Task type: Private Individual responses (forum discussions)</p>	<p>Today we'd like to talk to you about emergency water supplies. Please read the attached materials to learn:</p> <p>A brief overview of what emergency water supplies are, in what cases emergency water supplies are needed and why these events happen.</p> <p>Why Thames Water are rethinking their approach to emergency water supplies.</p> <p>We have also attached a PDF of everything you learned in day 1 should you need to refer to it while discussing this topic.</p> <p>(Alternate water 8tim)</p> <p>What are your reactions to this information? Does anything surprise you?</p> <p>Do you think Thames Water have historically done enough around this issue? Why/ why not?</p> <p>How concerned or unconcerned are you about what could happen if Thames Water don't improve in this area? Why?</p>
<p>Title: Proposed enhancements to improve emergency water supplies</p> <p>Day(s) & order: 2.2</p>	<p>Now we'd like to give you more detail about what Thames Water propose to do to improve emergency water supplies – the three options they are considering.</p> <p>(Alternate water 8tim)</p> <p>(Day 1 8tim)</p>

<p>Allocation: e.g. All</p> <p>Task type: Private Individual responses (forum discussions)</p>	<p>What are your initial reactions to this plan? What do you think of the 3 options? Which would you prefer if you were in such a situation?</p> <p>How important/not important is it to you that Thames Water make this improvement from 2025? Why?</p> <p>Do you trust that Thames Water will be able to do this? Why/why not?</p> <p>For context, the average household water and wastewater bill for Thames Water customers is currently £456 (so that amount may be higher or lower for different customers, depending on things like having a water meter or being a business customer).</p> <p>Please also keep in mind that the bill costs we're showing are just for this one issue. Other changes to bills from 2025 to 2030 could see an additional £38 per year to maintain and improve the day-to-day water and wastewater service. On top of this, it could cost up to another £28 per year if Thames Water makes further improvements to the water and wastewater service for the longer term (splitting the improvements mentioned in this research).</p> <p>Finally, inflation is not included in the future costs shown.</p> <p>How do you feel about the bill increases for the improvements? Do you think it's worth it based on everything you've read?</p> <p>Is there anything unclear about this, or anything else you'd like to know that would help you make a better-informed opinion about this?</p>
<p>Title: Your conclusion on Thames Water's proposed enhancements to enhance emergency water supplies</p> <p>Day(s) & order: 2.3</p> <p>Allocation: e.g. All</p> <p>Task type: Private Individual responses (forum discussions)</p>	<p>Overall, after considering the benefits and costs for you as a customer, do you support or oppose Thames Water's proposal to improve alternative water supplies in an emergency?</p> <p>(Alternate water 8tim)</p> <ol style="list-style-type: none"> I strongly support the plan. I somewhat support the plan. I somewhat oppose the plan. I strongly oppose the plan. <p>Please tell us the reasons for your answer.</p> <p>Thank you for all your input today! We'll see you tomorrow for the next set of questions.</p>
<ul style="list-style-type: none"> Day 3- Water supply resilience (TOPICS TO BE SHOWN IN DIFFERENT ORDERS PER CUSTOMER) 	
<p>Title: Current issues with water supply resilience</p> <p>Day(s) & order: 3.1</p> <p>Allocation: e.g. All</p> <p>Task type: Private Individual responses (forum discussions)</p>	<p>Today we are going to talk about how we ensure a reliable supply of water for the future. Please read the materials to learn:</p> <ul style="list-style-type: none"> What major water supply interruptions are and examples of what can go wrong to cause this. The current risk of water supply failure if Thames Water do not invest more in this area and how this would impact customers. We have also attached a PDF of everything you learned in day 1 should you need to refer to it while discussing this topic. <p>(Water supply resilience 8tim)</p> <p>(Day 3-8tim)</p>

<p>Title: Proposed enhancements to improve water supply resilience</p> <p>Day(s) & order: 3.2</p> <p>Allocation: e.g. All</p> <p>Task type: Private Individual responses (forum discussions)</p>	<ul style="list-style-type: none"> What are your reactions to this information? Does anything surprise you? Do you think that two consecutive days without water once in your lifetime is acceptable or unacceptable? Is a major water outage like this something you've experienced or thought about before? Thames Water supplying you with a constant source of water – has this expectation changed for you over the years or not? How concerned or unconcerned are you about what could happen if Thames Water don't improve in this area? Why? How aware were you of the increasing risk in future from major water supply interruptions? Do you think Thames Water should invest now to reduce the risks of major water supply interruptions, which may be impacted by population growth and climate change? Or not? Why? <p>We'd now like to show you some case studies and proposed solutions of how Thames Water can reduce the risk of major water supply interruptions.</p> <p>(Water supply resilience 8tim)</p> <ul style="list-style-type: none"> What do you think about the way Thames Water have developed solutions to these two case studies to tackle the issue of supply interruptions? With the two case studies, do you think Thames Water made the right choice in solutions? Thames Water selected solutions which first reduced the risk to an acceptable level for customers and then selected the lowest cost option. Do you support or oppose this way of deciding the best solution? Why? What do you think of Thames Water's plans to address the biggest risks to customers first? Do you support or oppose the idea of using one solution which may improve many risks, to save costs? Do you support or oppose the idea of Thames Water fixing things which have not yet failed, to reduce the risk of a major supply interruption? As well as the cost of the solution itself Thames Water looks at how much that solution would cost to run and maintain over the next 60 years. <u>So</u> a solution could be low cost to build but very expensive to run and maintain over the next 60 years. Would you prefer a solution that is a higher initial cost to customers but costs less in the long term. Or a smaller cost initially, but costing more in the long term? As well as costs, these solutions could impact customers and communities with building and road work disruption. Is that disruption acceptable to you, if it meant less repeating water interruptions in future? Or is the disruption unacceptable? <p>We'd now like to show you different approaches to improving major water supply interruptions for the future.</p> <ul style="list-style-type: none"> What are your initial reactions to this plan? How important/not important is it to you that Thames Water make these improvements from 2025? Why?
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	<ul style="list-style-type: none"> What is your view of Thames Water's ambition in this area? Do you trust that Thames Water will be able to do this? Why/why not? <p>For context, the average household water and wastewater bill for Thames Water customers is currently £456 (so that amount may be higher or lower for different customers, depending on things like having a water meter or being a business customer).</p> <p>Please also keep in mind that the bill costs we're showing are just for this one issue. Other changes to bills from 2025 to 2030 could see an additional £38 per year to maintain and improve the day-to-day water and wastewater service. On top of this, it could cost up to another £28 per year if Thames Water makes further improvements to the water and wastewater service for the longer term (significantly the improvements mentioned in this research).</p> <p>Finally, inflation is not included in the future costs shown.</p> <ul style="list-style-type: none"> How do you feel about the bill increases for each of the three approaches? Do you think it's worth it based on everything you've read? Considering everything, what is your preferred approach from the 3? Why? Why not the other approaches? Is there anything unclear about this, or anything else you'd like to know that would help you make a better-informed opinion about this?
<p>Title: Your conclusion on Thames Water's proposed enhancements to enhance water supply resilience</p> <p>Day(s) & order: 3.3</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Overall, after considering the benefits and costs for you as a customer, do you support or oppose Thames Water's proposal to reduce the risk of major water supply interruptions?</p> <ol style="list-style-type: none"> I strongly support the plan. I somewhat support the plan. I somewhat oppose the plan. I strongly oppose the plan. <p>Please tell us the reasons for your answer.</p> <p>Thank you for all your input today! We'll see you tomorrow for the next set of questions.</p>
<p>Day 4- Basement flooding from trunk mains (TOPIC 8 TO BE SHOWN IN DIFFERENT ORDER 8 PER CUSTOMER)</p>	
<p>Title: Current issues with basement flooding from trunk mains</p> <p>Day(s) & order: 4.1</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Today we will discuss basement flooding from trunk main bursts. Please read the attached materials to learn:</p> <ul style="list-style-type: none"> Why some basements are at risk from flooding if they're near to trunk mains, the number at risk and the consequences. What Thames Water currently does to reduce the risks. We have also attached a PDF of everything you learned in day 1 should you need to refer to it while discussing this topic. <p>(STIM- Basement Flooding) (Day 1 Stim)</p> <p>What are your reactions to this information? Does anything surprise you?</p>

	<p>Do you think Thames Water have historically done enough to minimise this issue? Why/ why not?</p> <p>How concerned or unconcerned are you about what could happen if Thames Water don't improve in this area? Why?</p>
<p>Title: Proposed enhancements to protect customers from basement flooding</p> <p>Day(s) & order: 4.2</p> <p>Allocation: e.g. All</p> <p>Task type: Private individual responses (forum discussions)</p>	<p>Now, we'd like to talk to you about 2 possible solutions Thames Water could use to reduce the risk of basement flooding from trunk main bursts.</p> <p>(STIM -replacement vs. slip lining slides)</p> <p>Regarding Trunk Mains replacement option: What are your first impressions of this?</p> <p>Do you trust that Thames Water will be able to do this? Why/why not?</p> <p>If Thames Water did this, would you approve of this part of the plan? Why/why not?</p> <p>Regarding Trunk main slip-lining option: What are your first impressions of this?</p> <p>Do you trust that Thames Water will be able to do this? Why/why not?</p> <p>If Thames Water did this, would you approve of this part of the plan? Why/why not?</p> <p>For context, the average household water and wastewater bill for Thames Water customers is currently £456 (so that amount may be higher or lower for different customers, depending on things like having a water meter or being a business customer).</p> <p>Please also keep in mind that the bill costs we're showing are just for this one issue. Other changes to bills from 2025 to 2030 could see an additional £38 per year to maintain and improve the day-to-day water and wastewater service. On top of this, it could cost up to another £28 per year if Thames Water makes further improvements to the water and wastewater service for the longer term (significantly the improvements mentioned in this research).</p> <p>Finally, inflation is not included in the future costs shown.</p> <p>How do you feel about the bill increase for Thames Water to invest in these methods? Do you think it's worth it based on everything you've read?</p> <p>Is there anything unclear about either of these options, or anything else you'd like to know that would help you make a better-informed opinion about this?</p>
<p>Title: Your conclusion on Thames Water's proposed enhancements to protect customers from basement flooding</p> <p>Day(s) & order: 4.3</p> <p>Allocation: e.g. All</p>	<p>(STIM- Basement Flooding)</p> <p>Overall, after considering the benefits and costs for you as a customer, do you support or oppose Thames Water's proposal (using both methods) to better protect customers from basement flooding?</p> <ol style="list-style-type: none"> I strongly support the plan. I somewhat support the plan. I somewhat oppose the plan. I strongly oppose the plan. <p>Please tell us the reasons for your answer.</p>

<p>Task type: Private individual responses (forum discussions)</p>	
<p>Title: What activities should take priority</p> <p>Day(s) & order: 4.4</p> <p>(Scripting note: Fix position)</p> <p>Allocation: e.g. All</p> <p>Task type: Mini Polls</p>	<p>Now we've discussed all 3 topics, please could you rank them in order of how important you feel they are for Thames Water to improve. 1st - what you think is the most important thing to improve, to the 3rd, the least important thing to improve.</p> <p>(STIM TBC- Brief recap of each enhancement and impact on bills)</p> <ul style="list-style-type: none"> Major water supply interruptions Alternative water supplies in an emergency Basement flooding from trunk main bursts <ul style="list-style-type: none"> Please tell us briefly why you think they should prioritise the improvements in this way!

Reminder email

<p>Short email sent to incompletes to remind them to take part</p>	
<p>Subject line: Reminder: the community is waiting for you!</p>	<p>Just a quick reminder to let you know that we have activities ready and waiting for you in the community! We'd love to hear from you, so please log in and let us know your thoughts!</p>

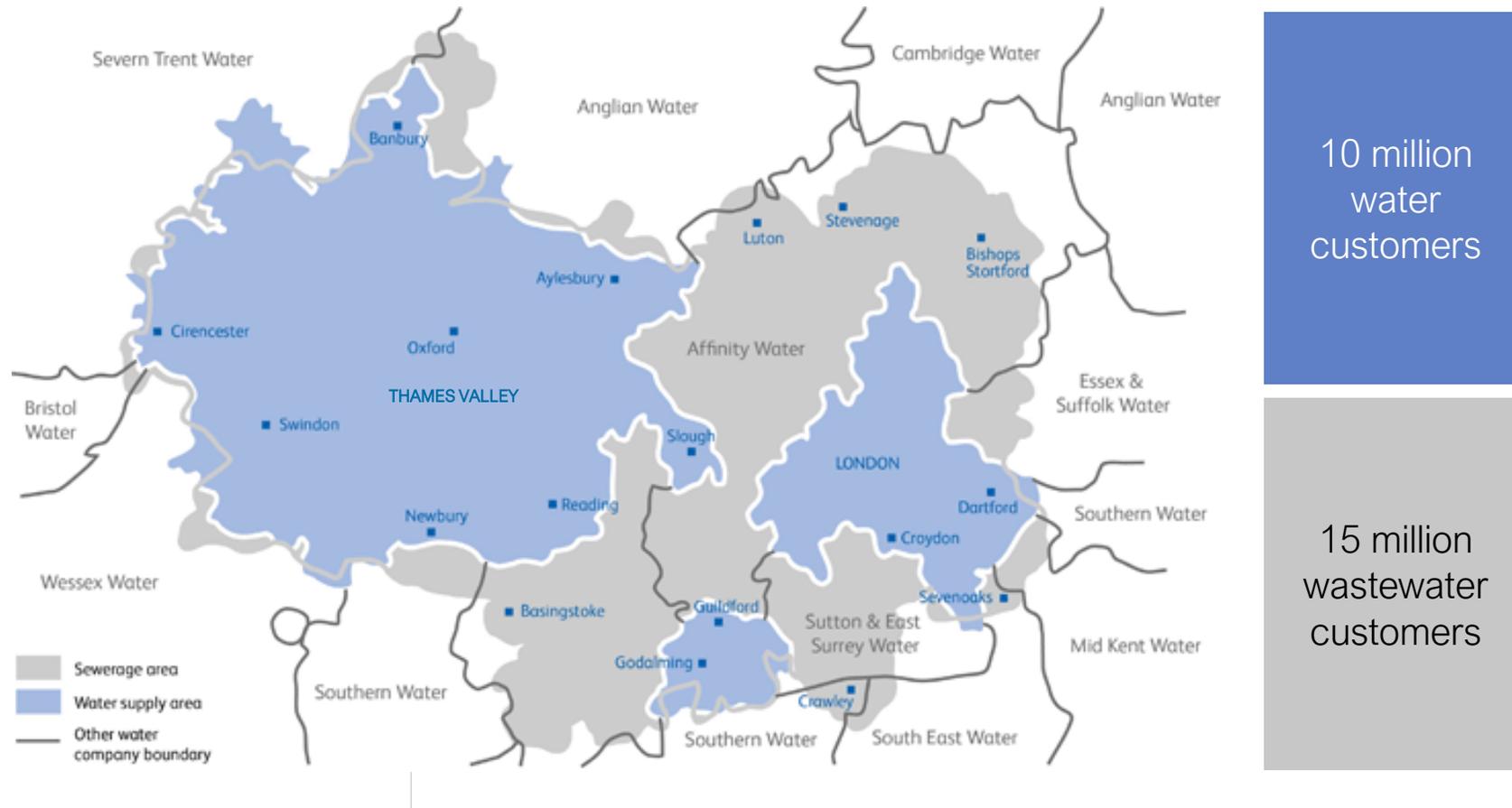


Water Community Stimulus



Day 1.1

Thames Water is the UK's largest water and wastewater services provider



Thames Water supplies 2.7 billion litres of drinking water on average every day to homes and businesses in London and across the Thames Valley

Thames Water has a large network of water pipes to provide drinking water to its customers

Thames Water has around 31,000 km of water pipes. Two thirds of which are in London.

If all these pipes were laid end to end it would be able to get to Tokyo and back...and back to Tokyo again!



This network is made up of:



Trunk main pipes
10% of the water network



Distribution pipes
90% of the water network

In addition:



Customer pipes
around 18,000 km

Trunk main pipes

- These are the largest pipes, between 30 – 140cm in diameter
- They can operate under very high pressure and carry a lot of water from water treatment works to the distribution pipes
- They can cause a lot of disruption if they burst as the escaped water can flood areas very quickly, which could be dangerous for people in basement or underground locations
- They are under almost all the main roads in London and throughout the Thames Valley

Distribution pipes

- These carry water from the trunk main pipes to customer properties
- They are smaller than the trunk pipes at around 10 – 25cm in diameter
- There is a distribution pipe under almost every road in London and many residential roads in the Thames Valley

Customer pipes

- These are around 1.5 – 2.5cm in diameter
- These are owned by customers, who are responsible for their repair
- However, Thames Water has a policy whereby they offer to fix some types of leaks on customer pipes for free

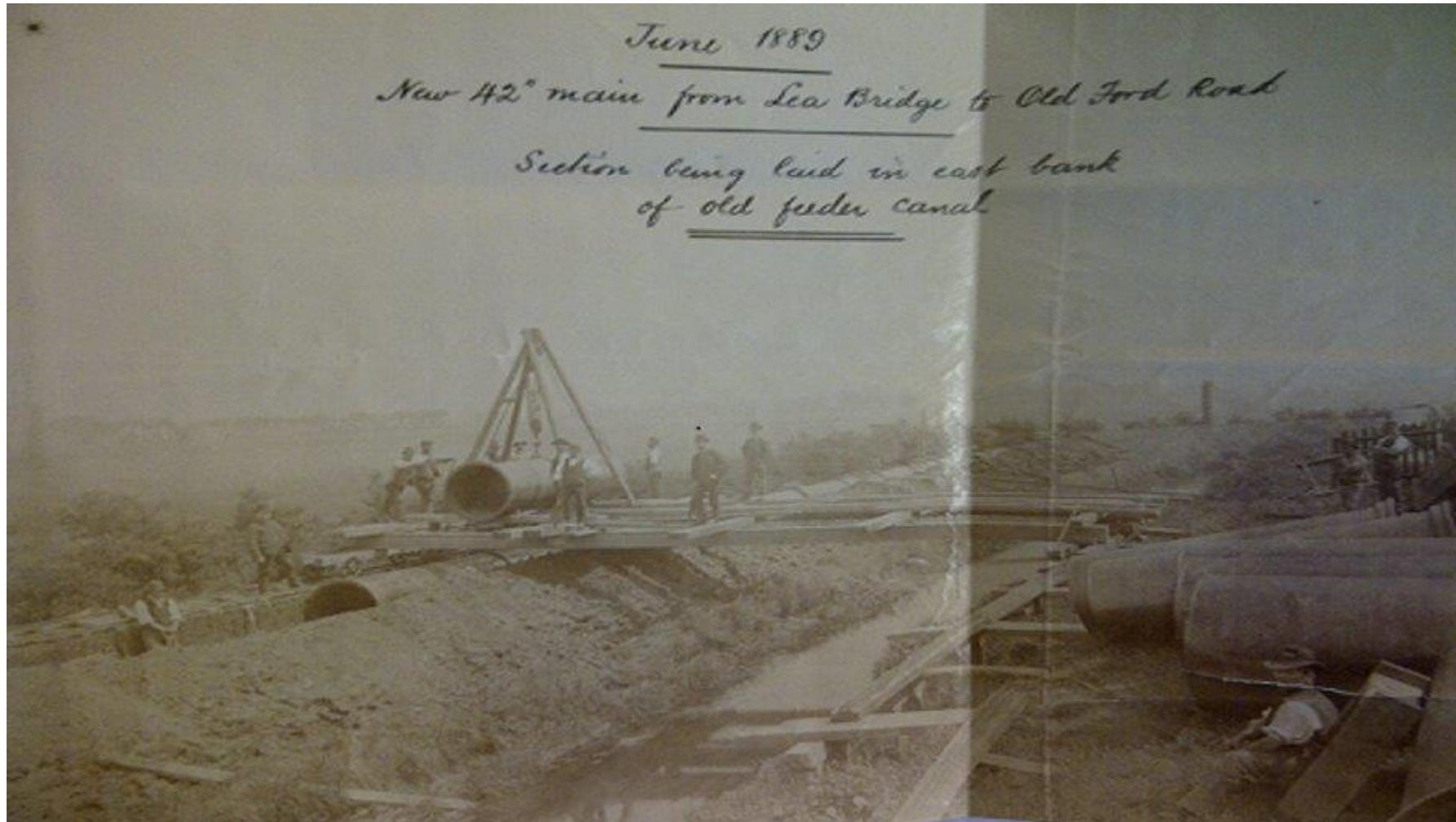




Day 1.2

Thames Water's water network is getting old!

Mains such as this one are still in use today...



What is a burst?

When a large mains pipe breaks it can have a huge impact. As a lot of water can escape at once there is a chance of rapid flooding that could cause danger to life and damage to property, especially for lower level properties like basements, cellars and underground stations.

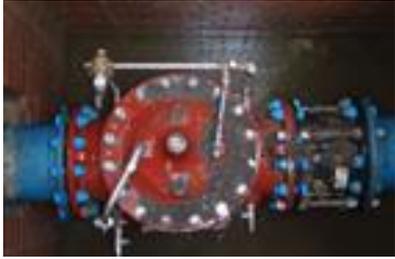
It can take several weeks or even months to replace mains, which can be highly disruptive to traffic, especially as mains tend to be located on main roads.

Bursts are caused by various things, including:

- Old or weak pipes
- Natural wear and tear on pipes
- Sudden heavy traffic causing movement in the ground
- Temperature and weather changes, which cause pipes or the surrounding ground to swell or shrink
- Extreme temperature changes causing water in pipes to freeze then thaw rapidly
- High water pressure or sudden changes in water pressure



Thames Water has been working to reduce bursts and leaks



1. Controlling water pressure

Reducing excess water pressure in the water pipe network reduces the amount of water being lost through leaks and reduces the frequency of bursts



2. Active leakage control

Thames Water monitor the water network to understand where hidden leaks are, find them and repair them



3. Targeted upgrading and replacing of pipes

Thames Water can upgrade pipes to reduce leakage, for example by re-lining weak pipes

When a pipe is too damaged to be upgraded it is completely replaced by digging up the road or in some cases by pushing a new pipe into the ground using new methods

In the last year
these efforts
have reduced
the amount of
water lost each
day by 5%

Water supply interruptions

Water supplies can be stopped for a number of reasons, for example:

- The most common is where water pipes burst and may need to be closed off to prevent flooding or a danger to life due to the huge amounts of water escaping
- A problem at a water treatment works where water quality tests show a failure, meaning the water cannot be drunk. Supplies will be stopped until the reason for the failure has been resolved
- High demand for water, in hot dry summers for example, where water production cannot keep up with the water being used by households and businesses

Thames Water does what it can to reduce the risk of water supplies stopping, for example:

- “Calming” the water network, reducing pressure surges by changing how water pumps work
- Replacing pipework and other equipment before it erodes or breaks
- Repairing leaks as quickly as possible
- Monitoring and forecasting weather patterns to prepare for potential high water demands





Major water supply
interruptions stimulus

Major water supply interruptions - what is the problem?

- The water network - treatment works, pumps and pipes - are all connected.
- Thames Water's water supply network can sometimes experience breakdowns leading to customers having no water, this is called a supply interruption. Often water supply is restored quickly as water can be moved around the network.
- However sometimes there are single points of failure, where, if a certain piece of equipment fails, it would stop the entire system from working and would stop water getting to customers.
- Some of these equipment failures are so big that Thames Water is unable to prevent the supply interruption to customers, even through recovery efforts such as providing bottled water to them.
- Thames Water believe that a customer experiencing two consecutive days of no water once in their lifetime would be unacceptable. This would be considered a **major water supply interruption**.
- Thames Water has identified particular equipment that could cause major supply interruptions, with no water for more than 2 days, once in a lifetime. One example of an equipment failure like this could mean over a million customers without water for up to 6 months.
- Thames Water regularly maintains its equipment to make sure the risk of these failures is as low as possible. However maintenance alone is not enough to stop these failures happening.
- The risk of major supply interruptions could also grow in future, particularly with increasing incidents of extreme weather because of climate change, making equipment more likely to fail more frequently.
- Thames Water's ambition is to develop a more secure water network for customers by 2050, where **no customers experience a water supply interruption greater than two days, once in a lifetime**.
- Thames Water plans to reduce all known major supply interruption risks by 2050, starting in 2025.

Example of electrical equipment which could be damaged by flooding, causing a large supply interruption



350 Olympic sized swimming pools worth of customer water are at risk of being stopped every year, from facilities/equipment/pipes that might breakdown

This is the same as 3 million customers' daily water use or 1.25 million properties being without water

Examples of major water supply interruption risks

Here are two examples of risks that Thames Water propose to improve by 2030

Honor Oak Water Booster Station and Reservoir (London)

- There are 8 different risks at this site which could cause it to fail, including flooding, power supply failure and failure of pumps
- Thames Water is already doing work at Honor Oak to reduce the likelihood of failure but flooding and other risks are outside its control
- If this site fails:
 - **450,000 customers would be without water for 2 weeks**
 - An emergency situation for London could be announced with public services called in to support
 - **Thames Water's stock of bottled water would run out in half a day.** It would need over 4 million litres of alternative water supplies through 92 bottled water stations
- Thames Water has assessed this could happen once every 5 years
- In the next five years Thames Water wants to build more pumps so that when the booster station fails, it can still get water to customers while it fixes the problem



Earley Water Booster Station (Berkshire)

- The pumps at this site are failing, but they cannot be repaired or maintained without closing the site. With the site closed there is no other way to get water to customers and a major supply interruption would occur
- If this site fails:
 - **61,000 customers would be without water for 6 months**
 - **Thames Water's stock of bottled water would run out in less than 3 days.** It would need over 600,000 litres of alternative water supplies through 12 bottled water stations
- Thames Water has assessed this could happen once every 10 years
- In the next five years Thames Water wants to build temporary pumps to allow for the existing pumps to be maintained and fixed



How Thames Water plan to tackle the problem

- Between 2025-2030, Thames Water want to remove 23 of the largest major supply interruption risks
- A total of 163 solutions were considered, from which 13 solutions were chosen. Thames Water considered best value for customers and whether the solutions could solve more than one risk. Environmental impacts were also considered.
- 13 solutions were chosen by:
 1. Firstly, selecting the solution that **reduced the risk of a major supply interruption** (two consecutive days of no water once in a customers lifetime)
 2. Secondly, selecting the **lowest cost** option

Examples of solutions and how they were chosen:

Honor Oak Water Booster Station and Reservoir (London)

The problem:

- The site is a single point of failure and if it fails 450,000 customers would be without water for 2 weeks
- There are 8 different risks at this site which could cause it to fail

Preferred solution:

36 solutions were considered and 1 was found that could solve 7 different risks on site:

- Installing a new set of pumps next to Honor Oak which could be used as a back up if the site had a pump failure
- This solution reduces the risk of a major supply interruption and was the lowest cost for customers

Example of rejected solution:

- Environmental options such as installing a sustainable urban drainage system at the site to absorb flood water
- These solutions were rejected as there is not enough space at the site to create drainage for the potential flood water

North Leigh Reservoir (Oxfordshire)

The problem:

- North Leigh reservoir has two parts and it is not possible to empty just one part for inspections to be made. The reservoir's water quality inspections are overdue so there is a risk of water quality problems which could result in the whole reservoir being shut

Preferred solution:

- Replace a nearby water pipeline and pump station to allow for a reliable backup supply when the reservoir is emptied for inspection
- 9 solutions were considered and this was the only solution which reduced the risk of a major supply interruption

Example of rejected solution:

- Building a third part to the reservoir
- This solution was rejected as there is not enough land to build a third part on and there would be higher chemical costs across the life of this solution. This may cost more to customers in the long-term

How Thames Water plan to tackle the problem

Using the methods of choosing best solutions that we've just spoken about, there are 3 overall approaches Thames Water could take to tackle the risks of water supply interruption, with different impacts on cost, time and improvement

Approach	What happens by 2030	What happens by 2050	Additional average annual cost to customers 2025-30
No extra investment to 2050	No additional customers protected from water supply interruptions	4,500 Olympic sized swimming pools worth of water supply would have been stopped , the same as 40 million customers' daily water use	£0 a year
Even investment to 2050	Protects 190 Olympic sized swimming pools worth of water supply from being stopped, the same as 1.7 million customers' or 710,000 properties daily water use	Protects 2,640 more Olympic sized swimming pools worth of water supply than the no investment approach, the same as 23 million customers' daily water use	£1 a year
More investment up front	Protects 250 Olympic sized swimming pools worth of water supply from being stopped, the same as 2.2 million customers' or 920,000 properties daily water use	Protects 3,100 more Olympic sized swimming pools worth of water supply than the no investment approach, the same as 27 million customers' daily water use	£6 a year



Security and Emergency Measures Direction stimulus

Alternative water supplies in an emergency

On very rare occasions the water network can experience significant problems resulting in large amounts of people being without a water supply for several days. For example:

- A major disruptive event like a terrorist attack
- Environmental challenges like droughts
- Power supply or major equipment failure at a water treatment works
- A large trunk main bursting

Thames Water does all it can to prevent these emergency situations impacting the water supply, but if water is stopped it must ensure customers have an alternative safe supply of water. Legally alternative sources of water needs to be made available to **1.5% of Thames Water's population**, around 185,000 people.

10 litres of water per person should be provided for the first 5 days of the emergency and then 20 litres per day after that. (That's 5, then 10 bottles of the size in the photo on this page - per person per day). For comparison, Thames Water customers currently use an average of 150 litres of water per person per day which includes cooking, washing, cleaning and toilet flushing.

The legal amount of people to be provided with water in an emergency used to be 0.5%, it changed to 1.5% in 2022, so Thames Water now need to prepare for providing many more customers with emergency supplies of water.

Currently in these situations Thames Water give out bottled water to customers through collection stations (at car parks for example). Bottled water is also hand delivered to vulnerable customers.

With the increased legal number, bottled water alone will not be enough to provide water supplies to everyone, as there is only ever a certain amount of bottled water stocked in the country.



How can Thames Water prepare for the increased level of alternative water supplies if an emergency happens?

Option	Benefits and drawbacks	Additional annual cost to customers from 2025-30
<p>Increase the number of water tankers Thames Water has, from 11 to 50, and these could bring in water from another area and pump it through water pipes to people's taps</p>	<ul style="list-style-type: none"> +Convenience of water from the tap +No single use plastic bottles -Customers need to be told to use as little as possible to prevent this source running out (if paddling pools were being filled for example) 	<p>£5.50 a year</p>
<p>Increase the number of water tankers Thames Water has, from 11 to 50, and these could bring in water from another area and park up near houses and businesses so customers could go to these to fill up their own containers with water</p>	<ul style="list-style-type: none"> +Sources of water will be closer to those in need +No single use plastic bottles -Not as convenient as having water supply to the tap 	<p>£5.50 a year</p>
<p>Stocks of bottled water could be increased and these could be delivered to central locations like supermarket carparks, so customers can collect bottles by car. Vulnerable customers would still have bottled water delivered to their door</p>	<ul style="list-style-type: none"> +Tried and tested method for distributing water -A lot of plastic waste -Not ideal for those less mobile or without cars -Not enough to go around if emergency continues for several days -Cost of storing and moving the bottled water -Limited shelf life of bottled water 	<p>£6.50 a year</p>

Water tanker



Bottled water station





Basement Flooding Stimulus

What are trunk mains and why can they cause basement flooding?

Trunk mains are the 'motorways' of the water pipe network and carry a large quantity of water at high pressure. Thames Water's trunk mains average over 100 years old and make up a tenth of the water network.

Trunks mains are often located under main roads and can be close to homes and businesses.

So if these pipes burst, they could flood properties with basements very quickly. It can take just 30 minutes for an entire basement to be flooded, leaving no time for emergency services to help. This could potentially put peoples lives at risk if they were unable to leave basements quickly.

Some households have needed to be relocated for over a year as a result of the damage from such flooding, and some businesses have had to stop trading for similar amounts of time.

Thames Water pay insurance claims to those impacted by trunk main bursts, the average claim is £43,000.

Case study: In 2019, an iron trunk main from 1894 burst near Finsbury Park, London. 100 basements were flooded and 45 households needed to be rehoused.

A burst trunk main



A flooded basement



What is currently done about trunk main bursts?

Before 2020 Thames Water generally only replaced trunk mains after they burst. Since then more investment has gone into replacing trunk mains that are most at risk of bursting – so the mains are replaced before they burst and cause any damage.

Thames Water do other things to make sure the risk of bursts is as low as possible:

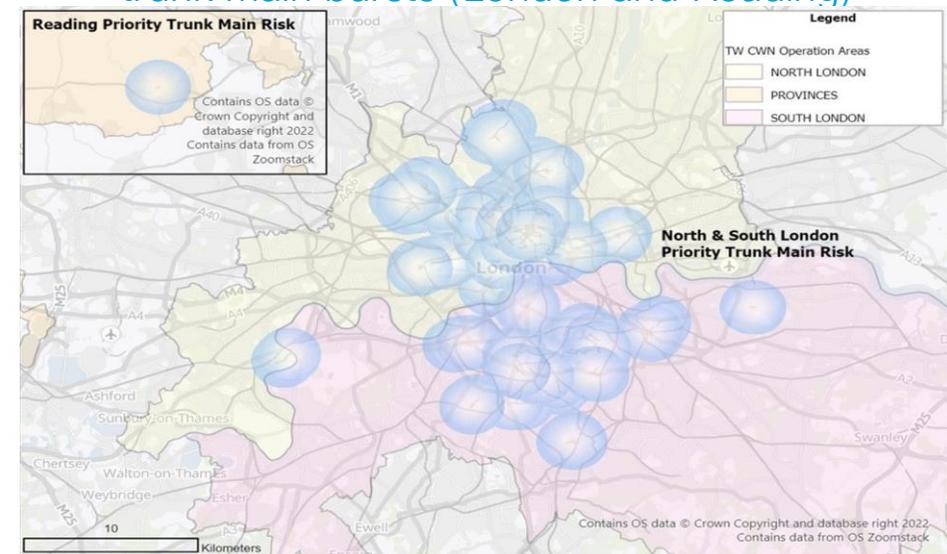
- Monitoring the condition of trunk mains, alerting of any potential failures
- Identifying, monitoring and repairing leaks that might eventually cause a trunk main to burst
- Checking and repairing the valves on trunk mains

Currently, almost 60,000 household basements are still identified as being at some risk from a trunk main burst in the Thames Water region, these are mostly in London, with some in Reading. This means more trunk mains still need to be replaced, and if nothing is done the risk of basement flooding could almost double by 2050.

Basement floods caused by trunk main bursts



Map of areas with basements at risk from trunk main bursts (London and Reading)



How can Thames Water improve the risk of basement flooding?

Thames Water plan to replace high risk trunk mains to protect 2,000 basements by 2030, with the rest being replaced by 2050. Two methods have been identified to make the risky trunk mains safer. A combination of these will be used to meet Thames Water's targets.

Trunk main replacement

What is this?	An old length of mains pipe is put out of action and replaced by a new pipe
Benefits	More flexibility over the type, size and positioning of the new trunk main
Drawbacks	Requires roads to be dug up, usually more expensive and more disruptive to the local community

Trunk main 'slip lining'

What is this?	A smaller pipe is pulled through the inside of a larger existing main
Benefits	Usually less expensive and less disruptive to the local community with smaller scale road works needed to fit the pipes
Drawbacks	Could cause a restriction to the water flow. May need to be replaced with a larger pipe in future anyway due to population growth

Additional cost to average annual bills for all customers for investing in these methods to improve the risk of basement flooding

2025-30	£1 a year
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Final day

Recap of the 3 topics we've discussed [WATER]

Issue	Thames Water's proposals for improvement	Additional annual cost to customers from 2025-30
Major water supply interruptions	Various problems in the water network can cause customers to be without water. Thames Water could invest in improvements to the network to reduce the risk of supply interruptions. The improvements could be done quicker (higher initial annual cost) or more steadily over the coming years (lower annual cost but over a longer time)	£1 to £6
Alternative water supplies in an emergency	If a major water supply interruption happens Thames Water should provide water for up to 185,000 customers. Thames Water could invest in more water tankers to take water directly to customers and they could have more bottled water supplies to be collected or delivered.	£5.50 to £6.50
Basement flooding from trunk main bursts	If a trunk main bursts it could flood basements. Thames Water could invest in replacing some old trunk mains and lining others to reduce the risk of bursts.	£1
TOTAL		£7.50 to £13.50

As well as these costs, please remember there could be other additional costs to your bill (on top of what you currently pay) from 2025 to 2030. For example:

- Maintain and improve the day-to-day water & wastewater service to meet customer needs and expectations = **£38** per year
- Make further improvements or reduce the chance of things going wrong in future for the water service (other than the 3 improvements above) and for the wastewater service = **£21.50 to £27.50** per year



Quantitative questionnaire



Enhancement Case Insight

QUANT QUESTIONNAIRE

VERVE
Energising Insight

17 March 2023

VERVE

Thames Water
Customer Voices



Scripting specifications			
Job code	7435	Enhancement Case Insight	Quant
Market and Languages	UK		
Sample source	<input type="checkbox"/> Panel <input type="checkbox"/> Client List <input checked="" type="checkbox"/> 3rd Party <input type="checkbox"/> Open link If Client List, specify pipe ins		
Stimulus path	n/a		
Scripting tools	n/a		
Member Ref Qc	n/a		

SAMPLE CRITERIA:

Demographic	Question	Quota	Sample Size Total (n=1270)
Overall targets			
Bill Type			
Future bill payer		HARD	55
Household Type			
Households		HARD	1010
Non-households		HARD	205
CATI			
Telephone interviews – non/narrow internet users		Household customers	HARD 100
Gender - Households			

Energising Insight

Enhancement Case Insight – 3-Jun-23

2

VERVE

Thames Water
Customer Voices



Male	Q1		HARD	48%	485	
Female			HARD	52%	525	
Age - Households						
18 – 24	Q2		HARD	13%	130	
25 – 34			HARD	19%	194	
35 – 44			HARD	19%	194	
45 – 54			HARD	17%	170	
55 – 64			HARD	14%	140	
65+			HARD	18%	182	
Ethnicity - Households						
White	Q3/Q13		HARD	London	55%	335
			HARD	TV	83%	337
BAME			HARD	London	45%	270
			HARD	TV	17%	68
Social Grade - Households						
SEG AB		Q12		HARD	28%	285
SEG C1			HARD	32%	325	
SEG C2			HARD	14%	140	
SEG DE			HARD	26%	260	
Service Type - Households						
Clean/Waste	Q3		SOFT	64%	645	
Waste only			SOFT	36%	365	
Disability – Households						
Disability in household	Q14 = Codes 1-8		HARD	27%	275	
No disability in household	Q14=9		HARD	73%	735	
Households Location						

Energising Insight

Enhancement Case Insight – 3-Jun-23

3



Households London	Q3		HARD	60%	605
Households Thames Valley & Home Counties			HARD	40%	405
Non-Households – in more detail (n=206)					
Non households under 10 employees	Q9		SOFT	90%	183
Non households 10+ employees			SOFT	10%	22
Non households London	Q4		HARD	67%	137
Non households London			HARD	33%	68
			SOFT		
Non household SIC: Construction, manufacturing, agriculture	Q8		SOFT	16%	33
Non household SIC: Wholesale, retail, transportation			SOFT	14%	28
Non household SIC: Accommodation, food services			SOFT	7%	13
Non household SIC: Services			SOFT	48%	100
Non household SIC: Public organisations			SOFT	9%	18
Non household SIC: Other services			SOFT	7%	13

RE-directs:

Complete: [https://obsrvnow.com/complete?BrokerPanelId=\[\[BrokerPanelId\]\]&obsrv_v=43d254af](https://obsrvnow.com/complete?BrokerPanelId=[[BrokerPanelId]]&obsrv_v=43d254af)

Screened Out: [https://obsrvnow.com/complete?BrokerPanelId=\[\[BrokerPanelId\]\]&obsrv_v=2aebe99](https://obsrvnow.com/complete?BrokerPanelId=[[BrokerPanelId]]&obsrv_v=2aebe99)



Quality

Term: [https://obsrvnow.com/complete?BrokerPanelId=\[\[BrokerPanelId\]\]&obsrv_v=ab4406f7](https://obsrvnow.com/complete?BrokerPanelId=[[BrokerPanelId]]&obsrv_v=ab4406f7)

Quota

Full: [https://obsrvnow.com/complete?BrokerPanelId=\[\[BrokerPanelId\]\]&obsrv_v=4f859f9e](https://obsrvnow.com/complete?BrokerPanelId=[[BrokerPanelId]]&obsrv_v=4f859f9e)

CREAT HIDDEN VARIABLE – ‘SAMPLE TYPE’:

1. HOU8EHOLD
2. NON-HOU8EHOLD
3. FUTURE BILL PAYER8
4. CATI

SECTION A – SCREENING

ASK ALL

QINTRO1. Thank you for taking part in this survey. Today, we have some questions from Thames Water about priorities for the future and we would like to hear what you think about them.

It should take no more than 10 minutes to complete depending on your answers.

ASK SAMPLE TYPE = CATI ONLY

Q0A. We have a couple of questions to check whether this survey is relevant to you. Do you or does anyone in your household have access to the internet at home (via any device, ~~u.g.~~ PC, mobile phone, etc.)? **SINGLE CODE. DO NOT RANDOMIZE**

- I have access to the internet and use it at home
- I have access to the internet, but don't use it at home
- I do not have internet access at home
- Don't know

ASK SAMPLE TYPE = CATI ONLY

Q0B. Which, if any, of these activities do you do online? **MULTI CODE. RANDOMISE.**

1. Online banking or paying bills online (~~u.g.~~ transferring money between accounts, managing mortgage or other payments, checking or paying bills)
2. Pay online for your council tax or for another local council service (~~u.g.~~ parking ticket, congestion charge etc.)
3. Look online for public services information on government sites (e.g. gov.uk/ ~~u.g.~~ or HMRC)
4. Finding/ downloading information for work/ business/ school/ college/ university
5. Look at job opportunities or apply for a job online
6. Find information for your leisure time including cinema, live music, theatre, museums etc.
7. Complete government processes online (~~u.g.~~ update Universal Credit, renew a driving ~~u.g.~~ or passport etc.)
8. Sign an online petition or use a campaigning website (~~u.g.~~ change.org)
9. Use streamed audio services (~~u.g.~~ Spotify or Deezer or Apple Music)



10. Listen to live, catch-up or on-demand radio through a website or app (~~u.g.~~ BBC Sounds, ~~u.g.~~)
11. Watch TV ~~u.g.~~ films/ content online (~~u.g.~~ Netflix, BBC ~~u.g.~~ or Sky Go)
12. Watch or post livestream videos (these let you watch or post videos 'live' at exactly the same time as they are being made) on sites or apps like YouTube Live, Instagram ~~u.g.~~ or Facebook Live
13. None of these **HOLD. EXCLUSIVE**

CATI SCREENOUT IF CODE 1 OR 2 AT Q0A AND SELECT MORE THAN 4 CODES AT Q0B.

NOTE TO SCRIPTING – PLEASE CREATE THE FOLLOWING VARIABLES:

- 'NARROW INTERNET USER' – LESS THAN 5 CODES SELECTED AT Q0B
- 'DIGITALLY EXCLUDED' – CODE 3 OR 4 AT Q0A

ASK ALL

Q1. Are you..?

SINGLE CODE

1. Male
2. Female
3. Other gender category
4. Prefer not to say

ASK ALL

Q2. How old are you?

[NUMERIC BOX]

NOTE TO SCRIPTING – PLEASE CREATE THE FOLLOWING VARIABLE:

- 13-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65+

SCREEN OUT IF YOUNGER THAN 13

MUST BE 25 AND UNDER TO QUALIFY AS 'FUTURE BILL PAYER'

IF OUTSIDE OF THAMES WATER SUPPLY AREA AND POSTCODE NOT ON LIST – SCREENOUT

ASK IF SAMPLE TYPE VARIABLE = HOU8EHOLD OR FUTURE BILL PAYER

Q3. Please can you share your postcode of your household. We only use this to validate the region you live in to ensure we're speaking to the correct people we need for this survey. Please put a space between the first group and the second group, ~~u.g.~~ AB1 2CD.

Please note that if you select Prefer Not To Say, you will be unable to continue with the survey as we are looking to hear from those in specific geographic locations in this particular survey.

[OPEN TEXT BOX. FORCE POSTCODE FORMAT WITH 'PREFER NOT TO SAY' OPTION]

SCREENOUT IF SELECT 'PREFER NOT TO SAY'

V:11. Client1. Existing Clients\Thames Water\1. Setup & Management\2. Community Set-Up\6. Recruitment\Postcode database
[Use MASTER POSTCODES_SERVICE AND WRZ FILE TO CREATE THE FOLLOWING VARIABLE]

SERVICE TYPE

1. HOUSEHOLD CLEAN & WASTE
2. HOUSEHOLD WASTE ONLY

WRZ

1. LONDON
2. BUNDOON/OXFORD (IF "BUNDOON")
3. SLOUGH/WYCOMBE/AYLESBURY
4. KENNET VALLEY
5. GUILDFORD
6. HENLEY
7. NO WRZ

NON WRZ AREA

1. AFFINITY WATER
2. ANGLIAN WATER
3. BRISTOL WATER
4. CAMBRIDGE WATER
5. E88EX & SUFFOLK WATER
6. MID KENT WATER
7. SEVERN TRENT WATER
8. SOUTH EAST WATER
9. SOUTHERN WATER
10. SUTTON & EAST SURREY WATER
11. WE88EX WATER
12. WRZ AREA

AREA TYPE

1. WRZ – CODE IF WRZ=1-8
2. NON WRZ – CODE IF WRZ=7

TRECC

1. CENTRAL BEDFORDSHIRE, BUCKINGHAMSHIRE, SLOUGH, LUTON
2. CENTRAL NORTH LONDON
3. CENTRAL SOUTH LONDON
4. E88EX AND THURROCK
5. HERTFORDSHIRE
6. LEE VALLEY
7. NORTH EAST LONDON
8. NORTH WEST LONDON
9. OXFORDSHIRE, BUNDOON, WILTSHIRE, GLOUCESTERSHIRE, WARWICKSHIRE
10. SOUTH EAST LONDON
11. SOUTH WEST LONDON
12. SURREY
13. WEST BERKSHIRE, READING, WOKINGHAM, BRACKNELL FOREST, WINDSOR AND MAIDENHEAD, HAMP SHIRE, WEST SUSSEX

NOTE TO SCRIPTING: CREATE 'HOUSEHOLD LOCATION' VARIABLE FOR Q3

1. HOUSEHOLD LONDON: IF POSTCODE IS IN LONDON
2. HOUSEHOLD TV: IF POSTCODE IS NOT IN LONDON

IF OUTSIDE OF THAMES WATER SUPPLY AREA AND POSTCODE NOT ON LIST – SCREENOUT

A8K IF SAMPLE TYPE VARIABLE = NON-HOUSEHOLD

Q4. Please can you share your postcode of your business. We only use this to validate the region you live in to ensure we're speaking to the correct people we need for this survey. Please put a space between the first group and the second group, e.g. AB1 2CD.

Please note that if you select 'Prefer Not To Say', you will be unable to continue with the survey as we are looking to hear from those in specific geographic locations in this particular survey.

[OPEN TEXT BOX, FORCE POSTCODE FORMAT WITH 'PREFER NOT TO SAY' OPTION]

SCREENOUT IF SELECT 'PREFER NOT TO SAY'

V:1. Client1_Existing Clients\Thames Water\1. Setup & Management\2. Community 3e-Up\6. Recruitment\Postcode databases
[Use MASTER POSTCODES_SERVICE AND WRZ FILE to CREATE THE FOLLOWING VARIABLE(S)]

SERVICE TYPE

1. NON-HOUSEHOLD CLEAN & WASTE
2. NON-HOUSEHOLD WASTE ONLY

WRZ

2. LONDON
9. BUNDOON/OXFORD (IF "BUNDOON")
10. SLOUGH/WYCOMBE/AYLESBURY
11. KENNET VALLEY
12. GUILDFORD
13. HENLEY
14. NO WRZ

NON WRZ AREA

13. AFFINITY WATER
14. ANGLIAN WATER
15. BRISTOL WATER
16. CAMBRIDGE WATER
17. E88EX & SUFFOLK WATER
18. MID KENT WATER
19. SEVERN TRENT WATER
20. SOUTH EAST WATER
21. SOUTHERN WATER
22. SUTTON & EAST SURREY WATER
23. WE88EX WATER
24. WRZ AREA

AREA TYPE

3. WRZ – CODE IF WRZ=1-8
4. NON WRZ – CODE IF WRZ=7

TRECC

14. CENTRAL BEDFORDSHIRE, BUCKINGHAMSHIRE, SLOUGH, LUTON
15. CENTRAL NORTH LONDON
16. CENTRAL SOUTH LONDON
17. E88EX AND THURROCK
18. HERTFORDSHIRE
19. LEE VALLEY

20. NORTH EAST LONDON
21. NORTH WEST LONDON
22. OXFORDSHIRE, BUNDOON, WILTSHIRE, GLOUCESTERSHIRE, WARWICKSHIRE
23. SOUTH EAST LONDON
24. SOUTH WEST LONDON
25. SURREY
26. WEST BERKSHIRE, READING, WOKINGHAM, BRACKNELL FOREST, WINDSOR AND MAIDENHEAD, HAMP SHIRE, WEST SUSSEX

NOTE TO SCRIPTING: CREATE 'NON-HOUSEHOLD LOCATION' VARIABLE FOR Q4

1. NON-HOUSEHOLD LONDON: IF POSTCODE IS IN LONDON
2. NON-HOUSEHOLD TV: IF POSTCODE IS NOT IN LONDON

NOTE TO SCRIPTING: CREATE 'LOCATION' VARIABLE

1. LONDON: IF POSTCODE IS IN LONDON FOR Q3 OR Q4
2. TV: IF POSTCODE IS NOT IN LONDON FOR Q3 OR Q4

NOTE TO SCRIPTING: CREATE 'SERVICE TYPE' VARIABLE

1. CLEAN & WASTE: IF CLEAN & WASTE AT Q3 OR Q4
2. WASTE ONLY: IF WASTE ONLY AT Q3 OR Q4

IF SAMPLE TYPE=HOUSEHOLD OR FUTURE BILL PAYER A8K

Q5. Are you the person responsible for paying your water and sewage bill for your household?
Please select the most relevant option.

SINGLE CODE

1. Yes, solely responsible
2. Yes, jointly responsible
3. Not responsible

IF 'HOUSEHOLD' SELECTS NOT RESPONSIBLE, TERMINATE, REGARDLESS OF AGE
'FUTURE BILL PAYER' MUST SELECT NOT RESPONSIBLE TO CONTINUE

IF 'FUTURE BILL PAYER' A8K

Q6. Which of the following applies to you?

MULTI CODE, RANDOMIZE

1. I live with my parents or other family members
2. I live in student accommodation where bills are included
3. I live in a rented accommodation where bills are included
4. Other HOLD
5. None of these HOLD

IF SELECTS OTHER OR NONE OF THESE – SCREENOUT

CREATE HIDDEN VARIABLE – 'FUTURE BILL PAYER': SELECTS CODES 1-3



IF SAMPLE TYPE= NON-HOU BEHOLD A 8K

Q7. Which of the following best describes your level of responsibility for managing the supply of water and wastewater services at your organisation's property?

Please select the most relevant option.

SINGLE CODE

1. Solely responsible / the main person responsible
2. Partially responsible / one of several people responsible
3. Bill payer / administrator of the account
4. I am not responsible at all **SCREENOUT**

IF SAMPLE TYPE= NON-HOU BEHOLD A 8K

Q8. Which of the following sectors is your business in?

SINGLE CODE. RANDOMIZE

1. Construction, mining, manufacturing, agriculture
2. Wholesale, retail, repair motor vehicles, transportation
3. Accommodation and food service activities
4. Services – information, financial, real estate, professional, scientific, technical activities, **gdr/g** and support
5. Public organisations, education, **pe/gt** and social work
6. Other **services-ANCHOR**
7. None of these **ANCHOR**

IF SELECT 3 NONE OF THESE - **SCREENOUT**

IF SAMPLE TYPE= NON-HOU BEHOLD A 8K

Q9. How many employees work in your business?

SINGLE CODE.

1. Under 10 employees
2. 10 or more employees
3. Not sure

IF SELECT 3 NOT SURE - **SCREENOUT**

IF SAMPLE TYPE= NON-HOU BEHOLD A 8K

Q10. How many sites does your business operate from?

SINGLE CODE.

1. One
2. Two
3. Three
4. Four
5. Five
6. More than five

IF SAMPLE TYPE= NON-HOU BEHOLD A 8K

Q11. Which of the following options apply to you, in relation to the supply of water to your business?

Water is vital for....

MULTICODE. RANDOMIZE

1. ...the manufacturing process which is essential to the running of your organisation (**gdr** to power machinery, agricultural production etc.)



2. ...the supply of services your organisation provides (**gdr**; cleaning services etc.)
3. ...an ingredient or part of the product or service your organisation provides (**gdr**; food or drink, chemical, cosmetics manufacturer etc.)
4. ...normal domestic use for your organisation's customers and employees (**gdr**; customer toilets, supply of drinking water)
5. None of the above **HOLD**

IF SAMPLE TYPE= HOU BEHOLD A 8K OR FUTURE BILL PAYER

Q12. Which of the following best describes your employment role?

SINGLE CODE.

1. Semi or unqualified / trainee manual worker (**gdr**; manual workers, all apprentices to be skilled trades, caretaker, park keeper, non-HGV driver, shop assistant)
2. Skilled Qualified / professional manual worker (**gdr**; skilled bricklayer, carpenter, plumber, painter, bus/ambulance driver, HGV driver, AA patrolman, publican worker etc.)
3. Supervisory or clerical/junior managerial/professional/administrative (**gdr**; office worker, student doctor, foreman with 25+ employees, salesperson, etc.)
4. Intermediate managerial/professional/administrative (**gdr**; newly qualified (under 3 years) doctor, solicitor, board director small organisation, middle manager in large organisation, principle officer in civil service/local government)
5. Higher managerial/professional/administrative (**gdr**; established doctor, solicitor, board director in a large organisation (200+ employees, top level civil servant/public service employee))
6. Student
7. Casual worker – not in permanent employment
8. Homemaker **gdr**; housewife, househusband etc
9. Retired and living on state pension
10. Retired and living on private pension
11. Unemployed or not working due to long-term sickness
12. Full-time **gdr** of other household member
13. Other

NOTE TO SCRIPTING: CREATE 'SOCIAL GRADE' VARIABLE

SEG1

1. AB — IF A = CODE 5 SELECTED / B = CODE 4 SELECTED
2. C1 — IF C1 CODE 3, 10 OR 8 SELECTED
3. C2 — IF C2 = CODE 2 SELECTED
4. DE — IF D = CODE 1 SELECTED / E = CODE 7 – 9 OR 11 – 13 SELECTED

SEG2

1. ABC1 (A = CODE 5 SELECTED / B = CODE 4 SELECTED / C1 = CODE 3, 10 OR 8 SELECTED)
2. C2DE (C2 = CODE 2 SELECTED / D = CODE 1 SELECTED / E = CODE 7 – 9 OR 11 – 13 SELECTED)

IF SAMPLE TYPE= HOU BEHOLD A 8K OR FUTURE BILL PAYER

Q13. Which ethnic group do you consider you belong to?

SINGLE CODE.

Asian or Asian British (TITLE ONLY)

1. Indian



2. Pakistani
3. Bangladeshi
4. Any other Asian background (please specify) **[OPEN]**

Black (TITLE ONLY)

5. Black British
6. Black Caribbean
7. Black African
8. Any other black background (please specify) **[OPEN]**

Chinese (TITLE ONLY)

9. Chinese
10. Any other Chinese background (please specify) **[OPEN]**

Mixed Race (TITLE ONLY)

11. White and Black Caribbean
12. White and Black African
13. White and Asian
14. Any other mixed background (please specify) **[OPEN]**

White (TITLE ONLY)

15. White British
16. White Irish
17. Any other white background (please specify) **[OPEN]**

18. Other (please specify) **[OPEN]**19. Prefer not to say **SCREENOUT**

CREATE 'ETHNICITY' VARIABLE

1. WHITE: IF Q8 = 15-17
2. BME: IF Q8 = 1-14 OR 18

CREATE 'ETHNICITY & LOCATION' VARIABLE

1. WHITE LONDON: ETHNICITY VARIABLE = 1 AND LOCATION VARIABLE = 1
2. WHITE NON-LONDON: ETHNICITY VARIABLE = 1 AND LOCATION VARIABLE = 2
3. BME LONDON: ETHNICITY VARIABLE = 2 AND LOCATION VARIABLE = 1
4. BME NON-LONDON: ETHNICITY VARIABLE = 2 AND LOCATION VARIABLE = 2

IF SAMPLE TYPE= HOU BEHOLD A 8K OR FUTURE BILL PAYER

Q14. Do you consider yourself or anyone within your household to be officially disabled defined by the Equality Act 2010 as having 'A physical or mental impairment which has a substantial and long-term adverse effect on a person's ability to carry out day-to-day activities'? If yes, which of the following disabilities do you consider yourself or anyone within your household to have? Please select all that apply.

MULTI CODE. RANDOMIZE

1. Visual disability
2. Hearing disability
3. Mobility disability
4. Learning disability
5. Mental health condition



- Chronic illness
- Disability requiring the use of at-home medical equipment (e.g. dialysis machines)
- Other, please specify **HOLD**
- I do not have any of these conditions or disabilities **HOLD**
- Prefer not to say **HOLD - SCREENOUT**

IF SAMPLE TYPE= HOUSEHOLD A BK

Q16. What is the combined gross income of your household? By this we mean how much money do all the people in your household have coming in, before Tax and National Insurance deductions. We would like you to include any benefits received or benefits paid directly to your landlord as part of your rent (e.g. Housing benefit)

SINGLE CODE

- Up to £8,000 a year / up to £670 a month / up to £155 a week
- £8,001 - £17,000 a year / £671 - £1,417 a month / £156 - £327 a week
- £17,000 - £21,750 a year / £1,418 - £1,813 a month / £328 - £418 a week
- £21,750 - £30,000 a year / £1,814 - £2,500 a month / £419 - £580 a week
- £30,001 - £40,000 a year / £2,501 - £3,300 a month / £581 - £770 a week
- £40,001 - £50,000 a year / £3,301 - £4,100 a month / £771 - £960 a week
- £50,001 - £70,000 a year / £4,101 - £5,800 a month / £961 - £1,345 a week
- £70,001 - £100,000 a year / £5,801 - £8,300 a month / £1,346 - £1,920 a week
- More than £100,000 a year / more than £8,300 a month / more than £1,920 a week
- Prefer not to say

A BK ALL

Q18. To the best of your knowledge, do you have a water meter installed at your home/property?

SINGLE CODE

- Yes, I have a water meter installed at my home/property i.e. I pay for what we use
- No, I do not have a water meter installed at my home/property i.e. I pay a fixed amount each month
- Don't know

A BK ALL- MULTICODE- RANDOMISE

Q17. Have you experienced any of the following related to your water company in the last few years?

- Issues paying the bill
- Went on a meter
- Had no water or low water pressure
- Reported a leak in the road
- Had a leak on my property
- Water tasted/looked funny
- Had sewage flood your house or garden
- Had water from a burst water pipe flood your house or garden
- Made a complaint
- Been swimming in a local river
- Seen pollution in a local river
- None of the above [**HOLD**]

A BK ALL

Q18. If you were able to choose your water provider, how likely is it that you would recommend Thames Water to a friend or family member? On a scale of 0 to 10 where 0 is not at all likely and 10 is extremely likely.

SINGLE CODE

- Not at all likely
-
-
-
-
-
-
-
-
- Extremely likely

HIDDEN VARIABLE 'NP 8 GROUP':

- Super detractors (0-4)
- Detractors (5-6)
- Passives (7-8)
- Promoters (9-10)

A BK ALL – SINGLE CODE

Q19. To what extent do you agree or disagree with these statements about Thames Water?

Please select one answer

TOP BREAKS, RANDOMISE

- Thames Water listen to their customers to better understand their needs
- Thames Water take care of the environment
- Thames Water invest in new ways to improve their service, preparing us well for the future
- Thames Water take ownership of their customer problems
- Thames Water only care about profits
- Thames Water are a responsible company
- Thames Water take providing an essential service seriously
- Thames Water play an active role in the community they work in

DOWNBREAKS/ SINGLE CODE

- Strongly agree
- Slightly agree
- Neither agree nor disagree
- Slightly disagree
- Strongly disagree

Q20. Please indicate the extent to which you agree or disagree with the following statements that other people have made about Thames Water.

TOP BREAKS, RANDOMISE

- I trust Thames Water to provide water and wastewater services
- It's easy to deal with Thames Water
- I have a good relationship with Thames Water
- Thames Water is a fair and honest company

DOWNBREAKS/ SINGLE CODE

- Strongly agree
- Slightly agree
- Neither agree nor disagree
- Slightly disagree



- Strongly disagree

SECTION B – MAIN SURVEY**SHOW SECTION 8 C/D/E/F/G IN RANDOM ORDER**

BINTRO. Every five years, water and sewerage companies take part in a Price Review. They plan out the activities they will undertake over a five-year period to deliver the service that customers expect, and any impacts on the bill that those activities might have. Water and sewerage companies must consult with their customers about their plans and reflect this in their plans.

Thames Water have identified a number of areas they could invest in that could further improve their future plans. We are going to show you some information about these different areas and we'd ask you to read them carefully. We'd like you to understand the information presented so that you are able to give an informed view, while considering the issues involved.

SHOW IF FUTURE BILL PAYER

We know you don't pay bills right now but please base your answers as though you would be (because you may have to in the not-too-distant future!)

SHOW IF NON-HOU SEHOLD

We want to understand your views as a business customer, so please base your answers on your experience as a business. You will see mentions of customer bills throughout this research, these are based on average annual household water and wastewater bills (£495 currently) rather than business bills, so the values could be different for your business. For the purposes of this research, please think about the principle of any bill increases mentioned, which will be on top of the average household bill.

SHOW ALL

In this survey we'll show you some potential changes to future water and wastewater bills. For context, the average household water and wastewater bill for Thames Water customers is currently £495 (so that amount may be higher or lower for different customers, depending on things like having a water meter or being a business customer).

Please keep in mind that the future bill costs we'll show are just for particular issues. Other changes to bills from 2025 to 2030 could see an additional £38 per year to maintain and improve the day-to-day water and wastewater service, and on top of this it could cost up to another £28 per year if Thames Water makes further improvements to the water and wastewater service for the longer term. Finally, inflation is not included in the future costs shown.

SECTION C – SEWER FLOODING RESILIENCE TO PROPERTIES**[INSERT BRIEF TOPIC DESCRIPTION]****A BK ALL**

C1. How important or not important is this to you that Thames Water make improvements to prevent sewer flooding to properties?

SINGLE CODE

- Very important
- Somewhat important
- Not sure
- Not very important
- Not at all important

ASK ALL

C2. Which, if any of Thames Water's proposals do you support for improving sewer flooding to properties?

[Click here to see plans again](#)

SINGLE CODE.

1. Achieve no sewer floods by 2040
2. Achieve no sewer floods by 2050
3. Achieve no sewer floods by 2065
4. No additional investment in tackling sewer floods

SECTION D – GROUNDWATER SEWER INFILTRATION**[INSERT BRIEF TOPIC DESCRIPTION]****ASK ALL**

D1. How important or not important is this to you that Thames Water make improvements to groundwater sewer infiltration to prevent sewer overflows?

SINGLE CODE.

1. Very important
2. Somewhat important
3. Not sure
4. Not very important
5. Not at all important

ASK ALL

D2. Which, if any of Thames Water's proposals do you support for improving groundwater sewer infiltration?

[Click here to see plans again](#)

MULTI CODE. RANDOMIZE

1. Reduce sewer overflows by increasing the size of sewage treatment works
2. Reduce sewer overflows by lining sewer pipes
3. Reduce sewer overflows by creating wetlands
4. No additional investment in tackling groundwater sewer infiltration **[HOLD.EXCLUSIVE]**

SECTION E – MAJOR WATER SUPPLY INTERRUPTIONS**[INSERT BRIEF TOPIC DESCRIPTION]****ASK ALL**

E1. How important or not important is this to you that Thames Water make improvements to reduce major water supply interruptions?

SINGLE CODE.

1. Very important
2. Somewhat important
3. Not sure
4. Not very important
5. Not at all important

ASK ALL

E2. Which, if any of Thames Water's proposals do you support for reducing major water supply interruptions?

[Click here to see plans again](#)

SINGLE CODE. RANDOMIZE

1. Reduced risk of water supply interruptions with evenly spread investment to 2050
2. Reduced risk of water supply interruptions with quicker improvement to 2030 then evenly spread investment to 2050
3. No additional investment in tackling water supply interruptions **[HOLD]**

SECTION F – (BMD) ALTERNATIVE WATER SUPPLIES IN AN EMERGENCY**[INSERT BRIEF TOPIC DESCRIPTION]****ASK ALL**

F1. How important or not important is this to you that Thames Water make improvements to providing alternative supplies of water in an emergency?

SINGLE CODE.

1. Very important
2. Somewhat important
3. Not sure
4. Not very important
5. Not at all important

ASK ALL

F2. Which, if any of Thames Water's proposals do you support for providing alternative supplies of water in an emergency?

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MULTI CODE. RANDOMIZE

1. More tankers to pump water directly to taps
2. More tankers for people to collect water from
3. More bottled water for people to collect (hand delivered to vulnerable people)
4. None of these **[HOLD.EXCLUSIVE]**

SECTION G – BASEMENT FLOODING FROM TRUNK MAINS**[INSERT BRIEF TOPIC DESCRIPTION]****ASK ALL**

G1. How important or not important is this to you that Thames Water make improvements to basement flooding from trunk main bursts?

SINGLE CODE.

1. Very important
2. Somewhat important
3. Not sure
4. Not very important
5. Not at all important

ASK ALL

G2. Which, if any of Thames Water's proposals do you support for reducing the risk of basement flooding from trunk main bursts?

[Click here to see plans again](#)

MULTI CODE. RANDOMIZE

1. Reduce the risk of flooding by replacing trunk mains
2. Reduce the risk of flooding by lining trunk main pipes
3. No additional investment in tackling basement flooding **[HOLD.EXCLUSIVE]**

SECTION H – CLOSING**Rank 1-3**

H1. Alongside the issues that you have been discussing over the past few days, Thames Water has several other initiatives that they are aiming to achieve in the future, over and above the main provision of your water and sewerage services.

All these initiatives could have a positive impact on improving both service and the environment, but they could also impact on your annual bill.

Please look at this list of the main extra initiatives that Thames Water could undertake over 2025-2030 (and beyond) and rank them in order of priority you think Thames Water should give them, for instance where you think Thames Water need to make the most improvements. So, the most important initiative for Thames Water to tackle should be no 1 and the least important initiative for them to tackle should be no 3.

[RANDOMISE ORDER]

- a) Upgrading sewage treatment works to prevent sewer overflows
- b) Tackling groundwater sewer infiltration to prevent sewer overflows
- c) Preventing sewer flooding to properties
- d) Working with local partners and other sectors to improve overall river health
- e) Increasing the quality and number of official bathing water areas in the rivers in Thames Water's area
- f) Improvements to reduce major water supply interruptions
- g) Improvements to providing alternative supplies of water in an emergency
- h) Reducing the risk of basement flooding from trunk main bursts



Quantitative online stimulus

Sewer flooding in properties and gardens can happen when the sewer system becomes full and overflows due to blockages or too much rainwater. About 1,200 properties each year experience sewer flooding. Sewer flooding will likely increase in the future due to added pressure on the sewer network from an increasing population and climate change. If no additional investment is made to prevent sewer flooding by 2050, there would be a significant increase in the number of properties at risk of sewer flooding.

Thames Water is planning to make improvements so there is no sewer flooding of customer properties by 2050, except where it's caused by a very rare heavy rainfall storm (less than 1 in 50 chance of happening per year). Improvements can be made by building, repairing or expanding sewer pipes and sewage treatment works, by educating the public on what not to flush, also by using more natural solutions, for example Sustainable Urban Drainage, where porous paving and green spaces can be created to absorb rainwater in built up areas, so the rainwater doesn't flow into sewers.

Thames Water could make improvements to end sewer flooding over different timescales and each would have a different impact on customer bills:

Approach	Additional average annual cost to customers							
	2025-30	2030-35	2035-40	2040-45	2045-50	2050-55	2055-60	2060-65
No additional investment By 2050 there would be a significant increase in the number of properties at risk of sewer flooding, compared to if investments to improve were started now	£0	£0	£0	£0	£0	£0	£0	£0
Meet the goal by 2040 Invest in improvements so that there is no sewer flooding of customer properties by 2040 (except from very rare heavy rainfall storms with less than 1 in 50 chance of happening per year)	£3	£49	£130	£168	£134	£107	£85	£85
Meet the goal by 2050 Invest in improvements so that there is no sewer flooding of customer properties by 2050 (except from very rare heavy rainfall storms with less than 1 in 50 chance of happening per year)	£3	£6	£18	£58	£133	£175	£140	£140
Meet the goal by 2065 Invest in improvements so that there is no sewer flooding of customer properties by 2065 (except from very rare heavy rainfall storms with less than 1 in 50 chance of happening per year)	£3	£8	£23	£52	£76	£94	£106	£106

Groundwater sewer infiltration happens when water naturally in the ground rises, typically after prolonged rainfall, and enters the sewers through manhole covers or through the ground by forcing its way through any cracks and joints in the pipe. When this happens the infiltrated groundwater takes up room in the sewer so less normal wastewater can be carried. Too much groundwater in sewers can lead to sewage spilling into rivers through storm overflows. Changing weather patterns, as a result of climate change could lead to more groundwater entering sewers in the future, meaning more untreated sewage could overflow into rivers.

The Environment Act states that all sewage storm overflows must have fewer than 10 spills a year by 2050. Thames Water has a number of ideas to tackle groundwater sewer infiltration from 2025 to 2030, this will allow the most successful ideas to be developed and continued beyond 2030, so that by 2050 the level of sewage overflows into rivers should be much lower, meeting government targets.

3 key ideas are:

- Increasing the size of sewage treatment works, which would treat the increased flow from groundwater sewer infiltration, this would cost 50p extra per year on each customer's bill from 2025 to 2030
- Adding a lining to sewer pipes that would stop groundwater entering the pipes in the first place, this would cost £1 extra per year on each customer's bill from 2025 to 2030
- Creating wetland areas near storm overflows which would treat any sewer overflows naturally, this would cost £2 extra per year on each customer's bill from 2025 to 2030

Thames Water's water supply network can sometimes experience breakdowns leading to customers having no water, this is called a supply interruption. Often water supply is restored quickly as water can be moved around the network. Thames Water has identified particular equipment that could cause **major water supply interruptions**, with no water for more than 2 days, once in a lifetime. One example of an equipment failure like this could mean over a million customers without water for up to 6 months.

Thames Water regularly maintains its equipment to make sure the risk of these failures is as low as possible. However, maintenance alone is not enough to stop these failures happening. The risk of major supply interruptions could also grow in future, particularly with increasing incidents of extreme weather because of climate change, making equipment more likely to fail more frequently.

Thames Water's ambition is to develop a more secure water network for customers by 2050, where no customers experience a major water supply interruption greater than two days, once in a lifetime. This will be achieved by removing the individual risks of equipment failure that could produce such a major water supply interruption. Thames Water would do this by choosing solutions that are best value for customers and that solve as many of the risks at once.

There are 3 approaches Thames Water could take to tackle the risks of major water supply interruption, with different impacts on cost, time and improvement:

- No further investment, **no additional customers** protected from stopped water by 2030, and by 2050 the additional amount of daily water use that could be stopped would be 40 million customers' worth. This would cost no extra per year on each customer's bill from 2025 to 2030.
- An evenly spread investment to 2050 to protect an additional **1.7 million customers'** worth of daily water use by 2030. By 2050 the amount of water protected would cover **23 million customers'** (daily use) more than the no investment approach. This would cost £1 extra per year on each customer's bill from 2025 to 2030.
- More investment upfront to protect an additional **2.2 million customers'** worth of daily water use by 2030. By 2050 the amount of water protected would cover **27 million customers'** (daily use) more than the no investment approach. This would cost £6 extra per year on each customer's bill from 2025 to 2030.

On very rare occasions the water network can experience significant problems resulting in large amounts of people being without a water supply for several days. For example: a major disruptive event like a terrorist attack or a power failure at a water treatment site. Thames Water does all it can to prevent these emergency situations impacting the water supply, but if water is stopped it must ensure customers have an **alternative safe supply of water**. Legally alternative sources of water needs to be made available to 1.5% of Thames Water's population, around 185,000 people. The legal amount of people to be provided with water in an emergency used to be 0.5%, it changed to 1.5% in 2022, so Thames Water now need to prepare for providing many more customers with emergency supplies of water.

Currently in these situations Thames Water gives out bottled water to customers through collection stations (at car parks for example). Bottled water is also hand delivered to vulnerable customers.

With the increased legal number, bottled water alone will not be enough to provide water supplies to everyone, as there is only ever a certain amount of bottled water stocks in the country.

There are three options which will be used.

- Increase the number of water tankers Thames Water has, from 11 to 50, and these could bring in water from another area and pump it through water pipes to people's taps (although people's water usage may have to be limited so this transfer doesn't run out too quickly) – this would cost £5.50 extra per year on each customer's bill from 2025 to 2030.
- Increase the number of water tankers Thames Water has, from 11 to 50, and these could bring in water from another area and park up near houses and businesses so customers could go to these to fill up their own containers with water – this would cost £5.50 extra per year on each customer's bill from 2025 to 2030.
- Stocks of bottled water could be increased and these could be delivered to central locations like supermarket car parks, so customers can collect bottles by car. Vulnerable customers would still have bottled water delivered to their door - this would cost £6.50 extra per year on each customer's bill from 2025 to 2030.

Trunk mains carry a large quantity of water at high pressure. Thames Water's trunk mains average over 100 years old and make up a tenth of the water network. These pipes are often located under main roads and can be close to homes and businesses, so if they burst, they could **flood properties with basements** very quickly. It can take just 30 minutes for an entire basement to be flooded, leaving no time for emergency services to help. This could potentially put people's lives at risk if they were unable to leave basements quickly. Some households have needed to be relocated for over a year as a result of the damage from such flooding, and some businesses have had to stop trading for similar amounts of time.

Before 2020 Thames Water generally only replaced trunk mains after they burst. Since then, more investment has gone into replacing trunk mains that are most at risk of bursting – so the mains are replaced before they burst and cause any damage.

Almost 60,000 household basements are still identified as being at some risk from a trunk main burst in the Thames Water region, these are mostly in London, with some in Reading. This means more trunk mains still need to be replaced, and if nothing is done the risk of basement flooding could almost double by 2050.

Thames Water plan to replace high risk trunk mains to protect 2,000 basements by 2030, with the rest being replaced by 2050. Two methods have been identified to make the risky trunk mains safer. A combination of these will be used to meet the 2030 and 2050 targets. This would cost £1 extra per year on each customer's bill from 2025 to 2030:

- Trunk main replacement – digging up and replacing lengths of older pipe with new pipework
 - This has more flexibility over the type, size, and positioning of the new main, but requires roads to be dug up, is usually more expensive, and can be more disruptive to the local community.
- Lining trunk mains – inserting a smaller pipe inside the larger main
 - This is usually less expensive and less disruptive compared to replacing trunk mains, but could cause a reduction in water flow, and may need to be replaced later due to population growth



Quantitative telephone stimulus

About 1,200 properties each year experience sewer flooding. Sewer flooding will likely increase in the future due to added pressure on the sewer network from an increasing population and climate change. If no additional investment is made to prevent sewer flooding by 2050, there would be a significant increase in the number of properties at risk of sewer flooding.

Thames Water is planning to make improvements so there is no sewer flooding of customer properties by 2050, except where it's caused by a very rare heavy rainfall storm (less than 1 in 50 chance of happening per year). Improvements can be made by building, repairing or expanding sewer pipes and sewage treatment works, by educating the public on what not to flush, also by using more natural solutions, for example Sustainable Urban Drainage, where porous paving and green spaces can be created to absorb rainwater in built up areas, so the rainwater doesn't flow into sewers.

Thames Water could make improvements to end sewer flooding over different timescales and each would have a different impact on customer bills:

- No additional investment : By 2050 there would be a significant increase in the number of properties at risk of sewer flooding, compared to if investments to improve were started now. There would be no increase to customer bills
- **Meet the goal by 2040:** This would see an initial increase of £3 to annual bills from 2025-30, with an increase high of £168 extra per year in 2040-45, falling to £85 extra per year in 2060-65
- **Meet the goal by 2050:** This would see an initial increase of £3 to annual bills from 2025-30, with an increase high of £175 extra per year in 2050-55, falling to £140 extra per year in 2060-65
- **Meet the goal by 2065:** This would see an initial increase of £3 to annual bills from 2025-30, rising to an increase of £106 extra per year in 2055-60

Groundwater sewer infiltration happens when water naturally in the ground rises, typically after prolonged rainfall, and enters the sewers through manhole covers or through the ground by forcing its way through any cracks and joints in the pipe. When this happens, the infiltrated groundwater takes up room in the sewer so less normal wastewater can be carried. Too much groundwater in sewers can lead to sewage spilling into rivers through storm overflows. Changing weather patterns, as a result of climate change could lead to more groundwater entering sewers in the future, meaning more untreated sewage could overflow into rivers.

The Environment Act states that all sewage storm overflows must have fewer than 10 spills a year by 2050. Thames Water has a number of ideas to tackle groundwater sewer infiltration from 2025 to 2030, this will allow the most successful ideas to be developed and continued beyond 2030, so that by 2050 the level of sewage overflows into rivers should be much lower, meeting government targets.

3 key ideas are:

- Increasing the size of sewage treatment works, which would treat the increased flow from groundwater sewer infiltration, this would cost 50p extra per year on each customer's bill from 2025 to 2030
- Adding a lining to sewer pipes that would stop groundwater entering the pipes in the first place, this would cost £1 extra per year on each customer's bill from 2025 to 2030
- Creating wetland areas near storm overflows which would treat any sewer overflows naturally, this would cost £2 extra per year on each customer's bill from 2025 to 2030

Thames Water's water supply network can sometimes experience breakdowns leading to customers having no water, this is called a supply interruption. Thames Water has identified particular equipment that could cause **major water supply interruptions**, with no water for more than 2 days, once in a lifetime. Maintenance alone is not enough to stop these failures happening. The risk of major supply interruptions could also grow in future, particularly with increasing incidents of extreme weather because of climate change, making equipment more likely to fail more frequently.

Thames Water's ambition is to develop a more secure water network for customers by 2050, where no customers experience a major water supply interruption greater than two days, once in a lifetime. This will be achieved by removing the individual risks of equipment failure that could produce such a major water supply interruption.

There are 3 approaches Thames Water could take to tackle the risks of major water supply interruption, with different impacts on cost, time and improvement:

- **No additional customers** protected from stopped water, and by 2050 an additional 40 million customers' worth of daily water use could be stopped. This would cost no extra per year on each customer's bill from 2025 to 2030.
- An evenly spread investment to 2050, initially protecting 1.7 million customers' worth of daily water use, rising to 23 million customers' worth by 2050, compared to the no investment approach. This would cost £1 extra per year on each customer's bill from 2025 to 2030.
- More investment upfront, initially protecting 2.2 million customers' worth of daily water use, rising to 27 million customers' worth by 2050, compared to the no investment approach. This would cost £6 extra per year on each customer's bill from 2025 to 2030.

On very rare occasions the water network can experience significant problems resulting in large amounts of people being without a water supply for several days. Thames Water does all it can to prevent these emergency situations impacting the water supply, but if water is stopped it must ensure customers have an **alternative safe supply of water**. Legally alternative sources of water needs to be made available to 1.5% of Thames Water's population, around 185,000 people. The legal amount used to be lower, so Thames Water now need to prepare for providing many more customers with emergency supplies of water.

Currently in these situations Thames Water gives out bottled water to customers through collection stations (at car parks for example). Bottled water is also hand delivered to vulnerable customers.

With the increased legal number, bottled water alone will not be enough to provide water supplies to everyone, as there is only ever a certain amount of bottled water stocks in the country.

There are three options which will be used.

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- Stocks of bottled water could be increased and these could be delivered to central locations like supermarket car parks. Vulnerable customers would still have bottled water delivered to their door - this would cost £6.50 extra per year on each customer's bill from 2025 to 2030.

Thames Water's trunk mains average over 100 years old and make up a tenth of the water network. These pipes are often located under main roads and can be close to homes and businesses, so if they burst, they could **flood properties with basements** very quickly. This could potentially put people's lives at risk. Some households have needed to be relocated for over a year as a result of the damage from such flooding, and some businesses have had to stop trading for similar amounts of time.

Before 2020 Thames Water generally only replaced trunk mains after they burst. Since then, more investment has gone into replacing trunk mains that are most at risk of bursting – so the mains are replaced before they burst and cause any damage.

Almost 60,000 household basements are still identified as being at some risk from a trunk main burst in the Thames Water region, in London and Reading. This means more trunk mains still need to be replaced, and if nothing is done the risk of basement flooding could almost double by 2050.

Two methods have been identified to make the risky trunk mains safer. A combination of these will be used to protect 2,000 basements by 2030 and all 60,000 basements by 2050. This would cost £1 extra per year on each customer's bill from 2025 to 2030:

- Trunk main replacement – digging up and replacing lengths of older pipe with new pipework
 - This has more flexibility over the type, size, and positioning of the new main, but is usually more expensive, and can cause more roadworks.
- Lining trunk mains – inserting a smaller pipe inside the larger main
 - This is usually less expensive with less roadworks, but could cause a reduction in water flow, and may need to be replaced later.