



Outcome Delivery Incentive Research: Testing and Development

Appendices to Stage 2 Report

August 2022

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Appendix A

Outcome Delivery Incentive
Research: Testing and
Development

Cognitive Testing Report

March 2022

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1. Introduction

1.1 Background

| | |
|----------------|---|
| Context | <p>The core objectives of the study were to develop a methodology for obtaining the customer evidence to support ODI rate setting at PR24 (Stage 1), and to develop and test the materials based on this methodology (Stage 2).</p> <ul style="list-style-type: none">▪ Stage 1 (completed) consisted of desk research, industry consultation and the development of options and recommendations for the measurement of customer preferences and values▪ Stage 2 (current) consists of the development of the survey instrument, two phases of cognitive depth interviews to test the survey instrument, and a quantitative pilot. <p>This report is the output of the first phase of cognitive testing for Stage 2 of this study.</p> |
| Core Objective | <p>Cognitive testing was required to ensure accessibility of the survey questionnaire and its embedded stimuli; and to assess whether the instrument and its attributes were clear and comprehensible.</p> |

1.2 Overview of methodology

This report details the findings and recommendations from the cognitive testing of the quantitative survey materials, which were developed according to the recommendations set out in the Stage 1 report.

The objectives of the exercise were to ensure:

- that the survey instrument is easily understood
- that the language is straightforward and clear
- that the survey instrument is supported by good visuals which provide an appropriate degree of context about the water industry.

Cognitive testing is particularly important as the survey focuses on unfamiliar areas for consumers. Cognitive interviews involve taking a participant through the survey and

include additional questions to probe for levels of comprehension and ease of completion.

Being cognitive in nature, the interviews allowed for detailed investigation of any issues that participants encountered (or concerns they had about the stimulus material and questions) and for assessing participants' understanding of concepts and terminology related to the trade-off exercise.

We interviewed 18 customers across household (HH) non bill payers and non-household (NHH) groups. Interviews were conducted online, via MS Teams and Zoom video meeting platforms.

For HH and non bill payers interviewers shared their screen, and control of their computer, and participants were asked to complete the survey questionnaire themselves, as though they were completing online, whilst simultaneously 'thinking aloud' to provide the interviewer with an insight into their thought and decision-making process as they progressed.

The 5 NHH participants were interviewed with the interviewer's camera off, to replicate the telephone-based (CATI) interviews that are likely to occur in the main survey. Rather than completing the survey themselves, NHH participants were asked the questions in the style of a CATI interview. The images to support the stated preference exercise were shared with 2 of the NHH participants, however the remaining 3 NHH participants were read the attribute text information only and asked to respond based on this information.

At certain points, interviewers asked additional cognitive questions to assess how well the questionnaire and wording had been understood, and how easy or difficult it was to provide an answer. These additional cognitive questions collectively formed the topic guide that was used to direct these interviews, which was agreed and approved for use before fieldwork took place.

Care was taken to ensure that the cognitive questioning did not educate participants as this might lead to them approaching later questions differently than would have been the case had they not been informed or asked to think about certain elements of the study in more detail. Therefore, some of the HH and non bill payer cognitive interviews were carried out upon completion of the questionnaire, rather than simultaneously with self-completion.

Recruitment and Incentives

All participants in cognitive testing were recruited via our recruitment partner, Riteangle, in line with specified and approved quotas. The following incentives were offered to participants completing cognitive interview:

- £30 for household
- £30 for future customers
- £40 for non-household

Sample design

Minimum quotas were set to ensure cognitive interviews were conducted with a range of different HH and NHH customers. The 3 subsamples for the cognitive interviews were as follows:

Household (HH) (n=10)

All participants to be responsible, either jointly or solely, for paying water bills of the household.

| HH breakdown | | | | | | | | |
|---|--------|--------------|------|--------------------------|-------|--------------|-------------------------------|--------|
| Gender | | Social Grade | | | Age | | | |
| Male | Female | AB | C1C2 | DE | 18-29 | 30-44 | 45-64 | 65+ |
| 4 | 6 | 4 | 5 | 1 | 2 | 4 | 2 | 2 |
| Geography | | Vulnerable | | Affordability challenges | | Wales Sewage | Experienced service incidence | |
| Rural | Urban | | | | | | Water | Sewage |
| 7 | 3 | 5 | | 3 | | 1 | 4 | 2 |
| Water companies | | | | | | | | |
| Representation from South East Water, DCWW, United Utilities, Yorkshire Water, Severn Trent, Bristol Water (2), Cambridge Water, Affinity Water, Thames Water | | | | | | | | |

Non bill payers (n=3)

All participants to *not* be responsible, either jointly or solely, for paying water bills of the household

| Future customer breakdown | | | | | |
|---------------------------|--------|---|--|--|-------|
| Gender | | Education/Employment status | | | Age |
| Male | Female | further education student, not paying water bills | higher education student, not paying water bills | working/not currently employed, not paying water bills | 16-25 |
| 1 | 2 | 1 | 1 | 1 | 3 |

Non-household customers (NHH) (n=5)

All participants to be responsible, either jointly or solely, for paying business' water bills, or otherwise responsible for issues of water supply.

- Ensure spread of SIC codes
- Ensure no more than 1 recruit from each Water Company

| NHH breakdown– note that numbers within these cells are minimums | | | | |
|--|--------|-------|--|-------|
| Size | | | Reliant on water for business purposes | Wales |
| Micro/small | Medium | Large | | |
| 3 | 1 | 1 | 3 | 1 |

2. Findings

Overall observations

Overall, participants perceived the survey as easy to complete and an acceptable length, with some commenting that they found the questions interesting and thought-provoking.

The ‘think-aloud’ commentary helped to confirm that participants were understanding what was expected of them. Some slight hesitation was encountered at certain points during the cognitive interviews, which are detailed below. While these usually would not have prevented the participant from completing the interview, improvements could help to make the process smoother and remove any potential uncertainty.

We have also included here some observations about the thought process behind some of the responses participants selected.

2.1 Screener, water and early sociodemographic/ classification questions

- **Q4 Postcode lookup: Please tell us the first half of your postcode. So if your full postcode is ME1 3BN please just tell us ME1 3. (This will be used to check who supplies your water and wastewater services)**

| Area | District | Sector |
|------|----------|--------|
| M | 15 | 4 |

Prefer not to answer

- Some participants had difficulties with completing the postcode lookup, due to the format and their lack of awareness of the meaning of ‘area’, ‘district’ and ‘sector’.
 - If participants completed this incorrectly they were not prompted with a water company and did not always know which company supplied their wastewater services and would have been screened out. A simpler presentation including the worked example should avoid losing participants at this stage.
- **Q5: Based on your postcode area, we believe your clean water service company should be #WATER COMPANY# and your wastewater service company should be #WASTEWATER COMPANY#. You may receive bills from one or both organisations. Is that correct?**

- Some were unsure which company was their supplier and which their wastewater provider ‘*I knew I was connected to both and can’t think who goes with what*’. More description/context up front would help clarify this- i.e. many people have two water companies, some have the same etc.
 - One NHH participant was invoiced by a *water retailer* called water 2 business (not on the questionnaire list) which, when entered under ‘other’, got screened out. This will need to be adjusted for the live interviews.
- **Q11: Do you receive separate bills for water and sewerage services or one bill for both services?**
- Separate bills*
- Joint bills*
- Don’t know*
- Having been asked about joint responsibility for bills earlier on, some participants hesitated at the use of the word ‘joint’ in the answer code list. Those talking through their responses used the phrase ‘combined bill’ or ‘one bill for both’.
-
- **Q12: How much do you pay for your total water bill – that’s the amount for your water and sewerage services? Please select ‘per month’ or ‘per year’ along with your amount.**
- Those who pay monthly found it easier to answer this question. Some claimed that they are billed and pay quarterly or every 6 months and looked for bills or on online banking to answer this question.
-
- **Q12b: IF HH & BILLPAYER: How are you billed for water and sewerage services?**
- This question does not offer the option of ‘quarterly billing’, which some claimed was relevant to them.
-
- **Q14: Have you experienced any of the following in the last 12 months or ever? ROTATE Please tick one or more in each of the two columns**
- Some were unsure whether to tick ‘in the last 12 months’ and ‘ever’ for each issue they had encountered in the last year. Some started to tick ‘ever’ for each issue they had not encountered in the last 12 months and then corrected themselves as they talked through their choices. This may be alleviated by swapping the order of the columns (or pre-populating ‘ever’ if ‘last 12 months’ is selected). Some were left with one column empty and could not move on. If the columns are not swapped or pre-populated participants may need prompting before ‘I haven’t experienced any of these’ to ensure they are totally clear about their response (eg they are answering for the issues other than those they have already ticked).

- A couple of participants missed the ‘haven’t experienced’ option and claimed it would be easier to have a column for ‘never experienced’ against each issue.

“So, there’s not a button for never? I thought ‘ever’ was a spelling mistake. I expected to see ‘never’”

■ Q15: Use of Rivers in the UK

- There was some hesitation here, which would be alleviated if the statement (for HH) ‘We would like to now find out a bit more about your use of rivers and beaches.’ Is placed **before** Q15.
- The third response option was often not read in its entirety and therefore overlooked, even though on prompting it was clear that some participants were occasionally walking near or sitting by rivers, as they did not associate this with ‘activities’. It may be helpful to reword the statement to ensure this is not overlooked, or re-order the options so that this one appears at the top of the list.

■ Q15: Use of Beaches in the UK

- Again, the third response option was often not read in its entirety and therefore overlooked, even though on prompting it was clear that some participants were walking near or sitting by beaches, as they did not associate this with ‘activities’

2.2 Impact of service issues stated preference task –including feedback on attributes

■ Introductory text

- Overall, this text was seen as clear and easy to understand, though not all read it thoroughly at first. It might be useful to state in the introduction that the options will be shown side by side as some people thought they might have to remember scenarios for comparison and were concerned that the task may be complex. Some participants said that this text made the Stated Preference task sound more onerous (and ‘boring’) than it turned out to be and suggested that it may be a good idea to add a visual to explain that they are just required to tick a box to select an option.
- It was also suggested that adding how many scenarios and stating that they are short may help to convey the task as a fairly simple one, eg: *‘There will be a series of 8 short questions’*.
- There were some comments around the instruction to consider their ‘concern for the environment’, but not ‘people outside your household/organisation’. Participants mentioned that concern for the local area or environment automatically includes other people, but on the whole participants seemed to

understand what was required of them here so no change to this instruction is required.

- Those who skim-read the introduction tended to focus only on the points in bold, suggesting that all key parts of the text should be highlighted and it might be useful to further break the text down into bullet points.

–

■ Overall observations

- Participants tended to find it easy to select between scenarios in this task, especially as each time they were asked which would most impact their household/organisation. Their voiced motivations for selecting one over the other were usually:
 - Whether there was a direct impact on their home/place of work or whether it was a problem in the area
 - Whether it was planned (so they could prepare for it)
 - How long the problem would last for/or would take to be restored
 - Whether there was a potential risk to health of their household (HH) or staff/customers (NHH).
 - How ‘unpleasant’ they felt the impact of the problem would be: eg regardless of whether they are told water is safe to use, they may still find unusual taste or smell, or discolouration unacceptable
 - The cost and disruption of the problem itself and of repairs etc (especially for NHH participants if staff are unable to work, due to a perceived health risk or premises have to be closed, affecting productivity and income)
- Business (NHH) participants tended to say that they were not usually thinking of the environmental impact with their ‘business head on’ and only really of their own organisation/premises. They also felt that the scenarios involving rivers and seas were not relevant to them, especially when not located near either of these. Thus, when asked to choose between two scenarios of this nature they sometimes found the choice difficult.
- *“Neither of these would really affect us, so I just had to pick one really”*
- The NHH participants who did not see the pairs of attributes on a screen tended to find them easy to follow, having occasionally asked for the first pair or so to be repeated.

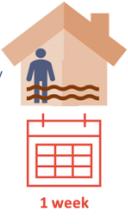
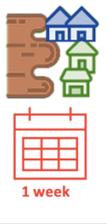
■ Q18-24: Which of these would have most impact on your household/organisation?

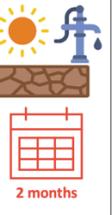
- It was felt that the bullet point style and use of visuals and headlines, made the scenarios easy to read.
- *“The descriptions are really good, really straightforward and easy to read and I don’t have to think about it too much”*

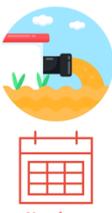
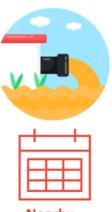
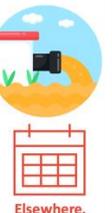
- While the images were not always studied, they were felt to help with breaking up the text and 'lightening' the onus of completing the task. None of the images were felt to detract from the question or confuse the scenario.
- *"It kind of lightens it a bit" and 'its sort of reiterating what the writing is saying"*
- Where any scenarios were felt to be less believable, this was usually referring to the length of time stated for issues to be resolved.
- Feedback on each scenario is detailed below, including some observations on why they were selected as having more impact or less impact on the participant's household or organisation.

| | Comments and improvements |
|---|---|
| <p>Unexpected water supply interruption (6 hours)</p> <ul style="list-style-type: none"> ▶ Your tap water supply stops working without warning ▶ This is due to a burst pipe in your local area ▶ It stops for 6 hours, between 06:00 and 12:00 on a Wednesday morning  <p>1 Unexpt6</p> | <ul style="list-style-type: none"> - Not all were sure if this meant they could use toilets. Some suggested multiple images may be useful and a tap image instead of a water droplet. - Some felt this issue would have minimum impact as they would be out for some or all of the 6 hours - Some NHH assumed they couldn't flush the toilets and may need to close - Images are clear and easy to understand, though one participant thought that the clock icon included an exclamation mark to highlight the unexpected nature of the issue. |
| <p>Unexpected water supply interruption (24 hours)</p> <ul style="list-style-type: none"> ▶ Your tap water supply stops working without warning ▶ This is due to a burst pipe in your local area ▶ It stops for 24 hours, from a Wednesday morning to a Thursday morning  <p>2 Unexpt24</p> | <ul style="list-style-type: none"> - Clear text and images - Could have a substantial impact on HH and NHH due to unexpected nature and length of disruption |
| <p>Planned water supply interruption (6 hours)</p> <ul style="list-style-type: none"> ▶ Your water company sends you a notice in the post that in 2 days' time your tap water supply will stop for 6 hours ▶ This is due to planned maintenance in your local area ▶ As planned, it then stops between 06:00 and 12:00 on a Wednesday morning  <p>3 Planned6</p> | <ul style="list-style-type: none"> - Easy to understand - Calendar suggests planned: Image described as 'spot on'. - Some participants suggested this attribute would benefit from a 'stronger title' to make clear that the interruption was PLANNED. |

| | |
|---|--|
| <p>Planned water supply interruption (24 hours)</p> <ul style="list-style-type: none"> ▶ Your water company sends you a notice that in 2 days' time your tap water supply will stop for 24 hours ▶ This is due to planned maintenance in your local area ▶ As planned, it then stops from a Wednesday morning to a Thursday morning  <p>4 PlannedInt24</p> | <ul style="list-style-type: none"> – Clear and easy to understand – Some felt this would have lower impact due to ability to plan, though would still be disruptive due to the length of time – Businesses stated that they would probably have to close for a day |
| <p>Unexpected low water pressure (6 hours)</p> <ul style="list-style-type: none"> ▶ Your tap water supply starts running with a low pressure, without warning ▶ This is due to a burst pipe in your local area ▶ It takes longer to fill a kettle, sink or bath and a shower would be weak. Some appliances like dishwashers and washing machines may not work properly ▶ This happens for 6 hours, between 06:00 and 12:00 on a Wednesday morning  <p>5 LowPressure</p> | <ul style="list-style-type: none"> – Some felt this was a lot to read and did not read the whole of the third bullet point, in particular – Images were felt to be helpful – Potential impact was felt to be mixed, depending on how low the pressure will go |
| <p>Boil water notice (48 hours)</p> <ul style="list-style-type: none"> ▶ Your water company sends you a notice saying you need to boil tap water before drinking, cooking or preparing food to avoid the risk of becoming ill ▶ This is due to traces of e-coli being found in the water supply in your area ▶ You can still safely use tap water for washing and cleaning ▶ The notice arrives on a Wednesday. After two days the water will be safe to drink again  <p>6 Boil</p> | <ul style="list-style-type: none"> – Notice means that it would be possible to plan, so impact would be lower. Some asked how they would be notified – Could have a significant impact on some NHH. Text here felt long, as it was read out not online – E-coli caused some concerns and there was some scepticism about the water being safe after 48 hours – Some suggested the images be made slightly smaller and placed next to the relevant bullet point to aid visual clarity: especially as the text felt longer than some other scenarios |
| <p>Do not drink notice (48 hours)</p> <ul style="list-style-type: none"> ▶ Your water company sends you a notice saying not to drink your tap water, or use it for cooking or preparing food, to avoid the risk of becoming ill ▶ This is due to traces of a harmful chemical being found in the water supply in your area ▶ You can still safely use tap water for washing and cleaning ▶ The notice arrives on a Wednesday. After two days the water will be safe to drink again  <p>7 DND</p> | <ul style="list-style-type: none"> – Some felt that, given the description, they were unlikely to want to either shower or use the water for laundry. – Some were concerned about the idea of the harmful chemical: assumed that the chemical found was 'pollution', or chlorine or an excess of fluoride. Described scenario as 'quite frightening' and were unsure if it would really be safe after two days. – Some participants suggested that the X should be through an image of someone drinking a glass of water. |

| | |
|--|---|
| <p>Discoloured water (24 hours)</p> <ul style="list-style-type: none"> ▶ Your tap water starts running light brown, without warning ▶ This is due to traces of sediment from pipes being disturbed ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again ▶ This happens for 24 hours from a Wednesday morning  <p>8 <u>Discolour</u></p> | <ul style="list-style-type: none"> – Some felt that they would be unlikely to drink, even if reassured that the water was safe – Some were concerned about the potential impact on dishwashers or washing machines – The images were felt to be clear – When asked to choose between this and water taste and smell, there were mixed views – <i>“The idea of water not being clear makes me feel a bit strange”</i> |
| <p>Water taste and smell (24 hours)</p> <ul style="list-style-type: none"> ▶ Your tap water starts tasting or smelling different, without warning ▶ This is due to traces of chlorine, and the taste and smell is like a swimming pool ▶ The water is safe to drink, and for use in the dishwasher or washing machine ▶ This happens for 24 hours from a Wednesday morning  <p>9 <u>TasteSmell</u></p> | <ul style="list-style-type: none"> – Some felt that they would be unlikely to drink, even if reassured that the water was safe – Some were concerned about the idea of chlorine and felt this could be unsafe: would buy bottled water – When asked to choose between this and discoloured water, there were mixed views: <i>“Stinky tap water is worse than dirty-looking tap water.”</i> |
| <p>Sewer flooding: INSIDE your property (1 week)</p> <ul style="list-style-type: none"> ▶ Flooding from the sewer gets inside your property, affecting your living areas ▶ This results from prolonged heavy rainfall in your local area ▶ It gives off a foul smell, and damages floors, walls and furniture. ▶ It takes 1 week for your property to get back to normal  <p>10 <u>InternalSF</u></p> | <ul style="list-style-type: none"> – This scenario was considered extremely disruptive and unpleasant – Imagery works well, though some felt the ‘waves’ were not entirely relevant to sewage – There was scepticism as to whether the property would be back to normal in a week – <i>“You would need to find someone to do the work and get the supplies etc. It wouldn't be sorted in a week”</i> |
| <p>Sewer flooding: OUTSIDE your property (1 week)</p> <ul style="list-style-type: none"> ▶ Flooding from the sewer gets inside your property boundary, affecting access to your front door / entrance ▶ This results from prolonged heavy rainfall in your local area ▶ It gives off a foul smell, and could cause damage ▶ It takes 1 week for your property to get back to normal  <p>11 <u>ExternalSF</u></p> | <ul style="list-style-type: none"> – NHH in particular were concerned about physical and reputational damage and impact on business: likely to have to close – Some picked up on ‘inside your property boundary’ and talked about this as if it were inside their property itself – may need rewording (did not always take notice of the heading) – Some unsure if work to clean up could be done within a week and also felt one week could be more clearly highlighted within the image |

| | |
|---|--|
| <p>Hosepipe ban (5 months)</p> <ul style="list-style-type: none"> ▶ Your water company sends you a notice saying you must not use a hosepipe or sprinkler ▶ This is due to an extended period of dry weather leading to a water shortage ▶ The hosepipe ban begins in May and lasts for 5 months  | <ul style="list-style-type: none"> – Felt to be irrelevant to some NHH and HH without gardens – When compared with an equally ‘irrelevant to them’ scenario, such as coastal water quality participants assumed this would have more impact, as it is indicative of a water shortage – Some suggested improvements to the images: Hosepipe not immediately clear as such; Calendar could be marked up to show 5 months |
| <p>12 HoseBan</p> | |
| <p>Emergency drought restrictions (2 months)</p> <ul style="list-style-type: none"> ▶ Your water company cuts off the tap water supply from 2pm to 7am every day ▶ This is due to a severe drought leading to an extreme water shortage in your area ▶ Standpipes would be available nearby to collect water in buckets or bottles ▶ The restrictions begin in July and last for 2 months  | <ul style="list-style-type: none"> – Main concerns among those with children or vulnerable in household, or older/disabled living alone – One on PSR had not received extra help when expected and would be worried about this scenario – All understood the scenario and assumed there would be advance notification |
| <p>13 RotaCuts</p> | |
| <p>Low flows in rivers NEARBY (2 months)</p> <ul style="list-style-type: none"> ▶ The water level in a nearby stretch of river (less than 5 miles away) has a flow that is lower than the minimum it should be naturally ▶ This is due to a combination of extended dry weather and water being taken from it for public water supply ▶ This happens from July and lasts for 2 months  | <ul style="list-style-type: none"> – Clearly understood – Image for water level felt to be helpful here – If not close to a river or the coast, but asked to trade this off against coastal water quality this option was usually selected as it might have an impact on water availability. |
| <p>14 LowFlowNearby</p> | |
| <p>Low flows in rivers ELSEWHERE (2 months)</p> <ul style="list-style-type: none"> ▶ The water level in a stretch of river somewhere in your region, but not nearby, has a flow that is lower than the minimum it should be naturally ▶ This is due to a combination of extended dry weather and water being taken from it for public water supply ▶ This happens from July and lasts for 2 months  | <ul style="list-style-type: none"> – Clearly understood – Image for water level felt to be helpful here – If not close to a river, this was not usually treated differently to ‘river nearby’ |
| <p>15 LowFlowElse</p> | |
| <p>Storm overflow NEARBY (2 days)</p> <ul style="list-style-type: none"> ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away) ▶ This is due to prolonged heavy rainfall and is allowed by the regulator to reduce the risk of sewer flooding ▶ The damage to the river and visible pollution would be minor ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 1 week  | <ul style="list-style-type: none"> – Some participants suggested using a photo of a storm overflow and it was noted that the top image was also used to depict a different type of issue (‘pollution incident’) – Some were unsure, on prompting, of the meaning behind ‘allowed by the regulator’ – Some living near areas where sewage had polluted rivers were particularly concerned about this – Timings in the image here were sometimes felt to be misleading as the river would take a week to be back to normal |
| <p>16 StormFlowNearby</p> | |

| | |
|---|--|
| <p>Minor pollution incident NEARBY (2 days)</p> <ul style="list-style-type: none"> ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away) ▶ This is due to sewerage equipment failure ▶ The damage to the river and visible pollution would be minor ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 1 week  <p>Nearby, 2 days</p> | <ul style="list-style-type: none"> – Most were aware of the term ‘untreated sewage’ and considered this quite unpleasant – Participants usually accepted that damage would be minor, as indicated, even though they were unsure on prompting exactly what this might mean, other than that the river would be back to normal after a week. – Some were unsure of the meaning of ‘river pollution’ – Timings in the image here were sometimes felt to be misleading as the river would take a week to be back to normal |
| <p>17 Pol3Nearby</p> | <ul style="list-style-type: none"> – The concept of ‘significant damage’ and ‘visible pollution’ raised concerns, even though participants were often unsure exactly what this would mean. – ‘Equipment failure’ as a cause was a surprise for some |
| <p>Significant pollution incident NEARBY (2 days)</p> <ul style="list-style-type: none"> ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away) ▶ This is due to sewerage equipment failure ▶ The damage to the river and visible pollution would be significant ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks  <p>Nearby, 2 days</p> | <ul style="list-style-type: none"> – Some were unsure how the sewage would spill into the river – Some suggested colour in blocks on calendar to highlight the affected period – Usually not treated any differently in selections if the incident was nearby or elsewhere |
| <p>18 Pol2Nearby</p> | <ul style="list-style-type: none"> – Some were unsure how the sewage would spill into the river – Some suggested colour in blocks on calendar to highlight the affected period – Usually not treated any differently in selections if the incident was nearby or elsewhere |
| <p>Storm overflow ELSEWHERE (2 days)</p> <ul style="list-style-type: none"> ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby ▶ This is due to prolonged heavy rainfall and is allowed by the regulator to reduce the risk of sewer flooding ▶ The damage to the river and visible pollution would be minor ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 1 week  <p>Elsewhere, 2 days</p> | <ul style="list-style-type: none"> – Usually not treated any differently in selections if the incident was nearby or elsewhere – Minor was sometimes understood to mean a spillage that could be quickly controlled and cleaned. |
| <p>19 StormFlowElse</p> | |
| <p>Minor pollution incident ELSEWHERE (2 days)</p> <ul style="list-style-type: none"> ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby ▶ This is due to sewerage equipment failure ▶ The damage to the river and visible pollution would be minor ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 1 week  <p>Elsewhere, 2 days</p> | |
| <p>20 Pol3Else</p> | |
| <p>Significant pollution incident ELSEWHERE (2 days)</p> <ul style="list-style-type: none"> ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby ▶ This is due to sewerage equipment failure ▶ The damage to the river and visible pollution would be significant ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks  <p>Elsewhere, 2 days</p> | <ul style="list-style-type: none"> – Usually not treated any differently in selections if the incident was nearby or elsewhere |
| <p>21 Pol2Else</p> | |

| <p>River water NEARBY is not High quality</p> <ul style="list-style-type: none"> ▶ A nearby stretch of river (less than 5 miles away) meets Medium rather than High quality standards, as defined by the government  ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area ▶ This has some effect on habitats for fish and wildlife, and leads to occasional algal blooms  <p>22 RWQNearby</p> | <ul style="list-style-type: none"> – Info button was not always very clear, depending on the device being used: ideally would be more visible – Participants focused on the impact on flowers and fauna and wildlife. – ‘Algal blooms’ was an unfamiliar term to most, though often assumed as the ‘green slime effect’ on water – One participant suggested the addition of a pipette to symbolise ‘a test’ rather than the test tube alone. | | | | | | | | |
|--|---|------------|-----------|--|--------|---|------------|---|--|
| <p>River water ELSEWHERE is not High quality</p> <ul style="list-style-type: none"> ▶ A stretch of river in your region, but not nearby, meets Medium rather than High quality standards, as defined by the government  ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area ▶ This has some effect on habitats for fish and wildlife, and leads to occasional algal blooms  <p>23 RWQElse</p> | <ul style="list-style-type: none"> – Info button was not always very clear, depending on the device being used: ideally would be more visible – Participants focused on the impact on flowers and fauna and wildlife – Not usually treated any differently to River nearby, unless directly compared to an incident nearby – ‘Algal blooms’ was usually unfamiliar, as above – Some were unsure why there was an X over the tree in the image | | | | | | | | |
| <p>(i) button show card:</p> <table border="1"> <thead> <tr> <th>River water quality level</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>High</td> <td> <ul style="list-style-type: none"> • There will be a diverse and natural range of plants, insects, fish, birds and other animals. • Water will generally have the right degree of clarity and there will be no noticeable pollution. </td> </tr> <tr> <td>Medium</td> <td> <ul style="list-style-type: none"> • Water will generally be suitable for contact activities, such as rowing or swimming. • There will be plants, insects, fish, birds and other animals, but there will be some fish and other wildlife missing. </td> </tr> <tr> <td>Low</td> <td> <ul style="list-style-type: none"> • Water will be slightly murky or discoloured in parts, and there will sometimes be visible pollution in some places, and some algal blooms. • Water may be suitable for contact activities in some areas but not others. • There may be limited or no plants or wildlife, or the water may be dominated by a single plant species. • Water will generally be murky or discoloured, and may sometimes be bad-smelling in some places. There may also regularly be visible pollution in some places, and frequent algal blooms. • Water will be unsuitable for contact activities. </td> </tr> </tbody> </table> | River water quality level | Definition | High | <ul style="list-style-type: none"> • There will be a diverse and natural range of plants, insects, fish, birds and other animals. • Water will generally have the right degree of clarity and there will be no noticeable pollution. | Medium | <ul style="list-style-type: none"> • Water will generally be suitable for contact activities, such as rowing or swimming. • There will be plants, insects, fish, birds and other animals, but there will be some fish and other wildlife missing. | Low | <ul style="list-style-type: none"> • Water will be slightly murky or discoloured in parts, and there will sometimes be visible pollution in some places, and some algal blooms. • Water may be suitable for contact activities in some areas but not others. • There may be limited or no plants or wildlife, or the water may be dominated by a single plant species. • Water will generally be murky or discoloured, and may sometimes be bad-smelling in some places. There may also regularly be visible pollution in some places, and frequent algal blooms. • Water will be unsuitable for contact activities. | <ul style="list-style-type: none"> – Explanations here were felt to be very clear, though participants felt differences between ‘high’ and ‘medium’ could be better highlighted within the text |
| River water quality level | Definition | | | | | | | | |
| High | <ul style="list-style-type: none"> • There will be a diverse and natural range of plants, insects, fish, birds and other animals. • Water will generally have the right degree of clarity and there will be no noticeable pollution. | | | | | | | | |
| Medium | <ul style="list-style-type: none"> • Water will generally be suitable for contact activities, such as rowing or swimming. • There will be plants, insects, fish, birds and other animals, but there will be some fish and other wildlife missing. | | | | | | | | |
| Low | <ul style="list-style-type: none"> • Water will be slightly murky or discoloured in parts, and there will sometimes be visible pollution in some places, and some algal blooms. • Water may be suitable for contact activities in some areas but not others. • There may be limited or no plants or wildlife, or the water may be dominated by a single plant species. • Water will generally be murky or discoloured, and may sometimes be bad-smelling in some places. There may also regularly be visible pollution in some places, and frequent algal blooms. • Water will be unsuitable for contact activities. | | | | | | | | |
| <p>Coastal bathing water is not Excellent quality</p> <ul style="list-style-type: none"> ▶ The sea water at the beach you would be most likely to visit meets Good rather than Excellent quality standards, as defined by the government  ▶ This is due to the quality of treated wastewater entering the water nearby ▶ You could still swim in the sea, but there would be a small increase in the chance that you might get ill if you swallowed some water  <p>24 BWQ</p> | <ul style="list-style-type: none"> – Some participants who did not live near to a coast felt this was not relevant to them: sometimes assuming the questionnaire was mainly for those who lived near to rivers and/or beaches – Some were unsure why there was an X over the tree in the image, or why there was a tree | | | | | | | | |
| <p>(i) button show card:</p> <table border="1"> <thead> <tr> <th>Bathing water quality level</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>The highest standard which means the bathing water is consistently very clean, with less than a 3%, or a 3 in 100, chance of a stomach upset.</td> </tr> <tr> <td>Good</td> <td>Between ‘Sufficient’ and ‘Excellent’. This means there is between a 3% and a 5% chance of a stomach upset.</td> </tr> <tr> <td>Sufficient</td> <td>The minimum standard required for bathing water which means there is between a 5% and an 8% chance of a stomach upset.</td> </tr> </tbody> </table> | Bathing water quality level | Definition | Excellent | The highest standard which means the bathing water is consistently very clean, with less than a 3%, or a 3 in 100, chance of a stomach upset. | Good | Between ‘Sufficient’ and ‘Excellent’. This means there is between a 3% and a 5% chance of a stomach upset. | Sufficient | The minimum standard required for bathing water which means there is between a 5% and an 8% chance of a stomach upset. | <ul style="list-style-type: none"> – Explanation here was felt to be very clear, although the percentages were seen as surprisingly close |
| Bathing water quality level | Definition | | | | | | | | |
| Excellent | The highest standard which means the bathing water is consistently very clean, with less than a 3%, or a 3 in 100, chance of a stomach upset. | | | | | | | | |
| Good | Between ‘Sufficient’ and ‘Excellent’. This means there is between a 3% and a 5% chance of a stomach upset. | | | | | | | | |
| Sufficient | The minimum standard required for bathing water which means there is between a 5% and an 8% chance of a stomach upset. | | | | | | | | |

■ **Q25: We would now like to ask you a few questions about the choices you have just made. How strongly do you agree or disagree with the following statements about the choices you have just made?**

- Where ‘strongly agree’ was not selected for the second statement ‘I found the options believable’, this was usually referring to the length of time stated for issues to be resolved.
- Where participants did not strongly agree that it was ‘easy to choose’ they sometimes struggled to make a choice that would either impact their HH directly or have a wider impact on the environment. Some also felt it was difficult to choose between two ‘irrelevant’ scenarios (eg rivers and coastal waters when neither is used by the participant).

2.3 Compensation for service issues stated preference task

■ Introductory text

- Not all participants read this fully as they assumed it was a similar task to that above. However, on reading, it was considered easy to understand.
- The statement ‘These amounts do not necessarily reflect current compensation entitlements, and compensation levels will not necessarily be influenced by answers to these questions.’ Was sometimes read, but when asked at the end of the interview about the purpose of the survey, some participants felt that it might be used to define compensation levels. This was not seen as controversial and did not seem to have impacted on their responses.

■ Q30: Which option would you prefer?

- The compensation level was not always noticed immediately and should be highlighted more effectively or increased in size to match the text of the service issue. This would help participants realise that they were on a different scenario when the same service issue was used with a different amount of compensation, as they often thought they had not moved on to a new question.

Which option would you prefer?

| Option A | Option B |
|--|--|
| <p>Unexpected water supply interruption (6 hours)</p> <ul style="list-style-type: none"> Your tap water supply stops working without warning This is due to a burst pipe in your local area It stops for 6 hours, between 06:00 and 12:00 on a Wednesday morning <p>6 hours</p> <p>Compensation paid*: £50</p> | <p>No unexpected water supply interruption</p> |
| <p>○</p> | <p>●</p> |

Which option would you prefer?

| Option A | Option B |
|---|--|
| <p>Unexpected water supply interruption (6 hours)</p> <ul style="list-style-type: none"> Your tap water supply stops working without warning This is due to a burst pipe in your local area It stops for 6 hours, between 06:00 and 12:00 on a Wednesday morning <p>6 hours</p> <p>Compensation paid*: £100</p> | <p>No unexpected water supply interruption</p> |
| <p>○</p> | <p>●</p> |

- Household participants often selected option B at this question, as they would prefer no disruption to their service. Occasionally option A was selected apart

from when the service issue was seen as minor and the compensation high considering this.

- Non-household participants usually selected option B due to potential impact on their business of any service issue
 - *“It’s just less hassle not to have any of these problems in the first place”*
- Some who were not bill-payers were unsure whether the compensation levels were appropriate, as they did not know the value of the bills, but often selected option B as they personally would prefer not to experience an issue.
-

■ *Q32: We would now like to ask you a few questions about the choices you have just made. How strongly do you agree or disagree with the following statements about the choices you have just made?*

- Where ‘strongly agree’ was not selected for the second statement ‘I found the options believable’, this was usually referring to the length of time stated for issues to be resolved.
- Most participants stated that their responses were based on the extent to which the issues would impact their household or business **regardless** of the compensation, so they usually did not select ‘strongly agree’ at the third statement.
-

■ *Q37: IF HH: Please look at the following five statements about pollution control and the costs of pollution control. Which do you agree with most?*

- The statements were seen as easy to understand. It was suggested that the question be rephrased to ‘Which **one** do you agree with most’ to add further clarification.
- As the first part of the first three statements is the same, participants suggested that it would be easier for them to distinguish between if the second part of each of these statements was in bold or italic.

2.4 Sociodemographic/ classification questions

■ *Some participants expected to have an option of ‘prefer not to say’ on more of these questions due to general concerns about data security.*

■ *Q45: IF HH: Thinking about all the people in your household, including yourself, how many people live here for each of these age groups: For each age group, please select the option that applies to you. If there are no people in your household belonging to a certain age group, please select ‘zero’ for it.*

- Not all participants selected zero for the irrelevant age bands but were allowed to progress despite this.

-
- **Q47 (affordability): IF HH: Which of the following statements do you most agree with? Please remember, this research is entirely confidential and that it is only by understanding the views of people who are struggling to pay their bills that change can be made.**

- Some were unsure which household bills to include here: eg mortgage etc. They asked for further clarification.
- Non bill-payers were unsure how best to answer this question.

–

- **Q51: IF HH: Which of the following best describes your household?**

- One participant rents via an agency and was not sure if this counted as private rented: suggested the addition of ‘...via a landlord or agency’
- One asked which option referred to living with parents or friends and suggested this be added as an example to ‘living rent free’

3 Recommendations

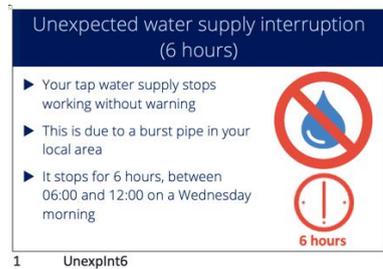
In this section we make specific recommendations to consider for some of the questions and the attributes presented as part of the stated preference tasks.

- ***Q4 Postcode lookup:***
 - Simplify the presentation by making all the boxes the same size and presenting the example above the boxes and consider removing ‘district’ and ‘sector’ as this is not familiar to consumers
- ***Q5: Based on your postcode area, we believe your clean water service company should be #WATER COMPANY# and your wastewater service company should be #WASTEWATER COMPANY#. You may receive bills from one or both organisations. Is that correct?***
 - Consider further explanation of two companies with two bills or one combined bill
- ***Q6/7: Water companies***
 - Ensure all water retailers are included for NHH customers.
- ***Q11: Do you receive separate bills for water and sewerage services or one bill for both services?***
 - Consider replacing ‘joint’ with ‘combined’ or ‘one bill for both’
- ***Q12b: How are you billed for water and sewerage services?***
 - Ensure all possible bill cycles are included or add ‘other’ if appropriate
- ***Q14: Have you experienced any of the following in the last 12 months or ever?***
 - Consider a different presentation of the response options to avoid confusion between ‘ever’ and ‘never’. Either add a third column or at least swap the order of the columns.
- ***We would like to now find out a bit more about your use of rivers and beaches. Do you, or does anyone in your household, use rivers in the UK for any of the following activities?***
 - Present this statement before Q15, which refers to ‘rivers in the UK’
- ***Q15: Do you, or does anyone in your household, use rivers in the UK for any of the following activities?***
 - Consider changing the order of the third response option to ‘walking, running, cycling, sitting nearby or other activities on or around the water (e.g. narrow-boating, other types of boating,)’ and moving to the top.
- ***Q16: Do you, or does anyone in your household, use the beach or sea in the UK for any of the following activities?***
 - Consider changing the order of the third response option to ‘Walking, running, cycling, sitting or playing nearby or other activities on or around the water (e.g. other types of boating) and moving to the top.
- ***Impact of Service Issues introductory text***

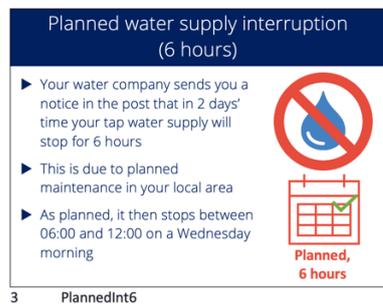
- Consider highlighting all key points in bold or further breaking up the text.
- Consider adding text to reassure that the task is not too onerous and easy to complete: eg ‘There will be a series of 8 short questions’ where you will be asked to choose between two scenarios [by ticking a box – online only]...’

■ **Q18-24: Which of these would have most impact on your household/organisation?**

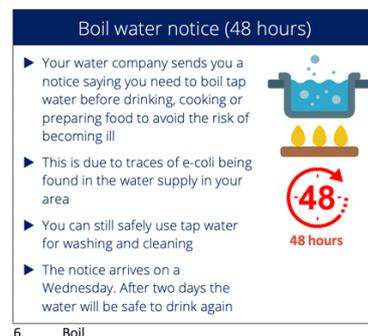
- Consider some enhancements to the attributes as follows:
 - Could include tap or other icons with cross to clarify extent of the issue for those using these images:



- Emphasise ‘Planned’ or ‘Unexpected’ in bold or uppercase in attributes such as this:



- Consider making the images slightly smaller and place next to the relevant bullet point to aid visual clarity: especially as the text felt longer than some other scenarios, such as this:



- Consider rewording to ‘flooding from the sewer affects access to your front door/entrance’:

Sewer flooding: OUTSIDE your property (1 week)

- ▶ Flooding from the sewer gets inside your property boundary, affecting access to your front door / entrance
- ▶ This results from prolonged heavy rainfall in your local area
- ▶ It gives off a foul smell, and could cause damage
- ▶ It takes 1 week for your property to get back to normal



11 ExternalSF

- Suggested improvements to the images may be considered here: Hosepipe not immediately clear as such; Calendar could be marked up to show 5 months:

Hosepipe ban (5 months)

- ▶ Your water company sends you a notice saying you must not use a hosepipe or sprinkler
- ▶ This is due to an extended period of dry weather leading to a water shortage
- ▶ The hosepipe ban begins in May and lasts for 5 months



12 HoseBan

- Consider using a different image to depict 'storm overflow' if possible here and an explanation of 'visible pollution'

Storm overflow NEARBY (2 days)

- ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to prolonged heavy rainfall and is allowed by the regulator to reduce the risk of sewer flooding
- ▶ The damage to the river and visible pollution would be minor
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 1 week



16 StormFlowNearby

- It may be useful to include a description of algal blooms and a different representation of tested water here:

River water NEARBY is not High quality

- ▶ A nearby stretch of river (less than 5 miles away) meets Medium rather than High quality standards, as defined by the government D
- ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area
- ▶ This has some effect on habitats for fish and wildlife, and leads to occasional algal blooms



22 RWQNearby

- Remove the X on the tree images here:

River water ELSEWHERE is not High quality

- ▶ A stretch of river in your region, but not nearby, meets Medium rather than High quality standards, as defined by the government (i)
- ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area
- ▶ This has some effect on habitats for fish and wildlife, and leads to occasional algal blooms



23 RWQElse

Coastal bathing water is not Excellent quality

- ▶ The sea water at the beach you would be most likely to visit meets Good rather than Excellent quality standards, as defined by the government (i)
- ▶ This is due to the quality of treated wastewater entering the water nearby
- ▶ You could still swim in the sea, but there would be a small increase in the chance that you might get ill if you swallowed some water



24 BWQ

- Highlight the differences in the text for high and medium here

(i) button show card:

| River water quality level | Definition |
|---------------------------|---|
| High | <ul style="list-style-type: none"> • There will be a diverse and natural range of plants, insects, fish, birds and other animals. • Water will generally have the right degree of clarity and there will be no noticeable pollution. |
| Medium | <ul style="list-style-type: none"> • Water will generally be suitable for contact activities, such as rowing or swimming. • There will be plants, insects, fish, birds and other animals, but there will be some fish and other wildlife missing. • Water will be slightly murky or discoloured in parts, and there will sometimes be visible pollution in some places, and some algal blooms. • Water may be suitable for contact activities in some areas but not others. |
| Low | <ul style="list-style-type: none"> • There may be limited or no plants or wildlife, or the water may be dominated by a single plant species. • Water will generally be murky or discoloured, and may sometimes be bad-smelling in some places. There may also regularly be visible pollution in some places, and frequent algal blooms. • Water will be unsuitable for contact activities. |

■ **Q30: Which option would you prefer?**

- Make the compensation amount clearer and larger

■ **Q32: We would now like to ask you a few questions about the choices you have just made. How strongly to do you agree or disagree with the following statements about the choices you have just made?**

- Be aware that participants agreement with the statement ‘My choices were based on how much impact I thought each option would have on my [IF HH] household [IF NHH] premises and whether the amount of money shown was enough to compensate for this’ is likely to be based on the extent to which they agree with the first part, but not necessarily the second part of the statement.

■ **Q37: IF HH: Please look at the following five statements about pollution control and the costs of pollution control. Which do you agree with most?**

- Rephrase to ‘Which one do you agree with most’ to add further clarification.
- As the first part of the first three statements is the same, make the second part of each of these statements bold or italic to aid differentiation.

- *Classification questions (Q39 onwards)*
 - Consider adding ‘prefer not to say’ on all of these questions due to general concerns about data security.
- *Q43 and Q46: ensure that the response options are aligned with current definitions.*
- *Q47 (affordability): IF HH: Which of the following statements do you most agree with? Please remember, this research is entirely confidential and that it is only by understanding the views of people who are struggling to pay their bills that change can be made.*
 - If it is useful for analysis, consider expanding on ‘household bills’ for clarification.
- *Q51: IF HH: Which of the following best describes your household?*
 - Add ‘...via a landlord or agency’ to ‘Private rented’
 - Add ‘eg living with parents or friends’ to ‘Living rent free’

Appendix A1

Topic Guide



| | |
|-------------------------|--|
| Participant Name | |
| Date / time | |
| Telephone Number | |
| URN | |

Introduction **3 mins (3)**

Good morning/afternoon/evening. My name is ... and I work for an independent market research company called Accent. We are conducting research for Ofwat, the water industry regulator, and Consumer Council for Water, the consumer organisation which represents the interests of water and sewerage customers in England and Wales.

The research is about views on water and sewerage services, and changes to water bills for the five years from 2025. Specifically, we want to get your feedback on a questionnaire that we plan to use to ask a large number of people to share their views on water and sewerage. Your feedback while answering the questionnaire, along with feedback from others, will allow us to understand how well the questionnaire works and how it might be improved. With this in mind, we will be asking you to share your thoughts on the questionnaire as you work through it.

Thank you very much for agreeing to help us with this research.

The research is being conducted in accordance with the Code of Conduct of the Market Research Society (MRS) and also with the Data Protection Act. This means that everything you say is confidential and will not be attributed to you personally unless you give your permission for us to pass your comments on in named format.

Our discussion is being recorded. This is standard market research procedure and is to ensure accuracy – so I do not have to try to remember what you have said – and for analysis purposes only. The recordings will not be passed to any third party not associated with the research project, and in reporting the findings from this research everything that you say will be confidential and will be reported in anonymised form only.

Our discussion will last around 45 minutes.

I'd like to stress that we are interested in your views. There are no right or wrong answers today; and this is not a test of your ability to answer the questionnaire. Instead, it is a test of how well the questionnaire has been designed to make it easy to complete. I haven't been involved in the design and development of the questionnaire, which means you can be open and honest when sharing your views on completing it.

As this interview will be completed on the telephone with business customers like you, I will turn off my camera in a moment and read out the questions. As you are answering questions and deciding between different options, I want to understand how you are making those choices. Please talk me through as you are making your choices and I might prompt you with some additional questions. Also,

if you come across anything which you don't understand or need further clarification please ask me as we go along.

[For those who have been sent attributes beforehand only] Please make sure that you have access to the information we sent you and I will tell you when to refer to it

Interviewer instructions

NA (3)

- Turn off your camera and read out the questions.
- Make a note of:
 - Any significant pauses or delays in responding
 - Participants asking for questions to be re-read or changing their response
 - Mentions of any question or section of text being confusing/complicated/unclear/long, or missing important information
 - Response options that they struggle to choose between
 - Questions they ask about elements of the survey (try not to answer these unless they mean the participant is unable to progress).
 - Ask the questions below after the relevant set of questions (or specific questions, as relevant to the responses)

Screener, water and early sociodemographic question blocks 5 mins (8)

- Q13 (billing) total water bill
 - How easy or difficult was it to answer this question?
 - What would make this easier to answer (if difficult)
 - How did you work out your answer to this question?
 - Did you need to look for any other information to answer this?
- Q14 (service issues experienced)
 - Did all the answer options make sense?
 - Were any of them unclear? Which ones? Why? **[interviewer: if any difficulties in understanding note if there are wording changes/additions needed - e.g. Planned water supply interruption means they will have been informed – does this need adding? Unexpected low pressure – is this obviously about water supply pressure etc]**

- Impact of service issues SP preamble [Stop after reading out introductory text]
 - How easy or difficult was this introductory text to understand?
 - If any issues, what caused you problems? What was the difficulty?
 - How clear was it what you would have to do?
 - How clear was it what you had to consider in order to arrive at your answer?
 - What, if anything would make this introduction easier to understand

- For Q17-Q24 [ask those who have been sent the attributes beforehand to refer to these]
 - **[ask after each question]**How easy or difficult is it to understand each of these scenarios that you are asked to choose between here? Why do you say this?
 - For each attribute where there are any issues:
 - What made it difficult?
 - Would anything have made it easier? If so, what?
 - How confident are you that you understood each description? If less confident why is that?
 - Was there anything missing from the descriptions of the options?
 - What could have been clearer?
 - **[NB capture any spontaneous issues with understanding of wording in attributes],** such as
 - 1.1.1 the difference between minor and significant pollution incident
 - 1.1.2 understanding of and issues around ‘treated wastewater entering the water’ etc
 - 1.1.3 use of ‘chlorine’
 - **[For those who have been sent the attributes in advance]** What are your thoughts on the images/icons used in the descriptions?
 - How helpful were they?
 - How relevant were they to you?
 - Did they bring anything specific to mind?
 - What could be improved?

- After completing each question of Q17-24
 - How did you decide on the choice you made?
 - Which factors were most influential in the choice you made?
 - Which factors drew you most to a particular option? Why?
 - Which factors deterred you most from a particular option? Why?
 - Which factors were least influential? That is, which had little impact on the option you chose?
 - Why?

- Q25 [Note the participant’s response to each element of this question and probe on reasons for these responses – especially where the response is not ‘strongly agree’ or ‘agree’]
 - Why did you select this response?

- For *I was able to understand the choices*: What would have helped **[if not already covered above]**
- For *I found the options believable*: what was not believable. What would have made the option(s) more believable **[if not already covered above]**
- For *My choices were based on how much impact I thought each option would have on my premises*: what did you base your choices on if not the impact on your household? **[if not already covered above]**
- For *I found it easy to choose between the options*: why is this and what would have made it easier to choose **[if not already covered above]**

Compensation for service issues SP task (CRITICAL)

14 mins (36)

- Compensation for service issues SP preamble [Stop and probe before participant starts SP task]
 - How easy or difficult was this introductory text to understand?
 - What was hard to understand? Why?
 - Was it clear what you would have to do?
 - Do you think this task will be similar, or not, to the task you have just completed where you had to choose between two options?
- For each of Q30-Q31 [ask those who have been sent information in advance to refer to it here]
 - How easy or difficult did you find making the choice? Why do you say this?
 - What made it difficult?
 - Would anything have made it easier? If so, what?
 - Was there anything confusing about the descriptions?
 - Was there anything that could have made the descriptions of the options clearer to you?
- After completing Q30-31
- How did you decide on each choice you made?
 - When you were making your choices, which factors were most influential?
 - Which factors drew you most to a particular option? Why?
 - Which factors deterred you most from a particular option? Why?
 - Which factors were least influential? That is, which had little impact on the option you chose?
 - Why?
 - What were your thoughts on the compensation explanation? How would you expect this to work? Any concerns here?
- Q32 [Note the participant's response to each element of this question and probe on reasons for these responses – especially where the response is not 'strongly agree' or 'agree']
 - Why did you select this response?
 - For *I was able to understand the choices*: What would have helped **[if not already covered above]**
 - For *I found the options believable*: what was not believable. What would have made the option(s) more believable **[if not already covered above]**

- For *My choices were based on how much impact I thought each option would have on my premises and whether the amount of money shown was enough to compensate for this*: why do you say this? **[if not already covered above]**
 - For *I found it easy to choose between the options*: why is this and what would have made it easier to choose **[if not already covered above]**
- **[For NHH – if this has not been covered above]** Tell me about how your organisation uses water?

Classification question block (Optional)

4 mins (40)

- Q52 (water meter)
 - Did you know straight away whether or not you had a water meter?
 - How did you/would you go about finding out to be able to answer the question?
- 2. **[if time]** Can you say in your own words how the findings of this research will be used?

Wrap and close

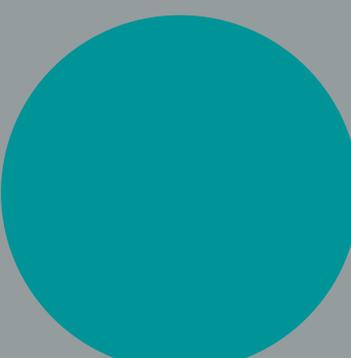
0 min (40)

- Record BACS details for incentive payment, if not already captured by Riteangle, and add to profile sheet.
- Thank and close.



Appendix A2

Survey Material Tested



Unexpected water supply interruption (6 hours)

- ▶ Your tap water supply stops working without warning
- ▶ This is due to a burst pipe in your local area
- ▶ It stops for 6 hours, between 06:00 and 12:00 on a Wednesday morning



Planned water supply interruption (6 hours)

- ▶ Your water company sends you a notice in the post that in 2 days' time your tap water supply will stop for 6 hours
- ▶ This is due to planned maintenance in your local area
- ▶ As planned, it then stops between 06:00 and 12:00 on a Wednesday morning



Unexpected water supply interruption (24 hours)

- ▶ Your tap water supply stops working without warning
- ▶ This is due to a burst pipe in your local area
- ▶ It stops for 24 hours, from a Wednesday morning to a Thursday morning



Planned water supply interruption (24 hours)

- ▶ Your water company sends you a notice that in 2 days' time your tap water supply will stop for 24 hours
- ▶ This is due to planned maintenance in your local area
- ▶ As planned, it then stops from a Wednesday morning to a Thursday morning



**Planned,
24 hours**

Unexpected low water pressure (6 hours)

- ▶ Your tap water supply starts running with a low pressure, without warning
- ▶ This is due to a burst pipe in your local area
- ▶ It takes longer to fill a kettle, sink or bath and a shower would be weak. Some appliances like dishwashers and washing machines may not work properly
- ▶ This happens for 6 hours, between 06:00 and 12:00 on a Wednesday morning



6 hours

Boil water notice (48 hours)

- ▶ Your water company sends you a notice saying you need to boil tap water before drinking, cooking or preparing food to avoid the risk of becoming ill
- ▶ This is due to traces of e-coli being found in the water supply in your area
- ▶ You can still safely use tap water for washing and cleaning
- ▶ The notice arrives on a Wednesday. After two days the water will be safe to drink again



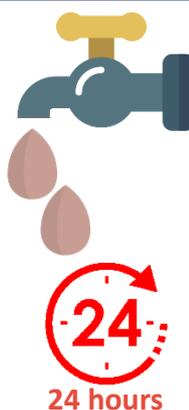
Do not drink notice (48 hours)

- ▶ Your water company sends you a notice saying not to drink your tap water, or use it for cooking or preparing food, to avoid the risk of becoming ill
- ▶ This is due to traces of a harmful chemical being found in the water supply in your area
- ▶ You can still safely use tap water for washing and cleaning
- ▶ The notice arrives on a Wednesday. After two days the water will be safe to drink again



Discoloured water (24 hours)

- ▶ Your tap water starts running light brown, without warning
- ▶ This is due to traces of sediment from pipes being disturbed
- ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again
- ▶ This happens for 24 hours from a Wednesday morning



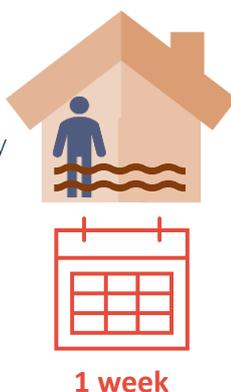
Water taste and smell (24 hours)

- ▶ Your tap water starts tasting or smelling different, without warning
- ▶ This is due to traces of chlorine, and the taste and smell is like a swimming pool
- ▶ The water is safe to drink, and for use in the dishwasher or washing machine
- ▶ This happens for 24 hours from a Wednesday morning



Sewer flooding: INSIDE your property (1 week)

- ▶ Flooding from the sewer gets inside your property, affecting your living areas
- ▶ This results from prolonged heavy rainfall in your local area
- ▶ It gives off a foul smell, and damages floors, walls and furniture.
- ▶ It takes 1 week for your property to get back to normal



Sewer flooding: OUTSIDE your property (1 week)

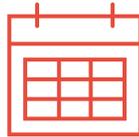
- ▶ Flooding from the sewer gets inside your property boundary, affecting access to your front door / entrance
- ▶ This results from prolonged heavy rainfall in your local area
- ▶ It gives off a foul smell, and could cause damage
- ▶ It takes 1 week for your property to get back to normal



1 week

Hosepipe ban (5 months)

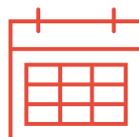
- ▶ Your water company sends you a notice saying you must not use a hosepipe or sprinkler
- ▶ This is due to an extended period of dry weather leading to a water shortage
- ▶ The hosepipe ban begins in May and lasts for 5 months



5 months

Emergency drought restrictions (2 months)

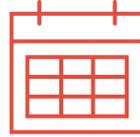
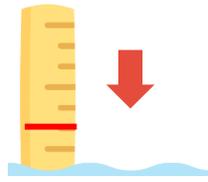
- ▶ Your water company cuts off the tap water supply from 2pm to 7am every day
- ▶ This is due to a severe drought leading to an extreme water shortage in your area
- ▶ Standpipes would be available nearby to collect water in buckets or bottles
- ▶ The restrictions begin in July and last for 2 months



2 months

Low flows in rivers NEARBY (2 months)

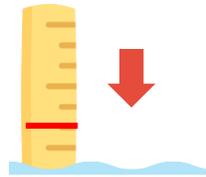
- ▶ The water level in a nearby stretch of river (less than 5 miles away) has a flow that is lower than the minimum it should be naturally
- ▶ This is due to a combination of extended dry weather and water being taken from it for public water supply
- ▶ This happens from July and lasts for 2 months



**Nearby,
2 months**

Low flows in rivers ELSEWHERE (2 months)

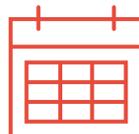
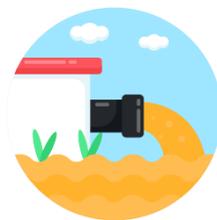
- ▶ The water level in a stretch of river somewhere in your region, but not nearby, has a flow that is lower than the minimum it should be naturally
- ▶ This is due to a combination of extended dry weather and water being taken from it for public water supply
- ▶ This happens from July and lasts for 2 months



**Elsewhere,
2 months**

Storm overflow NEARBY (2 days)

- ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to prolonged heavy rainfall and is allowed by the regulator to reduce the risk of sewer flooding
- ▶ The damage to the river and visible pollution would be minor
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 1 week



**Nearby,
2 days**

Minor pollution incident NEARBY (2 days)

- ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be minor
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 1 week



Nearby,
2 days

Significant pollution incident NEARBY (2 days)

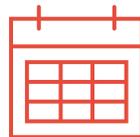
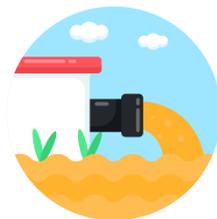
- ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be significant
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks



Nearby,
2 days

Storm overflow ELSEWHERE (2 days)

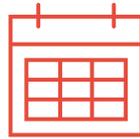
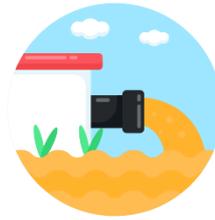
- ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to prolonged heavy rainfall and is allowed by the regulator to reduce the risk of sewer flooding
- ▶ The damage to the river and visible pollution would be minor
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 1 week



Elsewhere,
2 days

Minor pollution incident ELSEWHERE (2 days)

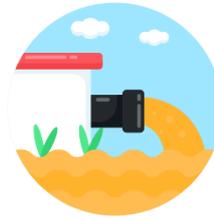
- ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be minor
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 1 week



Elsewhere,
2 days

Significant pollution incident ELSEWHERE (2 days)

- ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be significant
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks



Elsewhere,
2 days

River water NEARBY is not High quality

- ▶ A nearby stretch of river (less than 5 miles away) meets Medium rather than High quality standards, as defined by the government ⓘ
- ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area
- ▶ This has some effect on habitats for fish and wildlife, and leads to occasional algal blooms



Local

River water ELSEWHERE is not High quality

- ▶ A stretch of river **in your region, but** not nearby, meets Medium rather than High quality standards, as defined by the government ⓘ
- ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area
- ▶ This has some effect on habitats for fish and wildlife, and leads to occasional algal blooms



Elsewhere

(i) button show card:

| River water quality level | Definition |
|---------------------------|--|
| High | <ol style="list-style-type: none"> 1. There will be a diverse and natural range of plants, insects, fish, birds and other animals. 2. Water will generally have the right degree of clarity and there will be no noticeable pollution. 2. Water will generally be suitable for contact activities, such as rowing or swimming |
| Medium | <ol style="list-style-type: none"> 1. There will be plants, insects, fish, birds and other animals, but there will be some fish and other wildlife missing. 2. Water will be slightly murky or discoloured in parts, and there will sometimes be visible |

| | |
|------------|---|
| | <p>pollution in some places, and some algal blooms.</p> <p>3. Water may be suitable for contact activities in some areas but not others.</p> |
| Low | <p>4. There may be limited or no plants or wildlife, or the water may be dominated by a single plant species.</p> <p>5. Water will generally be murky or discoloured, and may sometimes be bad-smelling in some places. There may also regularly be visible pollution in some places, and frequent algal blooms.</p> <p>6. Water will be unsuitable for contact activities.</p> |

Coastal bathing water is not Excellent quality

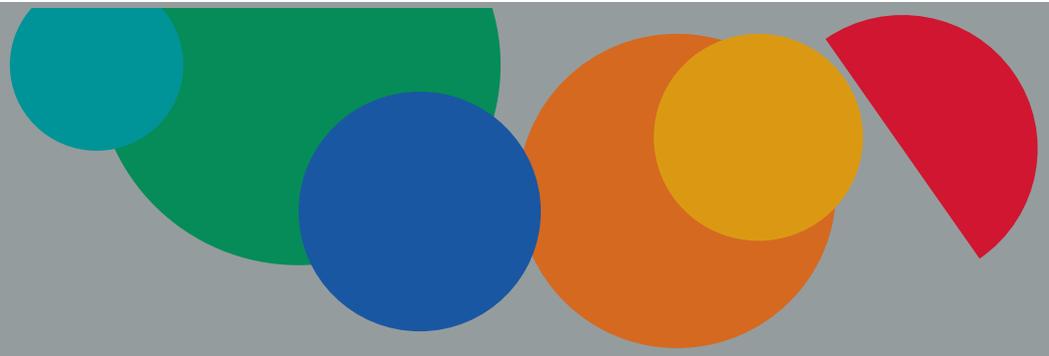
- ▶ The sea water at the beach you would be most likely to visit meets Good rather than Excellent quality standards, as defined by the government ⓘ
- ▶ This is due to the quality of treated wastewater entering the water nearby
- ▶ You could still swim in the sea, but there would be a small increase in the chance that you might get ill if you swallowed some water



Water not Excellent

(i) button show card:

| Bathing water quality level | Definition |
|-----------------------------|---|
| Excellent | The highest standard which means the bathing water is consistently very clean, with less than a 3%, or 3 in 100, chance of a stomach upset. |
| Good | Between 'Sufficient' and 'Excellent'. This means there is between a 3% and a 5% chance of a stomach upset. |
| Sufficient | The minimum standard required for bathing water which means there is between a 5% and an 8% chance of a stomach upset. |



Appendix A3

Questionnaire



Water Company Research

This survey is designed to get your views on water and sewerage services. It is being undertaken on behalf of Ofwat, the regulator, and Consumer Council for Water (CCW), the consumer organisation which represents the interests of water and sewerage customers in England and Wales.

The research will be used to help water companies plan their investments and thereby influence your future water services and bills.

This research is being conducted by Accent, an independent research agency on behalf of Ofwat and CCW.

NOT PANEL: Anyone completing the survey will be eligible for a £10 voucher (either an Amazon voucher, an M&S voucher, Love2Shop voucher). Alternatively we can donate your incentive to WaterAid. Details on how claim your voucher are given at the end of the survey.

The questionnaire will take about 15 minutes.

Any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society. If you would like to confirm Accent's credentials type Accent in the search box at: <https://www.mrs.org.uk/researchbuyersguide>.

Q1. Any data collected over the course of this interview that could be used to identify you, such as your name, address, or other contact details, will be held securely and will not be shared with any third party, including your water company, unless you give permission (or unless we are legally required to do so). Our privacy statement is available at <https://www.accent-mr.com/privacy-policy/>.

Do you agree to proceeding with the interview on this basis?

Yes

No **THANK AND CLOSE IF ONLINE**

Q2. **ASK HH ONLY:** Do you or any of your close family work in market research or for a water company?

Yes **THANK & CLOSE**

No

Q3. **IF NHH ASK:** Are you solely or jointly responsible as the decision maker for paying your organisation's water and wastewater bill?

Yes

No **THANK AND CLOSE**

Q4. **IF POSTCODE DATA NOT AVAILABLE FROM SAMPLE** Please state your postcode. (This will be used to check who supplies your water and wastewater services) **NHH ONLY If your organisation operates across multiple sites, please answer for the site you typically work from**

IF HH AND REFUSE GO TO Q6

IF NHH AND REFUSE THANK AND CLOSE

Q5. **IF HH AND DIFFERENT WATER AND WASTEWATER:** Based on your postcode area, we believe your water supply company should be #WATER COMPANY# and your wastewater supply company should be #WASTEWATER COMPANY#. You may receive bills from one or both organisations. Is that correct?

IF SAME WATER AND WASTEWATER: Based on your postcode area, we believe your water and wastewater supply company should be #WATER COMPANY#. Is that correct?

Yes **GO TO Q8**

No **GO TO Q6**

Don't know **GO TO Q8**

Q6. **IF HH:** Which water company supplies water to your home?

IF NHH: Which of the following companies bill you for water services at your premises??

Affinity Water

Anglian Water

Bournemouth Water

Bristol Water

Cambridge Water

Essex & Suffolk Water

Hafren Dyfrdwy

Hartlepool Water

Northumbrian Water

Portsmouth Water

Severn Trent Water

South East Water

Southern Water

South Staffs Water

South West Water

Sutton & East Surrey (SES) Water

Thames Water

United Utilities

Welsh Water/Dŵr Cymru

Wessex Water

Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: Retailers

ADSM

Berendsen UK Limited

Blackpool Borough Council

BT

Business Stream

Castle Water

Clear Business Water

ConservAqua Ltd

Everflow

First Business Water

Greene King Brewing & Retailing

Heineken UK Limited

Independent Water Networks

J Sainsbury
John Lewis PLC
Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (Please specify) **THEN THANK AND CLOSE**
Don't know **THANK AND CLOSE**
None **THANK AND CLOSE**

Q6B IF NHH: Do these bills include wastewater services or do you receive separate bills for wastewater?

Include wastewater services go to
Receive separate bill for waste water

Q7. IF HH: Which company supplies wastewater (sewerage) services to your home?
IF NHH AND Q6B=2: Which of the following companies bill you for wastewater services at your premises?

Anglian Water
Hafren Dyfrdwy
Northumbrian Water
Severn Trent Water
Southern Water
South West Water
Thames Water
United Utilities
Welsh Water/Dŵr Cymru
Wessex Water
Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: Retailers

ADSM
Berendsen UK Limited
Blackpool Borough Council
BT
Business Stream
Castle Water
Clear Business Water
ConservAqua Ltd
Everflow
First Business Water
Greene King Brewing & Retailing
Heineken UK Limited
Independent Water Networks

J Sainsbury
John Lewis PLC
Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (please specify) THEN THANK AND CLOSE

Don't know THANK AND CLOSE

None THANK AND CLOSE

Q8. IF HH: Are you the person in your household who is responsible, either solely or jointly, for paying for your water services bill?

I have complete responsibility for payment

I share responsibility for payment with others in my household

I have no responsibility

Don't know

BILLPAYER: = CODE 1 OR 2

NONBILLPAYER: = CODE 3-4

Q9. IF HH Which of the following age groups do you fall into?

18-29

30-44

45-64

65-74

75 or older

Prefer not to say

USE HH QUOTA IF PANEL

Q10. IF HH Are you....

Male

Female

Non binary

Prefer to self-identify

Prefer not to say

USE HH QUOTA IF PANEL

Q11. IF HH & BILLPAYER: Do you receive separate bills for water and sewerage services or one bill for both services?

IF NHH: Does your organisation receive separate bills for water and sewerage services or one bill for both services?

- Separate bills
- Joint bills
- Don't know

Q12. IF HH & BILLPAYER: How much do you pay for your total water bill – that's the amount for your water and sewerage services? **Please select 'per month' or 'per year' along with your amount.**
IF NHH: How much does your organisation pay for their annual total water bill at your premises – that's the amount for both water and sewerage services?

- IF HH:** Per month/Per year **GO TO Q14**
- IF NHH:** Per year **GO TO Q14**
- I'm not sure
- I prefer not to say

Q12b IF HH & BILLPAYER: How are you billed for water and sewerage services?

- Annually
- Monthly
- Monthly for eight months each year

Q13. IF HH & BILLPAYER AND Q12B=1-2 ASK: How much, roughly, do you pay for water and sewerage services each month, or in total for a year? The month amounts assume that the bills are paid evenly over a 12-month period, but some customers pay over a different number of months.

IF NHH: Which of the following bands do you estimate that your organisation's annual total water bill at your premises falls into – that's the amount for both water and sewerage services.

- IF HH:** Less than £10 per month/Less than £120 per year
- IF HH:** £10 - £19.99 per month/£120 - £239.99 per year
- IF HH:** £20 - £29.99 per month/£240 - £359.99 per year
- IF HH:** £30 - £39.99 per month/£360 - £479.99 per year
- IF HH:** £40 - £59.99 per month/£480 - £719.99 per year
- IF HH:** £60 - £79.99 per month/£720 - £959.99 per year
- IF HH:** £80 or more per month /£960 or more per year
- IF NHH:** Less than £1,000 per year
- IF NHH:** £1,000 to £5,000 per year
- IF NHH:** £5,000 to £25,000 per year
- IF NHH:** More than £25,000 per year
- I'm not sure

Q13b IF HH & BILLPAYER AND Q12B=3 ASK: How much, roughly, do you pay for water and sewerage services for each of the eight months, or in total for a year?

- Less than £15 per month/Less than £120 per year
- £15 - £29.99 per month/£120 - £239.99 per year
- £30 - £39.99 per month/£240 - £359.99 per year
- £40 - £59.99 per month/£360 - £479.99 per year
- £60 - £89.99 per month/£480 - £719.99 per year
- £90 - £199.99 per month/£720 - £959.99 per year
- £120 or more per month /£960 or more per year
- I'm not sure

Service issues

- Q14. Have you experienced any of the following in the last 12 months or ever? *ROTATE*
Please answer one or more in each of the two columns

Last 12 months
 Ever

Unexpected water supply interruption
 Planned water supply interruption
 Unexpected low pressure
 Boil water notice
 Do not drink notice
 Discolouration of water coming out of your tap
 A change to the taste and/or smell of your tap water
 Sewer flooding: inside your property
 Sewer flooding: outside your property
 Hosepipe ban
 Emergency drought restrictions (e.g. tap water being cut off on a rota basis to conserve supplies)
 Pollution in a river
 Pollution in the sea near a beach
 Other (please specify)
 I haven't experienced any of these

The Natural Environment

IF HH: We would like to now find out a bit more about your use of rivers and beaches.

- Q15. **IF HH:** Do you, or does anyone in your household, use rivers in the UK for any of the following activities? **Please state if you do these Often (more than six times a year); Sometimes (between one and five times a year); Rarely (less than once a year); or Never.**

| | Often | Sometimes | Rarely | Never |
|--|-------|-----------|--------|-------|
| Water contact activities (e.g. canoeing, rowing, rafting, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |
| Other activities on or around the water (e.g. narrowboating, other boating, walking, running, cycling or sitting nearby) | | | | |

- Q16. **IF HH:** Do you, or does anyone in your household, use the beach or sea in the UK for any of the following activities? **Please again state if you do these Often (more than six times a year); Sometimes (between one and five times a year); Rarely (less than once a year); or Never.**

| | Often | Sometimes | Rarely | Never |
|--|-------|-----------|--------|-------|
| Water contact activities (e.g. surfing, windsurfing, dinghy sailing, canoeing, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |
| Other activities on or around the water (e.g. other boating, walking, running, cycling or sitting or playing nearby) | | | | |

Impact of service issues

You are now going to be shown a series of questions each giving two different scenarios for your water or wastewater service. Please consider, and then compare the scenarios carefully, and then choose the one which would have the most impact on your **IF HH: household** **IF NHH: organisation** if it were to happen

Some of the scenarios would affect your own property whereas others would affect your local area. When comparing the impact that each would have, please:

- do consider any concerns you may have for the local area or environment,
- don't consider any impacts on other people outside your **IF HH: household** **IF NHH: organisation** - other people will answer for themselves!

Q17. Which of these would have the most impact on your **IF HH: household** **IF NHH: organisation**?

| Planned water supply interruption (6 hours) | Discoloured water (24 hours) |
|--|--|
| <ul style="list-style-type: none"> ▶ Your water company sends you a notice in the post that your tap water supply will stop the next morning for 6 hours ▶ This is due to planned maintenance in your local area ▶ As planned, it then stops between 06:00 and 12:00 on a Wednesday morning   <p>Planned, 6 hours</p> | <ul style="list-style-type: none"> ▶ Your tap water starts running with a light brown colour, without warning ▶ This is due to traces of sediment from pipes being disturbed ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again ▶ This happens for 24 hours from a Wednesday morning   <p>24 hours</p> |
| <input type="radio"/> | <input type="radio"/> |

Q18. Which of these would have the most impact on your **IF HH: household** **IF NHH: organisation**?

Q19. Which of these would have the most impact on your **IF HH: household** **IF NHH: organisation**?

Q20. Which of these would have the most impact on your **IF HH: household** **IF NHH: organisation**?

Q21. Which of these would have the most impact on your **IF HH: household** **IF NHH: organisation**?

Q22. Which of these would have the most impact on your **IF HH: household** **IF NHH: organisation**?

Q23. Which of these would have the most impact on your **IF HH: household** **IF NHH: organisation**?

Q24. Which of these would have the most impact on your **IF HH: household** **IF NHH: organisation**?

Q25. We would now like to ask you a few questions about the choices you have just made. How strongly to do you agree or disagree with the following statements about the choices you have just made?

| | Strongly disagree | Disagree | Neither | Agree | Strongly agree |
|--|-------------------|----------|---------|-------|----------------|
| | | | | | |

| | | | | | |
|--|--|--|--|--|--|
| I was able to understand the choices | | | | | |
| I found the options believable | | | | | |
| My choices were based on how much impact I thought each option would have on my [IF HH] household [IF NHH] premises. | | | | | |
| I found it easy to choose between the options | | | | | |

Q26. ASK IF Q25.1 = 1 OR 2. OTHERS GO TO Q27: Why were you unable to understand the choices?

Q27. ASK IF Q25.2 = 1 OR 2. OTHERS GO TO Q28: What was not believable about the options shown?

Q28. ASK IF Q25.3 = 1 OR 2. OTHERS GO TO Q29: What were the main factors driving your choices if not the impact that each would have on your [IF HH] household [IF NHH] premises?

Q29. ASK IF Q25.4 = 1 OR 2. OTHERS GO TO NEXT SECTION: Why was it difficult choosing between the options?

Compensation for service issues

Water and wastewater companies pay their customers compensation in some cases when there are problems with their service. They also invest money to reduce the number of problems that happen in the first place.

The next few questions will each present you with a choice between experiencing a service issue and being compensated for it, or not experiencing the issue and not receiving any compensation. The purpose of these questions is to see if the amounts shown are enough to offset the impact on your [IF HH] household [IF NHH] premises from the service issue shown.

In each question, the type of service problem and the compensation amount will vary. These amounts do not necessarily reflect current compensation entitlements, and compensation levels will not necessarily be influenced by answers to these questions.

Q30. Which option would you prefer?

Option A

**Unexpected water supply interruption
(6 hours)**

- ▶ Your tap water supply stops working without warning
- ▶ This is due to a burst pipe in your local area
- ▶ It stops for 6 hours, between 06:00 and 12:00 on a Wednesday morning

Compensation paid*: £100

Option B

No unexpected water supply interruption

* compensation would be paid either by applying a credit to your water bill, or by a sending a cheque to your IF HH household IF NHH organisation, whichever you prefer.

Q31. Which option would you prefer?

Option A

**Sewer flooding: OUTSIDE your property
(1 week)**

- ▶ Flooding from the sewer gets inside your property boundary, affecting access to your front door
- ▶ This results from extreme weather causing prolonged heavy rainfall in your local area
- ▶ It gives off a foul smell, and could damage your front path
- ▶ It takes 1 week for your property to get back to normal

Compensation paid*: £200

Option B

NO Sewer flooding: OUTSIDE your property

* compensation would be paid either by applying a credit to your water bill, or by a sending a cheque to your IF HH household IF NHH organisation, whichever you prefer.

Q32. We would now like to ask you a few questions about the choices you have just made. How strongly do you agree or disagree with eh following statements about the choices you have just made?

| | Strongly disagree | Disagree | Neither | Agree | Strongly agree |
|---|--------------------------|-----------------|----------------|--------------|-----------------------|
| I was able to understand the choices | | | | | |
| I found the options believable | | | | | |
| My choices were based on how much impact I thought each option would have on my [IF HH] household [IF NHH] premises and whether the | | | | | |

| | | | | | |
|--|--|--|--|--|--|
| amount of money shown was enough to compensate for this. | | | | | |
| I found it easy to choose between the options | | | | | |

Q33. ASK IF Q32.1 = 1 OR 2. OTHERS GO TO Q34: Why were you unable to understand the choices?

Q34. ASK IF Q32.2 = 1 OR 2. OTHERS GO TO Q35: What was not believable about the options shown?

Q35. ASK IF Q32.3 = 1 OR 2. OTHERS GO TO Q36: What were the main factors driving your choices?

Q36. ASK IF Q32.4 = 1 OR 2. OTHERS GO TO NEXT SECTION: Why was it difficult choosing between the options?

Attitudes to environmental costs

Q37. IF HH: Please look at the following five statements about pollution control and the costs of pollution control. Which do you agree with most? SINGLE CHOICE

- The environment should be protected from pollution and improved, regardless of cost
- The environment should be protected from pollution and improved, provided costs are not excessive
- The environment should be protected from pollution and improved, but at no additional cost
- Further protection and improvements to the environment are not needed, and the costs for this should fall
- Standards for protection and improvement to the environment are already too high and should be relaxed, and costs should fall
- Don't know

Q38. Please use this box to leave any further comments about this topic or this survey. Please note, your water company will be unable to respond to individuals.

Classification Questions

We will now ask you a few questions about you and your IF HH household IF NHH organisation. These will only be used to ensure we have spoken to a wide range of customers. All responses you give will be kept strictly confidential.

Q39. IF HH: How would you describe the occupation type of the main income earner in your household?

- Senior managerial or professional
- Intermediate managerial, administrative or professional
- Supervisor; clerical; junior managerial, administrative or professional
- Manual worker (with industry qualifications)
- Manual worker (with no qualifications)
- Unemployed
- Retired
- Student
- Prefer not to say GO TO Q42

Q40. IF Q39=7 (RETIRED) ASK: Does the main income earner have a state pension, a private pension or both?

- State only
- Private only
- Both

Prefer not to say **GO TO Q42**

Q41. IF Q40= PRIVATE OR BOTH ASK: How would you describe the main income earner's occupation type before retirement?

Senior managerial or professional
Intermediate managerial, administrative or professional
Supervisor; clerical; junior managerial, administrative or professional
Manual worker (with industry qualifications)
Manual worker (with no qualifications)
None of these

Q42. IF HH: Which of the following bands best describes the total annual income of your household, before tax and other deductions?

Less than £10,000 per year
£10,000 to £15,000 per year
£15,001 to £20,000 per year
£20,001 to £25,000 per year
£25,001 to £30,000 per year
£30,001 to £40,000 per year
£40,001 to £50,000 per year
£50,001 to £60,000 per year
£60,001 to £80,000 per year
£80,001 to £100,000 per year
£100,001 to £150,000 per year
More than £150,000 per year
Prefer not to say

Q43. IF HH: Do you receive any of the following benefits? *MULTICODE*

Attendance Allowance
Carer's Allowance
Child Tax Credit
Council Tax Benefit
Disability Living Allowance
Housing Benefit
Income Support (or similar)
Jobseeker's Allowance
Pension Credit
Universal Credit
Working tax credit
None of these
Prefer not to say

Q44. IF HH: To which of these ethnic groups do you consider you belong to? **We would like to collect this to ensure that people of all backgrounds are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.**

WHITE

English, Welsh, Scottish, Northern Irish or British
Irish
Gypsy or Irish Traveller
Any other White background

MIXED

White and Black Caribbean
White and Black African

White and Asian
Any other Mixed background

ASIAN OR ASIAN BRITISH

Indian
Pakistani
Bangladeshi
Chinese
Any other Asian background

BLACK OR BLACK BRITISH

Caribbean
African
Any other Black background

OTHER ETHNIC GROUP

Arab
Any other ethnic group
Prefer not to say

Q45. **IF HH: Thinking** about all the people in your household, including yourself, how many people live here for each of these age groups: **For each age group, please select the option that applies to you. If there are no people in your household belonging to a certain age group, please select 'zero' for it.**

| | 0 | 1 | 2 | 3 | 4 | 5+ |
|----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Up to 5 years | <input type="radio"/> |
| 6 to 15 years | <input type="radio"/> |
| 16 to 65 years | <input type="radio"/> |
| Over 65 years | <input type="radio"/> |

Q46. Please let us know if any of the following apply to you. **RANDOMISE ROWS**
We would like to collect this to ensure that with a variety of particular needs are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.

I or another member of my household is disabled or suffer(s) from a debilitating illness
I or another member of my household have/has a learning difficulty
I or another member of my household relies on water for medical reasons
I or another member of my household is visually impaired (i.e. struggles to read even with glasses)
I or another member of my household am/is over the age of 75 years old
I or another member of my household speaks English as a second language
I or another member of my household is deaf or hard of hearing
I or another member of my household is a new parent
None of these apply to me

Q47. **IF HH:** Which of the following statements do you most agree with? Please remember, this research is entirely confidential and that it is only by understanding the views of people who are struggling to pay their bills that change can be made.

I can always afford to pay my household bills
I can usually afford to pay my household bills
I sometimes struggle to pay my household bills
I usually struggle to pay my household bills
I always struggle to pay for my household bills

Q48. **IF NHH:** How many sites does your organisation operate from?

1

2
3
4+

Q49. **IF NHH:** How many employees does your organisation have in the UK?

None, sole trader
Fewer than 4 employees
4 to 49 employees
50 to 249 employees
250+ employees

Q50. **IF NHH:** Which of the following best defines the core activity of your organisation?

Agriculture, forestry and fishing
Mining and quarrying
Energy or water service & supply
Manufacturing
Construction
Wholesale and retail trade (including motor vehicles repair)
Transport and storage
Hotels & catering
IT and Communication
Finance and insurance activities
Real estate activities
Professional, scientific and technical activities
Administrative and Support Service Activities
Public administration and defence
Education
Human health and social work activities
Arts, entertainment and recreation
Other service activities
Other **PLEASE SPECIFY**

Q51. **IF HH:** Which of the following best describes your household?

Owns outright
Owns with a mortgage or loan
Part-owns and part-rents (shared ownership)
Private Rented
Social Housing rented (Council Housing, Housing Association or similar)
Living rent free
Prefer not to say

Q52. **IF HH:** Do you have a water meter?

IF NHH: Does your premises have a water meter?

Yes
No
Don't Know

Q53. **IF Q52=1 ASK:** Did you ask to have a water meter fitted for your household?

Yes
No

Q54. **IF HH AND POSTAL:** Which of these best describes you?

I have never used the internet
I have used the internet but do not have regular access to it

I have regular access to the internet
Prefer not to say

Q55. **IF HH NON PANEL:** We mentioned that there would be a £10 incentive for completing this survey. This incentive will be administered by Accent, within 4 weeks.

This can be sent as an Amazon, Marks & Spencer or Love2Shop voucher by email or by post. Alternatively we can donate your incentive to WaterAid. Which would you prefer?

Amazon voucher by email **COLLECT EMAIL ADDRESS**

M&S Voucher by email **COLLECT EMAIL ADDRESS**

Love2Shop by email **COLLECT EMAIL ADDRESS**

Amazon voucher by post **COLLECT ADDRESS**

M&S voucher by post **COLLECT ADDRESS**

Love2Shop by post **COLLECT ADDRESS**

Donation to Water Aid

If you have any queries about your incentive, please contact us on 0131 220 8770.

Q56. Thank you. Would you be willing to be contacted again if we need to clarify any of the answers you have given today?

Yes

No

Thank you. This research was conducted under the terms of the MRS code of conduct and is completely confidential.



Appendix B

Outcome Delivery Incentive Research: Testing and Development

Pilot 1 Report

May 2022

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Executive Summary

Introduction

Accent and PJM economics were commissioned jointly by Ofwat and CCW to develop and test a methodology for obtaining the customer evidence needed to support outcome delivery incentive (ODI) rate setting for common performance commitments (PC) at PR24.

The first stage of the study comprised a review of methodology options to deliver research to inform ODIs, and the development of a preferred option/s for PR24 ODI research. This stage culminated in the 'Stage 1' report delivered to Ofwat and CCW, and shared with water companies, in January 2022. The methodology was supported by peer review by two leading academics, Prof. Ken Willis (Newcastle University) and Prof. Giles Atkinson (LSE), and the study proceeded to Stage 2 to further develop and test the methodology with customers.

The first stage of testing involved a series of cognitive depth interviews with customers to test the language used and the overall survey performance. Following this stage, which was reported on separately, a number of changes were made to the survey materials, although none that substantially impacted the core structure of the design.

The present report covers the subsequent quantitative pilot stage of the study. This phase has allowed for tests of design performance not available in small cognitive interview samples and is a necessary part of the development of the research instrument.

In addition to testing the survey design, the pilot also presents the opportunity to test the sampling and fieldwork methodology. This is particularly important for the present study as the household survey has utilised a method not previously adopted in the water sector – an approach based on sampling addressed from the Postcode Address File (PAF), covering all households in England and Wales – alongside the commonly used method of sampling from online commercial panels (Panel). Additionally, the non-household survey (NHH) tested a telephone approach where the questions were read out over the phone as well as an approach where the non-household participants had the information provided via a weblink.

The report describes the survey design and methodology and presents key findings from analysis of the pilot data. The questionnaire used in the pilot survey is contained in Appendix B1.

Methodology

The survey design was based around two linked stated preference exercises:

■ Impact exercise

A pairwise choice exercise, measuring the relative impact of 25 service issue scenarios

■ Compensation exercise

A contingent valuation exercise asking participants to choose between experiencing a service issue and being compensated for it, or not experiencing the issue and not receiving any compensation. Two service issues were included in this exercise: a short, unexpected supply interruption, and an external sewer flooding incident. These are referred to as ‘pivots’ because the valuations for all other service issues are obtained by pivoting off the values obtained for these two issues using the relative impacts derived from the impact exercise.

An experimental design was created for each exercise, which involved showing different sequences of choice questions to different participants.

A total of 1,058 household customers and 80 non-household customers completed the pilot survey.

The household sample was split 50:50 between the PAF and Panel sampling methods.

The non-household survey was administered by telephone using a purchased sample of business telephone numbers. Potential participants were phoned, given brief details about the survey, and told it might be helpful in terms of speed and understanding if they were able to follow a short weblink that could be read out. If not, they were reassured that these could be read out over the phone. Of the full non-household sample, 33 took the link and 47 did not.

Findings

Household survey methodology

- Overall both the PAF and Panel methods were reasonably effective in achieving household sample targets by water/wastewater company combination.
- Both Panel and PAF samples had a somewhat older age profile than the Census
- The PAF sample was closer to the Census on gender
- The PAF sample and particularly the panel sample under-represented ethnic minorities
- The PAF sample had substantially more AB social grades than the Census, and much fewer DE. The Panel sample had a much more representative composition of social grades.
- Consistent with this, a greater proportion of the Panel sample said they usually or always struggled to pay their household bills
- However, both samples contained around the same proportion of vulnerable customers, broadly defined

- The PAF approach was able to capture those without access to the internet while the Panel approach was not. Of the PAF sample, 1% said they had never used the internet and 3% said they had used the internet but did not have regular access to it.

Overall, these findings do not conclusively point to an advantage of one method over the other, given the pre-known pros and cons of both methods. One option we put forward as worth considering is to split the main sample 50:50 between Panel and PAF methods. This would be substantially lower cost than a pure PAF approach, and achieve some of the benefits of the Panel method with respect to its improved ability to include lower social grade households and those with affordability concerns. It would also allow the ability to check for any biases attributable to a Panel sample due to its non-random selection.

Non-Household Methodology

The responses rate was low using the phone method with purchased telephone sample. Over 4,670 numbers were called to achieve the 80 interviews, a response rate of 2%.

This confirmed the known challenges of using this method and has implications for cost and timings.

Although the sample sizes were small in each case, the results of the SP diagnostic questions for the impact exercise seem to suggest some harmful impact due to the choices being read out by phone. More participants disagreed that they were able to understand the choices, and more disagreed that they found it easy to choose, when the choices were read out by phone.

For the compensation exercise there were less substantial negative impacts caused by reading out the choices over the phone in comparison with the impact exercise. In both cases, for example, there were no participants saying they disagreed with the statement that they were able to understand the choices. However, there were more people disagreeing that it was easy to choose between the options when read out by interviewer.

Stated preference design

The results of the pilot tests provided mixed evidence with respect to the stated preference design approach.

In support of the approach:

- Participant feedback was good for both the impact and the compensation exercise.
- There were very few instances of non-trading behaviour in the scenario impact exercise (where participants always chose the same alternative throughout the exercise).
- The econometric models were well estimated, especially considering the small sample size for non-households.

- The impact rankings derived from the econometric models were highly consistent with prior expectations.
- Also as expected, participants were more likely to take the compensation offered when it was high than when it was low.

However, set against these positive findings, two key issues were identified:

- At the highest compensation levels shown there were still substantial proportions of participants choosing not to take the compensation offered. Because of this, mean valuation estimates from the pilot survey are unlikely to be accurate, and median valuations are imprecisely estimated.

This should be addressable by increasing the compensation levels used in the survey, and/or by choosing lower-impact service issues.

- Estimates of the relative value of the two ‘pivot’ scenarios included in the compensation exercise were significantly different when obtained from the compensation exercise than when obtained from the impact exercise. This indicates that participants were not choosing consistently across the two exercises in line with the assumed underlying preference function.

There are a number of changes that can be made to the survey to address the issues, including:

- Change the service issues to replace external sewer flooding with an issue that has a more precise description of its impact, such as a boil water notice. This should avoid the potential problem that compensation amount is interpreted as an indicator of the severity of the issue, rather than being evaluated on its own merits.
- Revise the compensation exercise to encourage participants not to see the amounts shown as indicating the severity of the issue – an issue identified in the parallel cognitive interviews, which are reported on separately.
- Revise the structure of the survey to include a single choice exercise combining the impact and compensation exercises. This would eliminate the possibility of any inconsistency in relative values between the two exercises altogether as there would only be one exercise. (This option was suggested by Ofwat’s peer reviewer Prof. Stephane Hess, Leeds University)

In light of the findings from the pilot survey, and the fact that the changes recommended are more substantial than are ideally compatible with proceeding straight to the main stage, it would be sensible to undertake a second pilot survey. The content of this second pilot survey should be agreed as soon as possible to minimise the delay to the overall programme caused by this additional necessary testing phase.

1. Introduction

1.1 Background and objectives

Accent and PJM economics were commissioned jointly by Ofwat and CCW to develop and test a methodology for obtaining the customer evidence needed to support outcome delivery incentive (ODI) rate setting for common performance commitments (PC) at PR24.

The first stage of the study comprised a review of methodology options to deliver research to inform ODIs, and the development of a preferred option/s for PR24 ODI research. This stage culminated in the 'Stage 1' report delivered to Ofwat and CCW, and shared with water companies, in January 2022. The methodology was supported by peer review by two leading academics, Prof. Ken Willis (Newcastle University) and Prof. Giles Atkinson (LSE), and the study proceeded to Stage 2 to further develop and test the methodology with customers.

The first stage of testing involved a series of cognitive depth interviews with customers to test the language used and the overall survey performance. Following this stage, which was reported on separately, a number of changes were made to the survey materials, although none that substantially impacted the core structure of the design.

The present report covers the subsequent quantitative pilot stage of the study. This phase has allowed for tests of design performance not available in small cognitive interview samples and is a necessary part of the development of the research instrument.

In addition to testing the survey design, the pilot also presents the opportunity to test the sampling and fieldwork methodology. This is particularly important for the present study as the household survey has utilised a method not previously adopted in the water sector – an approach based on sampling addressed from the Postcode Address File (PAF), covering all households in England and Wales – alongside the commonly used method of sampling from online commercial panels (Panel). Additionally, the non-household survey (NHH) tested a telephone approach where the questions were read out over the phone as well as an approach where the non-household participants had the information provided via a weblink.

The report describes the survey design and methodology and presents key findings from analysis of the pilot data.

1.2 Contents

This report describes the research design and presents key findings from analysis of the pilot data. It is structured as follows: Section 2 describes the design of the stated preference exercises and provides details of the pilot survey methodology and pilot sample characteristics. Section 3 presents descriptive statistics on survey response, scoping, and demographics. Section 4 presents the results and findings of the scenario impact pairwise

choice exercise, and Section 5 presents the results and findings of the service issue contingent valuation exercise. Section 6 presents conclusions and recommendations on how to take the research forward.

In addition, the report contains a number of appendices: Appendix B1 contains the pilot questionnaire; Appendix B2 contains the full set of service issue show material included in the design of the impact exercise; Appendix B3 and Appendix B4 contain the letter survey invitations and reminder letter respectively; Appendix B5 contains the full set of verbatim responses to the open-ended questions following the stated preference exercises.

2. Methodology

2.1 Introduction

This section sets out the methodology used for the pilot. It includes a description of the stated preference design, details of the household and non-household survey administration, and an explanation of how water and wastewater company was identified for each participant.

2.2 Stated preference design

Overview

Stated preference methods involve asking survey participants a series of carefully designed questions to explore their preferences in relation to the object of the study. When used for valuation purposes, such methods invariably involve participants having to make a trade-off between having more or less of the good or service in question and having to make, or receive, a higher or lower payment. It is the trade-off between money and the provision of the good or service that defines the value measure.

As described in the Stage 1 report, the survey questionnaire was constructed to include two linked stated preference exercises:

- **Impact exercise**

A pairwise choice exercise, measuring the relative impact of 25 service issue scenarios

- **Compensation exercise**

A contingent valuation exercise asking participants to choose between experiencing a service issue and being compensated for it, or not experiencing the issue and not receiving any compensation. Two service issues were included in this exercise: a short, unexpected supply interruption, and an external sewer flooding incident. These are referred to as 'pivots' because the valuations for all other service issues are obtained by pivoting off the values obtained for these two issues using the relative impacts derived from the impact exercise.

The remainder of this subsection describes each exercise in turn.

Impact exercise

The survey questionnaire was designed to include a pairwise choice exercise focusing on the impact on customers of 25 different scenarios which cover service issues and environmental damages. The scenarios are shown in Table 1 below, while Appendix B2 contains the full descriptions shown.

Table 1: Service issue scenarios included in the impact exercise

| Scenario | |
|----------|---|
| 1 | Unexpected water supply interruption (6h) |
| 2 | Unexpected water supply interruption (24h) |
| 3 | Planned water supply interruption (6h) |
| 4 | Planned water supply interruption (24h) |
| 5 | Unexpected low water pressure (6h) |
| 6 | Boil water notice (48h) |
| 7 | Do not drink notice (48h) |
| 8 | Discoloured water (24h) |
| 9 | Water taste and smell (24h) |
| 10 | Sewer flooding: inside your property (1 week) |
| 11 | Sewer flooding: outside your property (1 week) |
| 12 | Hosepipe ban (5 months) |
| 13 | Emergency drought restrictions (2 months) |
| 14 | Low flows in rivers nearby (2 months) |
| 15 | Low flows in rivers elsewhere (2 months) |
| 16 | Storm overflow nearby (4 hours) |
| 17 | Minor pollution incident nearby (1 day) |
| 18 | Significant pollution incident nearby (4 weeks) |
| 19 | Storm overflow elsewhere (4 hours) |
| 20 | Minor pollution incident elsewhere (1 day) |
| 21 | Significant pollution incident elsewhere (4 weeks) |
| 22 | River water nearby is not High quality |
| 23 | River water elsewhere is not High quality |
| 24 | Coastal bathing water is not Excellent quality |
| 25 | Coastal bathing water is neither Excellent nor Good quality |

The scenarios were combined in an experimental design which was created to obtain the sequences of choices that participants faced in the survey. In each question, participants were shown two scenarios, and they were asked to indicate which one would have the most impact on their household/organisation.

- Figure 1 shows the introductory screen
- Figure 2 shows an example of a choice card from the survey, which illustrates the nature of the questions asked.

Participants each saw ten questions such as the one shown in Figure 2.

Figure 1: Impact exercise: introductory screen

Impact of service issues

You are now going to be shown a series of ten short questions where you will be asked to choose between two different scenarios for your water or wastewater service.

Please consider, and then compare the scenarios carefully, and then **choose the one which would have the most impact** on your household if it were to happen.

Some of the scenarios would affect your own property whereas others would affect your local area. When comparing the impact that each would have, please:

- **do** consider any concerns you may have for the local area or environment,
- **don't** consider any impacts on other people outside your household - other people will answer for themselves!

On some of the options you will see an ⓘ. Please click on this to see some more information about the option.

Figure 2: Impact exercise: example choice card

You're on choice 9 of 10
Which of these would have the most impact on your household?

| Option A | Option B |
|---|--|
| <div style="background-color: #00728f; color: white; padding: 5px; text-align: center;"> Significant pollution incident ELSEWHERE (4 weeks) </div> <ul style="list-style-type: none"> ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby ▶ This is due to sewerage equipment failure ▶ The damage to the river and visible pollution would be significant ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks <div style="display: flex; align-items: center; justify-content: center;"> </div> <p style="text-align: center; color: red; font-weight: bold;">Elsewhere, 4 weeks</p> <p style="text-align: center; font-size: small;">21</p> <p style="text-align: center; margin-top: 10px;"><input type="radio"/></p> | <div style="background-color: #00728f; color: white; padding: 5px; text-align: center;"> PLANNED water supply interruption (24 hours) </div> <ul style="list-style-type: none"> ▶ Your water company sends you a notice that in 2 days' time your tap water supply will stop for 24 hours ▶ This is due to planned maintenance in your local area ▶ As planned, it then stops from a Wednesday morning to a Thursday morning <div style="display: flex; align-items: center; justify-content: center;"> </div> <p style="text-align: center; color: red; font-weight: bold;">Planned, 24 hours</p> <p style="text-align: center; font-size: small;">4</p> <p style="text-align: center; margin-top: 10px;"><input type="radio"/></p> |

Hover buttons, represented by ⓘ, were included on some options. Clicking on these showed more information on the scenario. The full set of showcards and hover button texts is included in Appendix B2.

A 'D-efficient' design approach was used to create the choice situations faced by each participant from the set of all possible combinations of scenarios. This approach attempts to maximise the precision of the preference parameter estimates, given some prior estimates of the true parameters. For the pilot, priors were obtained from PR19 research, with the intention being to revise the priors for the main stage based on analysis of the pilot data as reported herein.

The design comprised 30 blocks of 10 questions each (each participant being randomly allocated to one of the blocks) and was restricted to exclude dominant/dominated pairs of options, such as an unexpected and a planned water supply interruption of the same duration, to ensure that each choice required some meaningful trade-off. The design restrictions are shown in Table 2.

Table 2: Impact exercise design restrictions : Excluded pairs

| | More impactful | Less impactful |
|-----------|---|--|
| 1 | Unexpected water supply interruption (6h) | Planned water supply interruption (6h) |
| 2 | Unexpected water supply interruption (24h) | Planned water supply interruption (6h) |
| 3 | Planned water supply interruption (24h) | Planned water supply interruption (6h) |
| 4 | Unexpected water supply interruption (24h) | Unexpected water supply interruption (6h) |
| 5 | Unexpected water supply interruption (24h) | Planned water supply interruption (24h) |
| 6 | Emergency drought restrictions (2 months) | Hosepipe ban (5 months) |
| 7 | Low flows in rivers nearby (2 months) | Low flows in rivers elsewhere (2 months) |
| 8 | Storm overflow nearby (4 hours) | Storm overflow elsewhere (4 hours) |
| 9 | Minor pollution incident nearby (1 day) | Minor pollution incident elsewhere (1 day) |
| 10 | Significant pollution incident nearby (4 weeks) | Significant pollution incident elsewhere (4 weeks) |
| 11 | River water nearby is not High quality | River water elsewhere is not High quality |
| 12 | Minor pollution incident nearby (1 day) | Storm overflow nearby (4 hours) |
| 13 | Significant pollution incident nearby (4 weeks) | Storm overflow nearby (4 hours) |
| 14 | Significant pollution incident nearby (4 weeks) | Minor pollution incident nearby (1 day) |
| 15 | Minor pollution incident nearby (1 day) | Storm overflow elsewhere (4 hours) |
| 16 | Significant pollution incident nearby (4 weeks) | Storm overflow elsewhere (4 hours) |
| 17 | Significant pollution incident nearby (4 weeks) | Minor pollution incident elsewhere (1 day) |
| 18 | Minor pollution incident elsewhere (1 day) | Storm overflow elsewhere (4 hours) |
| 19 | Significant pollution incident elsewhere (4 weeks) | Storm overflow elsewhere (4 hours) |
| 20 | Significant pollution incident elsewhere (4 weeks) | Minor pollution incident elsewhere (1 day) |
| 21 | Coastal bathing water is neither Excellent nor Good quality | Coastal bathing water is not Excellent quality |

Note: The impact exercise was designed to exclude any choice sets that included the pairs of scenarios shown in the table.

Compensation exercise

The compensation exercise was design to value two service issue scenarios: an unexpected water supply interruption lasting 6 hours, and an external sewer flooding incident. Each service issue was valued by asking participants to choose between experiencing the service issue and being compensated for it, or not experiencing the issue and not receiving any compensation. Amounts for an initial question in each case were varied across the sample, and this compensation amount was either halved or doubled in a follow-up question, depending on the response to the first question. This is the so-called ‘double-bounded contingent valuation’ method.

Figure 3 shows the introductory screen and Figure 4 shows an example of a choice card from the survey.

Figure 3: Compensation exercise: introductory screen

Compensation for service issues

Water and wastewater companies pay their customers compensation in some cases when there are problems with their service. They also invest money to reduce the number of problems that happen in the first place.

The next few questions will each present you with a choice between experiencing a service issue and being compensated for it, or not experiencing the issue and not receiving any compensation. The purpose of these questions is to see if the amounts shown are enough to offset the impact on your household from the service issue shown.

In each question, the type of service problem and the compensation amount will vary. These amounts do not necessarily reflect current compensation entitlements, and compensation levels will not necessarily be influenced by answers to these questions.

The compensation levels for the first question of each exercise were randomly chosen from the sets shown in Table 3. The compensation amounts were shown in pounds for households and as a percentage of the annual water services bill for non-households.

Figure 4: Impact exercise: example choice card

Which option would you prefer?

| Option A | Option B |
|---|--|
| <div style="background-color: #00728f; color: white; padding: 5px; text-align: center;"> Sewer flooding: OUTSIDE your property (1 week) </div> <ul style="list-style-type: none"> ▶ Flooding from the sewer affects access to your front door / entrance ▶ This results from prolonged heavy rainfall in your local area ▶ It gives off a foul smell, and could cause damage ▶ It takes 1 week for your property to get back to normal <div style="display: flex; align-items: center; justify-content: center;"> </div> <p style="text-align: center; margin-top: 5px;">Compensation paid*: £1000</p> | <div style="background-color: #00728f; color: white; padding: 10px; text-align: center; margin: 0 auto; width: 80%;"> NO Sewer flooding: OUTSIDE your property </div> |
| <input type="radio"/> | <input type="radio"/> |

* compensation would be paid either by applying a credit to your water bill, or by a sending a cheque to your household, whichever you prefer.

Table 3: Compensation levels for the first valuation question

| | Household | | Non-household | |
|---|-------------------------------------|----------------------------------|---|---|
| | Unexpected supply interruption (6h) | External sewer flooding (1 week) | Unexpected supply interruption (6h) | External sewer flooding (1 week) |
| 1 | £5 | £50 | 2.5% of your annual water services bill | 25% of your annual water services bill |
| 2 | £10 | £100 | 5% of your annual water services bill | 50% of your annual water services bill |
| 3 | £20 | £200 | 10% of your annual water services bill | 100% of your annual water services bill |
| 4 | £50 | £500 | 25% of your annual water services bill | 2.5 times the amount of your annual water services bill |
| 5 | £100 | £1,000 | 50% of your annual water services bill | 5 times the amount of your annual water services bill |
| 6 | £200 | £5,000 | 100% of your annual water services bill | 25 times the amount of your annual water services bill |

2.3 Household survey methodology

Two approaches to the household survey administration were proposed for the pilot study: an online commercial panel approach, which was widely used at PR19, and a novel approach (in the water sector) involving sampling from the Postcode Address File (PAF).

There are pros and cons to both approaches and hence it was agreed to test both sampling approaches as follows:

- 450 online commercial panel
- 450 PAF.

The pilot for the PAF approach tested the feasibility and practicality of the approach as well as assessing the nature of the resulting sample and results when compared with the panel sample.

PAF Method

The PAF approach involved purchasing address sample for each of the 17 water companies according to a matrix of water company and waste combinations which reflected the actual distribution of water and waste **within** each water company and sampled an equal number for each water company. With an assumption of a 7.5% response rate 6,000 letters were sent out to achieve the target 450 interviews as shown in Table 4.

Table 4: Numbers of letters sent by water company/wastewater company combination

| | | Wastewater | | | | | | | | | | | |
|--------------------|---------------------------|---------------|-----------|----------------|--------------------|--------------------|------------------|----------------|--------------|------------------|--------------|-----------------|-------------|
| | | Anglian Water | Dwr Cymru | Hafren Dyfrdwy | Northumbrian Water | Severn Trent Water | South West Water | Southern Water | Thames Water | United Utilities | Wessex Water | Yorkshire Water | Grand Total |
| Water | Affinity Water | 38 | | | | | | 17 | 298 | | | | 353 |
| | Anglian Water | 331 | | | 7 | 15 | | | | | | | 353 |
| | Bristol Water | | | | | | | | | | 353 | | 353 |
| | Dwr Cymru | | 353 | | | | | | | | | | 353 |
| | Hafren Dyfrdwy | | 263 | 90 | | | | | | | | | 353 |
| | Northumbrian Water | 102 | | | 205 | | | | | | 46 | | 353 |
| | Portsmouth Water | | | | | | | 353 | | | | | 353 |
| | SES Water | | | | | | | 25 | 328 | | | | 353 |
| | Severn Trent Water | | | | | 341 | | | | | | 12 | 353 |
| | South East Water | | | | | | | 215 | 138 | | | | 353 |
| | South Staffordshire Water | 70 | | | | 283 | | | | | | | 353 |
| | South West Water | | | | | | 279 | 11 | | | 63 | | 353 |
| | Southern Water | | | | | | | 337 | 16 | | | | 353 |
| | Thames Water | | | | | | | | 353 | | | | 353 |
| | United Utilities | | | | | | | | | 353 | | | 353 |
| | Wessex Water | | | | | | | | | | 353 | | 353 |
| | Yorkshire Water | | | | | 11 | | | | | | 342 | 353 |
| Grand Total | 541 | 616 | 90 | 212 | 649 | 279 | 958 | 1179 | 353 | 769 | 354 | 6001 | |

We prepared postcode data that defined each water and waste water combination and then randomly sampled 353 addresses from each water company area (17x353=6,000). Such a sampling approach does not allow for detailed stratification of the sample beyond geographically-based aspects (eg urban v rural) although it would be possible, for example, to over sample deprived areas.

Participants did not need to be bill payers to be eligible. This brought into scope both dependents aged 18 and over as well as tenants in households that do not directly pay for water.

The PAF does not include named addressees so each letter was addressed to the occupier. Each envelope included a letter on headed paper, explaining the purpose of the survey and including an online link and QR code (see Appendix B2). We offered an incentive to encourage participation. Different rates were used to gauge the impact. Some started at £5 and went to £10 on reminder whilst others were pitched at £10 throughout.

For those who were unable or didn't wish to respond online we offered the option of a paper version of the questionnaire.

Two methods for this were tested:

- A separate A5 Freepost card was included and referred to in the letter. If required, we asked the participant to enter the unique ID code (which enabled us to source the address) and post it back.
- We included a Freephone number in the letter. If required we asked participants to call the number and leave their name and unique ID.

For both we sent a paper version of the questionnaire by post along with another pre-paid envelope for its return. There were 30 versions of the questionnaire to cover the different designs and these were randomly allocated.



The initial invitation letters were sent out on 8 April 2022.

A reminder was sent out on 17 April 2022.

The interviews took place between 9 and 28 April. The average completion time was 16 minutes.

Panel method

We used the Kantar online panel for the other half of the HH sample.

The panel was provided with the following target (Table 5) and maximum (Table 6) number of interviews for the required water/wastewater combinations as well as a list of the postcodes for each combination.

No other quotas were applied.

Table 5: Target water company/wastewater company combination

| | | Wastewater | | | | | | | | | | | |
|--------------|---------------------------|---------------|-----------|----------------|--------------------|--------------------|------------------|----------------|--------------|------------------|--------------|-----------------|-------------|
| | | Anglian Water | Dwr Cymru | Hafren Dyfrdwy | Northumbrian Water | Severn Trent Water | South West Water | Southern Water | Thames Water | United Utilities | Wessex Water | Yorkshire Water | Grand Total |
| Water | Affinity Water | 3 | | | | | | 1 | 23 | | | | 27 |
| | Anglian Water | 25 | | | 1 | 1 | | | | | | | 27 |
| | Bristol Water | | | | | | | | | | 27 | | 27 |
| | Dwr Cymru | | 27 | | | | | | | | | | 27 |
| | Hafren Dyfrdwy | | 20 | 7 | | | | | | | | | 27 |
| | Northumbrian Water | 8 | | | 16 | | | | 3 | | | | 27 |
| | Portsmouth Water | | | | | | | 27 | | | | | 27 |
| | SES Water | | | | | | | 2 | 25 | | | | 27 |
| | Severn Trent Water | | | | | 26 | | | | | | 1 | 27 |
| | South East Water | | | | | | | 16 | 11 | | | | 27 |
| | South Staffordshire Water | 5 | | | | 22 | | | | | | | 27 |
| | South West Water | | | | | | 21 | 1 | | | 5 | | 27 |
| | Southern Water | | | | | | | 26 | 1 | | | | 27 |
| | Thames Water | | | | | | | | 27 | | | | 27 |
| | United Utilities | | | | | | | | | 27 | | | 27 |
| | Wessex Water | | | | | | | | | | 27 | | 27 |
| | Yorkshire Water | | | | | 1 | | | | | | 26 | 27 |
| | Grand Total | 41 | 47 | 7 | 16 | 50 | 21 | 73 | 90 | 27 | 59 | 27 | 459 |

Max quotas were set as shown below:

Table 6: Max water company/wastewater company combination

| | | Wastewater | | | | | | | | | | | |
|-------|---------------------------|---------------|-----------|----------------|--------------------|--------------------|------------------|----------------|--------------|------------------|--------------|-----------------|-------------|
| | | Anglian Water | Dwr Cymru | Hafren Dyfrdwy | Northumbrian Water | Severn Trent Water | South West Water | Southern Water | Thames Water | United Utilities | Wessex Water | Yorkshire Water | Grand Total |
| Water | Affinity Water | 4 | | | | | | 2 | 29 | | | | 34 |
| | Anglian Water | 32 | | | 1 | 1 | | | | | | | 34 |
| | Bristol Water | | | | | | | | | | 34 | | 34 |
| | Dwr Cymru | | 34 | | | | | | | | | | 34 |
| | Hafren Dyfrdwy | | 25 | 9 | | | | | | | | | 34 |
| | Northumbrian Water | 10 | | | 20 | | | | 4 | | | | 34 |
| | Portsmouth Water | | | | | | | 34 | | | | | 34 |
| | SES Water | | | | | | | 2 | 31 | | | | 34 |
| | Severn Trent Water | | | | | 33 | | | | | | 1 | 34 |
| | South East Water | | | | | | | 21 | 13 | | | | 34 |
| | South Staffordshire Water | 7 | | | | 27 | | | | | | | 34 |
| | South West Water | | | | | | 27 | 1 | | | 6 | | 34 |
| | Southern Water | | | | | | | 32 | 2 | | | | 34 |
| | Thames Water | | | | | | | | 34 | | | | 34 |
| | United Utilities | | | | | | | | | 34 | | | 34 |
| | Wessex Water | | | | | | | | | | 34 | | 34 |
| | Yorkshire Water | | | | | 1 | | | | | | 33 | 34 |
| | Grand Total | 52 | 59 | 9 | 20 | 62 | 27 | 92 | 113 | 34 | 74 | 34 | 459 |

The panel interviews took place between 12 and 19 April. The average completion time for the panel interviews was 11 minutes.

2.4 Non household survey methodology

The original proposal suggested an online commercial panel for the 100 non-household customers for the pilot. This was an approach commonly followed for PR19.

As there were concerns around using online commercial panel samples for business interviews the method chosen for the pilot was a telephone survey approach using a purchased sample of business telephone numbers. This approach was also used during PR19.

As for the household methods the sample company was provided with the water/wastewater matrix, this time for 3,000 contacts. See Table 7.

Table 7: Non-household sample purchased for water company/wastewater company combination

| | | Wastewater | | | | | | | | | | | |
|--------------------|---------------------------|---------------|-----------|----------------|--------------------|--------------------|------------------|----------------|--------------|------------------|--------------|-----------------|-------------|
| | | Anglian Water | Dwr Cymru | Hafren Dyfrdwy | Northumbrian Water | Severn Trent Water | South West Water | Southern Water | Thames Water | United Utilities | Wessex Water | Yorkshire Water | Grand Total |
| Water | Affinity Water | 19 | 0 | 0 | 0 | 0 | 0 | 8 | 149 | 0 | 0 | 0 | 176 |
| | Anglian Water | 166 | 0 | 0 | 4 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 176 |
| | Bristol Water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 176 | 0 | 176 |
| | Dwr Cymru | 0 | 176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 176 |
| | Hafren Dyfrdwy | 0 | 131 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 176 |
| | Northumbrian Water | 51 | 0 | 0 | 103 | 0 | 0 | 0 | 23 | 0 | 0 | 0 | 176 |
| | Portsmouth Water | 0 | 0 | 0 | 0 | 0 | 0 | 176 | 0 | 0 | 0 | 0 | 176 |
| | SES Water | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 164 | 0 | 0 | 0 | 176 |
| | Severn Trent Water | 0 | 0 | 0 | 0 | 170 | 0 | 0 | 0 | 0 | 0 | 6 | 176 |
| | South East Water | 0 | 0 | 0 | 0 | 0 | 0 | 107 | 69 | 0 | 0 | 0 | 176 |
| | South Staffordshire Water | 35 | 0 | 0 | 0 | 142 | 0 | 0 | 0 | 0 | 0 | 0 | 176 |
| | South West Water | 0 | 0 | 0 | 0 | 0 | 139 | 6 | 0 | 0 | 32 | 0 | 176 |
| | Southern Water | 0 | 0 | 0 | 0 | 0 | 0 | 168 | 8 | 0 | 0 | 0 | 176 |
| | Thames Water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 176 | 0 | 0 | 0 | 176 |
| | United Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 176 | 0 | 0 | 176 |
| | Wessex Water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 176 | 0 | 176 |
| | Yorkshire Water | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 171 | 176 |
| Grand Total | 271 | 308 | 45 | 106 | 325 | 139 | 479 | 589 | 176 | 384 | 177 | 3000 | |

Potential participants were phoned.

During the interview participants were told that they would be offered a series of choice pairs, where they could choose whether they would rather Scenario A, or Scenario B to occur and that these were hosted online. They were told it might be helpful in terms of speed and understanding if they were able to quickly look at them via a short link that could be read out. If not they were reassured that these could be read out over the phone.

The link was in the following format: <https://acsvy.com/3524/s1> with 30 variants.

33 took the link and 47 did not.

The interviews took place between 5 and 26 April. The average completion time for the non-household interviews was 18 minutes.

The responses rate was low using this method. Over 4,670 numbers were called to achieve the 80 interviews, a response rate of 2%. The key call statistics are:

- Interviews 2%
- No Reply/Ansaphone 62%
- Refusal 10%
- Not In Scope 11%
- Call again 8%

| | | |
|---|------------------------------------|----|
| ■ | Number Not Recognised | 3% |
| ■ | Engaged | 1% |
| ■ | Not Available During Survey Period | 1% |
| ■ | Firm call back | 1% |
| ■ | Other | 1% |

Sample: 4674

2.5 Identifying water and wastewater company

For all three approaches the first part of the postcode was used to identify the water and wastewater company.

At the start of the questionnaire, participants were asked to provide the first half of their postcode. So, for example, if the full postcode was ME1 3BN, this would be ME1 3.

The questionnaire software then used a look up table to identify the water and wastewater service company and asked the participant if they agreed with that. If not, they were provided with the full list of water and/or wastewater companies and asked to identify the relevant company.

If they typed in another company, said don't know or that none provided the service (for example because they had a septic tank) then the interview was closed.

For some postcodes there was more than one water and/or wastewater company. In those situations, the questionnaire showed the possible companies and asked the participant to choose.

3. Descriptive Findings

3.1 Introduction

This section sets out descriptive findings from the pilot.

3.2 Survey response

The HH panel survey achieved the 450 interviews as targeted.

The non-household survey achieved 80 out of the 100 targeted

The HH PAF approach achieved 627 against a target of 450.

PAF response

In total 6,000 letter invites were posted out.

- 3,000 invites were sent with a £5 incentive. Between 9 and 18 April there were 138 completes, a response rate of 4.6%
- 3,000 invites were sent with a £10 incentive. Between 9 and 18 April there were 198 completes, a response rate of 6.6%

Reminders were sent out on 17 April and between 18 April and 28 April when the survey closed a further 272 interviews were completed on line. The overall response rates were 9.1% for the initial £5 incentive that changed to £10 for the reminders and 11.1% for the initial £10 incentive. The overall online response rate was 10.1%.

45 asked for paper questionnaires (18 via a phone message and 27 via the postcard). The paper questionnaires were posted out and 19 have been returned.

The overall response, including the paper questionnaires, was 10.5%

3.3 Scoping

Some participants were excluded from the questionnaire. These were as follows:

- Those who did not agree with the privacy statement¹ at Q1

¹ Any data collected over the course of this interview that could be used to identify you, such as your name, address, or other contact details, will be held securely and will not be shared with any third party, including your water company, unless you give permission (or unless we are legally required to do so). Our privacy statement is available at <https://www.accent-mr.com/privacy-policy/>.

- Those or any of their close family who work in market research or for a water company at Q2
- For non-households: Those who are not solely or jointly responsible as the decision maker for paying their organisation’s water and wastewater bill at Q3
- For non-households: Those who refuse to give their postcode at Q4
- Those who answer Q6 on water company and either say other, don’t know or none
- Those who answer Q7 on wastewater company and either say other, don’t know or none

The numbers out of scope are shown below for the three samples:

Table 8: Out of scopes

| | Panel | PAF | NHH |
|--------------------------------------|------------|------------|------------|
| Total entered survey | 570 | 777 | 197 |
| Q1 privacy | 16 | 1 | 0 |
| Q2 work in MR or for water company | 21 | 13 | 0 |
| Q3 NHH not decision maker on bills | | | 61 |
| Q4 NHH refuse postcode | | | 0 |
| Q6 other for water company | 5 | 4 | 2 |
| Q6 don’t know for water company | 5 | 15 | 12 |
| Q6 none for water company | 2 | 3 | 2 |
| Q7 other for wastewater company | 2 | 14 | 3 |
| Q7 don’t know for wastewater company | 10 | 31 | 2 |
| Q7 none for wastewater company | 3 | 24 | 8 |
| Totals | 64 | 105 | 287 |
| Proportion of out of scopes | 11% | 14% | 46% |

Water Company

Participants were asked to provide the first half of their postcode.

Based on their postcode 40 PAF and 15 Panel participants had more than one potential water supplier and 7 PAF and 5 Panel participants had more than one wastewater supplier. One non-household participant had more than one wastewater supplier. These participants were shown the possible suppliers and asked to select the correct one.

The final allocation by water company for the household sample is shown in Table 9.

Table 9: HH water company

| | PAF | Panel |
|----------------------------------|------------|------------|
| Affinity Water | 4 | 4 |
| Anglian Water | 6 | 5 |
| Bournemouth Water | 1 | 1 |
| Bristol Water | 5 | 6 |
| Cambridge Water | 1 | * |
| Essex & Suffolk Water | 2 | 1 |
| Hafren Dyfrdwy | 3 | 3 |
| Hartlepool Water | 0 | * |
| Northumbrian Water | 4 | 4 |
| Portsmouth Water | 7 | 6 |
| Severn Trent Water | 7 | 8 |
| South East Water | 5 | 4 |
| Southern Water | 7 | 7 |
| South Staffs Water | 4 | 8 |
| South West Water | 7 | 2 |
| Sutton & East Surrey (SES) Water | 6 | 6 |
| Thames Water | 6 | 8 |
| United Utilities | 6 | 6 |
| Welsh Water/Dwr Cymru | 5 | 8 |
| Wessex Water | 6 | 6 |
| Yorkshire Water | 8 | 7 |
| Base | 608 | 450 |

* = less than 0.5%

The final allocation of wastewater company for the household sample is shown in Table 10.

Table 10: HH wastewater company

| | PAF | Panel |
|-----------------------|------------|------------|
| Anglian Water | 8 | 6 |
| Hafren Dyfrdwy | 2 | 2 |
| Northumbrian Water | 4 | 4 |
| Severn Trent Water | 12 | 16 |
| Southern Water | 19 | 17 |
| South West Water | 7 | 1 |
| Thames Water | 16 | 20 |
| United Utilities | 6 | 6 |
| Welsh Water/Dwr Cymru | 6 | 9 |
| Wessex Water | 12 | 13 |
| Yorkshire Water | 8 | 7 |
| Base | 608 | 450 |

For the non-household sample the final samples by water company and wastewater company are shown below:

| Water company | % |
|-----------------------|----------|
| Affinity Water | 5 |
| Anglian Water | 4 |
| Bournemouth Water | 0 |
| Bristol Water | 9 |
| Cambridge Water | 5 |
| Essex & Suffolk Water | 4 |
| Hafren Dyfrdwy | 6 |
| Hartlepool Water | 0 |
| Northumbrian Water | 6 |
| Portsmouth Water | 4 |
| Severn Trent Water | 6 |
| South East Water | 6 |
| Southern Water | 8 |
| South Staffs Water | 4 |
| South West Water | 10 |
| SES Water | 3 |
| Thames Water | 5 |
| United Utilities | 4 |
| Welsh Water/Dwr Cymru | 8 |
| Wessex Water | 1 |
| Yorkshire Water | 4 |

| Wastewater company | % |
|---------------------------|----------|
| Anglian Water | 10 |
| Hafren Dyfrdwy | 1 |
| Northumbrian Water | 6 |
| Severn Trent Water | 10 |
| Southern Water | 19 |
| South West Water | 8 |
| Thames Water | 14 |
| United Utilities | 4 |
| Welsh Water/Dwr Cymru | 13 |
| Wessex Water | 13 |
| Yorkshire Water | 4 |

Base: 80 non-households

The achieved interviews against the targets for the combined water and wastewater companies are shown in Table 11.

Table 11: Achieved interviews against the targets for combined water and wastewater companies

| Water | Wastewater | Target | Achieved | |
|-----------------------|-----------------------|------------|------------|------------|
| | | | Panel | PAF |
| Affinity Water | Anglian Water | 3 | 2 | 2 |
| | Southern Water | 1 | 2 | 2 |
| | Thames Water | 23 | 15 | 16 |
| Anglian Water | Anglian Water | 25 | 21 | 34 |
| | Welsh Water/Dwr Cymru | | 1 | |
| | Northumbrian Water | 1 | 0 | 0 |
| | Severn Trent Water | 1 | 0 | 2 |
| Bristol Water | Wessex Water | 27 | 27 | 25 |
| Welsh Water/Dwr Cymru | Welsh Water/Dwr Cymru | 27 | 33 | 30 |
| | Hafren Dyfrdwy | | 1 | 1 |
| Hafren Dyfrdwy | Welsh Water/Dwr Cymru | 20 | 4 | 6 |
| | Hafren Dyfrdwy | 7 | 9 | 10 |
| | Wessex Water | | | 1 |
| Northumbrian Water | Anglian Water | 8 | 1 | 7 |
| | Northumbrian Water | 16 | 16 | 20 |
| | Thames Water | 3 | 3 | 3 |
| Portsmouth Water | Southern Water | 27 | 27 | 38 |
| SES Water | Southern Water | 2 | 4 | 5 |
| | Thames Water | 25 | 24 | 26 |
| Severn Trent Water | Welsh Water/Dwr Cymru | | 1 | |
| | Severn Trent Water | 26 | 34 | 41 |
| | Wessex Water | | 1 | |
| | Yorkshire Water | 1 | 2 | 1 |
| South East Water | South West Water | | | 2 |
| | Southern Water | 16 | 12 | 24 |
| | Thames Water | 11 | 8 | 5 |
| South Staffs Water | Anglian Water | 5 | 1 | 3 |
| | Severn Trent Water | 22 | 34 | 20 |
| | South West Water | | | 1 |
| South West Water | South West Water | 21 | 6 | 34 |
| | Southern Water | 1 | 1 | 2 |
| | Wessex Water | 5 | 3 | 3 |
| Southern Water | Southern Water | 26 | 29 | 39 |
| | Thames Water | 1 | 2 | 1 |
| Thames Water | Thames Water | 27 | 38 | 32 |
| United Utilities | United Utilities | 27 | 28 | 33 |
| Wessex Water | Wessex Water | 27 | 26 | 30 |
| Yorkshire Water | Severn Trent Water | 1 | 1 | 1 |
| | Yorkshire Water | 26 | 30 | 44 |
| Other | Other | 0 | 3 | 3 |
| Total | | 450 | 450 | 547 |

Key:

Below target

Substantially below target

3.4 Demographics

Age

The age profile of the two HH samples is shown in Table 12 compared to the Census 2011. Both samples have an older profile than the census with the PAF closer than the Panel.

Table 12: Age band

| | Census % | PAF % | Panel % |
|-------------------|----------|------------|------------|
| 18-29 | 20 | 10 | 4 |
| 30-64 | 57 | 61 | 64 |
| 65 or older | 23 | 28 | 32 |
| Prefer not to say | - | 1 | |
| Base | | 608 | 450 |

Gender

The gender profile of the two HH samples is shown in Table 13 compared to the Census 2011. The PAF samples is much closer than the Panel to the Census gender split.

Table 13: Gender

| | Census % | PAF % | Panel % |
|-------------------------|----------|------------|------------|
| Male | 49 | 51 | 44 |
| Female | 51 | 47 | 56 |
| Non binary | - | * | 0 |
| Prefer to self-identify | - | * | 0 |
| Base | | 608 | 450 |

* = less than 0.5%

Occupation of head of household

The household sample was asked how they would describe the occupation type of the main income earner in their household.

The PAF sample has far more in the ‘Senior managerial or professional’ category than the Census (19% compared to 7%) whereas the panel is much closer (5%).

For the Intermediate managerial, administrative or professional category the PAF sample is very close (20% PAF v 21% Census) whereas the panel sample is much lower (13%).

For the Supervisor; clerical; junior managerial, administrative or professional category the PAF sample is closer than the panel (11% PAF, 20% panel v 6% Census).

Manual worker (with no qualifications) is much lower in the PAF than in the Census.

Table 14: Occupation of head of household

| | Census | PAF | Panel |
|--|--------|-----|-------|
|--|--------|-----|-------|

| | % | % | % |
|---|----|------------|------------|
| Senior managerial or professional | 7 | 19 | 5 |
| Intermediate managerial, administrative or professional | 21 | 20 | 13 |
| Supervisor; clerical; junior managerial, administrative or professional | 6 | 11 | 20 |
| Manual worker (with industry qualifications) | 10 | 8 | 13 |
| Manual worker (with no qualifications) | 17 | 3 | 10 |
| Unemployed | 4 | 2 | 7 |
| Retired | 29 | 29 | 32 |
| Student | 6 | 2 | * |
| Prefer not to say | - | 5 | * |
| Base | | 608 | 450 |

* = less than 0.5%

Those who stated that the head of household was retired was asked whether the main income earner had a state pension, a private pension or both. The panel sample had slightly more state only pensioners than the PAF sample: 13% v 10%

Table 15: Pension type

| | PAF % | Panel % |
|----------------------|------------|------------|
| State only | 10 | 13 |
| Private only | 14 | 19 |
| Both | 67 | 66 |
| Prefer not to say | 10 | 2 |
| Base: retired | 177 | 146 |

The data from Occupation of head of household was used to assess SEG for the under 65 year old sample. As can be seen the PAF sample had substantially more AB social grades than the Census, and much fewer DE. The Panel sample had a much more representative composition of social grades.

Table 16: SEG

| | Census % | PAF % | Panel % |
|----------------------------------|----------|------------|------------|
| AB | 23 | 55 | 27 |
| C1 | 30 | 19 | 28 |
| C2 | 22 | 11 | 20 |
| DE | 25 | 8 | 24 |
| Base (under 65 year olds) | | 436 | 306 |

Ethnic group

The ethnic group of the sample was compared with the Census. The PAF sample and particularly the panel sample under-represented non White people.

Table 17: Ethnic group

| | Census % | PAF % | Panel % |
|---|----------|------------|------------|
| English, Welsh, Scottish, Northern Irish or British | 80 | 86 | 89 |
| Irish | 1 | 1 | 1 |
| Gypsy or Irish Traveller | * | * | 0 |
| Any other White background | 4 | 5 | 4 |
| White and Black Caribbean | 1 | * | 0 |
| White and Black African | * | * | 0 |
| White and Asian | 1 | 0 | * |
| Any other Mixed background | 1 | 1 | 0 |
| Indian | 3 | 1 | 1 |
| Pakistani | 2 | 1 | 1 |
| Bangladeshi | 1 | * | * |
| Chinese | 1 | 1 | * |
| Any other Asian background | 1 | * | 1 |
| Caribbean | 2 | * | * |
| African | 1 | 1 | 1 |
| Any other Black background | 1 | 0 | * |
| Arab | * | * | * |
| Any other ethnic group | 1 | * | * |
| Prefer not to say | - | 3 | * |
| Base | | 608 | 450 |

* = less than 0.5%

Household size

62% of the PAF sample and 68% of the panel sample were 1 or 2 person households. See Table 18.

Table 18: People in household

| | PAF % | Panel % |
|-------------------|------------|------------|
| 1-2 | 62 | 68 |
| 3 or 4 | 29 | 28 |
| 5 or more | 7 | 5 |
| Prefer not to say | 2 | 0 |
| Base | 177 | 146 |

Vulnerability

The household sample was asked if they or another member of their household were:

- disabled or suffers from a debilitating illness
- has a learning difficulty
- relies on water for medical reasons
- is visually impaired (i.e. struggles to read even with glasses)
- is over the age of 75 years old
- speaks English as a second language
- is deaf or hard of hearing
- is a new parent

For six tenths (59% PAF and 60% panel) none of the factors applied. The main ones that did apply were disability or suffering from a debilitating illness, aged over 75 year old and deaf or hard of hearing for both samples.

Table 19: Vulnerability

| | PAF % | Panel % |
|--|------------|------------|
| I or another member of my household is disabled or suffer(s) from a debilitating illness | 11 | 17 |
| I or another member of my household am/is over the age of 75 years old | 11 | 12 |
| I or another member of my household is deaf or hard of hearing | 10 | 9 |
| I or another member of my household speaks English as a second language | 7 | 6 |
| I or another member of my household relies on water for medical reasons | 7 | 5 |
| I or another member of my household have/has a learning difficulty | 4 | 3 |
| I or another member of my household is a new parent | 4 | 1 |
| I or another member of my household is visually impaired | 2 | 2 |
| None of these apply to me | 59 | 60 |
| Prefer not to say | 4 | 2 |
| Base | 608 | 450 |

Ability to pay

The extent to which the household sample may have financial difficulties was probed by asking which of the following statements they most agreed with:

- I can always afford to pay my household bills
- I can usually afford to pay my household bills
- I sometimes struggle to pay my household bills
- I usually struggle to pay my household bills
- I always struggle to pay for my household bills

The majority (59% PAF and 55% panel) said they could always afford to pay their household bills. 4% of the PAF sample and 6% of the panel sample said they usually or always struggled to pay their household bills.

Table 20: Financial vulnerability

| | PAF % | Panel % |
|---|------------|------------|
| I can always afford to pay my household bills | 59 | 55 |
| I can usually afford to pay my household bills | 24 | 27 |
| I sometimes struggle to pay my household bills | 14 | 12 |
| I usually struggle to pay my household bills | 2 | 3 |
| I always struggle to pay for my household bills | 2 | 3 |
| Base | 608 | 450 |

Digital exclusion

The degree of digital exclusion for the PAF sample was explored by asking which of the following best described them:

- I have never used the internet
- I have used the internet but do not have regular access to it
- I have regular access to the internet

The panel sample was not asked this as they necessarily have internet access to be panel members.

95% of the PAF sample have regular access to the internet. 2% said they have used the internet but do not have regular access to it and 2% preferred not to say. This data was taken from the 608 who completed on line.

For the 19 who completed the paper questionnaires the figures were:

- I have never used the internet 5
- I have used the internet but do not have regular access to it 5
- I have regular access to the internet 7
- Prefer not to say 2

Base: 608 PAF online completes

Combining these with the online completes gives us:

- I have never used the internet 1%
- I have used the internet but do not have regular access to it 3%
- I have regular access to the internet 93%
- Prefer not to say 3%

Base: 627 PAF

Water meter status

62% of the PAF sample and 54% of the panel sample had a water meter.

Table 21: Whether has water meter

| | PAF % | Panel % |
|-------------------|------------|------------|
| Yes | 62 | 54 |
| No | 31 | 42 |
| Don't Know | 5 | 3 |
| Prefer not to say | 1 | 0 |
| Base | 608 | 450 |

Those who had a water meter were asked if they asked for it to be fitted: 31% of the PAF sample and 46% of the panel sample who had water meters said they did.

3.5 Non household sample characteristics

How organisation uses water

The main use of water was for normal domestic use for their organisation's customers and employees, mentioned by 93%.

The main uses in order were:

| | |
|--|-----|
| ■ Normal domestic use for their organisation's customers and employees | 93% |
| ■ The supply of services your organisation provides (e.g. cleaning services etc.) | 28% |
| ■ An ingredient or part of the product or service your organisation provides | 20% |
| ■ The manufacturing process which is essential to the running of your organisation | 18% |

Base: 80 non-households

Number of sites

Seven tenths of the non-household sample operated from one site. 16% operated from four or more sites:

| | |
|---------------------|-----|
| ■ 1 | 70% |
| ■ 2 | 11% |
| ■ 3 | 1% |
| ■ 4+ | 16% |
| ■ Prefer not to say | 1% |

Base: 80 non-households

Number of employees

The number of employees the organisation has in the UK was probed. Eight per cent were sole traders and 16% had less than four employees. 6% were large organisations with 250 or more employees:

| | |
|--------------------------|-----|
| ■ None, sole trader | 8% |
| ■ Fewer than 4 employees | 16% |
| ■ 4 to 49 employees | 59% |
| ■ 50 to 249 employees | 10% |
| ■ 250+ employees | 6% |
| ■ Prefer not to say | 1% |

Base: 80 non-households

Industry classification

The NHH sample was asked what the core activity of their organisation was. The main areas were wholesale and retail trade, manufacturing and hotels & catering:

| | |
|--|-----|
| ■ Wholesale and retail trade (including motor vehicles repair) | 23% |
| ■ Manufacturing | 16% |
| ■ Hotels & catering | 13% |
| ■ Human health and social work activities | 10% |
| ■ Arts, entertainment and recreation | 6% |
| ■ Other service activities | 6% |
| ■ Professional, scientific and technical activities | 5% |
| ■ Construction | 3% |
| ■ Real estate activities | 3% |
| ■ Agriculture, forestry and fishing | 1% |
| ■ Transport and storage | 1% |
| ■ IT and Communication | 1% |
| ■ Finance and insurance activities | 1% |
| ■ Administrative and Support Service Activities | 1% |
| ■ Education | 1% |
| ■ Other | 9% |

Base: 80 non-households

Water Meter

75% of the NNH sample said their premise had a water meter.5% did not know.

3.6 Billing

For households, 96% of the PAF sample and 95% of the panel sample were bill payers and the remaining proportions were non bill payers.

Table 22: Are you the person in your household who is responsible, either solely or jointly, for paying for your water services bill?

| | PAF % | Panel % |
|--|------------|------------|
| I have complete responsibility for payment | 65 | 61 |
| I share responsibility for payment with others in my household | 30 | 34 |
| I have no responsibility | 3 | 5 |
| Don't know | 1 | 0 |
| Base | 608 | 450 |

19% of those aged 18-29 were not bill payers compared to 3% aged 30 or older.

About four fifths of HH customers received combined bills (80% PAF and 83% panel). For the NHH sample 71% received combined bills and 16% separate bills. See Table 23.

Table 23: Whether separate water and wastewater bills

| | NHH % | PAF % | Panel % |
|----------------|-------|-------|---------|
| Separate bills | 16 | 14 | 13 |
| Combined bills | 71 | 80 | 83 |
| Don't know | 13 | 6 | 4 |

| | | | |
|-------------------------|-----------|------------|------------|
| Base bill payers | 80 | 582 | 428 |
|-------------------------|-----------|------------|------------|

Household bill payers were asked how often they made payments for water and sewerage services. This was used to show participants the appropriate bands for the following question on water and sewerage bills. The majority (61% PAF sample and 54% panel sample) made payments monthly with about a fifth six monthly.

Table 24: How often do you make payment for water and sewerage services

| | PAF % | Panel % |
|--|------------|------------|
| Annually | 4 | 9 |
| Every six months | 19 | 20 |
| Every month, over eight months of the year | 9 | 14 |
| Every month | 61 | 54 |
| Other | 7 | 3 |
| Base bill payers | 582 | 428 |

The bill amount, disaggregated by the payment frequency is shown in Table 25 and the bill amount grouped into seven categories is shown in Table 26.

Table 25: Bill amount

| | PAF % | Panel % |
|--|------------|------------|
| Less than £10 per month/Less than £120 per year | 1 | 3 |
| £10 - £19.99 per month/£120 - £239.99 per year | 10 | 14 |
| £20 - £29.99 per month/£240 - £359.99 per year | 18 | 18 |
| £30 - £39.99 per month/£360 - £479.99 per year | 13 | 9 |
| £40 - £59.99 per month/£480 - £719.99 per year | 19 | 11 |
| £60 - £79.99 per month/£720 - £959.99 per year | 5 | 3 |
| £80 or more per month /£960 or more per year | 1 | 1 |
| Less than £15 per month/Less than £120 per year | 0 | 1 |
| £15 - £29.99 per month/£120 - £239.99 per year | 3 | 2 |
| £30 - £39.99 per month/£240 - £359.99 per year | 2 | 2 |
| £40 - £59.99 per month/£360 - £479.99 per year | 2 | 3 |
| £60 - £89.99 per month/£480 - £719.99 per year | 2 | 2 |
| £90 - £199.99 per month/£720 - £959.99 per year | | 0 |
| £120 or more per month /£960 or more per year | | 0 |
| Less than £60 every 6 months/Less than £120 per year | 1 | 1 |
| £60 - £119.99 every 6 months /£120 - £239.99 per year | 4 | 4 |
| £120 - £179.99 every 6 months /£240 - £359.99 per year | 6 | 7 |
| £180 - £239.99 every 6 months /£360 - £479.99 per year | 3 | 4 |
| £240 - £359.99 every 6 months /£480 - £719.99 per year | 3 | 2 |
| £360- £479.99 every 6 months /£720 - £959.99 per year | 1 | 0 |
| £480 or more every 6 months /£960 or more per year | 0 | |
| Don't know | 8 | 13 |
| Base bill payers | 582 | 428 |

Table 26: Grouped bill amount

| | PAF % | Panel % |
|-------------------------|------------|------------|
| Less than £120 per year | 2 | 5 |
| £120 - £239.99 per year | 16 | 20 |
| £240 - £359.99 per year | 25 | 27 |
| £360 - £479.99 per year | 18 | 16 |
| £480 - £719.99 per year | 23 | 15 |
| £720 - £959.99 per year | 6 | 3 |
| £960 or more per year | 1 | 1 |
| I'm not sure | 8 | 13 |
| Base | 582 | 428 |

The PAF sample has a higher proportion paying larger bills: 30% over £480 per year compared to 19% for panel.

For the NHH sample the bill distribution was:

- Less than £1,000 per year 56%
- £1,000 to £5,000 per year 25%
- £5,000 to £25,000 per year 6%
- More than £25,000 per year 3%
- I'm not sure 10%

Base: 80 NHH

3.7 Service issues

Participants were asked if they had ever experienced any of the following service issues:

- Unexpected water supply interruption
- Planned water supply interruption
- Unexpected low pressure
- Boil water notice
- Do not drink notice
- Discolouration of water coming out of your tap
- A change to the taste and/or smell of your tap water
- Sewer flooding: inside your property
- Sewer flooding: outside your property
- Hosepipe ban
- Emergency drought restrictions (e.g. tap water being cut off on a rota basis to conserve supplies)
- Pollution in a river
- Pollution in the sea near a beach

Overall, the PAF sample were more likely to have experienced service issues: 65% PAF compared to 54% panel experienced service issues.

For the non-household sample 51% experienced service issues.

The main service issues were hosepipe bans, planned water supply interruptions, unexpected low pressure and discolouration of water coming out of your tap. See Table 27.

Table 27: Whether experienced any of the following service issues

| | NHH % | PAF % | Panel % |
|--|-----------|------------|------------|
| Hosepipe ban | 19 | 25 | 21 |
| Planned water supply interruption | 19 | 25 | 21 |
| Unexpected low pressure | 16 | 21 | 19 |
| Discolouration of water coming out of your tap | 15 | 21 | 17 |
| Unexpected water supply interruption | 14 | 14 | 14 |
| A change to the taste and/or smell of your tap water | 10 | 15 | 10 |
| Pollution in the sea near a beach | 8 | 9 | 5 |
| Sewer flooding: outside your property | 5 | 6 | 4 |
| Pollution in a river | 6 | 6 | 3 |
| Boil water notice | 4 | 4 | 3 |
| Do not drink notice | 3 | 2 | 2 |
| Emergency drought restrictions (e.g. tap water being cut off on a rota basis to conserve supplies) | 3 | 1 | 2 |
| Sewer flooding: inside your property | 9 | 1 | 1 |
| Other | 3 | 4 | 1 |
| I haven't experienced any of these | 49 | 35 | 46 |
| Base bill payers | 80 | 608 | 450 |

All participants who had mentioned the following two service issues were then asked if they had experienced them in the last 12 months:

- Discolouration of water coming out of your tap
- A change to the taste and/or smell of your tap water

Table 28 shows the proportion that had experienced each in the last 12 months.

Table 28: Proportion who had experienced the following service issues in last 12 months

| | NHH % | PAF % | Panel % |
|--|-----------|------------|------------|
| Discolouration of water coming out of your tap | 6 | 10 | 6 |
| A change to the taste and/or smell of your tap water | 6 | 8 | 4 |
| Base bill payers | 80 | 608 | 450 |

3.8 Use of rivers and beaches in the UK

The household sample was asked if they or anyone in their household, used rivers in the UK for any of the following activities:

- Water contact activities (e.g. canoeing, rowing, rafting, paddleboarding, swimming, paddling)
- Fishing
- Walking, running, cycling or sitting nearby or other activities on or around the water (e.g. narrowboating, other types of boating)

Walking, running, cycling or sitting nearby or other activities on or around the water was the most frequently cited activity with 67% of the PAF sample and 49% of the panel sample doing it sometimes or often. Fishing was done least with 82% of both PAF and panel samples saying they never did it. See Table 29.

Table 29: Use of rivers in the UK

| | Water contact activities | | Fishing | | Walking, running, cycling or sitting nearby or other activities on or around the water | |
|-------------|--------------------------|------------|------------|------------|--|------------|
| | PAF % | Panel % | PAF % | Panel % | PAF % | Panel % |
| Often | 5 | 2 | 3 | 3 | 31 | 19 |
| Sometimes | 15 | 8 | 5 | 7 | 37 | 30 |
| Rarely | 23 | 12 | 10 | 8 | 13 | 15 |
| Never | 57 | 78 | 82 | 82 | 19 | 36 |
| Base | 608 | 450 | 608 | 450 | 608 | 450 |

Similarly, the household sample was asked if they or anyone in their household, used the beach or sea in the UK for any of the same activities.

Again, walking, running, cycling or sitting nearby or other activities on or around the water was the most frequently cited activity with 72% of the PAF sample and 46% of the panel sample doing it sometimes or often. Again, fishing was done least with 85% of the PAF and 84% of the panel sample saying they never did it. See Table 30.

Table 30: Use of beaches or the sea in the UK

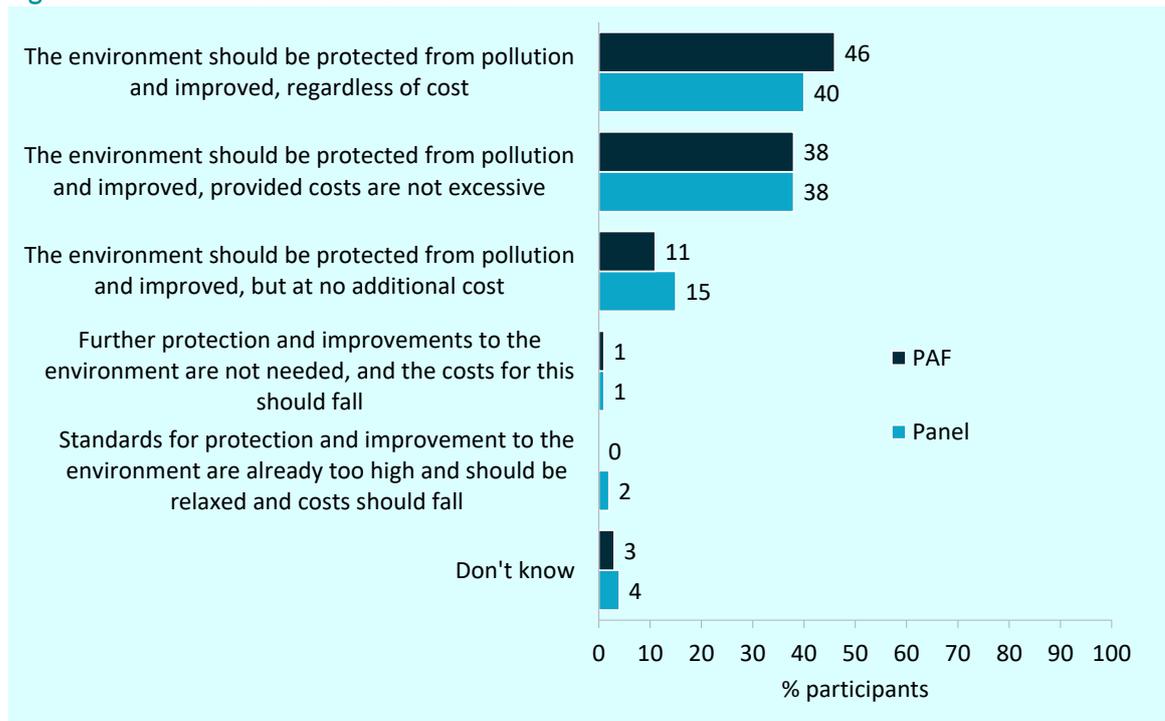
| | Water contact activities | | Fishing | | Walking, running, cycling or sitting nearby or other activities on or around the water | |
|-------------|--------------------------|------------|------------|------------|--|------------|
| | PAF % | Panel % | PAF % | Panel % | PAF % | Panel % |
| Often | 8 | 4 | 2 | 3 | 26 | 16 |
| Sometimes | 23 | 11 | 4 | 5 | 44 | 30 |
| Rarely | 27 | 16 | 9 | 8 | 15 | 20 |
| Never | 42 | 69 | 85 | 84 | 15 | 34 |
| Base | 608 | 450 | 608 | 450 | 608 | 450 |

3.9 Attitudes to environmental costs

The household sample was asked to state which of a set of five statements about pollution control and the costs of pollution control they agreed with most. Figure 5 shows the findings.

Two statements ‘the environment should be protected from pollution and improved, **regardless of cost**’ and ‘The environment should be protected from pollution and improved, **provided costs are not excessive**’ gained most support with 46% of the PAF sample compared to 40% for the panel sample agreeing most with the first and 38% of both samples agreeing most with the second.

Figure 5: Attitudes to environmental costs



Base: PAF 608, Panel 450

4. Impact Exercise Findings

4.1 Introduction

This section focuses on findings from the impact exercise. It includes feedback from pilot participants following the exercise, diagnostics concerning the choice data, econometric models, the impact scores generated from those models, and an analysis of the validity of these impact scores by comparing them against prior expectations.

4.2 Participant feedback

Feedback from participants following the impact exercise was positive. As shown in Figure 6, only very small proportions of participants disagreed a) that they were able to understand the choices, b) that they found the options believable, and c) that their choices were based on how much impact each option would have on their household/premises. This is true of all three sub-samples.

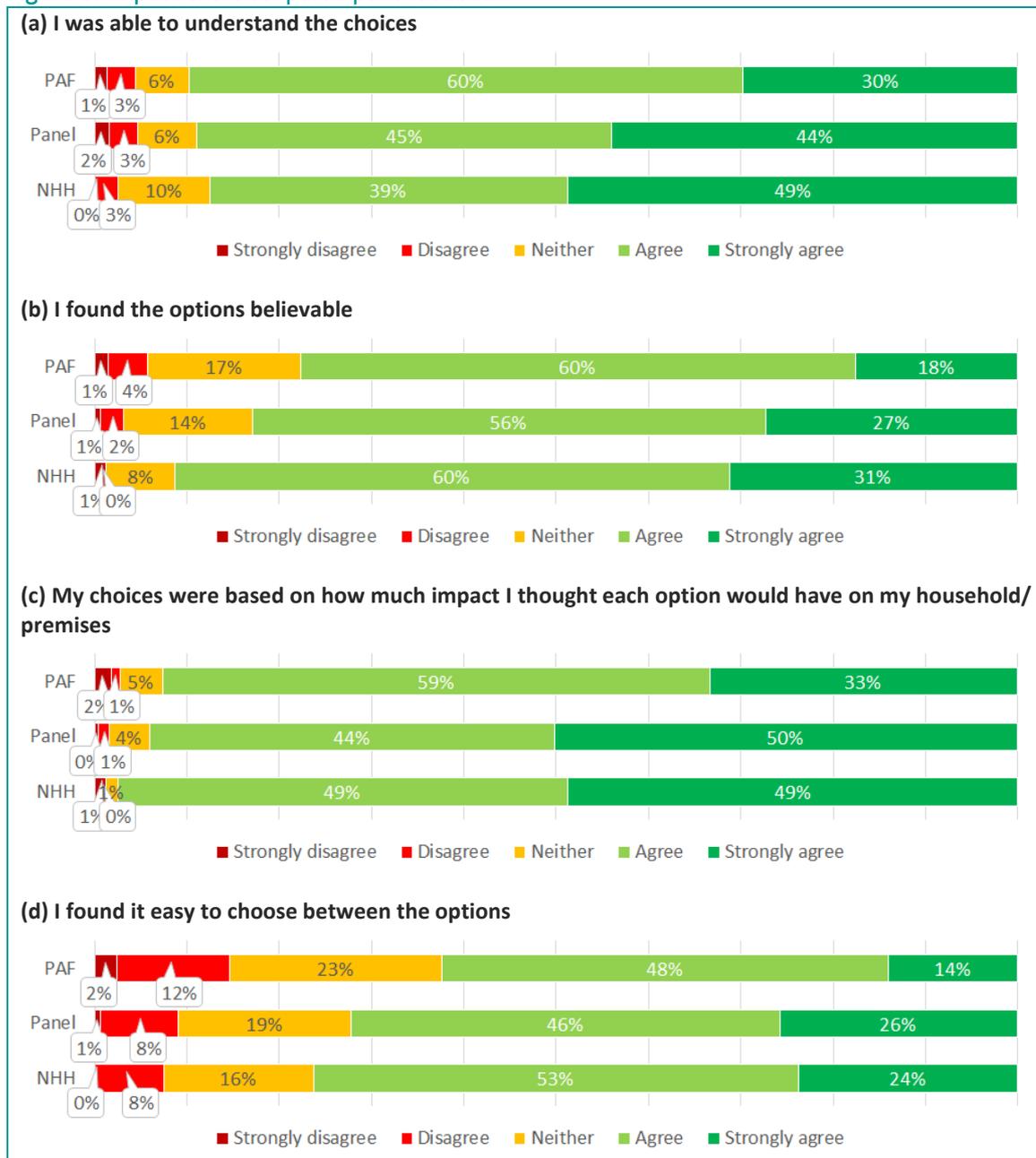
Furthermore, among those who did disagree that they were able to understand the choices, a number gave such reasons as 'I understood them all', 'They were explained clearly', 'Very clear questions', 'Written well, simple and easy to understand. Infographics helped too', suggesting that, in fact, they did not disagree at all (see Appendix B5).

A larger proportion disagreed that that it was easy to choose between the options—between 8% and 14%, depending on the sample, with the largest proportion of 14% being recorded amongst the PAF participants. A variety of reasons were given by participants; (see responses to feedback follow-up questions in Appendix B5). The main reasons were

- that one had to trade off the impact on the household against impacts on the environment, for example
 - *Because I was torn between environmental and what is better for my family*
 - *Whether to worry about the greater good or focus on own household.*
- that the impacts were negative under both scenarios, for example
 - *In some cases both options would impact us so it was necessary to work out which one would have the most impact*
- that neither scenario was seen as having a significant impact or that the impacts were similar, for example
 - *In some cases neither would really affect me.*
 - *Some were negligible*
 - *Impact appeared to be very similar in most cases.*
- that it was not easy to imagine the impacts in each scenario, for example
 - *On a couple of questions, I found it hard to gauge the impact of the 2 options.*
 - *because i am unsure of the exact consequences of some of the options*

The responses to the follow-up questions do not suggest any issues around the format or design of the exercise that need addressing. Overall, these findings provide support for considering the responses to the choice questions to be valid and meaningful in the vast majority of cases.

Figure 6: Impact exercise: participant feedback



Base: PAF = 608; Panel = 450; NHH = 80

The following table compares non-household feedback, in terms of the proportion disagreeing or strongly disagreeing, by the method of survey delivery. Although all were recruited by telephone and completed the interview by telephone, the non-household sample was split by whether the participant followed the weblink given by the interviewer to see the choices on the screen, or whether the choices were all read out by the interviewer over the phone.

The sample sizes are small in each case, but the results do seem to suggest some harmful impact due to the choices being read out by phone. More participants disagreed that they were able to understand the choices, and more disagreed that they found it easy to choose, when the choices were read out by phone. The results are inconclusive due to the small sample size, and the impacts are fairly small, but the mode of delivery does appear on this evidence to be having an effect.

Table 31: Non-household feedback to impact exercise by whether information was obtained from weblink or read out by interviewer

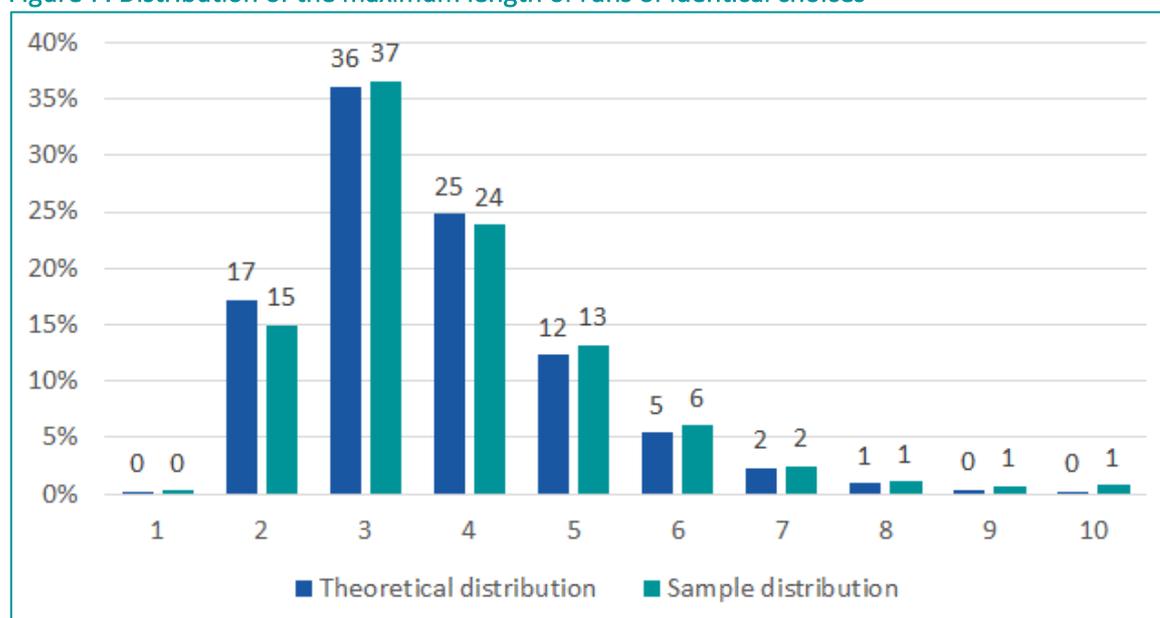
| | % disagree or strongly disagree | |
|--|---------------------------------|--------------------------------------|
| | Looked at website ¹ | Read out by interviewer ² |
| I was able to understand the choices | 0 | 4 |
| I found the options believable | 3 | 0 |
| My choices were based on how much impact I thought each option would have on my premises | 3 | 0 |
| I found it easy to choose between the options | 6 | 9 |

Bases: (1) 33, (2) 47

4.3 Diagnostics

Making the same choices repeatedly (e.g., Option A chosen nine times in a row) can be indicative of not engaging with the survey, and a large number of non-traders implies a poor-quality dataset for analysis. Figure 7 compares the sample distribution of the maximum length of runs of identical choices (e.g., same option chosen at most 5 times in a row) against the theoretical distribution that is obtained when there are equal choice probabilities for Option A and Option B in each question. The two distributions are nearly identical which confirms that non-trading is not a cause for concern. Moreover, only a tiny proportion (1%) chose the same option across all 10 choice occasions.

Figure 7: Distribution of the maximum length of runs of identical choices



Base: 1,138 participants (full sample)

4.4 Econometric modelling

The choices were analysed using a conditional logit model with choice as the dependent variable, a {1,0} variable indicating whether any given scenario was seen as having a greater impact than the other scenario available in any given choice occasion. The model estimates the impact of each scenario in comparison to a base scenario/variable (here, ‘Unexpected water supply interruption (6h)’ which is omitted. (The decision which variable is chosen as the base variable is arbitrary and has no influence on the final outcome.)

Separate models were estimated for the household PAF sample, the household Panel sample, and the non-household sample. Larger coefficients on any of the variables imply a greater impact of that scenario compared to scenarios that have smaller coefficients. The models are shown in Table 32 to Table 34 respectively.

Overall, the findings from the econometric analysis are positive. In the household models the vast majority of coefficients are highly statistically significant, i.e., most scenarios have a statistically larger or smaller impact than the omitted base scenario which is an unexpected water supply interruption lasting 6 hours. Most coefficients are statistically significant also in the non-household model. The models fit the data well for the household samples and very well for the non-household sample, as evidenced by the pseudo R² statistic.

Table 32: Household econometric model: PAF sample

| | Coef. | Std. Err. | z | P>z |
|--|---------|-----------|-------|-------|
| Sewer flooding: inside your property (1 week) | 2.9364 | 0.2657 | 11.05 | 0.000 |
| Sewer flooding: outside your property (1 week) | 1.7430 | 0.1899 | 9.18 | 0.000 |
| Emergency drought restrictions (2 months) | 1.2442 | 0.1954 | 6.37 | 0.000 |
| Do not drink notice (48h) | 0.9774 | 0.1644 | 5.95 | 0.000 |
| Unexpected water supply interruption (24h) | 0.6344 | 0.1602 | 3.96 | 0.000 |
| Discoloured water (24h) | 0.1846 | 0.1742 | 1.06 | 0.289 |
| Boil water notice (48h) | 0.1363 | 0.1502 | 0.91 | 0.364 |
| Significant pollution incident nearby (4 weeks) | 0.1163 | 0.1590 | 0.73 | 0.465 |
| Water taste and smell (24h) | 0.0285 | 0.1353 | 0.21 | 0.833 |
| Unexpected water supply interruption (6h) | 0.0000 | | | |
| Planned water supply interruption (24h) | -0.0483 | 0.1422 | -0.34 | 0.734 |
| Significant pollution incident elsewhere (4 weeks) | -0.3247 | 0.1608 | -2.02 | 0.043 |
| Unexpected low water pressure (6h) | -0.6862 | 0.1601 | -4.29 | 0.000 |
| Planned water supply interruption (6h) | -0.6946 | 0.1474 | -4.71 | 0.000 |
| River water nearby is not High quality | -0.7639 | 0.1478 | -5.17 | 0.000 |
| Minor pollution incident nearby (1 day) | -0.8397 | 0.1493 | -5.63 | 0.000 |
| Coastal bathing water is neither Excellent nor Good quality | -0.9126 | 0.1522 | -6.00 | 0.000 |
| Hosepipe ban (5 months) | -0.9315 | 0.1572 | -5.92 | 0.000 |
| River water elsewhere is not High quality | -0.9318 | 0.1589 | -5.87 | 0.000 |
| Storm overflow nearby (4 hours) | -0.9368 | 0.1432 | -6.54 | 0.000 |
| Storm overflow elsewhere (4 hours) | -1.0195 | 0.1460 | -6.98 | 0.000 |
| Minor pollution incident elsewhere (1 day) | -1.0843 | 0.1472 | -7.36 | 0.000 |
| Low flows in rivers nearby (2 months) | -1.1902 | 0.1452 | -8.20 | 0.000 |
| Coastal bathing water is not Excellent quality | -1.2055 | 0.1501 | -8.03 | 0.000 |
| Low flows in rivers elsewhere (2 months) | -1.4758 | 0.1508 | -9.78 | 0.000 |
| No of observations | | 12,160 | | |
| No of participants | | 608 | | |
| Pseudo R² | | 0.14 | | |

Note: Conditional logit estimates

Table 33: Household econometric model: Panel sample

| | Coef. | Std. Err. | z | P>z |
|---|---------|-----------|--------|-------|
| Sewer flooding: inside your property (1 week) | 1.9888 | 0.2749 | 7.23 | 0.000 |
| Emergency drought restrictions (2 months) | 0.7449 | 0.2153 | 3.46 | 0.001 |
| Sewer flooding: outside your property (1 week) | 0.6806 | 0.1982 | 3.43 | 0.001 |
| Do not drink notice (48h) | 0.4749 | 0.1956 | 2.43 | 0.015 |
| Unexpected water supply interruption (24h) | 0.2547 | 0.1814 | 1.40 | 0.160 |
| Boil water notice (48h) | 0.0308 | 0.1753 | 0.18 | 0.861 |
| Unexpected water supply interruption (6h) | 0.0000 | | | |
| Planned water supply interruption (24h) | -0.1260 | 0.1651 | -0.76 | 0.445 |
| Discoloured water (24h) | -0.1547 | 0.1942 | -0.80 | 0.426 |
| Water taste and smell (24h) | -0.2329 | 0.1675 | -1.39 | 0.164 |
| Significant pollution incident nearby (4 weeks) | -0.5187 | 0.1871 | -2.77 | 0.006 |
| Planned water supply interruption (6h) | -0.6244 | 0.1770 | -3.53 | 0.000 |
| Unexpected low water pressure (6h) | -0.6710 | 0.1842 | -3.64 | 0.000 |
| Significant pollution incident elsewhere (4 weeks) | -0.7015 | 0.1839 | -3.81 | 0.000 |
| Minor pollution incident nearby (1 day) | -0.9759 | 0.1689 | -5.78 | 0.000 |
| Storm overflow nearby (4 hours) | -1.1250 | 0.1789 | -6.29 | 0.000 |
| Hosepipe ban (5 months) | -1.1716 | 0.1827 | -6.41 | 0.000 |
| Minor pollution incident elsewhere (1 day) | -1.1837 | 0.1690 | -7.00 | 0.000 |
| River water nearby is not High quality | -1.2680 | 0.1754 | -7.23 | 0.000 |
| Low flows in rivers nearby (2 months) | -1.3356 | 0.1814 | -7.36 | 0.000 |
| Storm overflow elsewhere (4 hours) | -1.3763 | 0.1755 | -7.84 | 0.000 |
| Low flows in rivers elsewhere (2 months) | -1.4846 | 0.1726 | -8.60 | 0.000 |
| River water elsewhere is not High quality | -1.6151 | 0.1833 | -8.81 | 0.000 |
| Coastal bathing water is neither Excellent nor Good quality | -1.8759 | 0.1862 | -10.07 | 0.000 |
| Coastal bathing water is not Excellent quality | -1.8973 | 0.1690 | -11.23 | 0.000 |
| No of observations | | 9,000 | | |
| No of participants | | 450 | | |
| Pseudo R ² | | 0.15 | | |

Note: Conditional logit estimates

Table 34: Non-household econometric model

| | Coef. | Std. Err. | z | P>z |
|---|---------|-----------|-------|-------|
| Sewer flooding: inside your property (1 week) | 2.5544 | 0.8921 | 2.86 | 0.004 |
| Sewer flooding: outside your property (1 week) | 0.9375 | 0.6133 | 1.53 | 0.126 |
| Emergency drought restrictions (2 months) | 0.7297 | 0.5747 | 1.27 | 0.204 |
| Unexpected water supply interruption (24h) | 0.1641 | 0.4884 | 0.34 | 0.737 |
| Unexpected water supply interruption (6h) | 0.0000 | | | |
| Do not drink notice (48h) | -0.2451 | 0.5081 | -0.48 | 0.629 |
| Planned water supply interruption (24h) | -0.6643 | 0.4352 | -1.53 | 0.127 |
| Boil water notice (48h) | -0.7969 | 0.5052 | -1.58 | 0.115 |
| Water taste and smell (24h) | -0.8291 | 0.5508 | -1.51 | 0.132 |
| Unexpected low water pressure (6h) | -0.8995 | 0.5864 | -1.53 | 0.125 |
| Planned water supply interruption (6h) | -0.9455 | 0.5629 | -1.68 | 0.093 |
| Discoloured water (24h) | -0.9893 | 0.5988 | -1.65 | 0.099 |
| Significant pollution incident nearby (4 weeks) | -1.1883 | 0.4966 | -2.39 | 0.017 |
| Significant pollution incident elsewhere (4 weeks) | -1.4136 | 0.4623 | -3.06 | 0.002 |
| Storm overflow nearby (4 hours) | -1.9231 | 0.4450 | -4.32 | 0.000 |
| Minor pollution incident nearby (1 day) | -1.9790 | 0.5087 | -3.89 | 0.000 |
| River water nearby is not High quality | -2.3396 | 0.4581 | -5.11 | 0.000 |
| Storm overflow elsewhere (4 hours) | -2.4068 | 0.5320 | -4.52 | 0.000 |
| Low flows in rivers nearby (2 months) | -2.4250 | 0.4357 | -5.57 | 0.000 |
| Minor pollution incident elsewhere (1 day) | -2.4871 | 0.5215 | -4.77 | 0.000 |
| Hosepipe ban (5 months) | -2.6323 | 0.5237 | -5.03 | 0.000 |
| Low flows in rivers elsewhere (2 months) | -2.6412 | 0.5775 | -4.57 | 0.000 |
| River water elsewhere is not High quality | -2.8143 | 0.5205 | -5.41 | 0.000 |
| Coastal bathing water is neither Excellent nor Good quality | -3.0046 | 0.5123 | -5.86 | 0.000 |
| Coastal bathing water is not Excellent quality | -3.6190 | 0.5647 | -6.41 | 0.000 |
| No of observations | | 1,600 | | |
| No of participants | | 80 | | |
| Pseudo R ² | | 0.27 | | |

Note: Conditional logit estimates

4.5 Impact scores

Figure 8 and Figure 9 show the impact scores for each of the 25 scenarios for households and non-households, respectively.

Figure 8: Impact scores for the household sample: PAF vs Panel



Note: Stars * indicate statistically significant differences between PAF and Panel samples (5% level). The error bars show 95% confidence intervals calculated using the delta method.

The impact scores were calculated as exponentiated coefficients (odds ratios) based on the corresponding estimates in Table 32 to Table 34, and were scaled to sum to 100 across the full set of scenarios covered in the exercise. These scores are an index representing the relative impact of each scenario.

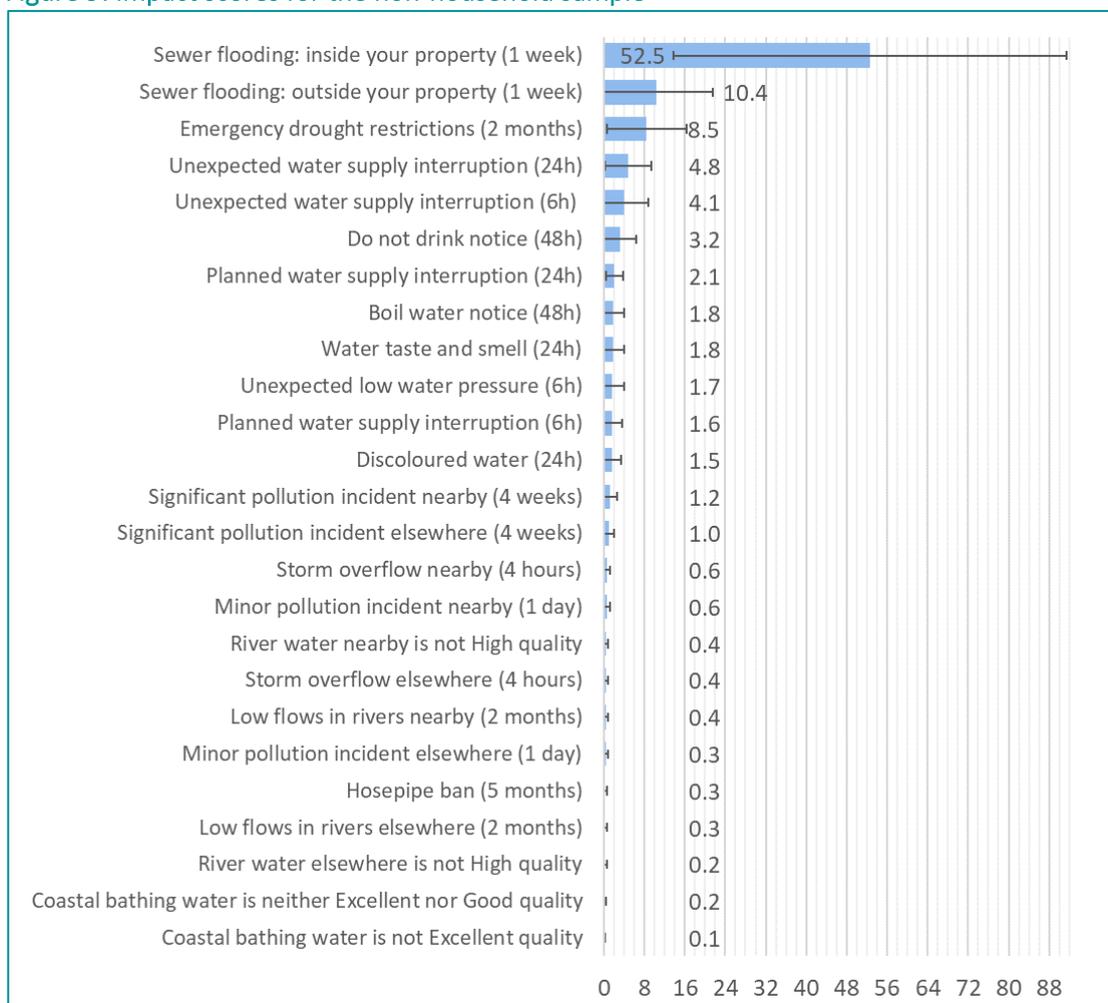
The highest impacts among household customers were associated with²:

- Sewer flooding: inside your property (1 week)
- Sewer flooding: outside your property (1 week)
- Emergency drought restrictions (2 months)
- Do not drink notice (48h)
- Unexpected water supply interruption (24h)

The rank correlation of 0.93 (on a 0-1 scale) between impact scores for the PAF and Panel samples indicates that views regarding the impacts of the service issues and environmental damages covered in the exercise were similar across samples.

The five highest impact scenarios for non-households are the same as for the PAF household sample, the only exception to this being that ‘Do not drink notice (48h)’ ranks in 6th place, while ‘Unexpected water supply interruption (6h)’ makes it to 5th place. The top five scenarios account for 80% of the ‘total impact’, compared to between 60%-73% for households, depending on sample.

Figure 9: Impact scores for the non-household sample



Note: The error bars show 95% confidence intervals calculated using the delta method.

² The rank order of internal sewer flooding and emergency drought restrictions was reversed in the Panel sample compared to PAF.

4.6 Expectation-based validity analysis

As a test of the validity of the rankings derived from the econometric models we checked the relative impacts between pairs of scenarios against prior expectations as laid out in Table 2, which were the basis for excluding choice sets that included the relevant pairs of scenarios from the design of the impact exercise on the grounds that, in each case, one scenario is 'dominant' in terms of impact.

We found three very minor 'violations' when comparing the restrictions shown in Table 2 against the impact score rankings.

- 'Minor pollution incident elsewhere' ranked lower (22nd) than 'Storm overflow elsewhere' (21st) in the PAF sample
- 'Minor pollution incident nearby' ranked lower (16th) than 'Storm overflow nearby' (15th) in the non-household sample
- 'Minor pollution incident elsewhere' ranked lower (20th) than 'Storm overflow elsewhere' (18th) in the non-household sample.

These are minor violations, both because the rank differences are small, and subject to sampling error, and because the descriptions do not necessarily imply there is any violation of expectation at all. These findings are therefore supportive of the validity of the impact scores obtained from the data.

5. Compensation Exercise Findings

5.1 Introduction

This section focuses on findings from the compensation exercise. It includes feedback from pilot participants following the exercise, analysis of the contingent valuation data, and derived valuations for all the service issue scenarios based on combining this analysis with the impact scores obtained in the previous section.

5.2 Participant feedback

Feedback from participants following the compensation exercise was positive as shown in Figure 10. Only very small proportions disagreed a) that they were able to understand the choices³, b) that their choices were based on how much impact each option would have on their household/premises and whether the amount of money shown was enough to compensate for, and c) that they found it easy to choose between the options.

Moreover, among those who disagreed that they were able to understand the choices, a number gave such reasons as 'I understood them all', 'They were explained clearly', 'Very clear questions', 'Written well, simple and easy to understand. Infographics helped too', suggesting that, in fact, they did not disagree at all (see Appendix B5).

A somewhat greater proportion, although still fairly small, (9% in the PAF sample) disagreed that the options were believable. The main reasons cited by the 76 participants who disagreed were:

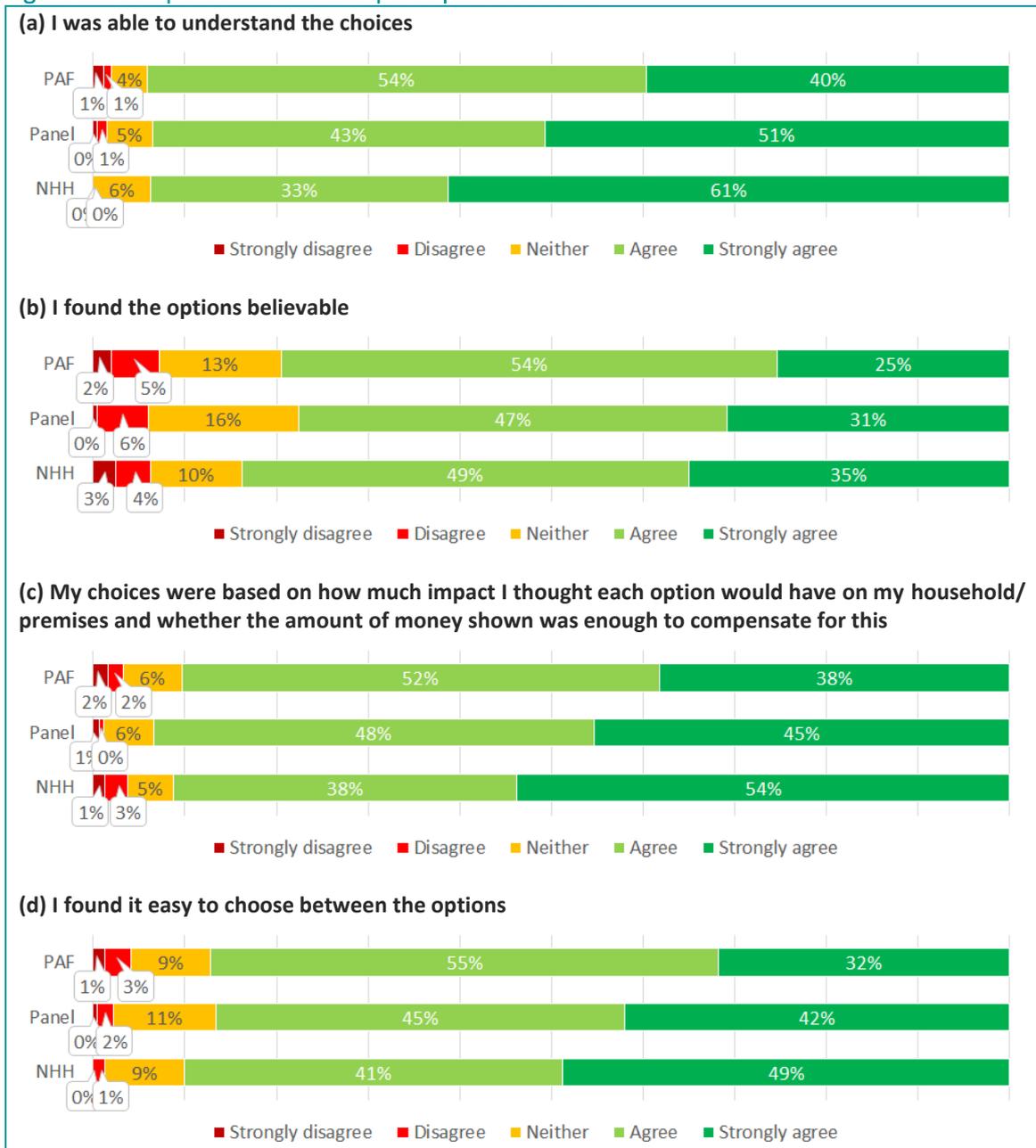
- that the compensation amounts were unbelievably high (around 30% of responses), for example⁴
 - *I don't believe the company would compensate that much.*
 - *I think the compensation amounts were higher than would be paid.*
 - *i cant imagine anglian water offering me £10k compo under any scenario.*
- that any compensation would be paid at all (around 10% of responses), for example
 - *Can't believe compensation would be offered*
 - *I can't believe those greedy inefficient bastards at the water company would front up with compensation.*

3

⁴ However, note the following responses to the question of why it was difficult choosing between the options: 'I don't know how much damage would be caused by the flooding, could cost more than £2000!'; 'Not knowing what damage a sewer leak could do to our property made it hard to decide if £5000 compensation would be enough to cover any damage.'

- I've had issues with other companies and the compensation entitlements are non-existent, I would be very surprised if companies would compensate
- that the service issue would occur (around 10% of responses), for example
 - I don't believe that would happen where we currently live
 - I live on a hill it is very unlikely to ever happen.
 - Just from experience of where I am, I cant imagine we would have that problem outside out office for that period if time (sewer flooding).

Figure 10: Compensation exercise: participant feedback



Base: PAF = 608; Panel = 450; NHH = 80

The following table compares non-household feedback, in terms of the proportion disagreeing or strongly disagreeing, by the method of survey delivery. The results here seem to suggest that there were less substantial negative impacts caused by reading out the choices over the phone in comparison with the impact exercise. In both cases, for example, there were no participants saying they disagreed with the statement that they

were able to understand the choices. However, there were more people disagreeing that it was easy to choose between the options when read out by interviewer. The sample sizes are fairly small, however, and so the results are inconclusive as to whether there could be any significant harmful effects.

Table 35: Non-household feedback to compensation exercise by whether information was obtained from weblink or read out by interviewer

| | % disagree or strongly disagree | |
|--|---------------------------------|--------------------------------------|
| | Looked at website ¹ | Read out by interviewer ² |
| I was able to understand the choices | 0 | 0 |
| I found the options believable | 9 | 4 |
| My choices were based on how much impact I thought each option would have on my premises | 3 | 4 |
| I found it easy to choose between the options | 0 | 2 |

Bases: (1) 33, (2) 47

The feedback statistics are supportive overall with regard to the design of the compensation exercise despite there being a small number of cases where the validity of individual participants' responses could be questioned. These feedback questions should be retained in the main stage questionnaire to allow checking the robustness of key findings to the exclusion of participants who give feedback indicating invalid responses.

5.3 Contingent valuation results

Estimates of the proportions choosing not to experience the service issues covered in the compensation exercise are shown in Figure 11 for households and in Figure 12 for non-households⁵.

As expected, all curves are downward sloping, indicating that participants were more likely to choose not to experience the service issues when a low compensation was offered than when compensations were high. For households, the blue curve (PAF sample) lies above the green curve (Panel sample) indicating that PAF participants were somewhat more reluctant to accept compensation than Panel customers, but, overall, the two curves are similar.

⁵ The estimates were obtained from the *DCchoice* package for the R environment (R Core Team 2021), and were checked against estimates obtained using several different algorithms available from the *Icens* package. See Nakatani, Tomoaki, Hideo Aizaki, and Kazuo Sato (2020). *DCchoice: An R Package for Analyzing Dichotomous Choice Contingent Valuation Data*. R package version 0.0.17 and Gentleman R., and Alain Vandal (2021). *Icens: NPMLE for Censored and Truncated Data*. R package version 1.64.0. The main advantage of the non-parametric approach over parametric estimates is that NPML estimation avoids a-priori specification of a functional form for the 'demand' function.

Figure 11: Proportions of households choosing not to experience the service issue

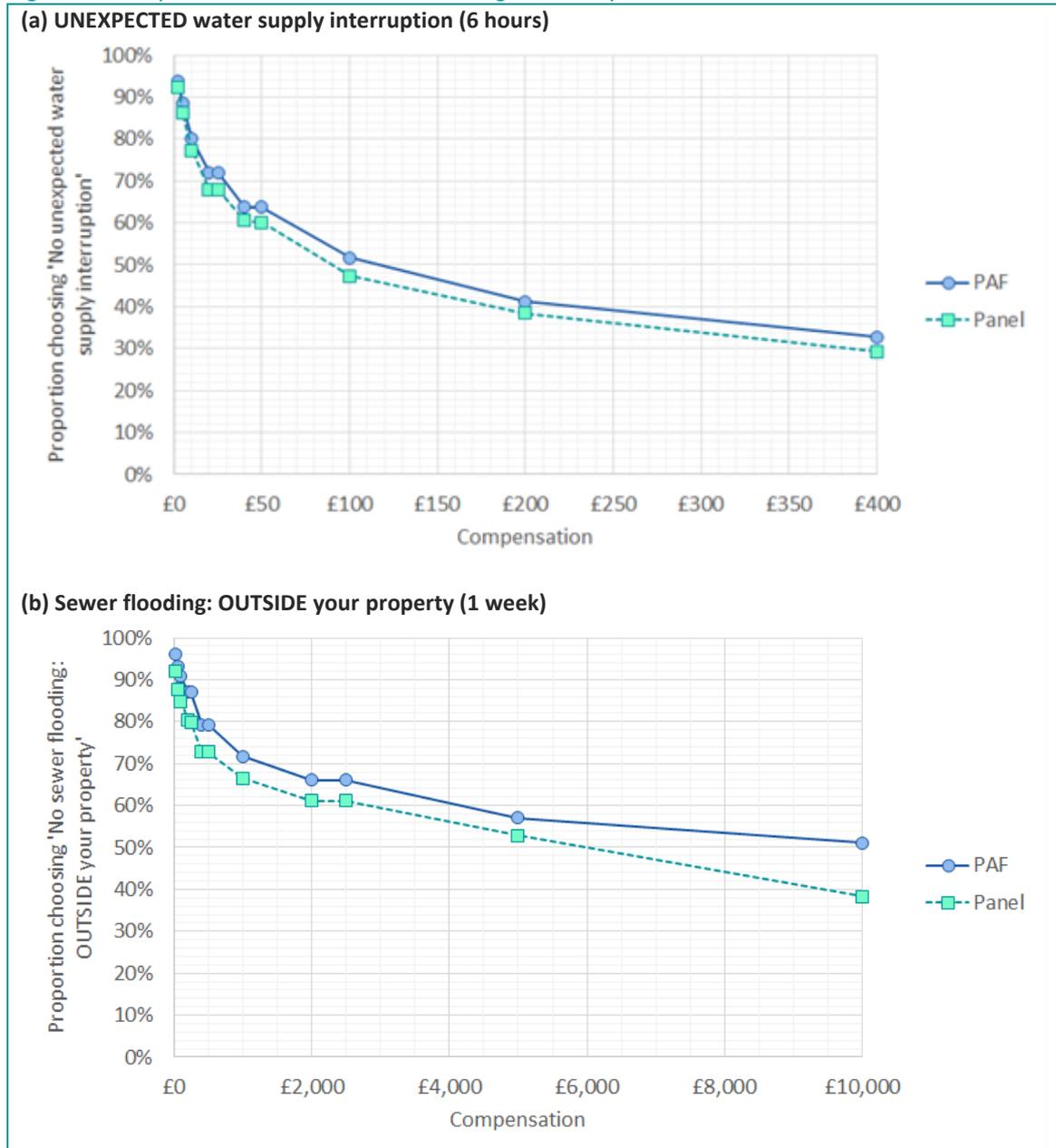
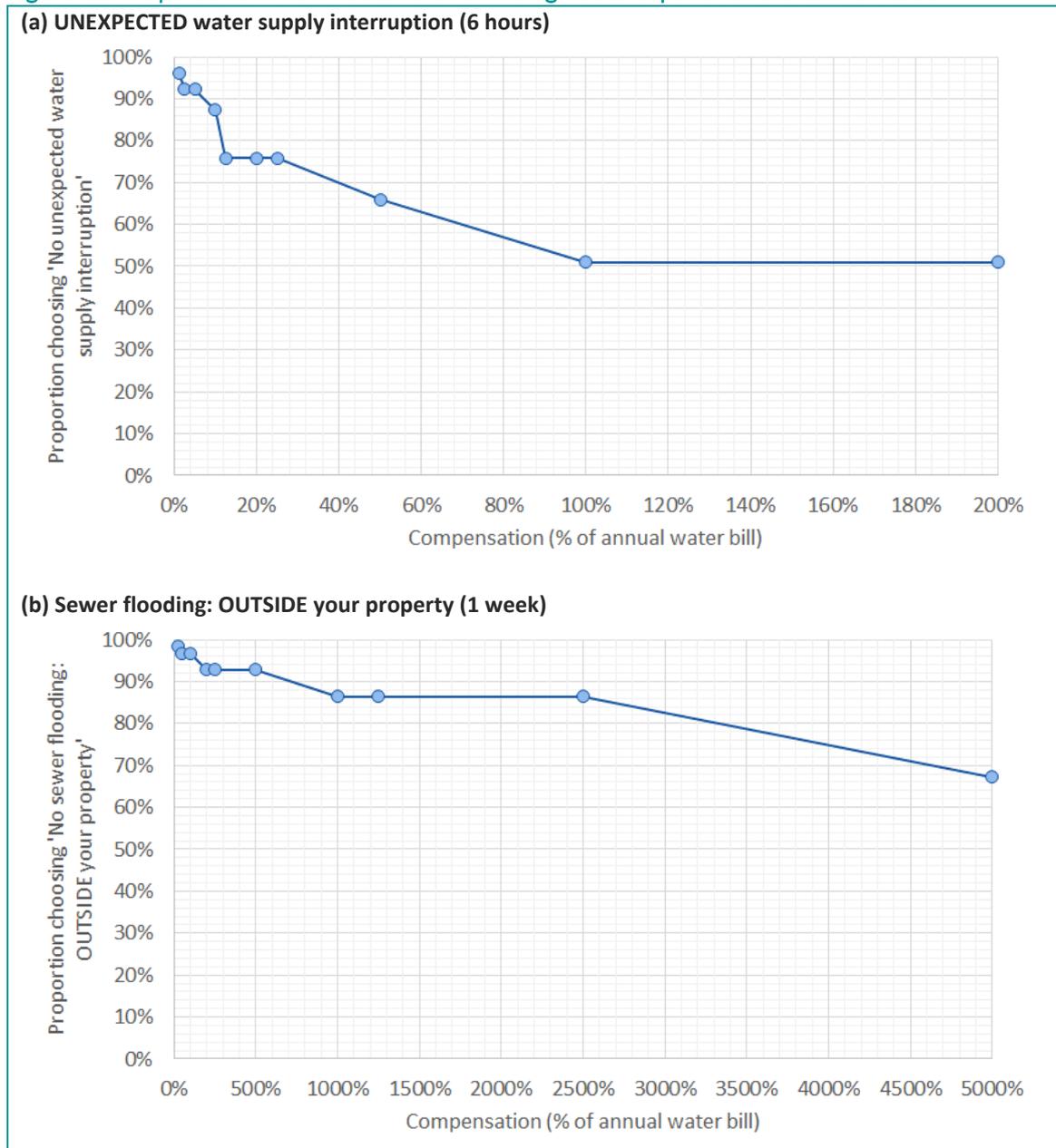


Figure 12: Proportions of non-households choosing not to experience the service issue



The main concern regarding pilot testing of the compensation exercise is to make sure that the range of compensation amounts is appropriate. Too narrow a range would lead to downward bias in the estimated mean valuations. Too large a range could be wasteful in terms of statistical efficiency of the design.

The curves shown in Figure 11 and Figure 12 do not span the full range of probabilities given that even at the highest compensation levels a considerable proportion of customers chose not to experience the service issue. This is especially true for non-household customers.

Because of this, mean valuation estimates from the pilot survey are unlikely to be accurate, and median valuations are imprecisely estimated.

This should be addressable by increasing the compensation levels used in the survey, and/or by choosing lower-impact service issues. Improving the ‘offer’ to customers is necessary to encourage more participants to choose to accept the compensation payment and thereby ‘choke off demand’ for the non-occurrence of the service issues.

Though the samples are not necessarily representative of the customer base, as no weighting has been applied at the pilot stage and the non-household sample is small, it is indicative to note the implied valuations arising from the choice data. For example, based on the PAF curve in panel (a) of Figure 11 we estimate that just over 50% of customers are willing to forego a £100 compensation to avoid an unexpected water supply interruption lasting 6 hours, which indicates that these customers’ valuation of avoiding the service issue is £100 or higher.

Table 36 presents estimates of mean and median valuations of avoiding the service issues covered in the compensation exercise. The ‘mean’ valuations shown here are highly sensitive to the upper level chosen in the compensation exercise design in the pilot survey and are therefore not recommended to be trusted on even an indicative basis. The median valuations, by contrast are much more reliable.

Table 36: Valuations of avoiding service issues

Unexpected water supply interruption lasting (6 hours)

| | PAF | Panel | NHH |
|----------------------------|--------------|--------------|---------------------------------|
| Mean | £168 | £154 | 113% of the annual water bill |
| Mean conf. interval | (£149, £187) | (£134, £176) | (86%, 141%) |
| Median | £116 | £89 | > 200% of the annual water bill |

Sewer flooding outside one’s property (1 week)

| | PAF | Panel | NHH |
|----------------------------|------------------|------------------|----------------------------------|
| Mean | £5,755 | £4,871 | 39 times the annual water bill |
| Mean conf. interval | (£5,141, £6,374) | (£4,262, £5,502) | |
| Median | > £10,000 | £5,958 | > 50 times the annual water bill |

Note: The mean is a lower bound Turnbull estimate, as explained in the text. Bootstrap confidence intervals based on 10,000 replications. (Interval not reported for NHH ‘Sewer flooding’ due to convergence issues in non-parametric ML estimation.) The median was estimated by interpolating between the relevant probability estimates.

To estimate the implied mean valuation, we used the Turnbull approach, which calculates the lower-bound of the mean valuation and represents a highly conservative estimate of the true mean. It is a conservative estimate as it assumes that the valuation of those who prefer ‘no service issue’ to, say, a £100 compensation, but prefer experiencing the service issue ‘in return for’ a £200 compensation, is £100 and no more, instead of attempting to smooth out the distribution between compensation levels. The Turnbull approach effectively treats the piecewise linear curves shown in Figure 11 and Figure 12 as ‘step functions’.

Looking across the sample columns of Table 36, we find that the lower bound mean valuation of avoiding external sewer flooding lasting 1 week is at least 30 times higher than the valuation of avoiding an unexpected water supply interruption lasting 6 hours. The median valuations of not experiencing a) an unexpected supply interruption and b) an

external sewer flooding similarly differ by an order of magnitude. These differences are considerably larger than the corresponding differences in the estimated impact of these service issues on customers. For example, using choice data from the PAF sample (see Figure 8), we found that the impact of 1 week of external sewer flooding (12.8 on a 0-100 scale) was less than 6 times as large as the impact of a 6-hour unexpected water supply interruption (2.2 on a 0-100 scale). This suggests that valuations of avoiding service issues and impacts of service issues are not being measured consistently.

Possible explanations for the inconsistency include:

The impact exercise fails to accurately measure relative impact;

The compensation exercise fails to accurately measure required compensation; or

People evaluate impact differently when asked the compensation question than when asked about relative impacts

There are a number of changes that can be made to the survey to address the issues, including:

- Change the service issues to replace external sewer flooding with an issue that has a more precise description of its impact, such as a boil water notice. This should avoid the potential problem that compensation amount is interpreted as an indicator of the severity of the issue, rather than being evaluated on its own merits.
- Revise the compensation exercise to encourage participants not to see the amounts shown as indicating the severity of the issue – an issue identified in the parallel cognitive interviews, which are reported on separately.
- Revise the structure of the survey to include a single choice exercise combining the impact and compensation exercises. This would eliminate the possibility of any inconsistency in relative values between the two exercises altogether as there would only be one exercise. (This option was suggested by Ofwat’s peer reviewer Prof. Stephane Hess, Leeds University)

5.4 Scenario valuations

Table 37 presents household valuations for individual scenarios obtained by combining a) impact scores, which provide a measure of the relative values of the scenarios, and the value estimates for ‘Unexpected water supply interruption (6h)’ and ‘Sewer flooding: outside your property (1 week)’. The table also includes comparisons against a compilation⁶ of valuations from several studies undertaken for PR19. Given the large difference between relative valuations and relative impacts for the latter two scenarios, the choice of pivot scenario has a major impact on the calculation of scenario valuations. Even so, in the majority of cases in which a comparison against PR19 valuations is feasible, we find that regardless of the choice of pivot attribute, the estimates from the present study lie within the range of PR19 valuations, although valuations pivoted on ‘Unexpected water supply interruption (6h)’ tend to be closer to the median (across studies) of PR19 valuations.

⁶ Accent/PJM, June 2018, ‘Comparative Review of PR19 WTP Results’

Table 37: Scenario valuations (households)

| Scenario | Pivot scenario: Unexpected water supply interruption (6h) | | | | Pivot scenario: Sewer flooding: outside your property (1 week) | | | | PR19 comparative review ^(a) | | |
|---|---|--------|-----------------------|-------|--|---------|-----------------------|---------|--|----------|-----------------------|
| | Mean ^(b) | | Median ^(b) | | Mean ^(b) | | Median ^(b) | | Min | Max | Median ^(c) |
| | PAF | Panel | PAF | Panel | PAF | Panel | PAF ^(d) | Panel | | | |
| Sewer flooding: inside your property (1 week) ⁽¹⁾ | £3,163 | £1,128 | £2,184 | £653 | £18,983 | £18,021 | | £22,041 | £1,772 | £123,477 | £50,970 |
| Sewer flooding: outside your property (1 week) ⁽²⁾ | £959 | £305 | £662 | £176 | £5,755 | £4,871 | | £5,958 | £714 | £8,317 | £4,422 |
| Emergency drought restrictions (2 months) ⁽³⁾ | £582 | £325 | £402 | £188 | £3,495 | £5,195 | | £6,354 | £43 | £730 | £491 |
| Do not drink notice (48h) ⁽⁴⁾ | £446 | £248 | £308 | £144 | £2,676 | £3,966 | | £4,850 | £431 | £63,964 | £548 |
| Unexpected water supply interruption (24h) ⁽⁵⁾ | £317 | £199 | £218 | £115 | £1,899 | £3,182 | | £3,892 | £90 | £332 | £295 |
| Discoloured water (24h) ⁽⁶⁾ | £202 | £132 | £139 | £77 | £1,211 | £2,113 | | £2,584 | £60 | £314 | £139 |
| Boil water notice (48h) ⁽⁷⁾ | £192 | £159 | £133 | £92 | £1,154 | £2,543 | | £3,111 | | | |
| Significant pollution incident nearby (4 weeks) ⁽⁸⁾ | £189 | £92 | £130 | £53 | £1,131 | £1,468 | | £1,796 | | | |
| Water taste and smell (24h) ⁽⁹⁾ | £173 | £122 | £119 | £71 | £1,036 | £1,954 | | £2,390 | £147 | £38,235 | £266 |
| Unexpected water supply interruption (6h) ⁽¹⁰⁾ | £168 | £154 | £116 | £89 | £1,007 | £2,466 | | £3,017 | £136 | £3,822 | £515 |
| Planned water supply interruption (24h) ⁽¹¹⁾ | £160 | £136 | £110 | £79 | £960 | £2,174 | | £2,659 | £154 | £175 | £175 |
| Significant pollution incident elsewhere (4 weeks) ⁽⁸⁾ | £121 | £77 | £84 | £44 | £728 | £1,223 | | £1,496 | | | |
| Unexpected low water pressure (6h) ⁽¹²⁾ | £85 | £79 | £58 | £46 | £507 | £1,261 | | £1,542 | £21 | £158,790 | £421 |
| Planned water supply interruption (6h) ⁽¹³⁾ | £84 | £83 | £58 | £48 | £503 | £1,321 | | £1,616 | £91 | £226 | £157 |
| River water nearby is not High quality ⁽¹⁴⁾ | £78 | £43 | £54 | £25 | £469 | £694 | | £849 | | | |
| Minor pollution incident nearby (1 day) ⁽⁸⁾ | £72 | £58 | £50 | £34 | £435 | £929 | | £1,137 | | | |
| Coastal bathing water is neither Excellent nor Good quality ⁽¹⁵⁾ | £67 | £24 | £47 | £14 | £404 | £378 | | £462 | | | |
| Hosepipe ban (5 months) ⁽¹⁶⁾ | £66 | £48 | £46 | £28 | £397 | £764 | | £935 | £32 | £325 | £97 |
| River water elsewhere is not High quality ⁽¹⁴⁾ | £66 | £31 | £46 | £18 | £397 | £490 | | £600 | | | |
| Storm overflow nearby (4 hours) ⁽⁷⁾ | £66 | £50 | £45 | £29 | £395 | £801 | | £979 | | | |
| Storm overflow elsewhere (4 hours) ⁽⁷⁾ | £61 | £39 | £42 | £23 | £363 | £623 | | £762 | | | |
| Minor pollution incident elsewhere (1 day) ⁽⁸⁾ | £57 | £47 | £39 | £27 | £341 | £755 | | £924 | | | |
| Low flows in rivers nearby (2 months) ⁽¹⁷⁾ | £51 | £41 | £35 | £23 | £306 | £649 | | £793 | | | |
| Coastal bathing water is not Excellent quality ⁽¹⁵⁾ | £50 | £23 | £35 | £13 | £302 | £370 | | £452 | | | |
| Low flows in rivers elsewhere (2 months) ⁽¹⁷⁾ | £38 | £35 | £26 | £20 | £230 | £559 | | £684 | | | |

Notes:

(a) Accent/PJM Economics, June 2018, 'Comparative Review of PR19 WTP Results'. Only attributes valued on a per-property basis are considered.

(b) Mean and median values are reported on a per-incident basis, with the value being contemporaneous with the timing of the incident

- (c) Median across studies
- (d) Median not determined
- (1) PR19: duration of incident not indicated; extent of damage varies across studies
- (2) PR19: two estimates referring to flooding on peoples' land and in gardens not considered
- (3) PR19: 'Rota cuts and/or standpipes'; duration of incident, where indicated, varies across studies ranging from 2-4 weeks to 2 months
- (4) PR19: 'Water not safe to drink'; duration of incident is 2 weeks, where indicated
- (5) PR19: includes 'unexpected'/'unplanned' interruptions of 'up to 24 hours', '12-24 hours', '>24 hours'
- (6) PR19: duration of incident: 'few hours', '24 hours', not indicated (for one study)
- (7) PR19: not covered
- (8) PR19: valuations are per incident
- (9) PR19: duration of incident: 'few days', '3 days'
- (10) PR19: duration of incident: '3-6 hours', 'around 6 hours', '4-8 hours', '6-12 hours'
- (11) PR19: duration of incident: '12-24 hours' (one study), '>24 hours' (one study)
- (12) PR19: 'Low water pressure'; duration of incident not indicated except for one study (3-6 hours)
- (13) PR19: duration of incident: '3-6 hours', '6-12 hours'
- (14) PR19: valuations are per km of river
- (15) PR19: valuations are per bathing water site
- (16) PR19: 'Temporary use ban'
- (17) PR19: valuations are per mile of river

6. Conclusions and Recommendations

6.1 Household survey methodology

- The PAF and Panel methods were both reasonably effective in achieving household sample targets by water/wastewater company combination.
- Both Panel and PAF samples had a somewhat older age profile than the Census
- The PAF sample was closer to the Census on gender
- The PAF sample and particularly the panel sample under-represented ethnic minorities
- The PAF sample had substantially more AB social grades than the Census, and much fewer DE. The Panel sample had a much more representative composition of social grades.
- Consistent with this, a greater proportion of the Panel sample said they usually or always struggled to pay their household bills
- However, both samples contained around the same proportion of vulnerable customers, broadly defined
- The PAF approach was able to capture those without access to the internet while the Panel approach was not. Of the PAF sample, 1% said they had never used the internet and 3% said they had used the internet but did not have regular access to it.

Overall, these findings do not conclusively point to an advantage of one method over the other, given the pre-known pros and cons of both methods. One option we put forward as worth considering is to split the main sample 50:50 between Panel and PAF methods. This would be substantially lower cost than a pure PAF approach, and achieve some of the benefits of the Panel method with respect to its improved ability to include lower social grade households and those with affordability concerns. It would also allow the ability to check for any biases attributable to a Panel sample due to its non-random selection.

6.2 NHH survey methodology

The responses rate was low using the phone method with purchased telephone sample. Over 4,670 numbers were called to achieve the 80 interviews, a response rate of 2%.

This confirmed the known challenges of using the CATI methodology with purchased sample. This has implications for cost and timings for the main stage.

For the NHH sample the diagnostic questions following the impact and compensation exercises seem to suggest some harmful impact if the choices are read out by phone. Ideally, the main stage method would ensure that the choices are shown to the participants.

6.3 Stated preference design

The results of the pilot tests provided mixed evidence with respect to the stated preference design approach.

In support of the approach:

- Participant feedback was good for both the impact and the compensation exercise.
- There were very few instances of non-trading behaviour in the scenario impact exercise (where participants always chose the same alternative throughout the exercise).
- The econometric models were well estimated, especially considering the small sample size for non-households.
- The impact rankings derived from the econometric models were highly consistent with prior expectations.
- Also as expected, participants were more likely to take the compensation offered when it was high than when it was low.

However, set against these positive findings, two key issues were identified:

- At the highest compensation levels shown there were still substantial proportions of participants choosing not to take the compensation offered. Because of this, mean valuation estimates from the pilot survey are unlikely to be accurate, and median valuations are imprecisely estimated.

This should be addressable by increasing the compensation levels used in the survey, and/or by choosing lower-impact service issues.

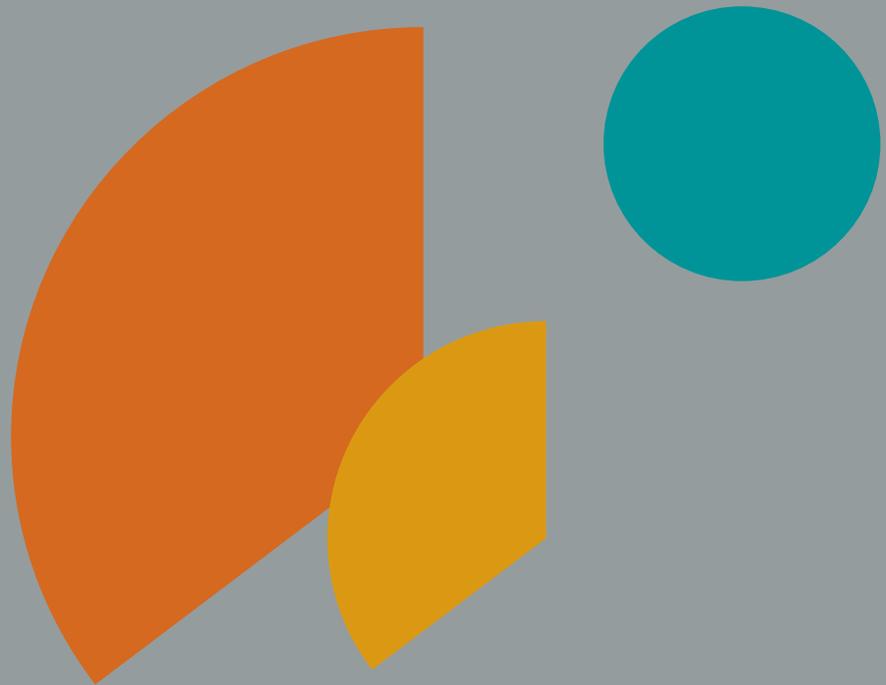
- Estimates of the relative value of the two 'pivot' scenarios included in the compensation exercise were significantly different when obtained from the compensation exercise than when obtained from the impact exercise. This indicates that participants were not choosing consistently across the two exercises in line with the assumed underlying preference function.
- There are a number of changes that can be made to the survey to address the issues, including:

- Change the service issues to replace external sewer flooding with an issue that has a more precise description of its impact, such as a boil water notice. This should avoid the potential problem that compensation amount is interpreted as an indicator of the severity of the issue, rather than being evaluated on its own merits.
- Revise the compensation exercise to encourage participants not to see the amounts shown as indicating the severity of the issue – an issue identified in the parallel cognitive interviews, which are reported on separately.
- Revise the structure of the survey to include a single choice exercise combining the impact and compensation exercises. This would eliminate the possibility of any inconsistency in relative values between the two exercises altogether as there would only be one exercise. (This option was suggested by Ofwat’s peer reviewer Prof. Stephane Hess, Leeds University)

In light of the findings from the pilot survey, and the fact that the changes recommended are more substantial than are ideally compatible with proceeding straight to the main stage, it would be sensible to undertake a second pilot survey. The content of this second pilot survey should be agreed as soon as possible to minimise the delay to the overall programme caused by this additional necessary testing phase.

Appendix B1

Pilot Questionnaire



Water Company Research

This survey is designed to get your views on water and sewerage services. It is being undertaken on behalf of Ofwat, the regulator, and Consumer Council for Water (CCW), the consumer organisation which represents the interests of water and sewerage customers in England and Wales.

The research will be used to help water companies plan investment in their service from 2025, and will influence your future water services and bills.

This research is being conducted by Accent, an independent research agency on behalf of Ofwat and CCW.

NOT PANEL: Anyone completing the survey will be eligible for a £10 voucher (either an Amazon voucher, an M&S voucher, Love2Shop voucher). Alternatively we can donate your incentive to WaterAid. Details on how claim your voucher are given at the end of the survey.

The questionnaire will take about 15 minutes.

Any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society. If you would like to confirm Accent's credentials type Accent in the search box at: <https://www.mrs.org.uk/researchbuyersguide>.

Q1 Any data collected over the course of this interview that could be used to identify you, such as your name, address, or other contact details, will be held securely and will not be shared with any third party, including your water company, unless you give permission (or unless we are legally required to do so). Our privacy statement is available at <https://www.accent-mr.com/privacy-policy/>.

Do you agree to proceeding with the interview on this basis?

Yes

No **THANK AND CLOSE IF ONLINE**

Q2 **ASK HH ONLY:** Do you or any of your close family work in market research or for a water company?

Yes **THANK & CLOSE**

No

Q3 **IF NHH ASK:** Are you solely or jointly responsible as the decision maker for paying your organisation's water and wastewater bill?

Yes

No **THANK AND CLOSE**

Q4 IF POSTCODE DATA NOT AVAILABLE FROM SAMPLE Please tell us the first half of your postcode. So if your full postcode is ME1 3BN please just tell us ME1 3. (This will be used to check who supplies your water and wastewater services) **NHH ONLY If your organisation operates across multiple sites, please answer for the site you typically work from**

IF HH AND REFUSE GO TO Q6
IF NHH AND REFUSE THANK AND CLOSE

Q5 IF HH AND DIFFERENT WATER AND WASTEWATER: Based on your postcode area, we believe your water service company should be #WATER COMPANY# and your wastewater service company should be #WASTEWATER COMPANY#. You may receive separate bills from each organisation or one combined bill. Is that correct?
IF SAME WATER AND WASTEWATER: Based on your postcode area, we believe your water service and wastewater service company should be #WATER COMPANY#. Is that correct?

Yes **GO TO Q8**
No **GO TO Q6**
Don't know **GO TO Q8**

Q6 IF HH: Which water company supplies water to your home?
IF NHH: Which of the following companies bill you for water services at your premises?

Affinity Water
Anglian Water
Bournemouth Water
Bristol Water
Cambridge Water
Essex & Suffolk Water
Hafren Dyfrdwy
Hartlepool Water
Northumbrian Water
Portsmouth Water
Severn Trent Water
South East Water
Southern Water
South Staffs Water
South West Water
Sutton & East Surrey (SES) Water
Thames Water
United Utilities
Welsh Water/Dŵr Cymru
Wessex Water
Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: Retailers

ADSM
Berendsen UK Limited
Blackpool Borough Council
BT
Business Stream
Castle Water
Clear Business Water
ConservAqua Ltd
Everflow
First Business Water
Greene King Brewing & Retailing
Heineken UK Limited

Independent Water Networks
J Sainsbury
John Lewis PLC
Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (Please specify) **THEN THANK AND CLOSE**
Don't know **THANK AND CLOSE**
None **THANK AND CLOSE**

Q6B IF NHH: Do these bills include wastewater services or do you receive separate bills for wastewater?

Include wastewater services
Receive separate bill for waste water

Q7 IF HH: Which company provides wastewater (sewerage) services to your home?
IF NHH AND Q6B=2: Which of the following companies bill you for wastewater services at your premises?

Anglian Water
Hafren Dyfrdwy
Northumbrian Water
Severn Trent Water
Southern Water
South West Water
Thames Water
United Utilities
Welsh Water/Dŵr Cymru
Wessex Water
Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: Retailers

ADSM
Berendsen UK Limited
Blackpool Borough Council
BT
Business Stream
Castle Water
Clear Business Water
ConservAqua Ltd
Everflow
First Business Water
Greene King Brewing & Retailing

Heineken UK Limited
Independent Water Networks
J Sainsbury
John Lewis PLC
Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (please specify) THEN THANK AND CLOSE

Don't know THANK AND CLOSE

None THANK AND CLOSE

Q8 IF HH: Are you the person in your household who is responsible, either solely or jointly, for paying for your water services bill?

I have complete responsibility for payment

I share responsibility for payment with others in my household

I have no responsibility

Don't know

BILLPAYER: = CODE 1 OR 2

NONBILLPAYER: = CODE 3-4

Q9 IF HH Which of the following age groups do you fall into?

18-29

30-64

65 or older

Prefer not to say

USE HH QUOTA IF PANEL

Q10 IF HH Are you....

Male

Female

Non binary

Prefer to self-identify

Prefer not to say

USE HH QUOTA IF PANEL

Q11 IF HH & BILLPAYER: Do you receive separate bills for water and sewerage services or one bill for both services?
IF NHH: Does your organisation receive separate bills for water and sewerage services or one bill for both services?

Separate bills
Combined bills
Don't know

Q12b IF HH & BILLPAYER: How often do you make payment for water and sewerage services?

Annually
Every six months
Every month, over eight months of the year
Every month
Other (please specify)

Q13 IF HH & BILLPAYER AND Q12B=1, 4-5 ASK: How much, roughly, do you pay for water and sewerage services each month, or in total for a year? The month amounts assume that the bills are paid evenly over a 12-month period, but some customers pay over a different number of months.

IF HH & BILLPAYER AND Q12B=3 ASK: How much, roughly, do you pay for water and sewerage services for each of the eight months, or in total for a year?

IF HH & BILLPAYER AND Q12B=2 ASK: How much, roughly, do you pay for water and sewerage services every 6 months, or in total for a year?

IF NHH: Which of the following bands do you estimate that your organisation's annual total water bill at your premises falls into – that's the amount for both water and sewerage services.

IF HH and 12B=1, 4 or 5: Less than £10 per month/Less than £120 per year

IF HH and 12B=1, 4 or 5: £10 - £19.99 per month/£120 - £239.99 per year

IF HH and 12B=1, 4 or 5: £20 - £29.99 per month/£240 - £359.99 per year

IF HH and 12B=1, 4 or 5: £30 - £39.99 per month/£360 - £479.99 per year

IF HH and 12B=1, 4 or 5: £40 - £59.99 per month/£480 - £719.99 per year

IF HH and 12B=1, 4 or 5: £60 - £79.99 per month/£720 - £959.99 per year

IF HH and 12B=1, 4 or 5: £80 or more per month /£960 or more per year

IF HH and 12B=3: Less than £15 per month/Less than £120 per year

IF HH and 12B=3: £15 - £29.99 per month/£120 - £239.99 per year

IF HH and 12B=3: £30 - £39.99 per month/£240 - £359.99 per year

IF HH and 12B=3: £40 - £59.99 per month/£360 - £479.99 per year

IF HH and 12B=3: £60 - £89.99 per month/£480 - £719.99 per year

IF HH and 12B=3: £90 - £199.99 per month/£720 - £959.99 per year

IF HH and 12B=3: £120 or more per month /£960 or more per year

IF HH and 12B=2: Less than £60 every 6 months/Less than £120 per year

IF HH and 12B=2: £60 - £119.99 every 6 months /£120 - £239.99 per year

IF HH and 12B=2: £120 - £179.99 every 6 months /£240 - £359.99 per year

IF HH and 12B=2: £180 - £239.99 every 6 months /£360 - £479.99 per year

IF HH and 12B=2: £240 - £359.99 every 6 months /£480 - £719.99 per year

IF HH and 12B=2: £360 - £479.99 every 6 months /£720 - £959.99 per year

IF HH and 12B=2: £480 or more every 6 months /£960 or more per year

IF NHH: Less than £1,000 per year

IF NHH: £1,000 to £5,000 per year

IF NHH: £5,000 to £25,000 per year

IF NHH: More than £25,000 per year

I'm not sure

Service issues

Q14 Have you ever experienced any of the following? *ROTATE*

Please tick one or more

Unexpected water supply interruption

Planned water supply interruption

Unexpected low pressure

Boil water notice

Do not drink notice

Discolouration of water coming out of your tap

A change to the taste and/or smell of your tap water

Sewer flooding: inside your property

Sewer flooding: outside your property

Hosepipe ban

Emergency drought restrictions (e.g. tap water being cut off on a rota basis to conserve supplies)

Pollution in a river

Pollution in the sea near a beach

Other (please specify)

I haven't experienced any of these GO TO Q15

Q14b **IF ONE BELOW IN Q14 ASK:** Have you experienced the following in the last 12 months?

IF BOTH BELOW IN Q14 ASK: Have you experienced any of the following in the last 12 months?

IF TICKED IN Q14: Discolouration of water coming out of your tap

IF TICKED IN Q14: A change to the taste and/or smell of your tap water

IF HH: We would like to now find out a bit more about your use of rivers and beaches in the UK.

Use of Rivers in the UK

Q15 **IF HH:** Do you, or does anyone in your household, use rivers in the UK for any of the following activities? **Please state if you do these Often (more than six times a year); Sometimes (between one and five times a year); Rarely (less than once a year); or Never.**

| | Often | Sometimes | Rarely | Never |
|---|-------|-----------|--------|-------|
| Water contact activities (e.g. canoeing, rowing, rafting, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |
| Walking, running, cycling or sitting nearby or other activities on or around the water (e.g. narrowboating, other types of boating) | | | | |

Use of Beaches in the UK

Q16 **IF HH:** Do you, or does anyone in your household, use the beach or sea in the UK for any of the following activities? **Please again state if you do these Often (more than six times a year); Sometimes (between one and five times a year); Rarely (less than once a year); or Never.**

| | Often | Sometimes | Rarely | Never |
|--|-------|-----------|--------|-------|
| Water contact activities (e.g. surfing, windsurfing, dinghy sailing, canoeing, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |

| | | | | |
|---|--|--|--|--|
| Walking, running, cycling or sitting or playing nearby or other activities on or around the water (e.g. other types of boating) | | | | |
|---|--|--|--|--|

Impact of service issues

You are now going to be shown a series of ten short questions where you will be asked to choose between two different scenarios for your water or wastewater service.

Please consider, and then compare the scenarios carefully, and then **choose the one which would have the most impact** on your **IF HH: household IF NHH: organisation** if it were to happen

Some of the scenarios would affect your own property whereas others would affect your local area. When comparing the impact that each would have, please:

- **do** consider any concerns you may have for the local area or environment,
- **don't** consider any impacts on other people outside your **IF HH: household IF NHH: organisation** - other people will answer for themselves!

On some of the options you will see an **i**. Please click on this to see some more information about the option.

Q17 Which of these would have the most impact on your **IF HH: household IF NHH: organisation**?

| | |
|---|--|
| <p>PLANNED water supply interruption (24 hours)</p> <ul style="list-style-type: none"> ▶ Your water company sends you a notice that in 2 days' time your tap water supply will stop for 24 hours ▶ This is due to planned maintenance in your local area ▶ As planned, it then stops from a Wednesday morning to a Thursday morning   <p>Planned, 24 hours</p> | <p>Discoloured water (24 hours)</p> <ul style="list-style-type: none"> ▶ Your tap water starts running light brown, without warning ▶ This is due to traces of sediment from pipes being disturbed ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again ▶ This happens for 24 hours from a Wednesday morning   <p>24 hours</p> |
| <input type="radio"/> | <input type="radio"/> |

Q18 Which of these would have the most impact on your **IF HH: household IF NHH: organisation**?

Q19 Which of these would have the most impact on your **IF HH: household IF NHH: organisation**?

Q20 Which of these would have the most impact on your **IF HH: household IF NHH: organisation**?

Q21 Which of these would have the most impact on your **IF HH: household IF NHH: organisation**?

Q22 Which of these would have the most impact on your **IF HH: household IF NHH: organisation**?

Q23 Which of these would have the most impact on your **IF HH: household IF NHH: organisation?**

Q24 Which of these would have the most impact on your **IF HH: household IF NHH: organisation?**

Q25 We would now like to ask you a few questions about the choices you have just made. How strongly do you agree or disagree with the following statements about the choices you have just made?

| | Strongly disagree | Disagree | Neither | Agree | Strongly agree |
|---|-------------------|----------|---------|-------|----------------|
| I was able to understand the choices | | | | | |
| I found the options believable | | | | | |
| My choices were based on how much impact I thought each option would have on my [IF HH] household [IF NHH] premises. | | | | | |
| I found it easy to choose between the options | | | | | |

Q26 **ASK IF Q25.1 = 1 OR 2. OTHERS GO TO Q27:** Why were you unable to understand the choices?

Q27 **ASK IF Q25.2 = 1 OR 2. OTHERS GO TO Q28:** What was not believable about the options shown?

Q28 **ASK IF Q25.3 = 1 OR 2. OTHERS GO TO Q29:** What were the main factors driving your choices if not the impact that each would have on your **[IF HH] household [IF NHH] premises?**

Q29 **ASK IF Q25.4 = 1 OR 2. OTHERS GO TO NEXT SECTION:** Why was it difficult choosing between the options?

Compensation for service issues

Water and wastewater companies pay their customers compensation in some cases when there are problems with their service. They also invest money to reduce the number of problems that happen in the first place.

The next few questions will each present you with a choice between experiencing a service issue and being compensated for it, or not experiencing the issue and not receiving any compensation. The purpose of these questions is to see if the amounts shown are enough to offset the impact on your **[IF HH] household [IF NHH] premises** from the service issue shown.

In each question, the type of service problem and the compensation amount will vary. These amounts do not necessarily reflect current compensation entitlements, and compensation levels will not necessarily be influenced by answers to these questions.

Q30 Which option would you prefer?

Option A

**UNEXPECTED water supply interruption
(6 hours)**

- ▶ Your tap water supply stops working without warning
- ▶ This is due to a burst pipe in your local area
- ▶ It stops for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



Compensation paid*: £100

Option B

No unexpected water supply interruption

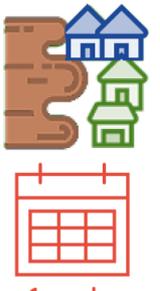
* compensation would be paid either by applying a credit to your water bill, or by a sending a cheque to your IF HH household IF NHH organisation, whichever you prefer.

Q31 Which option would you prefer?

Option A

**Sewer flooding: OUTSIDE your property
(1 week)**

- ▶ Flooding from the sewer gets inside your property boundary, affecting access to your front door
- ▶ This results from extreme weather causing prolonged heavy rainfall in your local area
- ▶ It gives off a foul smell, and could damage your front path
- ▶ It takes 1 week for your property to get back to normal



Compensation paid*: £200

Option B

NO Sewer flooding: OUTSIDE your property

* compensation would be paid either by applying a credit to your water bill, or by a sending a cheque to your IF HH household IF NHH organisation, whichever you prefer.

Q32 We would now like to ask you a few questions about the choices you have just made. How strongly to do you agree or disagree with the following statements about the choices you have just made?

| | Strongly disagree | Disagree | Neither | Agree | Strongly agree |
|--|-------------------|----------|---------|-------|----------------|
| I was able to understand the choices | | | | | |
| I found the options believable | | | | | |
| My choices were based on how much impact I thought each option would have on my [IF HH] household [IF NHH] premises and whether the amount of money shown was enough to compensate for this. | | | | | |
| I found it easy to choose between the options | | | | | |

Q33 ASK IF Q32.1 = 1 OR 2. OTHERS GO TO Q34: Why were you unable to understand the choices?

Q34 ASK IF Q32.2 = 1 OR 2. OTHERS GO TO Q35: What was not believable about the options shown?

Q35 ASK IF Q32.3 = 1 OR 2. OTHERS GO TO Q36: What were the main factors driving your choices?

Q36 ASK IF Q32.4 = 1 OR 2. OTHERS GO TO NEXT SECTION: Why was it difficult choosing between the options?

Attitudes to environmental costs

Q37 **IF HH:** Please look at the following five statements about pollution control and the costs of pollution control. Which one do you agree with most? SINGLE CHOICE

The environment should be protected from pollution and improved, **regardless of cost**

The environment should be protected from pollution and improved, **provided costs are not excessive**

The environment should be protected from pollution and improved, **but at no additional cost**

Further protection and improvements to the environment are not needed, and the costs for this should fall

Standards for protection and improvement to the environment are already too high and should be relaxed, and costs should fall

Don't know

Q38 Please use this box to leave any further comments about this topic or this survey. Please note, your water company will be unable to respond to individuals.

Classification Questions

We will now ask you a few questions about you and your **IF HH** household **IF NHH** organisation. These will only be used to ensure we have spoken to a wide range of customers. All responses you give will be kept strictly confidential.

Q39 **IF HH:** How would you describe the occupation type of the main income earner in your household?

Senior managerial or professional

Intermediate managerial, administrative or professional

Supervisor; clerical; junior managerial, administrative or professional

Manual worker (with industry qualifications)

Manual worker (with no qualifications)
Unemployed
Retired
Student
Prefer not to say **GO TO Q42**

Q40 IF Q39=7 (RETIRED) ASK: Does the main income earner have a state pension, a private pension or both?

State only
Private only
Both
Prefer not to say **GO TO Q42**

Q41 IF Q40= PRIVATE OR BOTH ASK: How would you describe the main income earner's occupation type before retirement?

Senior managerial or professional
Intermediate managerial, administrative or professional
Supervisor; clerical; junior managerial, administrative or professional
Manual worker (with industry qualifications)
Manual worker (with no qualifications)
None of these
Prefer not to say

Q44 IF HH: To which of these ethnic groups do you consider you belong to? **We would like to collect this to ensure that people of all backgrounds are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.**

WHITE

English, Welsh, Scottish, Northern Irish or British
Irish
Gypsy or Irish Traveller
Any other White background

MIXED

White and Black Caribbean
White and Black African
White and Asian
Any other Mixed background

ASIAN OR ASIAN BRITISH

Indian
Pakistani
Bangladeshi
Chinese
Any other Asian background

BLACK OR BLACK BRITISH

Caribbean
African
Any other Black background

OTHER ETHNIC GROUP

Arab
Any other ethnic group
Prefer not to say

Q45 **IF HH:** Thinking about all the people in your household, including yourself, how many people live here?

- 1-2
- 3 or 4
- 5 or more
- Prefer not to say

Q46 Please let us know if any of the following apply to you. *RANDOMISE ROWS*
We would like to collect this to ensure that with a variety of particular needs are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.

- I or another member of my household is disabled or suffer(s) from a debilitating illness
- I or another member of my household have/has a learning difficulty
- I or another member of my household relies on water for medical reasons
- I or another member of my household is visually impaired (i.e. struggles to read even with glasses)
- I or another member of my household am/is over the age of 75 years old
- I or another member of my household speaks English as a second language
- I or another member of my household is deaf or hard of hearing
- I or another member of my household is a new parent
- None of these apply to me
- Prefer not to say

Q47 **IF HH:** Which of the following statements do you most agree with? Please remember, this research is entirely confidential and that it is only by understanding the views of people who are struggling to pay their household bills (eg gas, electricity, telephone etc) that change can be made.

- I can always afford to pay my household bills
- I can usually afford to pay my household bills
- I sometimes struggle to pay my household bills
- I usually struggle to pay my household bills
- I always struggle to pay for my household bills
- Prefer not to say

Q47b **IF NHH:** How does your organisation mainly use water? **You can choose more than one answer**

- The manufacturing process which is essential to the running of your organisation (e.g. to power machinery, agricultural production etc.)
- The supply of services your organisation provides (e.g. cleaning services etc.)
- An ingredient or part of the product or service your organisation provides (e.g. food or drink, chemical, cosmetics manufacturer etc.)
- Normal domestic use for your organisation's customers and employees (e.g. customer toilets, supply of drinking water)
- None of the above
- Don't Know

Q48 **IF NHH:** How many sites does your organisation operate from?

- 1
- 2
- 3
- 4+
- Prefer not to say

Q49 **IF NHH:** How many employees does your organisation have in the UK?

- None, sole trader

Fewer than 4 employees
4 to 49 employees
50 to 249 employees
250+ employees
Prefer not to say

Q50 **IF NHH:** Which of the following best defines the core activity of your organisation?

Agriculture, forestry and fishing
Mining and quarrying
Energy or water service & supply
Manufacturing
Construction
Wholesale and retail trade (including motor vehicles repair)
Transport and storage
Hotels & catering
IT and Communication
Finance and insurance activities
Real estate activities
Professional, scientific and technical activities
Administrative and Support Service Activities
Public administration and defence
Education
Human health and social work activities
Arts, entertainment and recreation
Other service activities
Other (please specify)
Prefer not to say

Q52 **IF HH:** Do you have a water meter?
IF NHH: Does your premises have a water meter?

Yes
No
Don't Know
Prefer not to say

Q53 **IF Q52=1 ASK:** Did you ask to have a water meter fitted for your household?

Yes
No
Prefer not to say

Q54 **IF HH AND POSTAL:** Which of these best describes you?

I have never used the internet
I have used the internet but do not have regular access to it
I have regular access to the internet
Prefer not to say

Q55 **IF HH NON PANEL:** We mentioned that there would be a £10 incentive for completing this survey. This incentive will be administered by Accent, within 4 weeks.

This can be sent as an Amazon, Marks & Spencer or Love2Shop voucher by email or by post. Alternatively we can donate your incentive to WaterAid. Which would you prefer?

Amazon voucher by email **COLLECT EMAIL ADDRESS**
M&S Voucher by email **COLLECT EMAIL ADDRESS**

Love2Shop by email COLLECT EMAIL ADDRESS
Amazon voucher by post COLLECT ADDRESS
M&S voucher by post COLLECT ADDRESS
Love2Shop by post COLLECT ADDRESS
Donation to Water Aid

If you have any queries about your incentive, please contact us on 0131 220 8770.

Q56 Thank you. Would you be willing to be contacted again if we need to clarify any of the answers you have given today?

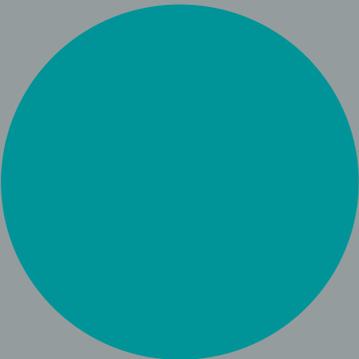
Yes
No

Thank you. This research was conducted under the terms of the MRS code of conduct and is completely confidential.



Appendix B2

Attributes



UNEXPECTED water supply interruption (6 hours)

- ▶ Your tap water supply stops working without warning
- ▶ This is due to a burst pipe in your local area
- ▶ It stops for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



6 hours

PLANNED water supply interruption (6 hours)

- ▶ Your water company sends you a notice in the post that in 2 days' time your tap water supply will stop for 6 hours
- ▶ This is due to planned maintenance in your local area
- ▶ As planned, it then stops between 12:00 and 18:00 on a Wednesday afternoon



**Planned,
6 hours**

UNEXPECTED water supply interruption (24 hours)

- ▶ Your tap water supply stops working without warning
- ▶ This is due to a burst pipe in your local area
- ▶ It stops for 24 hours, from a Wednesday morning to a Thursday morning



24 hours

PLANNED water supply interruption (24 hours)

- ▶ Your water company sends you a notice that in 2 days' time your tap water supply will stop for 24 hours
- ▶ This is due to planned maintenance in your local area
- ▶ As planned, it then stops from a Wednesday morning to a Thursday morning



**Planned,
24 hours**

UNEXPECTED low water pressure (6 hours)

- ▶ Your tap water supply starts running with a low pressure, without warning
- ▶ This is due to a burst pipe in your local area
- ▶ It takes longer to fill a kettle, sink or bath and a shower would be weak. Some appliances like dishwashers and washing machines may not work properly
- ▶ This happens for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



6 hours

Boil water notice (48 hours)

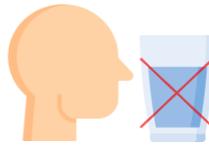
- ▶ Your water company sends you a notice saying you need to boil tap water before drinking, cooking or preparing food to avoid the risk of becoming ill
- ▶ This is due to traces of e-coli being found in the water supply in your area
- ▶ You can still safely use tap water for washing and cleaning
- ▶ The notice arrives on a Wednesday. After two days the water will be safe to drink again



48 hours

Do not drink notice (48 hours)

- ▶ Your water company sends you a notice saying not to drink your tap water, or use it for cooking or preparing food, to avoid the risk of becoming ill
- ▶ This is due to traces of a harmful chemical being found in the water supply in your area
- ▶ You can still safely use tap water for washing and cleaning
- ▶ The notice arrives on a Wednesday. After two days the water will be safe to drink again



Discoloured water (24 hours)

- ▶ Your tap water starts running light brown, without warning
- ▶ This is due to traces of sediment from pipes being disturbed
- ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again
- ▶ This happens for 24 hours from a Wednesday morning



Water taste and smell (24 hours)

- ▶ Your tap water starts tasting or smelling different, without warning
- ▶ This is due to traces of chlorine, and the taste and smell is like a swimming pool
- ▶ The water is safe to drink, and for use in the dishwasher or washing machine
- ▶ This happens for 24 hours from a Wednesday morning



Sewer flooding: INSIDE your property (1 week)

- ▶ Flooding from the sewer gets inside your property, affecting your living areas
- ▶ This results from prolonged heavy rainfall in your local area
- ▶ It gives off a foul smell, and damages floors, walls and furniture.
- ▶ It takes 1 week for your property to get back to normal



1 week

Sewer flooding: OUTSIDE your property (1 week)

- ▶ Flooding from the sewer affects access to your front door / entrance
- ▶ This results from prolonged heavy rainfall in your local area
- ▶ It gives off a foul smell, and could cause damage
- ▶ It takes 1 week for your property to get back to normal



1 week

Hosepipe ban (5 months)

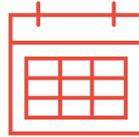
- ▶ Your water company sends you a notice saying you must not use a hosepipe or sprinkler
- ▶ This is due to an extended period of dry weather leading to a water shortage
- ▶ The hosepipe ban begins in May and lasts for 5 months



5 months

Emergency drought restrictions (2 months)

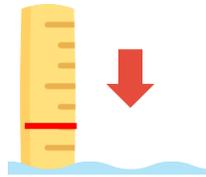
- ▶ Your water company cuts off the tap water supply from 2pm to 7am every day
- ▶ This is due to a severe drought leading to an extreme water shortage in your area
- ▶ Standpipes would be available nearby to collect water in buckets or bottles
- ▶ The restrictions begin in July and last for 2 months



2 months

Low flows in rivers NEARBY (2 months)

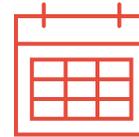
- ▶ The water level in a nearby stretch of river (less than 5 miles away) has a flow that is lower than the minimum it should be naturally
- ▶ This is due to a combination of extended dry weather and water being taken from it for public water supply
- ▶ This happens from July and lasts for 2 months



**Nearby,
2 months**

Low flows in rivers ELSEWHERE (2 months)

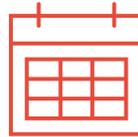
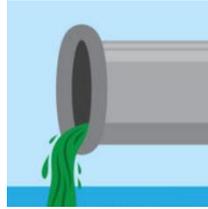
- ▶ The water level in a stretch of river somewhere in your region, but not nearby, has a flow that is lower than the minimum it should be naturally
- ▶ This is due to a combination of extended dry weather and water being taken from it for public water supply
- ▶ This happens from July and lasts for 2 months



**Elsewhere,
2 months**

Storm overflow NEARBY (4 hours)

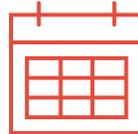
- ▶ Rainwater mixed with untreated sewage regularly spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to prolonged heavy rainfall and is allowed by the regulator to reduce the risk of sewer flooding
- ▶ There is no damage to the river and visible pollution is minor



Nearby,
4 hours

Minor pollution incident NEARBY (1 day)

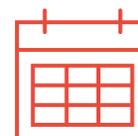
- ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be minor
- ▶ The spill begins on a Wednesday and lasts for 4 hours. The river is then back to normal after 1 day



Nearby,
1 day

Significant pollution incident NEARBY (4 weeks)

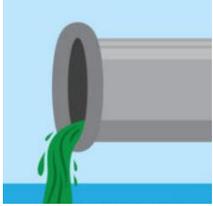
- ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be significant
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks



Nearby,
4 weeks

Storm overflow ELSEWHERE (4 hours)

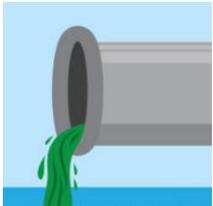
- ▶ Rainwater mixed with untreated sewage regularly spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to prolonged heavy rainfall and is allowed by the regulator to reduce the risk of sewer flooding
- ▶ There is no damage to the river and visible pollution is minor



Elsewhere,
4 hours

Minor pollution incident ELSEWHERE (1 day)

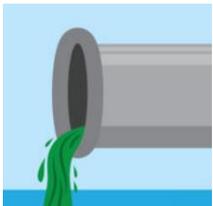
- ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be minor
- ▶ The spill begins on a Wednesday and lasts for 4 hours. The river is then back to normal after 1 day



Elsewhere,
1 day

Significant pollution incident ELSEWHERE (4 weeks)

- ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be significant
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks



Elsewhere,
4 weeks

River water NEARBY is not High quality

- ▶ A nearby stretch of river (less than 5 miles away) meets Medium rather than High quality standards, as defined by the government ⓘ
- ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area
- ▶ This has some effect on habitats for fish and wildlife, and leads to occasional algal blooms



Local

River water ELSEWHERE is not High quality

- ▶ A stretch of river in your region, but not nearby, meets Medium rather than High quality standards, as defined by the government ⓘ
- ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area
- ▶ This has some effect on habitats for fish and wildlife, and leads to occasional algal blooms



Elsewhere

ⓘ button show card:

| River water quality level | Definition |
|---------------------------|---|
| High | <ul style="list-style-type: none"> ▪ There will be a diverse and natural range of plants, insects, fish, birds and other animals. ▪ Water will generally have the right degree of clarity and there will be no noticeable pollution. ▪ Water will generally be suitable for contact activities, such as rowing or swimming |
| Medium | <ul style="list-style-type: none"> ▪ There will be plants, insects, fish, birds and other animals, but there will be some fish and other wildlife missing. ▪ Water will be slightly murky or discoloured in parts, and there will sometimes be visible pollution in some places, and some algal blooms. ▪ Water may be suitable for contact activities in some areas but not others. |
| Low | <ul style="list-style-type: none"> ▪ There may be limited or no plants or wildlife, or the water may be dominated by a single plant species. ▪ Water will generally be murky or discoloured, and may sometimes be bad-smelling in some places. There may also regularly be visible pollution in some places, and frequent algal blooms. ▪ Water will be unsuitable for contact activities. |

Coastal bathing water is not Excellent quality

- ▶ The sea water at the beach you would be most likely to visit meets Good rather than Excellent quality standards, as defined by the government ⓘ
- ▶ This is due to the quality of treated wastewater entering the water nearby
- ▶ You could still swim in the sea, but there would be a small increase in the chance that you might get ill if you swallowed some water



Water not Excellent

ⓘ button show card:

| Bathing water quality level | Definition |
|-----------------------------|--|
| Excellent | The highest standard which means the bathing water is consistently very clean, with less than a 3%, or 3 in 100, chance of a stomach upset. |
| Good | Between 'Sufficient' and 'Excellent'. This means there is between a 3% and a 5% chance of a stomach upset. |
| Sufficient | The minimum standard required for bathing water which means there is between a 5% and an 8% chance of a stomach upset. |

Coastal bathing water is neither Excellent nor Good quality

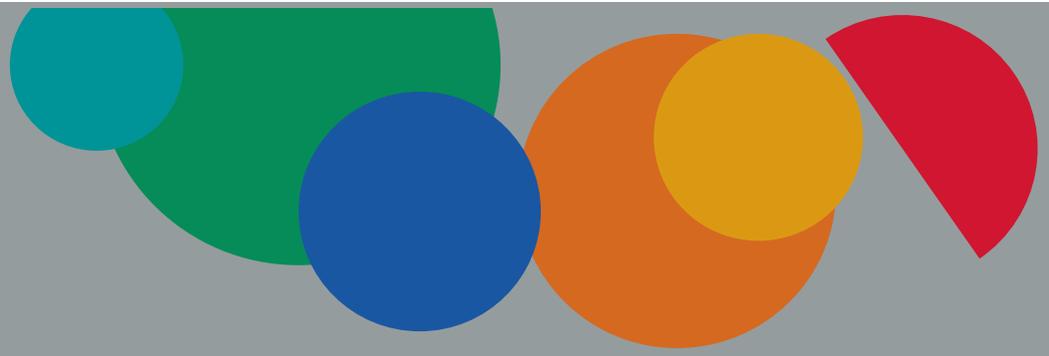
- ▶ The sea water at the beach you would be most likely to visit meets Sufficient rather than Good or Excellent quality standards, as defined by the government ⓘ
- ▶ This is due to the quality of treated wastewater entering the water nearby
- ▶ You could still swim in the sea, but there would be a small increase in the chance that you might get ill if you swallowed some water



Water not Excellent

ⓘ button show card:

(Same as for previous bathing water quality card)



Appendix B3

Letter survey invites

Invite with £10 voucher and Freephone method for accessing paper questionnaire

Southside
105 Victoria Street
London
SW1E 6QT

ID number: XXXX

Dear Sir/Madam

Water services research: complete a 10 minute survey and receive a £10 voucher

This letter has been sent to you by Accent, an independent market research company, on behalf of Ofwat, the water regulator, and Consumer Council for Water (CCW), the consumer organisation which represents the interests of water and sewerage customers in England and Wales.

We are looking for people to complete a survey about their views on water and sewerage services.

The research will be used to help water companies plan investment in their service from 2025 and will influence your future water services and bills.

Anyone completing the survey will be eligible for a £10 voucher (an Amazon voucher, an M&S voucher or a Love2Shop voucher). Alternatively we can donate your incentive to WaterAid. Details on how claim your voucher are given at the end of the survey.

How to take part

The questionnaire will take about 10 minutes to complete. You can complete the survey online by entering the following link or scanning the QR code:

<https://acsvy.com/3524A2survey>

Alternatively you can fill the survey in by pen and paper. To request a paper version of the survey please call FREEPHONE 0800 099 6245. You will be asked to leave your name and the 4 digit unique ID number which you can find at the top right hand corner of this letter. We will send a paper version of the survey by post, and include a FREEPOST return envelope for you to post it back.

The final date for us to receive completed surveys is **15th April 2022**. Ofwat and CCW will be very grateful if you are able to complete the survey, but taking part is completely optional.

If you have any questions, please don't hesitate to contact the research team at WaterResearch@accent-mr.com

Yours faithfully

Chris Heywood on behalf of the study team

Registered in London No.
2231083. Accent Marketing &
Research Limited
Registered Address: 30 City
Road, London, EC1Y 2AB

Invite with £5 voucher and postcard method for accessing paper questionnaire



Ofwat



CCW
The voice for water consumers
Llun Wyn / Wynhyma ddi



Accent

Southside
105 Victoria Street
London
SW1E 6QT

ID number: XXXX

Dear Sir/Madam,

Water services research: complete a 10 minute survey and receive a £5 voucher

This letter has been sent to you by Accent, an independent market research company, on behalf of Ofwat, the water regulator, and Consumer Council for Water (CCW), the consumer organisation which represents the interests of water and sewerage customers in England and Wales.

We are looking for people to complete a survey about their views on water and sewerage services. The research will be used to help water companies plan investment in their service from 2025 and will influence your future water services and bills.

Anyone completing the survey will be eligible for a £5 voucher (an Amazon voucher, an M&S voucher or a Love2Shop voucher). Alternatively we can donate your incentive to WaterAid. Details on how claim your voucher are given at the end of the survey.

How to take part

The questionnaire will take about 10 minutes to complete. You can complete the survey online by entering the following link or scanning the QR code:
<https://acsvy.com/3524A1survey>



Alternatively you can fill the survey in by pen and paper. To request a paper version of the survey please enter your details on the enclosed card (including the 4 digit unique ID code which you can find at the top right hand corner of this letter), put it in the FREEPOST envelope and post it to us. We will post you a paper version of the survey along with another pre paid envelope for its return.

The final date for us to receive completed surveys is 15th April 2022. Ofwat and CCW will be very grateful if you are able to complete the survey, but taking part is completely optional.

If you have any questions, please don't hesitate to contact the research team at WaterResearch@accent-mr.com

Yours faithfully



Chris Heywood on behalf of the study team







Registered in London No.
2231083. Accent Marketing &
Research Limited
Registered Address: 30 City
Road, London, EC1Y 2AB

Appendix B4

Reminder letter





Southside
105 Victoria Street
London
SW1E 6QT

ID number: XXXX

Dear Sir/Madam,

Water services research: still time to complete a 10 minute survey and receive a £10 voucher - REMINDER

We are writing to you on behalf of Ofwat, the water regulator, and Consumer Council for Water (CCW), the consumer organisation which represents the interests of water and sewerage customers in England and Wales.

We are still looking for people to complete a survey about their views on water and sewerage services. The research will be used to help water companies plan investment in their service from 2025 and will influence your future water services and bills. If you have already completed or attempted to complete the questionnaire please ignore this letter.

If you complete the survey you will be eligible for a £10 voucher (an Amazon voucher, an M&S voucher or a Love2Shop voucher). Alternatively we can donate your incentive to WaterAid. Details on how claim your voucher are given at the end of the survey.

How to take part

The questionnaire will take about 10 minutes to complete. You can complete the survey online by entering the following link or scanning the QR code:

<https://acsvy.com/3524A1survey>



Please complete the survey within 3 days of receiving this letter. We have extended the final date for us to receive completed surveys to 27th April 2022. Ofwat and CCW will be very grateful if you are able to complete the survey, but taking part is completely optional.

If you have any questions, please don't hesitate to contact the research team at WaterResearch@accent-mr.com

Yours faithfully

Chris Heywood on behalf of the study team



Registered in London No.
2231083. Accent Marketing &
Research Limited
Registered Address: 30 City
Road, London, EC1Y 2AB

Appendix B5

Verbatim responses to feedback follow-up questions

Impact Exercise

Table 38: Feedback follow-up questions: impact exercise

| Sample | Why were you unable to understand the choices? |
|--------|--|
| PAF | Because of the technical language |
| PAF | But if a crappy question in all honesty. I was able to understand them because I read them... basic English. |
| PAF | Could not see the relevance. |
| PAF | Didn't fully understand the impact to me or my household for some of the choices |
| PAF | Difficulty making up mind |
| PAF | I understood the questions however my answers were solely based on the impact of my house and environment which made me realise that more thought should have been given to the wider environment and impact on wild life hence would have preferred |
| PAF | I understood them all |
| PAF | I wasn't unable to understand. |
| PAF | Lots to read, ideas that concern me may not impact directly on my household |
| PAF | Most of them were not relevant as we live on the summit of a hill with no significant nearby rivers and no chance of flooding |
| PAF | No sense |
| PAF | Questions were logical |
| PAF | Seem far fetched |
| PAF | Some seemed to be unrelated |
| PAF | The difference between excellent, good, minor, major etc. |
| PAF | They were explained clearly |
| PAF | This is difficult to choose as some of them don't seem true to life |
| PAF | Too many words |
| PAF | Unlikely to happen |
| PAF | Very clear questions |
| PAF | Very confusing way to list |
| PAF | Written well, simple and easy to understand. Infographics helped too. |
| PAF | Yes easy to understand. |
| PAF | Yes quite easy |
| PAF | I would have no idea why a river with low levels would affect me |
| PAF | partially |
| PAF | unrealistic. |
| Panel | Cause I'm thick |
| Panel | I CHOSE WHAT WAS MORE RELEVANT TO MYSELF |
| Panel | I DIDN'T HAVE A PROBLEM WITH THE CHOICES |
| Panel | I couldn't understand how some of the scenarios would affect me in any way personally |
| Panel | I did understand the choices quite well |
| Panel | I felt in some circumstances they did not apply to my household |
| Panel | I never said that at all! |
| Panel | I understood |
| Panel | I was sorry |
| Panel | I wasn't sure how I would be affected |
| Panel | I wasn't |
| Panel | I wasn't |
| Panel | Na |
| Panel | None |
| Panel | Nope |
| Panel | STUPID CHOICES |
| Panel | They were not clear. Too long winded. |
| Panel | Wording was too similar with some of the options |
| Panel | everything works fine with water |
| Panel | some were confusing |

| Sample | Why were you unable to understand the choices? |
|--------|---|
| Panel | yes they were very clear |
| NHH | I didn't really understand what it was about |
| NHH | It was too much information to try and give people over the phone (he didn't take the link as he wasn't in front of a computer, so it had to be read out to him). |

Table 39: Feedback follow-up questions: impact exercise

| Sample | What was not believable about the options shown? |
|--------|--|
| PAF | All seem feasible |
| PAF | Answers were based on location whether they would have an effect on our life directly, not necessarily my overall concern. |
| PAF | As previous reply |
| PAF | Don't know |
| PAF | Global warming |
| PAF | Hardly any of those things have happened to my household |
| PAF | I do not believe that it is acceptable that we should need to chose between polluting rivers and \or the sea and having a clean uninterrupted water supply. Rivers flow to the sea therefore a pollution incident on a river will affect the quali |
| PAF | I don't live anywhere near a river |
| PAF | I feel it was underplaying the environmental impact of raw sewage going into rivers. |
| PAF | I haven't experienced those scenarios and the scenarios about the beach wouldn't impact me |
| PAF | I would always consider the costal water dirty and make us ill if we swallowed it. I don't believe it's ever high quality and I believe sewerage in the river is disgusting but if it means the drains not overflowing then it shouldn't be a choice |
| PAF | In my experience some of the options did not appear realistic. |
| PAF | In some instances but not all, I couldn't understand how one option related to the other. Having untreated water running into a river isn't acceptable at all. how this relates to excessive chlorine in my drinking water needs explaining.! |
| PAF | It seemed |
| PAF | N/A |
| PAF | No connection between options. |
| PAF | Not clear |
| PAF | Not everyone considers wider context of problems. Sewage leak the problem does not last only 4 hours. Low water during a drought does affect household by using less water to not waste reserves. Also always keep bottled drinking water so do not |
| PAF | Not sure some of the river/beach issues were believable |
| PAF | Nothing |
| PAF | Nothing :) |
| PAF | Seemed to be a disproportionate focus on nudging me towards deciding my water provider not testing sewage/runoff was the lesser of two evils. |
| PAF | Sewer issues |
| PAF | So obvious |
| PAF | Some of them have never happened and will never happen |
| PAF | The sewer cannot overflow into my property |
| PAF | They didn't seem relevant at all for the area |
| PAF | To confusing |
| PAF | Turn off water from 2pm |
| PAF | You asked if the options were believable or not in the multi choice questions prior. Again a crappy question. |
| PAF | choice of my house being inundated with sewage versus pollution in river. Answers seem to be skewed towards outcomes wanted as no-one would prefer such damage to their home. |
| PAF | n/a |
| PAF | no mains drainage in are so pollution low chance |
| PAF | seemed to bear little relation to each other |
| PAF | the choices were set to show the supply or cleansing. not really comparable |

| Sample | What was not believable about the options shown? |
|--------|--|
| Panel | Don't know |
| Panel | Dunno |
| Panel | EVERYTHING |
| Panel | HOW A RIVER COULD EFFECT TOWN DWELLERS. REMEMBER I LIVE NEAR THE THAMES AND WE HAVE SEWAGE, WATER WORKS NEARBY. IN 30 YEARS WE HAVE ONLY SUFFERED A COUPLE OF LOSSES OF WATER DUE TO BURST PIPES. NEVER HAD A SEWAGE PROBLEM. PERHAPS WE ARE |
| Panel | There should be more options |
| Panel | They use the right service for water |
| Panel | Weighted option choices |
| Panel | Yes |
| Panel | Your property being flooded with sewage |
| Panel | dunno |
| Panel | having no running water |
| Panel | life does not give binary choices |
| Panel | na |
| Panel | we don't have a river near us |
| NHH | It's not that I didn't find them believable - they're not issues you have when when you have a business- we have tidal drainage and we have never had a problem with sewerage flooding - the questions are irrelevant. Boiling water: every compa |

Table 40: Feedback follow-up questions: impact exercise

| Sample | What were the main factors driving your choices if not the impact that each would have on your household/premises? |
|--------|--|
| PAF | Affect on wildlife and river pollution |
| PAF | Clean water |
| PAF | Concern for the environment |
| PAF | Effects on my disabled husband |
| PAF | Environmental |
| PAF | How it would affect my house personally. |
| PAF | Impact on my household |
| PAF | Infant Child. |
| PAF | Larger environmental impact versus personal inconvenience |
| PAF | Personal |
| PAF | Sewerage pollution from old drainage,Victorian net works unable to cope. |
| PAF | Supply of water |
| PAF | The household impact is minimum in many cases. Eg tap water that tastes unpleasant is irrelevant, as we buy bottled water. For us, the environment is extremely important. More needs to be done to protect the rivers and oceans. |
| PAF | The tap water tastes so awful |
| PAF | Water quality both in seas and rivers |
| PAF | bills |
| PAF | effect on the local rivers and environment |
| Panel | Don't know |
| Panel | Impact on community |
| Panel | Impact on my family |
| Panel | Nope |
| Panel | how much incavenss |
| Panel | outer expire of invoice |
| Panel | paying the bills for water |
| NHH | The impact on the environment is absolutely everything. |

Table 41: Feedback follow-up questions: impact exercise

| Sample | Why was it difficult choosing between the options? |
|--------|--|
| PAF | Again far fetched |
| PAF | As an environment conscious family, both the options bother me. |
| PAF | As it wasn't clear on the impact to me or my household |
| PAF | As previous reply |
| PAF | Bad thins on both |
| PAF | Because I know the one that impacts me hardest could be avoid by sorting out the other one .wake up call |
| PAF | Because I was torn between environmental and what is better for my family |
| PAF | Because eventually they all affect us! |
| PAF | Because its an either or not question |
| PAF | Because my household only occasionally goes to the seaside but I do think it matters. I would have found it easier if there had been some reference to the effect on fish in our local river. |
| PAF | Because the impact of both choices were sometimes equal in my opinion |
| PAF | Both options were detrimental, I had to opt for the one that was most impactful |
| PAF | Choosing between concern for the local environment and inconvenience for my household |
| PAF | Choosing between minor personal inconvenience and a suspicion that ANY sewage leak will cause SOME damage to wildlife, fish, plants and no pollution of water I want to swim in should be acceptable |
| PAF | Choosing between my personal disruption and the environmental impact |
| PAF | Choosing between what effects me directly. |
| PAF | Circumstances change all the time and choice depends on circumstances at the time. |
| PAF | Clean wayer |
| PAF | Common sense should answer this question |
| PAF | Detailed, and taking me longer to complete your survey than you said it would. |
| PAF | Difficult to imagine which option would be the most impactful |
| PAF | Difficult to know which would affect more between nearby and regional rivers |
| PAF | Difficult to predict exactly what impact either scenario would have. |
| PAF | Easy to decide on the impact of the household but hard when also taking into account the impact on the environment |
| PAF | Effects on self or environmental impact a difficult choice |
| PAF | Feel like trick questions. Are you asking to what inconveniences the consumer in order to justify environmental concerns? Water is precious, we need an educated consumer and responsible operator |
| PAF | Hard to assess what the impact would be on my self. Felts like concerns for the environment should outweigh shorter more immediate impacts on myself. |
| PAF | I felt that the environmental issues with sewage in rivers nearby were extremely important, but would not appear to impact my household directly, so it was difficult to decide. I also felt that the idea of tap water being unsafe to use would |
| PAF | I got tired of reading them. Some options may have other kind of outcomes I might not know about |
| PAF | I was putting my convenience above the environment. I would like to be able to do both. |
| PAF | I worry about the impact to the wildlife and the environment but also my household |
| PAF | I would have preferred an option of selecting both as it made ,me question the importance of the wider environment and the future for my grandchildren |
| PAF | IT WOULD ALL HAVE AN IMPACT ON MY HOUSEHOLD |
| PAF | Impact appeared to be very similar in most cases. |
| PAF | Impact could be the same |
| PAF | Impact was difficult to discern based upon the vague descriptions |
| PAF | In some cases both options would impact us so it was necessary to work out which one would have the most impact |
| PAF | In some cases neither would really affect me. |
| PAF | It something that needs thinking about and some unbelievable |

| Sample | Why was it difficult choosing between the options? |
|--------|---|
| PAF | It was a choice of being selfish sometimes - |
| PAF | It was difficult to clearly quantify and compare the two options in some of the scenarios. I appreciate that this is part of the point of the exercise though |
| PAF | It was not |
| PAF | It wasn't |
| PAF | It wasn't |
| PAF | It's hard to choose between pollution which affects everyone and ne not having water for a set time |
| PAF | Neither questions about rivers or beaches would impact our household. An option asking about sewage leaks around households would have been better |
| PAF | No reason |
| PAF | Not easy to read |
| PAF | Not sure |
| PAF | Of equal impact |
| PAF | On a couple of questions, I found it hard to gauge the impact of the 2 options. |
| PAF | Questions appeared to be choosing between personal circumstances or damage to the wider local environment. Both are important and would prefer nether to occur if possible |
| PAF | See previous answers. |
| PAF | Situations not comparable |
| PAF | Some aren't applicable to my household |
| PAF | Some choices didnt directly affect me at all. Or affected household to the same extent. Hard to choose between low impact for me direct but large impact on environment therefore myself indirectly |
| PAF | Some had minimal impact on me |
| PAF | Some of the choices would have affected me nearly equally. |
| PAF | Some of the options do not really have any impact on our household at all. |
| PAF | Some of the options were similar and some of the options would impact me in only slightly different ways. |
| PAF | Some of them didn't seem comparable with eachother. I would have chosen both options in one case. |
| PAF | Some options both would affect the household |
| PAF | Some were negligible |
| PAF | Some were very similar |
| PAF | Some would have no impact with both options |
| PAF | Some would both have an impact and choosing the option with most impact was sometimes difficult. |
| PAF | Sometimes I was thinking 'It depends'. If water was off and it was nice weather I might decide to go out anyway so no problem. Or if I was desperate for a cuppa and weather really bad it would be very inconvenient. |
| PAF | Sometimes both options could be a problem |
| PAF | TO pick between environment and affect on household. |
| PAF | The choice was hard to make. The inconvenience of not having water at home was less than the worry of letting our dog swim in the sea and rivers. We care about flora and fauna and wildlife but also like having a safe domestic water supply |
| PAF | The impact of each on my household was low, so i had to consider carefully which would impact me the most |
| PAF | The options were not realistic alternatives, nor were the estimates of recovery time after damage in the home, for example. I dont believe it should be a choice between discharging raw sewage in rivers/sea OR having water supply in the home. |
| PAF | The options were set to decide between polution incidents and supply. Anything that occurs that directly impacts your home is always going to impact directly the household. Waste water, spills etc tend to be in public places and will have less |
| PAF | They had been designed to offer fine distinctions |
| PAF | They were too generalised and it was not easy to relate them to this particular household. |

| Sample | Why was it difficult choosing between the options? |
|--------|--|
| PAF | They're quite odd scenarios aren't they and it is hard to compare two quite different events and to really think through which would be worse |
| PAF | Thought neither would impact much for some of them |
| PAF | Time to read and take in |
| PAF | To confusing |
| PAF | Too many options |
| PAF | Unusual choices |
| PAF | When there was a risk to my health eg sewer flooding inside the house and also risk to wildlife health |
| PAF | Whether to worry about the greater good or focus on own household. |
| PAF | Yes |
| PAF | because i am unsure of the exact consequences of some of the options |
| PAF | because the options didn't always seem to be related to each other. |
| PAF | neither were very good |
| PAF | the non local scenarios might have a local impact and should not be less important because not on doorstep. |
| Panel | ASSESSING THE TRUE EFFECT. |
| Panel | All of them were not ideal for a service I'm paying for especially with a baby at home |
| Panel | BECAUSE SOMETIMES NEITHER AFFECTED ME AND FOR OTHERS BOTH CHOICES DID |
| Panel | Because I didn't have the choice to say "Neither would affect my household" |
| Panel | Because both weren't good |
| Panel | Because certain options would have significant ramifications with either choice. |
| Panel | Because directly it can affect you not to have water from your pipes one day. Anyway, you will survive. However, contamination somewhere else it will end affecting you too, even though it's more difficult to see it straight away |
| Panel | Because most seemed irrelevant to me. |
| Panel | Don't know |
| Panel | Dont know what has a worse impact |
| Panel | Hard to visualise |
| Panel | Have never experienced problems so difficult to choose |
| Panel | I didn't think either would affect me at all |
| Panel | Impact on household is debatable |
| Panel | It was difficult to concentrate on the impact for just the household. |
| Panel | Just felt difficult as we do not have a river close by |
| Panel | Lots of choice |
| Panel | Not sure which wud b worse with some of them |
| Panel | Options confused me |
| Panel | STUPID CHOISES |
| Panel | Some didn't have much effect on me and mine |
| Panel | Some were equally disruptive |
| Panel | They were quite closely matched, and the degree to which I chose one over the other was fairly small. |
| Panel | Tough to pick |
| Panel | Well some were more of a nuisance than others |
| Panel | Where both scenarios seemed bad it was quite hard to choose between my own convenience and my beliefs about the environment |
| Panel | Working out what would Impact me More |
| Panel | Yes |
| Panel | any incident can affect my home sooner or later |
| Panel | because in some cases both options would impact my household |
| Panel | both thing ould happen |
| Panel | did not know how much impact on houshold some choises would have |
| Panel | just difficult to assess impact |
| Panel | just found some harder than others |

| Sample | Why was it difficult choosing between the options? |
|--------|---|
| Panel | na |
| Panel | no |
| Panel | often both didn't really apply |
| Panel | on some scenarios there are shorter term impacts but closer to home and some longer term impacts further from my home. At what point does the longer term impact affect me? |
| Panel | seemed most were around 5 miles away |
| Panel | situations were not like for like,between some environmental issues and a few hours inconvenience to me personally |
| Panel | the rates are all compatative |
| NHH | Because were a commercial organisation and a negative eff on the river can be a positive effect on us, because people swim in our lake and also in the river, so if the river was polluted, then they would swim in the lake - it's complex - not a |
| NHH | Going back to what i said it is like choosing a red hot needle in one part of your body or a cold needle in a more sensitive part. You can't compare apples and oranges. You can't dissociate something that will be terrible for the environment b |
| NHH | I don't know |
| NHH | Non of them would affect me- especially the rivers - I'm far away from them - the taste of the water would affect me. |
| NHH | There was a lot of options and I had to think quickly to answer them. |
| NHH | Wasn't bothered about either one. |

Compensation exercise

Table 42: Feedback follow-up questions: compensation exercise

| Sample | Why were you unable to understand the choices? |
|--------|---|
| PAF | Again clearly explained |
| PAF | Because I feel a great loss of investing if this was to happen. Would rather have money invested in improving |
| PAF | Because the wording was unclear |
| PAF | Clearly laid out |
| PAF | Don't know |
| PAF | I was able to clearly understand all choices. |
| PAF | I wasnt |
| PAF | I would like £10 c |
| PAF | It said compensation for either choice. Why would I be compensated for something that didn't happen |
| PAF | Options was easy |
| PAF | Unclear |
| PAF | Yes |
| Panel | No |
| Panel | Ridiculous options |
| Panel | The choices were fine. |
| Panel | i would never want a problem with my water or sewage |
| Panel | its great |
| Panel | they were unrelated |
| Panel | you asked the same question 3 times with a difference of how much is paid |

Table 43: Feedback follow-up questions: compensation exercise

| Sample | What was not believable about the options shown? |
|--------|--|
| PAF | A problem with compensation or no problem at all, who isn't going to prefer there to not be a problem? |
| PAF | Anything I'd believe this day and age |
| PAF | Can't believe compensation would be offered |

| Sample | What was not believable about the options shown? |
|--------|--|
| PAF | Compensation amount too high |
| PAF | Compensation for 6 hours of water loss is unbelievable |
| PAF | Dk |
| PAF | Don't know |
| PAF | Everyone prefers to have no disruption but inevitable it would happen for many reasons, compensation would be better used supplying alternative water to customers. Most sewage problems are caused by customers so we can't understand why you wo |
| PAF | Extreme examples |
| PAF | Hope to think it would happen |
| PAF | I can't believe those greedy inefficient bastards at the water company would front up with compensation. |
| PAF | I don't believe that would happen where we currently live |
| PAF | I don't believe the company would compensate that much. |
| PAF | I just don't believe water companies care enough about individuals to pay that much in compensation. |
| PAF | I think the compensation amounts were higher than would be paid. |
| PAF | I would never expect compensation for any of these issues |
| PAF | I've never heard of anyone receiving compensation in this way |
| PAF | In all scenarios, either it happened or it didn't - obviously I would prefer no interruption of water supply or sewage outside my house, so it is obvious which scenario would be chosen (although in the case of any compensation £100 is preferabl |
| PAF | It was hard to distinguish what to choose |
| PAF | Likelihood of getting compensation |
| PAF | N/A all believable scenarios. |
| PAF | Not on mains drainage . I would prefer the system to be updated rather paying compensation |
| PAF | Nothing |
| PAF | Noting |
| PAF | See before |
| PAF | Sometimes things go wrong-it is better to work together to remedy issues. There needs to be third option-work quickly to resolution-keep customer up to date on progress so arrangements can be made |
| PAF | "Sounds a bit weird |
| , | " |
| PAF | That it would take one week to resolve |
| PAF | That you are going to pay me money |
| PAF | The amount of money ascompensation |
| PAF | The amounts offered were too high |
| PAF | The compensation offered would not be easy to access! |
| PAF | The fact u would rather pay out than sort the problem or prevent it in the first place with regular maintenance |
| PAF | The information about the stoppage or damage is unlikely to be available in an incident. |
| PAF | Time frame |
| PAF | Wasn't about being believable - it was about being understandable |
| PAF | We have experienced sewage outside our property for the last few years. It has taken a lot of visits, investigations and pumping until the problem was hopefully resolved during Christmas 2021. We have not received any compensation whatsoever, |
| PAF | We live on a hill |
| PAF | Who would choose compensation for a sewage leak over no sewage leak? |
| PAF | Would they really give me that much money? I feel they would want to give the bare minimum to keep people quiet. |
| PAF | You have no problems. |

| Sample | What was not believable about the options shown? |
|--------|--|
| PAF | compensation levels were not credible |
| PAF | too much compensation on offer |
| Panel | Do they really pay that much compensation |
| Panel | Don't believe the company would pay the amount of compensation shown |
| Panel | Dont think they wud offer that amount of comp |
| Panel | Don't know |
| Panel | I cannot envisage such high compensation payments (such as £5000) |
| Panel | I couldn't believe that the water company would pay over £2K in compensation |
| Panel | I do not think my water company would offer compensation |
| Panel | I live in a tower block |
| Panel | I live on a hill it is very unlikely to ever happen. |
| Panel | It wouldn't happen in my area |
| Panel | See previous |
| Panel | The amount of money being offered as compensation. |
| Panel | The compensation amounts were very high |
| Panel | The compensation part |
| Panel | The level of compensation |
| Panel | The scenarios were not realistic or authentic. They also would not sply to the location thst I live in. |
| Panel | The sewage one happening |
| Panel | Yes |
| Panel | You wouldnt get that much compensation |
| Panel | i cant imagine anglian water offering me £10k compo under any scenario |
| Panel | life is not either or, it is mainly both or none |
| Panel | na |
| Panel | no idea |
| Panel | none |
| Panel | the amount of compensation |
| Panel | they are unlikely to happen |
| Panel | you cant have a problem or not |
| NHH | I was given options for the level of compensation for level of effect, then asked what would you prefer: to get compensation or for event not to happen, but of course I would prefer for the event not to happen - if they it were to happen then |
| NHH | I've had issues with other companies and the compensation entitlements are non existent, I would be very surprised if companies would compensate |
| NHH | Just from experience of where I am, I cant imagine we would have that problem outside out office for that period if time (sewer flooding). |
| NHH | The idea that water companies would be giving out 25% or 50% compensation for things going wrong - if they run out of money then they would start running sewerage into the rivers. |
| NHH | The level of compensations, which was about 5-10 times the annual water bill, I don't find believable. It's not the way it's happened in the past. |

Table 44: Feedback follow-up questions: compensation exercise

| Sample | What were the main factors driving your choices? |
|--------|--|
| PAF | Affect on us |
| PAF | Bills |
| PAF | Common sense and logic |
| PAF | Ensuring a continuous supply of water and no sewage spills |
| PAF | Ese of compensation pid but also would rather not hbe sewage thn £1000 |
| PAF | How it impacts my family is most important |
| PAF | I am 89yrs old with limited vision and very limited walking ability. I rely heavily on support from family. So not having water and needing to get bottles or standpipe refills would be unattainable. |
| PAF | I would prefer not to have foul sewage near my property regardless of the amount of compensation potentially being offered |

| Sample | What were the main factors driving your choices? |
|--------|---|
| PAF | Importance of reliability of service |
| PAF | Inconvenience versus compensation |
| PAF | Maintaining a clean water supply |
| PAF | Nothing |
| PAF | Personal |
| PAF | Prevention is better than a cure in most cases |
| PAF | Sewerage issues |
| PAF | The fact I'm at work for 60 hours a week so am rarely at home |
| PAF | WE CAN LIVE WITHOUT WATER DURING THAT PERIOD AS WE WOULD BE AT WORK SO IT WOULD NOT EFFECT OUR HOUSEHOLD. THERE IS NO WAY I WOULD LIKE SEWAGE IN MY HOUSE WHATEVER THE COMPENSATION. |
| PAF | Whether the compensation amount was enough for the inconvenience. |
| PAF | compensation payments drive up bills. some households would be affected worse than others ie, with lots of small children. For my household I would rather that southwest water did its job well and these incidents did not occur in the first plac |
| Panel | I DID NOT WANT A PROBLEM. COMPENSATION IS NOT THE ANSWER. SOMETIMES PROBLEMS ARE INEVITABLE AND ONE HAS TO ACCEPT THAT IT WAS NOT DELIBERATE. ALSO THE COMPANIES CONCERNED ARE NOT EXPECTING THESE PROBLEMS AND TAKE STEPS TO PREVENT IF POSSIBLE |
| Panel | I would prefer not to have any disruption. Money isn't everything |
| Panel | Less upheaval |
| Panel | Nope |
| Panel | its nice getting something back for your loyalty |
| NHH | Common sense. |
| NHH | It's about patient care and providing a service. We have a duty of care for our staff and patients. We don't want sewer flooding or the associated health risks. |
| NHH | The compensation wasn't driving my choices. We want a continuous supply of water and don't want sewerage running down the road outside the property. The figures didn't sound realistic. |

Table 45: Feedback follow-up questions: compensation exercise

| Sample | Why was it difficult choosing between the options? |
|--------|--|
| PAF | ???? |
| PAF | Bills |
| PAF | Did not know the extent of how bad sewer flooding is. |
| PAF | Finely balanced options |
| PAF | I don't know how much damage would be caused by the flooding, could cost more than £2000! |
| PAF | I would not want any of the incidents to occur. I already pay a significant amount each month for a good reliable service. The options implied whether I would accept a 'reactive' service or a 'proactive' service. Both have a cost but only the r |
| PAF | It wasn't difficult |
| PAF | It wasnt |
| PAF | It's hard to put monetary value on inconvenience. |
| PAF | Ju |
| PAF | N/A |
| PAF | N/a |
| PAF | NOT SURE |
| PAF | Need third option |
| PAF | No |
| PAF | No not all |
| PAF | No perspective was given |
| PAF | None |
| PAF | Not knowing what damage a sewer leak could do to our property made it hard to decide if £5000 compensation would be enough to cover any damage. |

| Sample | Why was it difficult choosing between the options? |
|--------|--|
| PAF | Not sure |
| PAF | Obviously we would all prefer not to have issues at all, but for the money offered it was sometimes worth it, if the disruption was very manageable. Also, I have never experienced a sewerage spill, so I was finding it difficult to know the d |
| PAF | See previous answers! |
| PAF | Stupid, obviously would prefer no problems with services! |
| PAF | frustration with the time it was taking |
| Panel | Because I couldn't decide whether it would be better for it to not happen or for the compensation |
| Panel | Don't know |
| Panel | I didn't understand some |
| Panel | It was only the sewerage leak I found difficult. I am on a low income and was tempted by the compensation package. |
| Panel | No |
| Panel | The questions were too ambiguous. |
| Panel | had to think how it would affect me |
| Panel | na |
| Panel | none |
| Panel | the amount |
| NHH | Because it's quite hard to put a value on things like that. |



Appendix C

Outcome Delivery Incentive
Research: Testing and
Development

Cognitive Testing (Wave 2) Report

May 2022

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1 Introduction

1.1 Background

| | |
|-----------------------|---|
| Context | <p>The core objectives of the study were to develop a methodology for obtaining the customer evidence to support ODI rate setting at PR24 (Stage 1), and to develop and test the materials based on this methodology (Stage 2).</p> <ul style="list-style-type: none">■ Stage 1 (completed) consisted of desk research, industry consultation and the development of options and recommendations for the measurement of customer preferences and values■ Stage 2 (current stage) consists of the development of the survey instrument, two phases of cognitive depth interviews to test the survey, and a quantitative pilot. <p>This report is the output of the second phase of cognitive testing for Stage 2 of this study.</p> |
| Core Objective | <p>Cognitive testing was required to ensure accessibility of the survey questionnaire and its embedded stimuli.</p> <p>Comprehensibility and accessibility were assessed during the first phase of cognitive testing but were tested again during this wave, as was the suitability of the stated preference stimuli. An additional focus of this phase of cognitive testing was to test new compensation levels for the 'compensation for service issues' stated preference task.</p> |

1.2 Overview of methodology

This report details the findings from the second phase of cognitive testing of the latest iteration of the quantitative survey tool and materials, which were developed according to the recommendations set out in the Stage 1 report and in accordance with the findings of the first phase of cognitive testing.

The objectives of this second phase of testing were:

- To further test accessibility and understanding of the questionnaire
- To capture any further feedback on the stimuli used in the stated preference exercises (both written descriptions and images), through spontaneous feedback and probing

- To test and gauge participants' responses to the levels of compensation being offered in the event of a customer experiencing a number of service issues. These were deliberately set at very high levels in order to provide a strong test of whether such high levels could be used within the main design without weakening the credibility of the exercise, and how the wording of the exercise might need to change to accommodate such levels. This focus was added following results from the pilot study (reported separately), which found that high proportions of participants, particularly amongst the non-household customer base, were choosing not to take the compensation offered even at the highest levels included in the pilot design. This finding indicated that higher levels of compensation might be needed for the main stage to allow for the estimation of average compensation required.
- To test the performance of two new service issues within the compensation exercise. Previously, two service issues had been included in this exercise; a short supply interruption and an external sewer flooding incident. For the present phase of testing, these service issues were retained within the exercise, with the higher compensation levels as discussed above, but to these were added a short, planned supply interruption and a boil water notice. These service issues were considered to be preferable to the initial two, and in particular in comparison to an external sewer flooding incident, because they are lower impact, and hence should require lower compensation; both would affect any property equally; there is little room for ambiguity in the service issue description; and the company will definitely be aware of the issue as they have already sent a notice, hence covering off a possible objection in relation to the credibility of compensation being paid.

Cognitive testing is important as the survey focuses on unfamiliar areas for consumers. Cognitive interviews involve taking a participant through the survey and include additional questions to probe for levels of comprehension, ease of completion and response to stimuli.

We interviewed six customers across household (HH), non-bill payers and non-household (NHH) groups. Interviews were conducted online, via the Zoom video meeting platform.

For HH and non-bill payer interviews, interviewers shared their screen and control of their computer, and participants were asked to complete the survey questionnaire themselves, as though they were completing online. Participants were asked to work through the questionnaire autonomously on the most part but were asked to highlight areas of the questionnaire that were inaccessible, difficult to understand, or troublesome to navigate or complete. As extensive cognitive testing had been undertaken in the earlier phase, this approach was deemed adequate to identify any areas for further change.

NHH participants were interviewed with the interviewer's camera off, to replicate as closely as possible the telephone-based (CATI) interview mode. Rather than completing the survey themselves, NHH participants were read the questions in the style of a CATI interview. The images to support the stated preference exercises were shared onscreen with NHH participants at the appropriate times, again replicating the anticipated approach for stimulus-assisted CATI interviews.

At key points during questionnaire completion, interviewers used additional cognitive probes to assess how well the question wording had been understood, clarity of instructions and service issue descriptions, and how easy or difficult it was to provide an answer. These probes focused on the presentation of service issues and associated compensation levels during this phase of testing, as this was the primary focus. These additional cognitive probes collectively formed the topic guide, which was used to direct all interviews, and was agreed and approved for use before fieldwork took place.

Recruitment and Incentives

All participants in cognitive testing were recruited by our recruitment partner, Riteangle, in line with prescribed quotas. The following incentives were offered to participants completing cognitive interview:

- £30 for household
- £30 for non-bill payers
- £40 for non-household

1.3 Sample design

Minimum quotas were set on gender, water company and age to ensure cognitive interviews were conducted with a range of different household, non-bill payer and NHH customers from multiple water companies. The three achieved subsamples for the cognitive interviews were as follows:

Household (HH, n=3)

All HH participants were responsible, either jointly or solely, for paying water bills of the household.

| Gender | | Social Grade | | | Age | | | |
|---|--------|--------------|------|----|-------|-------|-------|-----|
| Male | Female | AB | C1C2 | DE | 18-34 | 35-44 | 45-64 | 65+ |
| 1 | 2 | 0 | 2 | 1 | 0 | 1 | 1 | 1 |
| Water companies | | | | | | | | |
| Participants were customers of Yorkshire Water, Affinity Water and United Utilities | | | | | | | | |

Non-bill payer (n=1)

Non-bill payer was not responsible, either jointly or solely, for paying water bills of the household.

Non-bill payer was male, aged 18-34, a student and living with parents/guardians who are responsible for paying water and other household bills.

Non-household customers (NHH, n=2)

All participants were responsible, either jointly or solely, for paying business' water bills, or otherwise responsible for issues of water supply.

| Size | | | Reliant on water for business purposes | Wales |
|---|--------|-------|--|-------|
| Micro/small | Medium | Large | | |
| 1 | 1 | 0 | 2 | 0 |
| Water companies | | | | |
| Participants were customers of Thames Water and Essex & Suffolk Water | | | | |

NHH participants represented businesses in the manufacturing and construction industries.

2 Findings

Overall observations

Cognitive testing showed high levels of accessibility and good comprehension; questions and task instructions were clear and well understood, with participants able to respond as intended. Participants were encouraged to provide feedback at all points of the questionnaire, outside of specific cognitive probes, yet this resulted in very little need for improvement.

Stated preference task instructions were found to be clear and informative, successfully preparing participants for the choices they would be asked to make in both the ‘impact of service issues’ and ‘compensation for service issues’ tasks.

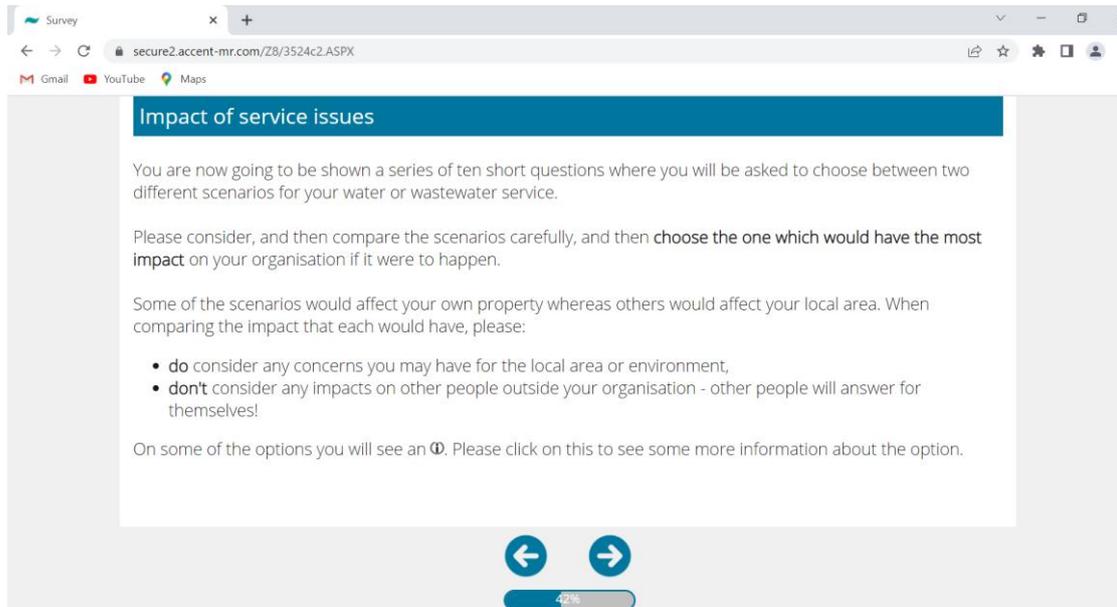
Some minor feedback and suggestions for improvement were captured on the service issues attributes that were presented at both started preference tasks.

This phase of testing focused on the ‘compensation for service issues’ task. Some participants expressed concerns about the conceivability (or ‘believability’) of the levels of financial compensation being offered, and this finding was particularly true of NHH participants in the research. In these cases, compensation was presented as a multiple of a business customer’s annual water bill, which resulted in sums of up to £500,000 being offered following the experience of a service issue (100 times annual spend).

The testing delivered insights into how the questionnaire might assure future participants that the sums being offered were genuine and accurate.

2.1 Impact of service issues stated preference task

Task instructions



Participants were asked to provide feedback on the task instructions after reading them. We found that participants took the time to read the instructions autonomously without the need to prompt them to revisit them and attend more carefully.

Participants told us that the instructions were clear, comprehensive and adequately outlined what they would be required to do over the upcoming screens. All participants were able to explain to the interviewer, when questioned, what would be required of them in the task, demonstrating good levels of comprehension.

When probed on whether anything was unclear, or could be made easier to understand, some household participants expressed a degree of confusion over the instruction to consider concerns for the local area and environment yet to disregard the impact on others when completing the task. Participants reasoned that other people are inextricable from the local area and environment; that they are 'one and the same'. No such confusion was encountered by NHH participants

“But people outside your household are in your local area or environment. It’s not that clear that those two are separate issues (...) I think it’s a bit confusing, that bit.” HH 2

“That, to me, the two are the same, really. The concern for the local area and environment involves people to me.” HH 3

We have considered this feedback in light of the need to ensure that the correct components of value are being considered to be consistent with the Total Economic Value basis of Cost-Benefit Analysis. This requires that people take into account any concerns they may have for the service issue in question rather than limiting it to the

direct impacts on their own household, but that they disregard impacts on the welfare of other people. We have also been mindful of the need not to add complexity or ‘wordiness’ to the introduction to the exercise, and of the fact that this introduction was also tested, in exactly the same form, within the previous round of cognitive interviews and found to work successfully overall.

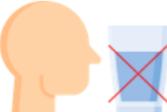
- **Consequently, we recommend only a minor change to the wording here to replace ‘environment’ with ‘natural environment’, to thereby add a small degree of additional clarity that this is not meant to be about other people.**

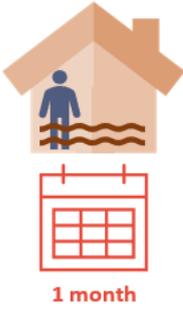
Feedback on service issue attributes

Having been tested in the earlier phase of cognitive interviews, participants in this phase of testing were not pressed to provide detailed feedback on each of the service attributes presented in this task, other than where there had been significant changes to the presentation between testing phases. Participants were, however, encouraged to offer feedback on those scenarios that were unclear, or stood to be improved.

Not related to a specific service issue scenario, one NHH participant noted that most scenarios presented were domestic in nature, probably affecting household customers but not likely to have a significant impact on business operations. The same participant noted that it was difficult to choose which scenario would have the greater impact on his business where there was no direct threat or consequence (for example in the case of low flows in nearby rivers, or river water elsewhere not being of high quality).

For reasons of brevity, this report includes only those attributes where feedback was captured from participants.

| Attribute | Feedback |
|---|--|
| <p style="text-align: center;">Do not drink notice (48 hours)</p> <ul style="list-style-type: none"> ▶ Your water company sends you a notice saying not to drink your tap water, or use it for cooking or preparing food, to avoid the risk of becoming ill  ▶ This is due to traces of a harmful chemical being found in the water supply in your area  ▶ You can still safely use tap water for washing and cleaning ▶ Water would be made available nearby to collect in buckets or bottles and vulnerable people would be delivered water directly. ▶ The notice arrives on a Wednesday. After two days the water will be safe to drink again and your water company will notify you. | <p>One NHH participant noted that there being no potable water available was not acceptable according to health and safety guidelines.</p> <ul style="list-style-type: none"> ➤ No action required |
| | <p>Feedback was specifically sought on this attribute given the change since the last wave of testing.</p> |

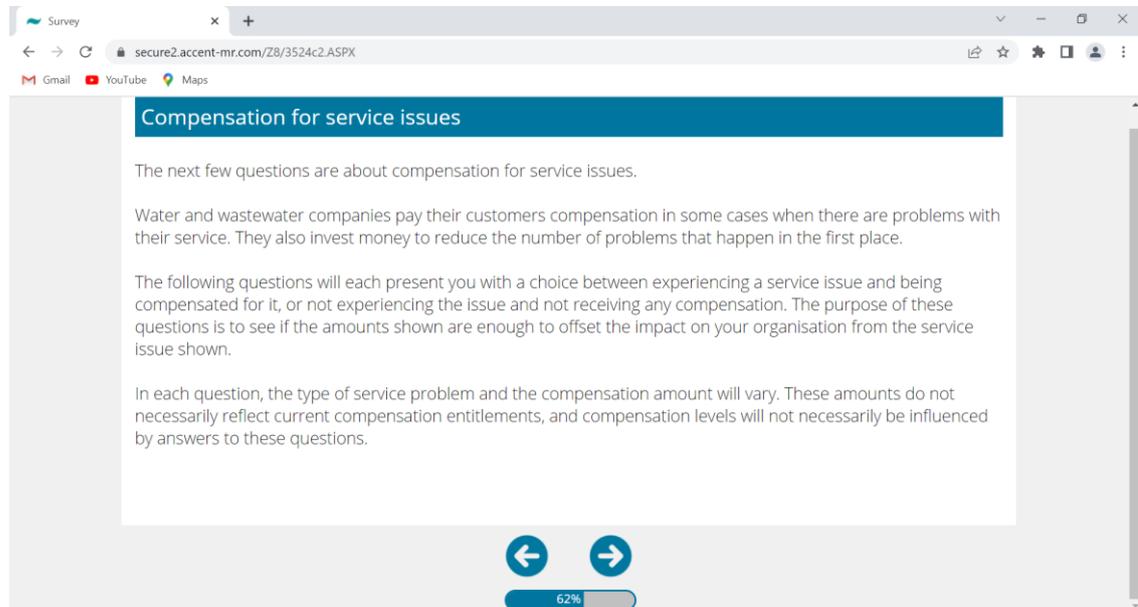
| Sewer flooding: INSIDE your property (1 month) | |
|---|--|
| <ul style="list-style-type: none">▶ Flooding from the sewer gets inside your property, affecting your living areas▶ This results from prolonged heavy rainfall in your local area▶ It gives off a foul smell, and damages floors, walls and furniture.▶ It takes 1 month for your property to get back to normal |  <p>The severity of the issue was clear. Participants were clear that the issue would be ongoing for one month and were concerned by this. The risk to health and damage to property and belongings was evident.</p> <p><i>“For a whole month? That’s really very bad.”</i> NHH 1</p> <p><i>“That would be horrible to live with. One month is a long time!”</i> HH 1</p> <p><i>“All the sewage would come in – revolting!”</i> HH 3</p> <ul style="list-style-type: none">➤ No action required – the change from 1 week to 1 month duration has been clearly communicated |

Post-completion questions

Participants’ answers to these questions, as well as the insights gained from any probing, suggest that the choices presented in the service issues stated preference task are easy to understand, the scenarios described are believable, and that it was easy to choose between the two service issue scenarios. As above, one NHH participant shared the difficulty experienced in decision making when neither service issue had a direct impact on their business.

2.2 Compensation for service issues stated preference task

Task instructions



As with the initial stated preference task, participants were asked to provide feedback on this task rubric. Believing they were now familiar with the format of the tasks, and what was required to complete them, participants tended to read this screen more quickly. That said, on probing both NHH and household customers evidenced good levels of understanding of what they would see on the following screens and what they would be asked to do. Participants understood that they would be faced with the decision of either experiencing a service issue and being compensated for it or not experiencing any issue – things carrying on unaffected – and thus receiving no compensation. Testing captured no requests for clarification nor any suggestions for improving these instructions.

Feedback on service issue attributes presented during the compensation task

Probes were built into the topic guide to test how well presented the scenarios at this task were. Angles included clarity of the information presented, sufficiency of the information to allow the participant to understand the issue, adequacy of the information to make the choice between experiencing the issue or not, the value of the images, and clarity of the compensation being offered.

Included here are all service issues presented at this compensation task.

| Attribute | Feedback |
|--|--|
| <p>PLANNED water supply interruption (6 hours)</p> <ul style="list-style-type: none"> ▶ Your water company sends you a notice in the post that in 2 days' time your water supply will stop for 6 hours, affecting all taps, toilets, dishwasher, etc ▶ This is due to planned maintenance in your local area ▶ As planned, it then stops between 12:00 and 18:00 on a Wednesday afternoon <p>Compensation paid*: 5 times the amount of your annual water services bill</p>   | <p>Clarity The information presented was clear.</p> <p>Sufficiency to understand The information was sufficient to allow participants to understand the scenario.</p> <p>Adequacy to make the choice Adequate information presented to enable participants to make the choice.</p> <p>Images To one participant, the cross through the tap suggested that one should not turn the tap on (likened to a 'no entry' sign) rather than there being no water.</p> <p>Compensation Non-bill payer noted that there is no legend to explain the meaning of the asterisk.</p> <ul style="list-style-type: none"> ➤ Consider amending image ➤ Add legend to define asterisk |
| <p>Sewer flooding: OUTSIDE your property (1 week)</p> <ul style="list-style-type: none"> ▶ Flooding from the sewer affects access to your front door / entrance ▶ This results from prolonged heavy rainfall in your local area ▶ It gives off a foul smell, and could cause damage ▶ It takes 1 week for access to your property to get back to normal <p>Compensation paid*: 100 times the amount of your annual water services bill</p>   | <p>Clarity Overall, participants saw this attribute as clear. Does this really mean access only to the front door, or access to the property as a whole? What about side and back doors – are they affected?</p> <p>Sufficiency to understand Notwithstanding the above, information was sufficient to allow participants to understand the scenario.</p> <p>Adequacy to make the choice Adequate information presented to enable participants to make the choice.</p> <p>Images Participants suggested the image could be improved by showing sewage under the houses rather than to the side.</p> |

| | |
|---|--|
| | <p>Compensation</p> <p>Household participant suggested compensation values could be made clearer with the use of commas, e.g. £20,000 rather than £20000.</p> <p>There is no legend to explain the meaning of the asterisk.</p> <ul style="list-style-type: none"> ➤ Clarify definition of ‘access’ ➤ Consider amending image ➤ Add commas to sums offered ➤ Add legend to define asterisk |
| <p style="text-align: center;">Boil water notice (48 hours)</p> <ul style="list-style-type: none"> ▶ Your water company sends you a notice saying you need to boil tap water before drinking, cooking or preparing food to avoid the risk of becoming ill ▶ This is due to traces of e-coli being found in the water supply in your area ▶ You can still safely use tap water for washing and cleaning ▶ You can still safely use tap water for washing and cleaning. The notice arrives on a Wednesday. After two days the water will be safe to drink again and your water company will notify you <p style="text-align: center;">Compensation paid*: 10 times the amount of your annual water services bill</p> | <p>Clarity</p> <p>The content of bullet 3 is repeated in bullet 4. (This was due to a programming error, and was hence not deliberate.)</p> <p>Sufficiency to understand</p> <p>The situation and required action are sufficiently explained.</p> <p>Adequacy to make the choice</p> <p>Participants asked how they would receive such a notice.</p> <p>Images</p> <p>Participants suggested a boiling kettle and a thermometer reading 100c may better communicate the need to ‘boil’.</p> <p>Compensation</p> <p>There is no legend to explain the meaning of the asterisk.</p> <ul style="list-style-type: none"> ➤ Remove repeated information (bullets 3 and 4) ➤ Consider amending image ➤ Add legend to define asterisk |
| <p style="text-align: center;">UNEXPECTED water supply interruption (6 hours)</p> <ul style="list-style-type: none"> ▶ Your water supply stops working without warning, affecting taps, toilets, dishwasher, etc ▶ This is due to a burst pipe in your local area ▶ It stops for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon <p style="text-align: center;">Compensation paid*: 10 times the amount of your annual water services bill</p> | <p>Clarity</p> <p>The information presented was clear.</p> <p>Sufficiency to understand</p> <p>The information was sufficient to allow participants to understand the scenario.</p> <p>Adequacy to make the choice</p> <p>Adequate information presented to enable participants to make the choice.</p> |

| | |
|--|--|
| | <p>Images To one participant, the cross through the tap suggested that one should not turn the tap on (likened to a 'no entry' sign) rather than there being no water.</p> <p>Compensation The meaning of the asterisk is explained at this attribute.</p> <p>➤ Consider amending image</p> |
|--|--|

Compensation being offered

One of the key objectives of this phase of testing was to test whether participants could find very high levels of compensation for the service issues presented realistic and believable, for the purpose of ensuring that a sufficient proportion of participants would choose to accept the service issue in question and take the compensation offered. This phase of testing aimed to explore how, if at all, the exercise might need to be refined to ensure the believability of the compensation scenario.

We found mixed responses when probing household customers on the believability of the sums being offered, where reactions varied by service issue. NHH participants were more likely to find the compensation being offered to be unbelievable.

It is worth noting that compensation was offered to household (and non-bill paying) customers as a fixed sum whereas NHH customers were offered compensation as a multiple of their annual bill. This required NHH participants to initially calculate the compensation being offered – although this did not present a problem for the two NHH customers interviewed – by multiplying their water spend. With estimated annual bills of £2,500 and £5,000 and compensation levels of up to 100 times annual bills being offered, this resulted in compensation sums of up to £500,000 being offered to NHH participants in relation to the external sewer flooding scenario. In contrast, the maximum level of compensation offered to a household customer in this testing phase was £40,000, which again is roughly around 100 times the average annual household water and wastewater bill.

Unexpected water supply interruption (6 hours):

Sums offered ranged between £500 and £2,000 for HH and up to 10 times annual bill for NHH

Reactions here were mixed, but the general sentiment was that sums offered were very high, but not unbelievable. Participants reasoned that one might expect to receive compensation given the unexpected nature of the supply issue and on the basis that the interruption might go on for more than the stated 6 hours. In this scenario, where up to £2,000 was offered to household customers, none dismissed the offer because they felt they would not be compensated to these levels. A level of trust was placed in water

companies that they would not publish these sums if they were not accurate and genuinely available.

“£500 is a lot for six hours. It’s no hardship, really.” HH3

“Yes, they’re believable. They [water company] must have it [the money to fund compensation payouts].” HH1

➤ These findings suggest no substantive issues with the levels used for this service issue.

Sewer flooding outside your property (1 week):

Sums offered ranged between £10,000 and £40,000 for HH and up to 100 times annual bill for NHH

The sums being offered here were not regarded as believable in general. Multiple participants believed that this issue may affect several residents and started to multiply the compensation by a theoretical number of households that would need to be paid. The resulting costs to water companies led these participants to conclude that the compensation being offered here was not believable. One customer also noted that they had experienced similar issues previously yet been offered no compensation at that time.

“How many properties will they have to pay out on though?” HH 1

“I can’t see them paying you £10,000 for that! I could go on a cruise with that!” HH 3

“I can retire on option A!” NHH 1

Some reasoned that the level of damage that might result may warrant generous amounts of compensation, suggesting a link between the perceived severity of the service issue and the amount of money offered.

➤ These findings indicate that the amount of money that needs to be shown to encourage people to choose this option could be too high to be believable. They also suggest that further text is needed to clarify that the amounts being shown differ from those currently offered by water companies.

Planned water supply interruption (6 hours):

Sums offered ranged between £250 and £1,000 for HH and up to 5 times annual bill for NHH

Both households and NHH participants considered the sums on offer to be too generous. One household respondent remarked that they had experienced similar issues previously and had never been compensated. However, household customers accepted the offers as accurate and genuine.

“I’ve had loads of planned interruptions and never been compensated.” HH 2

For NHH customers, the sums being offered were considered high compared to the likely turnover or profit in the same 6-hour period.

“That’s £12,000! Our water bill is £2,500 a year. Five times that is over £12,000. We don’t make £12,000 in six hours; I wish we did!”
NHH 1

- Although seen as very high, there were no indications that the choices were answered incorrectly as a result of the amounts being considered incredible. This supports the use of this service issue and the amounts shown.

Boil water notice (48 hours):

Sums offered ranged between £500 and £1,000 for HH and up to 10 times annual bill for NHH

For household customers the sums between £500 and £1000 here were regarded as believable – more so than for any other scenario. In this case, the reasoning was that there is a risk to health that is being compensated for. Whilst one participant commented that the compensation was not commensurate with the inconvenience, they did comment that levels of compensation were more plausible in this scenario than in others.

“Yes, it’s more believable [the level of compensation] here because of the potential danger and risk to people’s health” HH2

Compensation for NHH customers, however, was seen as less realistic, with one being convinced that the amounts being presented were a mistake in questionnaire programming whilst the other said they ‘could not see water companies offering these amounts’.

“But it’s only the people in the office, who tend to boil it [water] for a cup of tea or coffee anyway. So it’s only going to be the people who drink tap water and saying to them, ‘there’s loads of water bottles there in the corner, use that for two days’, put a few signs around saying don’t drink the water! It’s not a handicap or inconvenience for £50,000.” NHH 2

- For this attribute, the amounts shown could potentially be too high for non-households, but for households they may be about right. Quantitative testing would be needed to ensure the right levels are shown if this service issue is to be used as one of the pivot attributes for the main survey.

Assuring participants on the sums being offered

We asked participants how they might be assured that the sums being offered in compensation were accurate and genuine. The following suggestions were made:

- Advise that these are the levels of compensation dictated by, or agreed with, Ofwat

- Provide contact details for Ofwat to allow participants in the research to verify that the levels of compensation are accurate and genuine
- Link participants to an ‘official document’ that outlines their legal right to compensation and the amounts available
- Explain how the compensation had been calculated and why it is ‘so generous’.
- **Given that the levels on offer are to be experimentally designed rather than based on real-world compensation amounts, the first three of these suggestions are infeasible. Instead, we interpret these findings as indicating a need to explain to participants why they are being offered amounts that are higher than they may have expected, and we recommend a change to the introduction of the exercise accordingly.**

Use of the term ‘compensation’

Early feedback from a NHH participant suggested that the sums being offered did not match his definition of ‘compensation’ but instead constituted ‘incentives’. The levels of compensation offered as multiples of annual bills were considered too generous to make good the inconvenience that might be experienced because of a service issue.

Following this feedback, a probe was added to the topic guide to test the appropriateness of the word ‘compensation’, and the suitability of an alternative term ‘one-off payment’.

Most participants from this point onwards agreed that ‘compensation’ had been used appropriately within this stated preference task and that its use met with their definition. Participants consistently defined compensation as a ‘sum of money (or indeed a service) offered in recognition of inconvenience caused or loss suffered’.

However, these findings reinforced our view that the term ‘compensation’ was causing a link in participants’ minds between the severity of the issue and the amount of money being offered

In testing of the term ‘one off payment’ participants tended to believe that compensation was the more appropriate description, given the circumstances under which it was being offered. Participants offered alternative descriptions including ‘inconvenience payment’ and ‘remuneration’ but none suggested that the description of the sum on offer would impact their decision making in the task.

“Potato, potato.” NHH 2

“No, it’s all the same thing. The wording would have very little impact [on my decision].” HH 1

- **Based on these findings, we conclude that ‘one-off payment’ would work equally as well as ‘compensation’ from a cognitive perspective, whilst (partially) mitigating against the risk of participants associating the amount shown with the severity or inconvenience of the service issue itself. Consequently, we recommend revising the questionnaire accordingly to reflect this finding.**

Mode of payment

Participants in this phase of testing expressed a preference for a direct bank credit/BACS payment over receipt of a cheque but would accept a cheque if necessary. Objections included the need for them to personally take action to deposit the cheque and the time needed for the funds to become available to them.

When asked whether they would be willing to accept a credit to their water bill of the sum offered in compensation, acceptability was driven by the value of the payment being made available. For both NHH (whose compensation sums were invariably significant) and household customers who stood to be paid large sums, there was reluctance to receive a bill credit, with many noting that they would never 'spend' such a credit in their lifetime. Some would have accepted this if a cash refund was not an option, whilst others would have opted not to experience the service issue at all if this was the only means of compensation available.

“Who needs a £500,000 credit on their water bill?” NHH 2

“A credit of £40,000? I could be dead by then!” HH 1

- **Based on these findings, we recommend changing the mode of payment to be either a bank credit, for those who have a direct debit setup, or a cheque otherwise, and not a credit to the water bill.**

Appendix C1

Topic Guide (Phase 2, Household)



| | |
|------------------|--|
| Participant Name | |
| Date / time | |
| Telephone Number | |
| URN | |

Introduction **5 mins (5)**

Good morning/afternoon/evening. My name is ... and I work for an independent market research company called Accent. We are conducting research for Ofwat, the water industry regulator, and Consumer Council for Water, the consumer organisation which represents the interests of water and sewerage customers in England and Wales.

The research is about views on water and sewerage services, and changes to water bills for the five years from 2025. Specifically, we want to get your feedback on a questionnaire that we plan to use to ask a large number of people to share their views on water and sewerage. Your feedback while completing the questionnaire, along with feedback from others, will allow us to understand how well the questionnaire works and how it might be improved. **[Spontaneous interviews – ALL W2]** With this in mind, I will be asking you to share your thoughts on the questionnaire as you work through it.

The research is being conducted in accordance with the Code of Conduct of the Market Research Society (MRS) and also with the Data Protection Act. This means that everything you say is confidential and will not be attributed to you personally unless you give your permission for us to pass your comments on in named format.

I would like to record our discussion. This is standard market research procedure and is to ensure accuracy – so I do not have to try to remember what you have said – and for analysis purposes only. The recordings will not be passed to any third party not associated with the research project, and in reporting the findings from this research everything that you say will be confidential and will be reported in anonymised form only. Are you happy for me to record the session?

Our discussion will last around **30** minutes.

I'd like to stress that we are interested in your views. There are no right or wrong answers today; and this is not a test of your ability to complete the questionnaire. Instead, it is a test of how well the questionnaire has been designed to make it easy to complete. I haven't been involved in the design and development of the questionnaire, which means you can be open and honest when sharing your views on completing it.

In a moment, I will hand over control of my screen to you so you can complete the survey.

As you are answering questions and deciding between different options, I want to understand how you are making those choices. Please talk me through as you are making your choices and I might prompt you with some additional questions as you work your way through the questionnaire. Also, if you come across anything which you don't understand or need further clarification on, please ask me as we go along.

Interviewer instructions

NA (5)

- **Share window with Accis questionnaire and allow participant to control your screen to complete questionnaire.**
- **Remind participants to talk aloud as they deliberate over any options. Stop and probe at the questions below (unless ‘think aloud’ commentary provides adequate insight).**
- Make a note of:
 - Any significant pauses or delays in responding
 - Participants re-reading questions/text or changing their response
 - Mentions of any question or section of text being confusing/complicated/unclear/long, or missing important information
 - Response options that they struggle to choose between
 - Questions they ask about elements of the survey (try not to answer these unless they mean the participant is unable to progress).

Impact of service issues SP task

10 mins (15)

- **Impact of service issues SP preamble [stop and probe before participant starts SP task]**
 - Were these instructions clear?
 - Was it clear what you would have to do?
 - If not:
 - What, if anything, would make this introduction easier to understand?
- Q17-24c
 - As you work through this set of questions, please let me know if there is anything that is unclear or difficult to understand. If you have suggestions on how we might make things easier, please let me know [interviewer to record on separate attributes document]

[INTERVIEWER INSTRUCTION: Probe and capture feedback on attribute “SEWER FLOODING INSIDE PROPERTY (1 month)” – TILE 10] [interviewer to record on separate attributes document]

- **Q25 [Note the participant’s response to each element of this question and probe on reasons for these responses – especially where the response is not ‘strongly disagree’ or ‘disagree’]**
 - *For I was able to understand the choices:* What would have helped?
 - *For I found the options believable:* What was not believable? What would have made the option(s) more believable?
 - *For My choices were based on how much impact I thought each option would have on my household:* What did you base your choices on if not the impact on your household?
 - *For I found it easy to choose between the options:* Why is this, and what would have made it easier to choose?

Compensation for service issues SP task (CRITICAL)

15 mins (30)

- Compensation for service issues SP preamble [**Stop and probe before participant starts SP task**]
 - Were these instructions clear?
 - Was it clear what you would have to do?
 - If not:
 - What, if anything, would make this introduction easier to understand?

- For **Sewer Flooding OUTSIDE your property (1 week)**:
 - How clear or unclear is the explanation of this service issue?
 - What would make it clearer or easier to understand?
 - What do you think we mean by access to your front door/entrance/property?
 - Do the images here aid understanding?
 - Does this tile give enough information to allow you to decide on which option you prefer?
 - Were the levels of compensation clear?
 - Were the levels of compensation offered **believable**?
 - **If believed to be unrealistic:**
 - Did you dismiss the compensation offer because you didn't believe you would really be compensated?
 - If I could assure you that this amount was available, would you have chosen to experience the service issue instead?
 - How, in the questionnaire, could we best assure you that these levels of compensation were accurate and genuine?
 - [**If participant opted for no service issue after being presented with 2 levels of compensation**] What amount of compensation would have made you choose differently? Why?

- For **UNEXPECTED water supply interruption (6 hours)**:
 - How clear or unclear is the explanation of this service issue?
 - What would make it clearer or easier to understand?
 - Are you satisfied with the explanation of why this unexpected service issue has happened?
 - Do the images here aid understanding?
 - Does this tile give enough information to allow you to decide on which option you prefer?
 - Were the levels of compensation clear?
 - Were the levels of compensation offered **believable**?

- **If believed to be unrealistic:**
 - Did you dismiss the compensation offer because you didn't believe you would really be compensated?
 - If I could assure you that this amount was available, would you have chosen to experience the service issue instead?
 - How, in the questionnaire, could we best assure you that these levels of compensation were accurate and genuine?
- **[If participant opted for no service issue after being presented with 2 levels of compensation]** What amount of compensation would have made you choose differently? Why?

- For **PLANNED water supply interruption (6 hours):**
 - How clear or unclear is the explanation of this service issue?
 - What would make it clearer or easier to understand?
 - Are you satisfied with the explanation 'planned maintenance in your area'?
 - Do the images here aid understanding?
 - Does this tile give enough information to allow you to decide on which option you prefer?
 - Were the levels of compensation clear?
 - Were the levels of compensation offered **believable**?

 - **If believed to be unrealistic:**
 - Did you dismiss the compensation offer because you didn't believe you would really be compensated?
 - If I could assure you that this amount was available, would you have chosen to experience the service issue instead?
 - How, in the questionnaire, could we best assure you that these levels of compensation were accurate and genuine?
 - **[If participant opted for no service issue after being presented with 2 levels of compensation]** What amount of compensation would have made you choose differently? Why?

- For **Boil water notice (48 hours):**
 - How clear or unclear is the explanation of this service issue?
 - What would make it clearer or easier to understand?
 - Is it clear **why** this notice has been given?
 - Is it clear **what** you will have to do for this period?
 - Do the images here aid understanding?
 - Does this tile give enough information to allow you to decide on which option you prefer?
 - Were the levels of compensation clear?
 - Were the levels of compensation offered **believable**?

- **If believed to be unrealistic:**
 - Did you dismiss the compensation offer because you didn't believe you would really be compensated?
 - If I could assure you that this amount was available, would you have chosen to experience the service issue instead?
 - How, in the questionnaire, could we best assure you that these levels of compensation were accurate and genuine?
- **[If participant opted for no service issue after being presented with 2 levels of compensation]** What amount of compensation would have made you choose differently? Why?

[After completing Q30-31H]

- Are you familiar with the word 'compensation'?
- What does it mean to you? Define it in your own words.
- Do the sums of money we have presented here meet your definition of compensation or not? Why?
 - If not, what term might better describe the sums being offered?
- How would you feel if we'd used the term 'one off payment' here instead of compensation?
- Would using a different term have changed your decision making?
- **[Do not ask of future/non-bill payers, as they would be issued a cheque: skip]** Compensation is being offered in the form of a credit to your bank account or by sending a cheque.
 - How do you feel about these options? Is one preferable to the other for you and your business? Why?
 - How would you feel if compensation was offered by means of a credit to your water bill? Would this have impacted the choices you made?
- Compensation is being offered as an automatic payment within 7 days of the service issue.
 - Did you have any reason to doubt this? Were you sceptical at all that this compensation would be awarded as promised?
 - Did this influence your decision making/choice?
- Q32 **[Note the participant's response to each element of this question and probe on reasons for these responses – especially where the response is not 'strongly agree' or 'agree']**
 - For *I was able to understand the choices*: What would have helped? **[if not already covered above]**
 - For *I found the options believable*: What was not believable? What would have made the option(s) more believable? **[if not already covered above]**
 - For *My choices were based on how much impact I thought each option would have on my household and whether the amount of money shown was enough to compensate for this*: why do you say this? **[if not already covered above]**

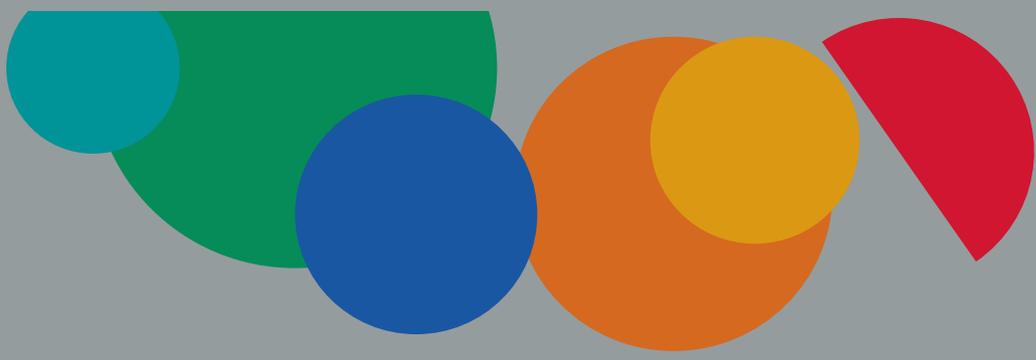
- For *I found it easy to choose between the options*: why is this and what would have made it easier to choose? **[if not already covered above]**

Wrap and close

0 min (30)

Record BACS details for incentive payment, if not already captured by Riteangle, and add to profile sheet.

Thank and close.



Appendix C2

Questionnaire

Water Company Research

This survey is designed to get your views on water and sewerage services. It is being undertaken on behalf of Ofwat, the regulator, and Consumer Council for Water (CCW), the consumer organisation which represents the interests of water and sewerage customers in England and Wales.

The research will be used to help water companies plan investment in their service from 2025, and will influence your future water services and bills.

This research is being conducted by Accent, an independent research agency on behalf of Ofwat and CCW.

NOT PANEL: Anyone completing the survey will be eligible for a £10 voucher (either an Amazon voucher, an M&S voucher, Love2Shop voucher). Alternatively we can donate your incentive to WaterAid. Details on how claim your voucher are given at the end of the survey.

The questionnaire will take about 15 minutes to complete.

Any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society. If you would like to confirm Accent's credentials type Accent in the search box at: <https://www.mrs.org.uk/researchbuyersguide>.

Q1. Any data collected over the course of this interview that could be used to identify you, such as your name, address, or other contact details, will be held securely and will not be shared with any third party, including your water company, unless you give permission (or unless we are legally required to do so). Our privacy statement is available at <https://www.accent-mr.com/privacy-policy/>.

Do you agree to proceeding with the interview on this basis?

Yes

No **THANK AND CLOSE IF ONLINE**

Q2. **ASK HH ONLY:** Do you or any of your close family work in market research or for a water company?

Yes **THANK & CLOSE**

No

Q3. **IF NHH ASK:** Are you solely or jointly responsible as the decision maker for paying your organisation's water and wastewater bill?

Yes

No **THANK AND CLOSE**

Q4. **IF POSTCODE DATA NOT AVAILABLE FROM SAMPLE** Please tell us the first half of your postcode. So if your full postcode is ME1 3BN please just tell us ME1 3. (This will be used to check who supplies

your water and wastewater services) **NHH ONLY** If your organisation operates across multiple sites, please answer for the site you typically work from

IF HH AND REFUSE GO TO Q6
IF NHH AND REFUSE THANK AND CLOSE

Q5. **IF HH AND DIFFERENT WATER AND WASTEWATER:** Based on your postcode area, we believe your clean water service company should be #WATER COMPANY# and your wastewater service company should be #WASTEWATER COMPANY#. You may receive separate bills from each organisation or one combined bill. Is that correct?

IF SAME WATER AND WASTEWATER: Based on your postcode area, we believe your clean water service and wastewater service company should be #WATER COMPANY#. Is that correct?

Yes **GO TO Q8**
No **GO TO Q6**
Don't know **GO TO Q8**

Q6. **IF HH:** Which water company supplies clean water to your home?
IF NHH: Which of the following companies bill you for clean water services at your premises?

Affinity Water
Anglian Water
Bournemouth Water
Bristol Water
Cambridge Water
Essex & Suffolk Water
Hafren Dyfrdwy
Hartlepool Water
Northumbrian Water
Portsmouth Water
Severn Trent Water
South East Water
Southern Water
South Staffs Water
South West Water
Sutton & East Surrey (SES) Water
Thames Water
United Utilities
Welsh Water/Dŵr Cymru
Wessex Water
Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: Retailers

ADSM
Berendsen UK Limited
Blackpool Borough Council
BT
Business Stream
Castle Water
Clear Business Water
ConservAqua Ltd
Everflow
First Business Water
Greene King Brewing & Retailing
Heineken UK Limited
Independent Water Networks
J Sainsbury
John Lewis PLC

Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (Please specify) THEN THANK AND CLOSE
Don't know THANK AND CLOSE
None THANK AND CLOSE

Q6B IF NHH: Do these bills include wastewater services or do you receive separate bills for wastewater?

Include wastewater services
Receive separate bill for waste water

Q7. IF HH: Which company provides wastewater (sewerage) services to your home?
IF NHH AND Q6B=2: Which of the following companies bill you for wastewater services at your premises?

Anglian Water
Hafren Dyfrdwy
Northumbrian Water
Severn Trent Water
Southern Water
South West Water
Thames Water
United Utilities
Welsh Water/Dŵr Cymru
Wessex Water
Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: Retailers

ADSM
Berendsen UK Limited
Blackpool Borough Council
BT
Business Stream
Castle Water
Clear Business Water
ConservAqua Ltd
Everflow
First Business Water
Greene King Brewing & Retailing
Heineken UK Limited
Independent Water Networks
J Sainsbury
John Lewis PLC

Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (please specify) THEN THANK AND CLOSE
Don't know THANK AND CLOSE
None THANK AND CLOSE

Q8. IF HH: Are you the person in your household who is responsible, either solely or jointly, for paying for your water services bill?

I have complete responsibility for payment
I share responsibility for payment with others in my household
I have no responsibility
Don't know

BILLPAYER: = CODE 1 OR 2
NONBILLPAYER: = CODE 3-4

Q9. IF HH Which of the following age groups do you fall into?

18-29
30-64
65 or older
Prefer not to say
USE HH QUOTA IF PANEL

Q10. IF HH What is your sex? (A question about gender identity will follow)

Male
Female
USE HH QUOTA IF PANEL

Q10a **IF HH:** Is the gender you identify with the same as your sex registered at birth? **We would like to collect this to ensure that people of all backgrounds are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.**

Yes

No type in gender identity

Prefer not to say

Q11. **IF HH & BILLPAYER:** Do you receive separate bills for water and sewerage services or one bill for both services?
IF NHH: Does your organisation receive separate bills for water and sewerage services or one bill for both services?

Separate bills

Combined bills

Don't know

Q12.

Q12b **IF HH & BILLPAYER:** How often do you make payment for water and sewerage services?

Annually

Every six months

Every month, over eight months of the year

Every month

Other (please specify)

Q13. **IF HH & BILLPAYER AND Q12B=1, 4-5 ASK:** How much, roughly, do you pay for water and sewerage services each month, or in total for a year? The month amounts assume that the bills are paid evenly over a 12-month period, but some customers pay over a different number of months.

IF HH & BILLPAYER AND Q12B=3 ASK: How much, roughly, do you pay for water and sewerage services for each of the eight months, or in total for a year?

IF HH & BILLPAYER AND Q12B=2 ASK: How much, roughly, do you pay for water and sewerage services every 6 months, or in total for a year?

IF NHH: Which of the following bands do you estimate that your organisation's annual total water bill at your premises falls into – that's the amount for both water and sewerage services.

IF HH and 12B=1, 4 or 5: Less than £10 per month/Less than £120 per year

IF HH and 12B=1, 4 or 5: £10 - £19.99 per month/£120 - £239.99 per year

IF HH and 12B=1, 4 or 5: £20 - £29.99 per month/£240 - £359.99 per year

IF HH and 12B=1, 4 or 5: £30 - £39.99 per month/£360 - £479.99 per year

IF HH and 12B=1, 4 or 5: £40 - £59.99 per month/£480 - £719.99 per year

IF HH and 12B=1, 4 or 5: £60 - £79.99 per month/£720 - £959.99 per year

IF HH and 12B=1, 4 or 5: £80 or more per month /£960 or more per year

IF HH and 12B=3: Less than £15 per month/Less than £120 per year

IF HH and 12B=3: £15 - £29.99 per month/£120 - £239.99 per year

IF HH and 12B=3: £30 - £39.99 per month/£240 - £359.99 per year

IF HH and 12B=3: £40 - £59.99 per month/£360 - £479.99 per year

IF HH and 12B=3: £60 - £89.99 per month/£480 - £719.99 per year

IF HH and 12B=3: £90 - £199.99 per month/£720 - £959.99 per year

IF HH and 12B=3: £120 or more per month /£960 or more per year

IF HH and 12B=2: Less than £60 every 6 months/Less than £120 per year

IF HH and 12B=2: £60 - £119.99 every 6 months /£120 - £239.99 per year

IF HH and 12B=2: £120 - £179.99 every 6 months /£240 - £359.99 per year

IF HH and 12B=2: £180 - £239.99 every 6 months /£360 - £479.99 per year

IF HH and 12B=2: £240 - £359.99 every 6 months /£480 - £719.99 per year
 IF HH and 12B=2: £360- £479.99 every 6 months /£720 - £959.99 per year
 IF HH and 12B=2: £480 or more every 6 months /£960 or more per year
 IF NHH: Less than £1,000 per year
 IF NHH: £1,000 to £5,000 per year
 IF NHH: £5,000 to £25,000 per year
 IF NHH: More than £25,000 per year
 I'm not sure

Service issues

Q14. Have you ever experienced any of the following? *ROTATE*

Please tick one or more

Unexpected water supply interruption

Planned water supply interruption

Unexpected low pressure

Boil water notice

Do not drink notice

Discolouration of water coming out of your tap

A change to the taste and/or smell of your tap water

Sewer flooding: inside your property

Sewer flooding: outside your property

Hosepipe ban

Emergency drought restrictions (e.g. tap water being cut off on a rota basis to conserve supplies)

Pollution in a river

Pollution in the sea near a beach

Other (please specify)

I haven't experienced any of these GO TO Q15

Q14b **IF ONE BELOW IN Q14 ASK:** Have you experienced the following in the last 12 months?

IF BOTH BELOW IN Q14 ASK: Have you experienced any of the following in the last 12 months?

IF TICKED IN Q14: Discolouration of water coming out of your tap

IF TICKED IN Q14: A change to the taste and/or smell of your tap water

Use of rivers and beaches in the UK

IF HH: We would like to now find out a bit more about your use of rivers and beaches in the UK.

Q15. **IF HH:** How often do you, or anyone in your household, use rivers in the UK for any of the following activities?

| | Often (more than six times a year) | Sometimes (between one and five times a year) | Rarely (less than once a year) | Never |
|---|---|--|---|--------------|
| Water contact activities (e.g. canoeing, rowing, rafting, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |
| Walking, running, cycling or sitting nearby or other activities on or around the water (e.g. narrowboating, other types of boating) | | | | |

Q16. **IF HH:** How often do you, or anyone in your household, use the beach or sea in the UK for any of the following activities?

| | Often (more than six times a year) | Sometimes (between one and five times a year) | Rarely (less than once a year) | Never |
|---|---|--|---|--------------|
| Water contact activities (e.g. surfing, windsurfing, dinghy sailing, canoeing, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |
| Walking, running, cycling or sitting or playing nearby or other activities on or around the water (e.g. other types of boating) | | | | |

Use of hosepipe or sprinkler

Q16a How often does your **[IF HH]** household **[IF NHH]** premises use a hosepipe or sprinkler for any purpose (e.g. washing/cleaning, or watering plants)?

- Often (more than six times a year);
- Sometimes (between one and five times a year)
- Rarely (less than once a year)
- Never

Impact of service issues

You are now going to be shown a series of ten short questions where you will be asked to choose between two different scenarios for your water or wastewater service.

Please consider, and then compare the scenarios carefully, and then **choose the one which would have the most impact** on your **IF HH:** household **IF NHH:** organisation if it were to happen

Some of the scenarios would affect your own property whereas others would affect your local area. When comparing the impact that each would have, please:

- **do** consider any concerns you may have for the local area or environment,
- **don't** consider any impacts on other people outside your **IF HH:** household **IF NHH:** organisation - other people will answer for themselves!

On some of the options you will see an **i**. Please click on this to see some more information about the option.

Q17. Which of these would have the most impact on your IF HH: household IF NHH: organisation?

PLANNED water supply interruption (24 hours)

- ▶ Your water company sends you a notice that in 2 days' time your tap water supply will stop for 24 hours
- ▶ This is due to planned maintenance in your local area
- ▶ As planned, it then stops from a Wednesday morning to a Thursday morning




Planned, 24 hours



Discoloured water (24 hours)

- ▶ Your tap water starts running light brown, without warning
- ▶ This is due to traces of sediment from pipes being disturbed
- ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again
- ▶ This happens for 24 hours from a Wednesday morning




24 hours



Q18. Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q19. Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q20. Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q21. Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q22. Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q23. Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q24. Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q24b Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q24c Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q25. We would now like to ask you a few questions about the choices you have just made. How strongly do you agree or disagree with the following statements about the choices you have just made?

| | Strongly disagree | Disagree | Neither | Agree | Strongly agree |
|--|-------------------|----------|---------|-------|----------------|
| I was able to understand the choices | | | | | |
| I found the options believable | | | | | |
| My choices were based on how much impact I thought each option would have on my [IF HH] household [IF NHH] organisation. | | | | | |
| I found it easy to choose between the options | | | | | |

Q26. ASK IF Q25.1 = 1 OR 2. OTHERS GO TO Q27: Why were you unable to understand the choices?

Q27. ASK IF Q25.2 = 1 OR 2. OTHERS GO TO Q28: What was not believable about the options shown?

Q28. ASK IF Q25.3 = 1 OR 2. OTHERS GO TO Q29: What were the main factors driving your choices if not the impact that each would have on your [IF HH] household [IF NHH] organisation?

Q29. ASK IF Q25.4 = 1 OR 2. OTHERS GO TO NEXT SECTION: Why was it difficult choosing between the options?

Compensation for service issues

The next few questions are about compensation for service issues.

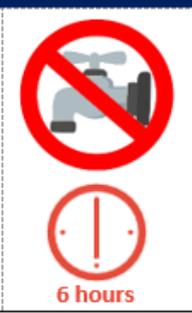
Water and wastewater companies pay their customers compensation in some cases when there are problems with their service. They also invest money to reduce the number of problems that happen in the first place.

The following questions will each present you with a choice between experiencing a service issue and being compensated for it, or not experiencing the issue and not receiving any compensation. The purpose of these questions is to see if the amounts shown are enough to offset the impact on your [IF HH] household [IF NHH] organisation from the service issue shown.

In each question, the type of service problem and the compensation amount will vary. These amounts do not necessarily reflect current compensation entitlements, and compensation levels will not necessarily be influenced by answers to these questions.

RANDOMISE ORDER OF SERVICE ISSUES SHOWN IN Q30-Q31E.

Q30. Which option would you prefer?

| Option A | Option B |
|---|---|
| <p>UNEXPECTED water supply interruption (6 hours)</p> <ul style="list-style-type: none">▶ Your tap water supply stops working without warning▶ This is due to a burst pipe in your local area▶ It stops for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon  <p>Compensation paid*: £100</p> <p><input type="radio"/></p> | <p>No unexpected water supply interruption</p> <p><input type="radio"/></p> |

IF BILLPAYER OR NHH: * compensation would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise

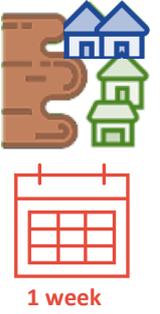
IF NON-BILLPAYER: * compensation would be paid automatically, and within 7 days, by sending a cheque to your household.

If Option A compensation level=50% of Q30 value
If Option B compensation level =2*Q30 value
Then add in follow up question (Q30a) containing new compensation amounts.

Q30a Which option would you prefer?

Q30d **[IF Q30=B AND Q30a=B]** Why did you choose this option?

Q31. Which option would you prefer?

| Option A | Option B |
|--|---|
| <p>Sewer flooding: OUTSIDE your property (1 week)</p> <ul style="list-style-type: none">▶ Flooding from the sewer affects access to your front door / entrance▶ This results from prolonged heavy rainfall in your local area▶ It gives off a foul smell, and could cause damage▶ It takes 1 week for access to your property to get back to normal  <p>Compensation paid*: £200</p> <p><input type="radio"/></p> | <p>NO Sewer flooding: OUTSIDE your property</p> <p><input type="radio"/></p> |

IF BILLPAYER OR NHH: * compensation would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise

[IF NON-BILLPAYER] * compensation would be paid automatically, and within 7 days, by sending a cheque to your household.

If Option A compensation level=50% of Q31 value
If Option B compensation level =2*Q31 value
Then add in follow up question (Q31a) containing new compensation amounts.

Q31A Which option would you prefer?

Q31B **[IF Q31=B AND Q31A=B]** Why did you choose this option?

Q31C Which option would you prefer?

Option A

**PLANNED water supply interruption
(6 hours)**

- ▶ Your water company sends you a notice in the post that in 2 days' time your water supply will stop for 6 hours, affecting all taps, toilets, dishwasher, etc.
- ▶ This is due to planned maintenance in your local area
- ▶ As planned, it then stops between 12:00 and 18:00 on a Wednesday afternoon




**Planned,
6 hours**

Compensation paid*: £200

○

Option B

NO PLANNED water supply interruption

○

IF BILLPAYER OR NHH: * compensation would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise
 [IF NON-BILLPAYER] * compensation would be paid automatically, and within 7 days, by sending a cheque to your household.

If Option A compensation level=50% of Q31C value
 If Option B compensation level =2*Q31C value
 Then add in follow up question (Q31D) containing new compensation amounts.

Q31D Which option would you prefer?

Q31E [IF Q31C=B AND Q31D=B] Why did you choose this option?

Q31F Which option would you prefer?

| Option A | Option B |
|--|--|
| <div style="background-color: #003366; color: white; padding: 5px; text-align: center; font-weight: bold;">Boil water notice (48 hours)</div> <ul style="list-style-type: none"> ▶ Your water company sends you a notice saying you need to boil tap water before drinking, cooking or preparing food to avoid the risk of becoming ill ▶ This is due to traces of e-coli being found in the water supply in your area ▶ You can still safely use tap water for washing and cleaning ▶ The notice arrives on a Wednesday. After two days the water will be safe to drink <u>again</u> and your water company will notify you. <div style="text-align: center;">   <p style="color: red; font-weight: bold;">48 hours</p> </div> <p style="font-weight: bold;">Compensation paid*: £200</p> | <div style="background-color: #003366; color: white; padding: 10px; text-align: center; font-weight: bold; font-size: 1.2em;">NO Boil water notice</div> |
| <input type="radio"/> | <input type="radio"/> |

IF BILLPAYER OR NHH: * compensation would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise
 [IF NON-BILLPAYER] * compensation would be paid automatically, and within 7 days, by sending a cheque to your household.

If Option A compensation level=50% of Q31F value
 If Option B compensation level =2*Q31F value
 Then add in follow up question (Q31G) containing new compensation amounts.

Q31G Which option would you prefer?

Q31H [IF Q31F=B AND Q31G=B] Why did you choose this option?

Q32. We would now like to ask you a few questions about the choices you have just made. How strongly do you agree or disagree with the following statements about the choices you have just made?

| | Strongly disagree | Disagree | Neither | Agree | Strongly agree |
|--|-------------------|----------|---------|-------|----------------|
| I was able to understand the choices | | | | | |
| I found the options believable | | | | | |
| My choices were based on how much impact I thought each option would have on my [IF HH] household [IF NHH] organisation and whether the amount of money shown was enough to compensate for this. | | | | | |
| I found it easy to choose between the options | | | | | |

Q33. ASK IFQ32.1 = 1 OR 2. OTHERS GO TO Q34: Why were you unable to understand the choices?

Q34. ASK IF Q32.2 = 1 OR 2. OTHERS GO TO Q35: What was not believable about the options shown?

Q35. ASK IF Q32.3 = 1 OR 2. OTHERS GO TO Q36: What were the main factors driving your choices?

Q36. ASK IF Q32.4 = 1 OR 2. OTHERS GO TO NEXT SECTION: Why was it difficult choosing between the options?

Attitudes to environmental costs

Q37. IF HH: Please look at the following five statements about pollution control and the costs of pollution control. Which one do you agree with most? SINGLE CHOICE

The environment should be protected from pollution and improved, **regardless of cost**

The environment should be protected from pollution and improved, **provided costs are not excessive**

The environment should be protected from pollution and improved, **but at no additional cost**

Further protection and improvements to the environment are not needed, and the costs for this should fall

Standards for protection and improvement to the environment are already too high and should be relaxed, and costs should fall

Don't know

Q38. Please use this box to leave any further comments about this topic or this survey. Please note, your water company will be unable to respond to individuals.

Classification Questions

We will now ask you a few questions about you and your IF HH household IF NHH organisation. These will only be used to ensure we have spoken to a wide range of customers. All responses you give will be kept strictly confidential.

Q39. IF HH: How would you describe the occupation type of the main income earner in your household?

Higher managerial/ professional/ administrative (e.g. Established doctor, Solicitor, Board Director in a large organisation (200+ employees, top level civil servant/public service employee))

Intermediate managerial/ professional/ administrative (e.g. Newly qualified (under 3 years) doctor, Solicitor, Board director small organisation, middle manager in large organisation, principle officer in civil service/local government)

Supervisory or clerical/ junior managerial/ professional/ administrative (e.g. Office worker, Student Doctor, Foreman with 25+ employees, salesperson, etc)

Skilled manual worker (e.g. Skilled Bricklayer, Carpenter, Plumber, Painter, Bus/ Ambulance Driver, HGV driver, AA patrolman, pub/bar worker, etc)

Semi or unskilled manual work. (e.g. Manual workers, all apprentices to be skilled trades, Caretaker, Park keeper, non-HGV driver, shop assistant)

Unemployed

Retired

Student

Prefer not to say GO TO Q42

Q40. IF Q39=7 (RETIRED) ASK: Does the main income earner have a state pension, a private pension or both?

State only

Private only

Both
Prefer not to say **GO TO Q42**

Q41. **IF Q40= PRIVATE OR BOTH ASK:** How would you describe the main income earner's occupation type before retirement?

Higher managerial/ professional/ administrative (e.g. Established doctor, Solicitor, Board Director in a large organisation (200+ employees, top level civil servant/public service employee))

Intermediate managerial/ professional/ administrative (e.g. Newly qualified (under 3 years) doctor, Solicitor, Board director small organisation, middle manager in large organisation, principle officer in civil service/local government)

Supervisory or clerical/ junior managerial/ professional/ administrative (e.g. Office worker, Student Doctor, Foreman with 25+ employees, salesperson, etc)

Skilled manual worker (e.g. Skilled Bricklayer, Carpenter, Plumber, Painter, Bus/ Ambulance Driver, HGV driver, AA patrolman, pub/bar worker, etc)

Semi or unskilled manual work. (e.g. Manual workers, all apprentices to be skilled trades, Caretaker, Park keeper, non-HGV driver, shop assistant)

None of these

Prefer not to say

Q42.

Q43.

Q44. **IF HH:** To which of these ethnic groups do you consider you belong to? **We would like to collect this to ensure that people of all backgrounds are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.**

WHITE

English, Welsh, Scottish, Northern Irish or British

Irish

Gypsy or Irish Traveller

Any other White background

MIXED

White and Black Caribbean

White and Black African

White and Asian

Any other Mixed background

ASIAN OR ASIAN BRITISH

Indian

Pakistani

Bangladeshi

Chinese

Any other Asian background

BLACK OR BLACK BRITISH

Caribbean

African

Any other Black background

OTHER ETHNIC GROUP

Arab

Any other ethnic group

Prefer not to say

Q45. **IF HH:** Thinking about all the people in your household, including yourself, how many people live here?

- 1 or 2
- 3 or 4
- 5 or more
- Prefer not to say

Q46. Please let us know if any of the following apply to you. *RANDOMISE ROWS*
We would like to collect this to ensure that with a variety of particular needs are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.

- I or another member of my household is disabled or suffer(s) from a debilitating illness
- I or another member of my household have/has a learning difficulty
- I or another member of my household relies on water for medical reasons
- I or another member of my household is visually impaired (i.e. struggles to read even with glasses)
- I or another member of my household am/is over the age of 75 years old
- I or another member of my household speaks English as a second language
- I or another member of my household is deaf or hard of hearing
- I or another member of my household is a new parent
- None of these apply to me
- Prefer not to say

Q47. **IF HH:** Which of the following statements do you most agree with? Please remember, this research is entirely confidential and that it is only by understanding the views of people who are struggling to pay their household bills (eg gas, electricity, telephone etc) that change can be made.

- I can always afford to pay my household bills
- I can usually afford to pay my household bills
- I sometimes struggle to pay my household bills
- I usually struggle to pay my household bills
- I always struggle to pay for my household bills
- Prefer not to say

Q47a. **IF HH:** Thinking about your household finances, do you expect your household to be better off, worse off or about the same in 12 months' time?

- Better off
- The same
- Worse off
- Don't know

Q47b **IF NHH:** How does your organisation mainly use water? **You can choose more than one answer**

- The manufacturing process which is essential to the running of your organisation (e.g. to power machinery, agricultural production etc.)
- The supply of services your organisation provides (e.g. cleaning services etc.)
- An ingredient or part of the product or service your organisation provides (e.g. food or drink, chemical, cosmetics manufacturer etc.)
- Normal domestic use for your organisation's customers and employees (e.g. customer toilets, supply of drinking water)
- None of the above
- Don't Know

Q48. **IF NHH:** How many sites does your organisation operate from?

- 1
- 2
- 3
- 4+
- Prefer not to say

Q49. **IF NHH:** How many employees does your organisation have in the UK?

- None, sole trader
- Fewer than 4 employees
- 4 to 49 employees
- 50 to 249 employees
- 250+ employees
- Prefer not to say

Q50. **IF NHH:** Which of the following best defines the core activity of your organisation?

- Agriculture, forestry and fishing
- Mining and quarrying
- Energy or water service & supply
- Manufacturing
- Construction
- Wholesale and retail trade (including motor vehicles repair)
- Transport and storage
- Hotels & catering
- IT and Communication
- Finance and insurance activities
- Real estate activities
- Professional, scientific and technical activities
- Administrative and Support Service Activities
- Public administration and defence
- Education
- Human health and social work activities
- Arts, entertainment and recreation
- Other service activities
- Other (please specify)
- Prefer not to say

Q51.

Q52. **IF HH:** Do you have a water meter?

IF NHH: Does your premises have a water meter?

- Yes
- No
- Don't Know
- Prefer not to say

Q53. **IF Q52=1 ASK:** Did you ask to have a water meter fitted for your household?

- Yes
- No
- Prefer not to say

Q54. **IF HH AND POSTAL:** Which of these best describes you?

- I have never used the internet
- I have used the internet but do not have regular access to it
- I have regular access to the internet
- Prefer not to say

Q55. **IF HH NON PANEL:** We mentioned that there would be a £10 incentive for completing this survey. This incentive will be administered by Accent, within 4 weeks.

This can be sent as an Amazon, Marks & Spencer or Love2Shop voucher by email or by post. Alternatively we can donate your incentive to WaterAid. Which would you prefer?

Amazon voucher by email **COLLECT EMAIL ADDRESS**

M&S Voucher by email **COLLECT EMAIL ADDRESS**

Love2Shop by email **COLLECT EMAIL ADDRESS**

Amazon voucher by post **COLLECT ADDRESS**

M&S voucher by post **COLLECT ADDRESS**

Love2Shop by post **COLLECT ADDRESS**

Donation to Water Aid

If you have any queries about your incentive, please contact us on 0131 220 8770.

Q56. Thank you. Would you be willing to be contacted again if we need to clarify any of the answers you have given today?

Yes

No

Thank you. This research was conducted under the terms of the MRS code of conduct and is completely confidential.

Appendix C3

Attributes

UNEXPECTED water supply interruption (6 hours)

- ▶ Your water supply stops working without warning, affecting taps, toilets, dishwasher, etc
- ▶ This is due to a burst pipe in your local area
- ▶ It stops for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



6 hours

PLANNED water supply interruption (6 hours)

- ▶ Your water company sends you a notice in the post that in 2 days' time your water supply will stop for 6 hours, affecting all taps, toilets, dishwasher, etc
- ▶ This is due to planned maintenance in your local area
- ▶ As planned, it then stops between 12:00 and 18:00 on a Wednesday afternoon



**Planned,
6 hours**

UNEXPECTED water supply interruption (24 hours)

- ▶ Your water supply stops working without warning, affecting all taps, toilets, dishwasher, etc
- ▶ This is due to a burst pipe in your local area
- ▶ Water would be made available nearby to collect in buckets or bottles and vulnerable people would be delivered water directly
- ▶ It stops for 24 hours, from a Wednesday morning to a Thursday morning



24 hours

UNEXPECTED low water pressure (6 hours)

- ▶ Your tap water supply starts running with a low pressure, without warning
- ▶ This is due to a burst pipe in your local area
- ▶ It takes longer to fill a kettle, sink or bath and a shower would be weak. Some appliances like dishwashers and washing machines may not work properly
- ▶ This happens for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



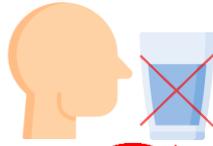
Boil water notice (48 hours)

- ▶ Your water company sends you a notice saying you need to boil tap water before drinking, cooking or preparing food to avoid the risk of becoming ill
- ▶ This is due to traces of e-coli being found in the water supply in your area
- ▶ You can still safely use tap water for washing and cleaning
- ▶ You can still safely use tap water for washing and cleaning. The notice arrives on a Wednesday. After two days the water will be safe to drink again and your water company will notify you



Do not drink notice (48 hours)

- ▶ Your water company sends you a notice saying not to drink your tap water, or use it for cooking or preparing food, to avoid the risk of becoming ill
- ▶ This is due to traces of a harmful chemical being found in the water supply in your area
- ▶ You can still safely use tap water for washing and cleaning
- ▶ Water would be made available nearby to collect in buckets or bottles and vulnerable people would be delivered water directly.
- ▶ The notice arrives on a Wednesday. After two days the water will be safe to drink again and your water company will notify you.



48 hours

Discoloured water (6 hours)

- ▶ Your tap water starts running light brown, without warning
- ▶ This is due to traces of sediment from pipes being disturbed
- ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again
- ▶ This happens for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



6 hours

Discoloured water (24 hours)

- ▶ Your tap water starts running light brown, without warning
- ▶ This is due to traces of sediment from pipes being disturbed
- ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again
- ▶ This happens for 24 hours from a Wednesday morning



Water taste and smell (6 hours)

- ▶ Your tap water starts tasting or smelling different, without warning
- ▶ This is due to traces of chlorine, and the taste and smell is like a swimming pool
- ▶ The water is safe to drink, and for use in the dishwasher or washing machine
- ▶ This happens for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



Water taste and smell (24 hours)

- ▶ Your tap water starts tasting or smelling different, without warning
- ▶ This is due to traces of chlorine, and the taste and smell is like a swimming pool
- ▶ The water is safe to drink, and for use in the dishwasher or washing machine
- ▶ This happens for 24 hours from a Wednesday morning



Sewer flooding: INSIDE your property (1 month)

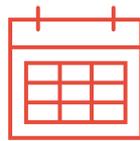
- ▶ Flooding from the sewer gets inside your property, affecting your living areas
- ▶ This results from prolonged heavy rainfall in your local area
- ▶ It gives off a foul smell, and damages floors, walls and furniture
- ▶ It takes 1 month for your property to get back to normal



1 month

Sewer flooding: OUTSIDE your property (1 week)

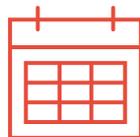
- ▶ Flooding from the sewer affects access to your front door / entrance
- ▶ This results from prolonged heavy rainfall in your local area
- ▶ It gives off a foul smell, and could cause damage
- ▶ It takes 1 week for access to your property to get back to normal



1 week

Hosepipe ban (5 months)

- ▶ Your water company sends you a notice saying you must not use a hosepipe or sprinkler
- ▶ This is due to an extended period of dry weather leading to a water shortage
- ▶ The hosepipe ban begins in May and lasts for 5 months



5 months

Emergency drought restrictions (2 months)

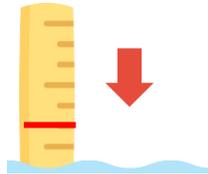
- ▶ Your water company cuts off the tap water supply from 2pm to 7am every day
- ▶ This is due to a severe drought leading to an extreme water shortage in your area
- ▶ Standpipes would be available nearby to collect water in buckets or bottles and vulnerable people would be delivered water directly
- ▶ The restrictions begin in July and last for 2 months



2 months

Low flows in rivers NEARBY (2 months)

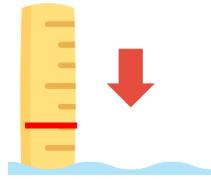
- ▶ The water level in a nearby stretch of river (less than 5 miles away) has a flow that is lower than the minimum it should be naturally
- ▶ This could affect habitats and harm the wildlife living in and by the river
- ▶ This is due to a combination of extended dry weather and water being taken from it for public water supply
- ▶ This happens from July and lasts for 2 months



**Nearby,
2 months**

Low flows in rivers ELSEWHERE (2 months)

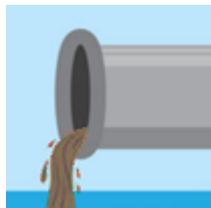
- ▶ The water level in a stretch of river somewhere in your region, but not nearby, has a flow that is lower than the minimum it should be naturally
- ▶ This could harm the wildlife living in and by the river
- ▶ This is due to a combination of extended dry weather and water being taken from it for public water supply
- ▶ This happens from July and lasts for 2 months



**Elsewhere,
2 months**

Storm overflow NEARBY (4 hours)

- ▶ Rainwater mixed with untreated sewage regularly spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to prolonged heavy rainfall and is allowed by the regulator to reduce the risk of sewer flooding
- ▶ There is no damage to the river and visible pollution is minor



**Nearby,
4 hours**

Minor pollution incident NEARBY (1 day)

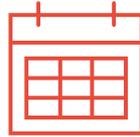
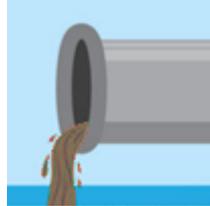
- ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be minor
- ▶ The spill begins on a Wednesday and lasts for 4 hours. The river is then back to normal after 1 day



**Nearby,
1 day**

Significant pollution incident NEARBY (4 weeks)

- ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and would be significant, including possible harm to wildlife and health risks to river users, plus visible sewage litter
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks



Nearby,
4 weeks

Storm overflow ELSEWHERE (4 hours)

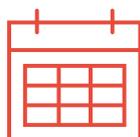
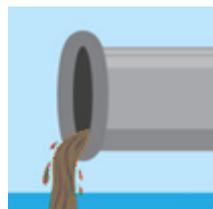
- ▶ Rainwater mixed with untreated sewage regularly spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to prolonged heavy rainfall and is allowed by the regulator to reduce the risk of sewer flooding
- ▶ There is no damage to the river and visible pollution is minor



Elsewhere,
4 hours

Minor pollution incident ELSEWHERE (1 day)

- ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be minor
- ▶ The spill begins on a Wednesday and lasts for 4 hours. The river is then back to normal after 1 day

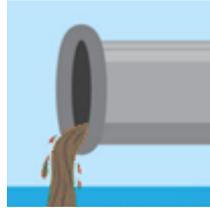


Elsewhere

1 day

Significant pollution incident ELSEWHERE (4 weeks)

- ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river would be significant, including possible harm to wildlife and health risks to river users, plus visible sewage litter
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks



Elsewhere

,
4 weeks

River water NEARBY is not High quality

- ▶ A nearby stretch of river (less than 5 miles away) meets Medium rather than High quality standards, as defined by the government ⓘ
- ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area
- ▶ This has some effect on habitats for fish and wildlife, and can lead to algae (green slime) in the water



Local

River water ELSEWHERE is not High quality

- ▶ A stretch of river **in your region**, **but** not nearby, meets Medium rather than High quality standards, as defined by the government ⓘ
- ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area
- ▶ This has some effect on habitats for fish and wildlife, and can lead to algae (green slime) in the water



Elsewhere

ⓘ button show card:

| River water quality level | Definition |
|---------------------------|---|
| High | <ul style="list-style-type: none"> ▪ There will be a diverse and natural range of plants, insects, fish, birds and other animals. ▪ Water will generally have the right degree of clarity and there will be no noticeable pollution. ▪ Water will generally be suitable for contact activities, such as rowing or swimming |
| Medium | <ul style="list-style-type: none"> ▪ There will be plants, insects, fish, birds and other animals, but there will be some fish and other wildlife missing. ▪ Water will be slightly murky or discoloured in parts, and there will sometimes be visible pollution in some places, and some algal blooms. ▪ Water may be suitable for contact activities in some areas but not others. |
| Low | <ul style="list-style-type: none"> ▪ There may be limited or no plants or wildlife, or the water may be dominated by a single plant species. ▪ Water will generally be murky or discoloured, and may sometimes be bad-smelling in some places. There may also regularly be visible pollution in some places, and frequent algal blooms. ▪ Water will be unsuitable for contact activities. |

Coastal bathing water is not Excellent quality

- ▶ The sea water at the beach you would be most likely to visit meets Good rather than Excellent quality standards, as defined by the government ⓘ
- ▶ This is due to the quality of treated wastewater entering the water nearby
- ▶ You could still swim in the sea, but there would be a small increase in the chance that you might get ill if you swallowed some water



**Water not
Excellent**

ⓘ button show card:

| Bathing water quality level | Definition |
|-----------------------------|--|
| Excellent | The highest standard which means the bathing water is consistently very clean, with less than a 3%, or 3 in 100, chance of a stomach upset. |
| Good | Between 'Sufficient' and 'Excellent'. This means there is between a 3% and a 5% chance of a stomach upset. |
| Sufficient | The minimum standard required for bathing water which means there is between a 5% and an 8% chance of a stomach upset. |

Coastal bathing water is neither Excellent nor Good quality

- ▶ The sea water at the beach you would be most likely to visit meets Sufficient rather than Good or Excellent quality standards, as defined by the government ⓘ
- ▶ This is due to the quality of treated wastewater entering the water nearby
- ▶ You could still swim in the sea, but there would be a small increase in the chance that you might get ill if you swallowed some water



**Water not
Excellent**

ⓘ button show card:

(Same as for previous bathing water quality card)



Appendix D

Outcome Delivery Incentive Research: Testing and Development

Pilot 2 Report

June 2022

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Executive Summary

Introduction

Accent and PJM economics were commissioned jointly by Ofwat and CCW to develop and test a methodology for obtaining the customer evidence needed to support outcome delivery incentive (ODI) rate setting for common performance commitments (PC) at PR24.

The first stage of the study comprised a review of methodology options to deliver research to inform ODIs, and the development of a preferred option/s for PR24 ODI research. This stage culminated in the 'Stage 1' report delivered to Ofwat and CCW, and shared with water companies, in January 2022. The methodology was supported by peer review by two leading academics, Prof. Ken Willis (Newcastle University) and Prof. Giles Atkinson (LSE), and the study proceeded to Stage 2 to further develop and test the methodology with customers.

The first stage of testing involved a series of cognitive depth interviews with customers to test the language used and the overall survey performance. Following this stage, which was reported on separately, a number of changes were made to the survey materials, although none that substantially impacted the core structure of the design.

The present report covers a second pilot stage of the study. *This phase has allowed for tests of design performance not available in small cognitive interview samples and is a necessary part of the development of the research instrument.*

The report describes the survey design and methodology and presents key findings from analysis of the 2nd pilot data. The questionnaires used in the 2nd pilot survey are contained in Appendix D1.

Methodology

The survey design was based around two linked stated preference exercises:

- **Impact exercise**

A pairwise choice exercise, measuring the relative impact of 25 service issue scenarios

- **Compensation exercise**

A contingent valuation exercise asking participants to choose between experiencing a service issue and being compensated for it, or not experiencing the issue and not receiving any compensation. Two service issues were included in this exercise: a short, unexpected supply interruption, and an external sewer flooding incident. These are referred to as 'pivots' because the valuations for all other service issues are obtained by pivoting off the values obtained for these two issues using the relative impacts derived from the impact exercise.

An experimental design was created for each exercise, which involved showing different sequences of choice questions to different participants.

A total of 452 household customers and 151 non-household customers completed the 2nd pilot survey.

The household survey method for the 2nd pilot was an online panel survey. This method was adopted as it allowed for a quick turn around and was cost effective. A target of 400 online interviews was set: 200 for version 1 of the questionnaire and 200 for version 2 of the questionnaire.

Two methods were used for the non-household sample: 140 business-to-business online panel (split 100 version 1 and 40 version 2) and 10 CATI using version 2.

No weighting was applied to the online sample for the purposes of the pilot analysis, and so any observed differences could include differences in sample demographics.

Findings

Stated preference design

The results of the pilot tests provided mixed evidence with respect to the stated preference design approach.

In support of the approach:

- Participant feedback was good for both the impact and the compensation exercise.
- There were very few instances of non-trading behaviour in the scenario impact exercise (where participants always chose the same alternative throughout the exercise).
- The econometric models were well estimated, especially considering the small sample size for non-households.
- The impact rankings derived from the econometric models were highly consistent with prior expectations.
- Also as expected, participants were more likely to take the compensation offered when it was high than when it was low.

However, set against these positive findings, two key issues were identified:

- At the highest compensation levels shown there were still substantial proportions of participants choosing not to take the compensation offered. Because of this, mean valuation estimates from the pilot survey are unlikely to be accurate, and median valuations are imprecisely estimated.

This should be addressable by increasing the compensation levels used in the survey, and/or by choosing lower-impact service issues.

- Estimates of the relative value of the two ‘pivot’ scenarios included in the compensation exercise were significantly different when obtained from the compensation exercise than when obtained from the impact exercise. This indicates that participants were not choosing consistently across the two exercises in line with the assumed underlying preference function.

There are a number of changes that can be made to the survey to address the issues, including:

- Change the service issues to replace external sewer flooding with an issue that has a more precise description of its impact, such as a boil water notice. This should avoid the potential problem that compensation amount is interpreted as an indicator of the severity of the issue, rather than being evaluated on its own merits.
- Revise the compensation exercise to encourage participants not to see the amounts shown as indicating the severity of the issue – an issue identified in the parallel cognitive interviews, which are reported on separately.
- Revise the structure of the survey to include a single choice exercise combining the impact and compensation exercises. This would eliminate the possibility of any inconsistency in relative values between the two exercises altogether as there would only be one exercise. (This option was suggested by Ofwat’s peer reviewer Prof. Stephane Hess, Leeds University)

In light of the findings from the pilot survey, and the fact that the changes recommended are more substantial than are ideally compatible with proceeding straight to the main stage, it would be sensible to undertake a 2nd pilot survey. The content of this 2nd pilot survey should be agreed as soon as possible to minimise the delay to the overall programme caused by this additional necessary testing phase.

1. Introduction

1.1 Background and objectives

Accent and PJM economics were commissioned jointly by Ofwat and CCW to develop and test a methodology for obtaining the customer evidence needed to support outcome delivery incentive (ODI) rate setting for common performance commitments (PC) at PR24.

The first stage of the study comprised a review of methodology options to deliver research to inform ODIs, and the development of a preferred option. This stage culminated in the 'Stage 1' report delivered to Ofwat and CCW, and shared with water companies, in January 2022. The methodology was supported by peer review by two leading academics, Prof. Ken Willis (Newcastle University) and Prof. Giles Atkinson (LSE), and the study proceeded to Stage 2 to further develop and test the methodology with customers.

The first phase of testing involved a series of cognitive depth interviews with customers to test the language used and the overall survey performance. Following this phase, which was reported on separately, a number of changes were made to the survey materials, although none that substantially impacted the core structure of the design.

Subsequently, and following further industry consultation on the survey materials, a quantitative pilot survey and a further round of cognitive interviews were completed. These were again reported on separately.

The results of the pilot tests provided mixed evidence with respect to the stated preference design approach. Whilst there were many supportive findings, two key issues were identified – discussed later in this report – which motivated the commissioning of a second pilot and a third round of cognitive interviews to test two revised versions of the survey.

The present report covers the second pilot survey. It describes the survey design and explains how and why this has been revised following the 1st pilot, and presents findings from analysis of the pilot data, and recommendations to take the study forward.

1.2 Contents

This report describes the research design and presents key findings from analysis of the pilot data. It is structured as follows: Section 2 describes the design of the stated preference exercises and provides details of the pilot survey methodology. Section 3 presents descriptive statistics on survey response, scoping, and demographics. Section 4 presents the results and findings of the scenario impact pairwise choice exercise, and Section 5 presents the results and findings of the service issue contingent valuation exercise. Section 6 presents the results and findings of the Combined Impact-Compensation Exercise. Finally, Section 7 presents conclusions and recommendations on how to take the research forward.

In addition, the report contains a number of appendices: Appendix D1 contains the pilot questionnaires; Appendix D2 contains the full set of service issue show material included in the design of the impact exercise; Appendix D3 contains the full set of verbatim responses to the open-ended questions following the stated preference exercises.

2. Methodology

2.1 Introduction

This section sets out the methodology used for the 2nd pilot. It includes a description of the stated preference design, and details of the household and non-household pilot survey administration.

2.2 Stated preference design

Overview

In line with recommendations contained in the report on the 1st pilot survey, in the 2nd pilot two versions of the questionnaire were tested, participants being randomly allocated to one of the two versions.

Version 1 of the questionnaire included two stated preference (SP) exercises:

- **SP1 Impact exercise**

A pairwise choice exercise, measuring the relative impact of 26 service issue scenarios

- **SP2 Compensation exercise**

A contingent valuation exercise asking participants to choose between experiencing a service issue and being compensated for it, or not experiencing the issue and not receiving any compensation. Two service issues were included in this exercise: a short, planned supply interruption, and a boil water notice. These are referred to as ‘pivots’ because the valuations for all other service issues are obtained by pivoting off the values obtained for these two issues using the relative impacts derived from the impact exercise.

Version 2 of the questionnaire included a single choice exercise combining the impact and compensation exercises, as suggested by Ofwat’s peer reviewer Prof. Stephane Hess, Leeds University:

- **SP3 Combined impact-compensation exercise**

A pairwise choice exercise, directly measuring the compensation required for each of 26 service issue scenarios.

The remainder of this subsection describes each exercise in turn.

SP1 Impact exercise

Version 1 of the survey questionnaire was designed to include a pairwise choice exercise focusing on the impact on customers of 26 different scenarios which cover service issues and environmental damages. The scenarios are shown in Table 1 below, while Appendix D2 contains the full descriptions shown.

Table 1: SP1 service issue scenarios

| Scenario | |
|----------|---|
| 1 | Unexpected water supply interruption (6 hours) |
| 2 | Unexpected water supply interruption (24 hours) |
| 3 | Planned water supply interruption (6 hours) |
| 4 | Unexpected low water pressure (6 hours) |
| 5 | Boil water notice (48 hours) |
| 6 | Do not drink notice (48 hours) |
| 7 | Discoloured water (6 hours) |
| 8 | Discoloured water (24 hours) |
| 9 | Water taste and smell (6 hours) |
| 10 | Water taste and smell (24 hours) |
| 11 | Sewer flooding: inside your property (1 month) |
| 12 | Sewer flooding: outside your property (1 week) |
| 13 | Hosepipe ban (5 months) |
| 14 | Emergency drought restrictions (2 months) |
| 15 | Low flows in rivers nearby (2 months) |
| 16 | Low flows in rivers elsewhere (2 months) |
| 17 | Storm overflow nearby (4 hours) |
| 18 | Minor pollution incident nearby (1 day) |
| 19 | Significant pollution incident nearby (4 weeks) |
| 20 | Storm overflow elsewhere (4 hours) |
| 21 | Minor pollution incident elsewhere (1 day) |
| 22 | Significant pollution incident elsewhere (4 weeks) |
| 23 | River water nearby is not High quality |
| 24 | River water elsewhere is not High quality |
| 25 | Coastal bathing water is not Excellent quality |
| 26 | Coastal bathing water is neither Excellent nor Good quality |

The following changes were made relative to the set of scenarios tested in the 1st pilot:

- ‘Planned water supply interruption (24 hours)’ was not included in the 2nd pilot.
- ‘Discoloured water (6 hours)’ was added in the 2nd pilot.
- ‘Water taste and smell (24h)’ was added in the 2nd pilot.
- The duration of the internal sewer flooding incident was changed from ‘1 week’ to ‘1 month’

These changes were made following consultation with water companies.

The scenarios were combined in an experimental design which was created to obtain the sequences of choices that participants faced in the survey. In each question, participants were shown two scenarios, and they were asked to indicate which one would have the most impact on their household/organisation.

- Figure 1 shows the introductory screen
- Figure 2 shows an example of a choice card from the survey, which illustrates the nature of the questions asked.

Participants each saw ten questions such as the one shown in Figure 2.

Figure 1: SP1 introductory screen

Impact of service issues

You are now going to be shown a series of ten short questions where you will be asked to choose between two different scenarios for your water or wastewater service.

Please consider, and then compare the scenarios carefully, and then **choose the one which would have the most impact** on your household if it were to happen.

Some of the scenarios would affect your own property whereas others would affect your local area. When comparing the impact that each would have, please:

- **do** consider any concerns you may have for the local area or natural environment,
- **don't** consider any impacts on other people outside your household - other people will answer for themselves!

On some of the options you will see an ⓘ. Please click on this to see some more information about the option.

Figure 2: SP1 example choice card

You're on choice 4 of 10
Which of these would have the most impact on your household?

| Option A | Option B |
|--|---|
| <div style="background-color: #0056b3; color: white; padding: 5px; text-align: center;"> Significant pollution incident ELSEWHERE (4 weeks) </div> <ul style="list-style-type: none"> ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby ▶ This is due to sewerage equipment failure ▶ The damage to the river would be significant, including possible harm to wildlife and health risks to river users, plus visible sewage litter ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks <div style="text-align: right; margin-top: 10px;">   </div> | <div style="background-color: #0056b3; color: white; padding: 5px; text-align: center;"> Sewer flooding: INSIDE your property (1 month) </div> <ul style="list-style-type: none"> ▶ Flooding from the sewer gets inside your property, affecting your living areas ▶ This results from prolonged heavy rainfall in your local area ▶ It gives off a foul smell, and damages floors, walls and furniture ▶ It takes 1 month for your property to get back to normal <div style="text-align: right; margin-top: 10px;">   </div> |

Hover buttons, represented by ⓘ, were included on some options. Clicking on these showed more information on the scenario. The full set of showcards and hover button texts is included in Appendix D2.

A 'D-efficient' design approach was used to create the choice situations faced by each participant from the set of all possible combinations of scenarios. This approach attempts to maximise the precision of the preference parameter estimates, given some prior estimates of the true parameters. For the 2nd pilot, priors were based on analysis of data from the 1st pilot, with the intention being to revise the priors for the main stage based on analysis of the 2nd pilot data as reported herein.

The design comprised 30 blocks of 10 questions each (each participant being randomly allocated to one of the blocks) and was restricted to exclude dominant/dominated pairs of

options, such as an unexpected and a planned water supply interruption of the same duration, to ensure that each choice required some meaningful trade-off. The design restrictions are shown in Table 2.

Table 2: SP1 design restrictions : Excluded pairs

| | More impactful | Less impactful |
|----|---|--|
| 1 | Unexpected water supply interruption (6 hours) | Planned water supply interruption (6 hours) |
| 2 | Unexpected water supply interruption (24 hours) | Planned water supply interruption (6 hours) |
| 3 | Unexpected water supply interruption (24 hours) | Unexpected water supply interruption (6 hours) |
| 4 | Emergency drought restrictions (2 months) | Hosepipe ban (5 months) |
| 5 | Low flows in rivers nearby (2 months) | Low flows in rivers elsewhere (2 months) |
| 6 | Storm overflow nearby (4 hours) | Storm overflow elsewhere (4 hours) |
| 7 | Minor pollution incident nearby (1 day) | Minor pollution incident elsewhere (1 day) |
| 8 | Significant pollution incident nearby (4 weeks) | Significant pollution incident elsewhere (4 weeks) |
| 9 | River water nearby is not High quality | River water elsewhere is not High quality |
| 10 | Minor pollution incident nearby (1 day) | Storm overflow nearby (4 hours) |
| 11 | Significant pollution incident nearby (4 weeks) | Storm overflow nearby (4 hours) |
| 12 | Significant pollution incident nearby (4 weeks) | Minor pollution incident nearby (1 day) |
| 13 | Minor pollution incident nearby (1 day) | Storm overflow elsewhere (4 hours) |
| 14 | Significant pollution incident nearby (4 weeks) | Storm overflow elsewhere (4 hours) |
| 15 | Significant pollution incident nearby (4 weeks) | Minor pollution incident elsewhere (1 day) |
| 16 | Minor pollution incident elsewhere (1 day) | Storm overflow elsewhere (4 hours) |
| 17 | Significant pollution incident elsewhere (4 weeks) | Storm overflow elsewhere (4 hours) |
| 18 | Significant pollution incident elsewhere (4 weeks) | Minor pollution incident elsewhere (1 day) |
| 19 | Coastal bathing water is neither Excellent nor Good quality | Coastal bathing water is not Excellent quality |
| 20 | Discoloured water (24 hours) | Discoloured water (6 hours) |
| 21 | Water taste and smell (24 hours) | Water taste and smell (6 hours) |

Note: The impact exercise was designed to exclude any choice sets that included the pairs of scenarios shown in the table.

SP2 Compensation exercise

The compensation exercise, included in Version 1 of the questionnaire, was designed to value two service issue scenarios:

- A planned water supply interruption lasting 6 hours, and
- A 48-hour boil water notice incident.

Each service issue was valued by asking participants to choose between experiencing the service issue and being compensated for it, or not experiencing the issue and not receiving any compensation⁷. The order in which the two service issues appeared in the questionnaire was determined randomly for each participant to address any concerns around order effects⁸.

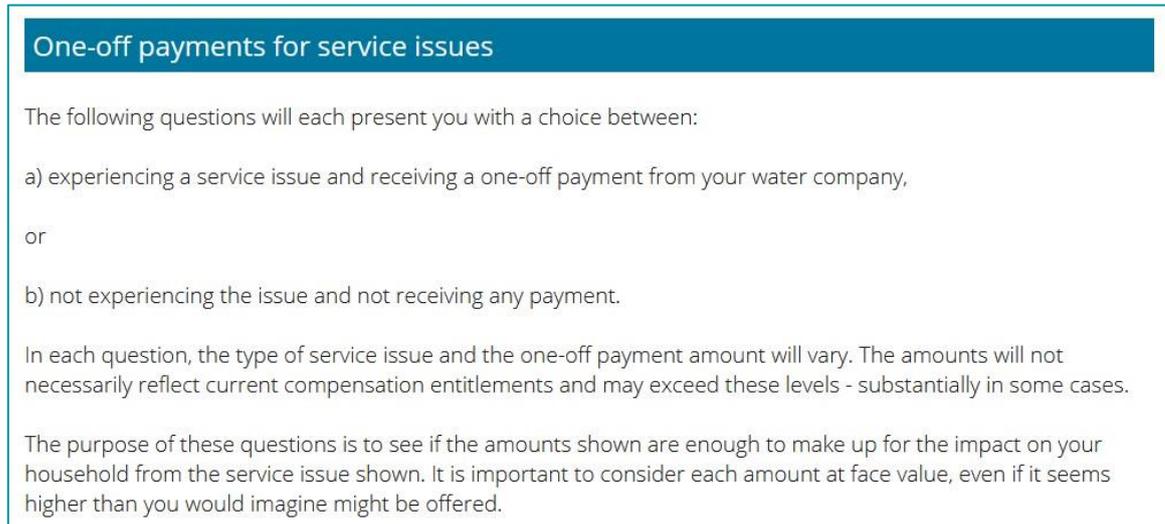
⁷ Unlike in the 1st pilot, the compensation was referred to as a ‘one-off payment’ to reduce the chance that participants might see the amounts shown as indicating the severity of the issue.

⁸ 101 household (49 non-household) participants were shown ‘Boil water notice’ first, followed by ‘Planned supply interruption’, while the reverse was true for 101 household (53 non-household) participants.

Amounts for an initial question in each case were varied across the sample, and this compensation amount was either halved or doubled in a follow-up question, depending on the response to the first question. This is the so-called 'double-bounded contingent valuation' method.

Figure 3 shows the introductory screen and Figure 4 shows an example of a choice card from the survey.

Figure 3: SP2 introductory screen



One-off payments for service issues

The following questions will each present you with a choice between:

- a) experiencing a service issue and receiving a one-off payment from your water company,

or

- b) not experiencing the issue and not receiving any payment.

In each question, the type of service issue and the one-off payment amount will vary. The amounts will not necessarily reflect current compensation entitlements and may exceed these levels - substantially in some cases.

The purpose of these questions is to see if the amounts shown are enough to make up for the impact on your household from the service issue shown. It is important to consider each amount at face value, even if it seems higher than you would imagine might be offered.

The compensation levels for the first question of each exercise were randomly chosen from the sets shown in Table 3. The compensation amounts were shown in pounds for households and as a percentage of the annual water and wastewater services bill for non-households.

Figure 4: SP2 example choice card

Which option would you prefer?

| Option A | Option B |
|---|---|
| <p>PLANNED water supply interruption (6 hours)</p> <ul style="list-style-type: none"> ▶ Your water company sends you a notice in the post that in 2 days' time your water supply will stop for 6 hours, affecting all taps, toilets, dishwasher, etc ▶ This is due to planned maintenance in your local area ▶ As planned, it then stops between 12:00 and 18:00 on a Wednesday afternoon   <p>One-off payment amount *: £50</p> <p><input type="radio"/></p> | <p>NO PLANNED water supply interruption</p> <p><input type="radio"/></p> |

* one-off payments would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise

Table 3: SP2 compensation levels for the first valuation question

| | Household | | Non-household | |
|---|---|------------------------------|--|--|
| | Planned water supply interruption (6 hours) | Boil water notice (48 hours) | Planned water supply interruption (6 hours) | Boil water notice (48 hours) |
| 1 | £20 | £40 | 40% of your annual water and wastewater services bill | 80% of your annual water and wastewater services bill |
| 2 | £50 | £100 | 100% of your annual water and wastewater services bill | 2 times the amount of your annual water and wastewater services bill |
| 3 | £150 | £300 | 3 times the amount of your annual water and wastewater services bill | 6 times the amount of your annual water and wastewater services bill |

SP3 Combined impact-compensation exercise

The combined impact-compensation exercise, which was included in Version 2 of the questionnaire, was designed to directly value each of the 26 service issue scenarios covered in the SP1 impact exercise (see Table 1). Participants were asked to choose between two scenarios, each of which involved some service issue/environmental damage or 'No service issue'. Most scenarios involved the water company making a one-off compensation payment to the participant's household/organisation, but some did not.

Figure 5 shows the introductory screen and Figure 6 shows two examples of choice cards from the survey.

Figure 5: SP3 introductory screens

(a) Screen 1

Service Scenario Choices

You are now going to be shown a series of ten short questions where you will be asked to choose between two different scenarios for your water or wastewater service. **Please read the following instructions carefully.**

Each scenario will show a different type of service issue that could happen to your household.

Some of the scenarios would affect your own property whereas others would affect your local area. When comparing the impact that each would have, please:

- **do** consider any concerns you may have for the local area or natural environment,
- **don't** consider any impacts on other people outside your household - other people will answer for themselves!

On some of the options you will see an ⓘ. Please click on this to see some more information about the option.

(b) Screen 2

Additionally, some of these scenarios will involve your water and/or wastewater provider making a one-off payment to your household.

The amounts will not necessarily reflect current compensation entitlements and may exceed these levels - substantially in some cases.

The purpose of these questions is to see if the amounts shown are enough to make up for the impact on your household from the service issue shown. It is important that you consider each amount at face value, even if it seems higher than you would imagine might be offered.

For each question, please state which option you prefer. If neither of the options is appealing, please still choose the better of the two.

Hover buttons, represented by ⓘ, were included on some options. Clicking on these showed more information on the scenario. The full set of showcards and hover button texts is included in Appendix D2.

A 'D-efficient' design approach was used to create the choice situations faced by each participant from the set of all possible combinations of scenarios and compensation levels. This approach attempts to maximise the precision of the preference parameter estimates, given some prior estimates of the true parameters. The priors were based on analysis of data from the 1st pilot impact exercise.

The design comprised 30 blocks of 10 questions each (each participant being randomly allocated to one of the blocks) and was restricted to exclude dominant/dominated pairs of options, where a higher compensation is paid for a less impactful service issue, to ensure that each choice required some meaningful trade-off. The design restrictions are based on the pairs of service issues shown Table 2. The design also excludes any choice situations in which a higher compensation is paid for an external sewer flooding incident than for an internal sewer flooding incident.

The compensation levels used for SP3 are shown in Table 4, and the range restrictions in Table 5 were imposed to ensure that the options were credible, and that the choice required some meaningful trade-off⁹.

⁹ No compensation (i.e., zero compensation) was given for environmental issues (low river flows, storm overflows, pollution incidents, river water quality, coastal bathing water quality).

Figure 6: SP3 example choice cards

(a) Example 1

You're on choice 8 of 10

Which option would you prefer? If neither is appealing, please still choose the better of the two

| Option A | Option B |
|---|--|
| <p>Boil water notice (48 hours)</p> <ul style="list-style-type: none"> Your water company sends you a notice saying you need to boil tap water before drinking, cooking or preparing food to avoid the risk of becoming ill This is due to traces of e-coli being found in the water supply in your area You can still safely use tap water for washing and cleaning Bottled water would be delivered to vulnerable customers that need it You can still safely use tap water for washing and cleaning. The notice arrives on a Wednesday. After two days the water will be safe to drink again and your water company will notify you <p>One-off payment amount *: £20</p> | <p>Sewer flooding: INSIDE your property (1 month)</p> <ul style="list-style-type: none"> Flooding from the sewer gets inside your property, affecting your living areas This results from prolonged heavy rainfall in your local area It gives off a foul smell, and damages floors, walls and furniture It takes 1 month for your property to get back to normal <p>One-off payment amount *: £10000</p> |
| <input type="radio"/> | <input type="radio"/> |

* one-off payments would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise

(b) Example 2

You're on choice 7 of 10

Which option would you prefer? If neither is appealing, please still choose the better of the two

| Option A | Option B |
|--|---|
| <p>UNEXPECTED low water pressure (6 hours)</p> <ul style="list-style-type: none"> Your tap water supply starts running with a low pressure, without warning This is due to a burst pipe in your local area It takes longer to fill a kettle, sink or bath and a shower would be weak. Some appliances like dishwashers and washing machines may not work properly This happens for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon <p>One-off payment amount *: £20</p> | <p>PLANNED water supply interruption (6 hours)</p> <ul style="list-style-type: none"> Your water company sends you a notice in the post that in 2 days' time your water supply will stop for 6 hours, affecting all taps, toilets, dishwasher, etc This is due to planned maintenance in your local area As planned, it then stops between 12:00 and 18:00 on a Wednesday afternoon <p>One-off payment amount *: £0</p> |
| <input type="radio"/> | <input type="radio"/> |

* one-off payments would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise

Table 4: SP3 compensation levels

| | Household | Non-household |
|----|-----------|---|
| 1 | £0 | None |
| 2 | £10 | 5% of your annual water and wastewater services bill |
| 3 | £20 | 10% of your annual water and wastewater services bill |
| 4 | £40 | 20% of your annual water and wastewater services bill |
| 5 | £60 | 40% of your annual water and wastewater services bill |
| 6 | £100 | 50% of your annual water and wastewater services bill |
| 7 | £150 | 100% of your annual water and wastewater services bill |
| 8 | £300 | 1.5 times the amount of your annual water and wastewater services bill |
| 9 | £500 | 2.5 times the amount of your annual water and wastewater services bill |
| 10 | £1,000 | 5 times the amount of your annual water and wastewater services bill |
| 11 | £2,500 | 12.5 times the amount of your annual water and wastewater services bill |
| 12 | £5,000 | 25 times the amount of your annual water and wastewater services bill |
| 13 | £10,000 | 50 times the amount of your annual water and wastewater services bill |
| 14 | £20,000 | 100 times the amount of your annual water and wastewater services bill |
| 15 | £30,000 | 150 times the amount of your annual water and wastewater services bill |
| 16 | £40,000 | 200 times the amount of your annual water and wastewater services bill |

Table 5: SP3 design restrictions on compensation levels

| Service issue | Household | | Non-household | |
|---|-----------|---------|---------------|-----|
| | Min | Max | Min | Max |
| No service issue | 0 | 0 | 0 | 0 |
| Unexpected water supply interruption (6 hours) | 0 | £60 | 0 | 0.4 |
| Unexpected water supply interruption (24 hours) | 0 | £100 | 0 | 0.5 |
| Planned water supply interruption (6 hours) | 0 | £40 | 0 | 0.2 |
| Unexpected low water pressure (6 hours) | 0 | £40 | 0 | 0.2 |
| Boil water notice (48 hours) | 0 | £60 | 0 | 0.4 |
| Do not drink notice (48 hours) | 0 | £60 | 0 | 0.4 |
| Discoloured water (24 hours) | 0 | £60 | 0 | 0.4 |
| Water taste and smell (24 hours) | 0 | £60 | 0 | 0.4 |
| Sewer flooding: inside your property (1 month) | £2,500 | £30,000 | 12.5 | 150 |
| Sewer flooding: outside your property (1 week) | £500 | £5,000 | 2.5 | 25 |
| Hosepipe ban (5 months) | 0 | £60 | 0 | 0.4 |
| Emergency drought restrictions (2 months) | £40 | £500 | 0.2 | 2.5 |
| Discoloured water (6 hours) | 0 | £40 | 0 | 0.2 |
| Water taste and smell (6 hours) | 0 | £40 | 0 | 0.2 |

Note: For non-households, compensations are shown as bill amount multipliers.

2.3 Household survey methodology

The household survey method for the 2nd pilot was an online panel survey. This method was adopted as it allowed for a quick turn around and was cost effective.

We used the Dynata online panel. (NB: this represented a difference from the first panel, for which the Kantar online panel was used.)

A target of 400 online interviews was set: 200 for version 1 of the questionnaire and 200 for version 2 of the questionnaire.

No other quotas were applied.

The panel interviews took place between 24 and 31 May. The average completion time for the panel interviews was 9 minutes.

No weighting was applied to the online sample for the purposes of the pilot analysis, and so any observed differences could include differences in sample demographics.

2.4 Non household survey methodology

Two methods were used for the NHH sample:

A business-to-business online panel and CATI.

The allocation of the two survey types was as follows:

Version 1:

- 100 B2B panel interviews

Version 2:

- 40 B2B panel interviews
- 10 interviews using a CATI approach where participants did not have access to the choice materials (to explore how the more complex second design works in this scenario).

3 Descriptive Findings

3.1 Introduction

This section sets out descriptive findings from the 2nd pilot.

3.2 Survey response

The household panel survey achieved 402 interviews, slightly above the 400 targeted.

The non-household survey achieved 151 interviews, slightly above the 150 targeted.

Water Company

Participants were asked to provide the first half of their postcode, and this was used to allocate them to water and wastewater companies.

If participants had more than one potential water supplier and/or wastewater supplier, they were shown the possible options and asked to select the correct one.

The final allocation by water company for the household and non-household samples is shown in Table 6.

Table 6: Water company

| | HH % | NHH % |
|----------------------------------|------------|------------|
| Affinity Water | 5 | 7 |
| Anglian Water | 7 | 11 |
| Bournemouth Water | * | 1 |
| Bristol Water | 2 | 1 |
| Cambridge Water | 1 | 4 |
| Essex & Suffolk Water | 3 | 0 |
| Hafren Dyfrdwy | | 9 |
| Hartlepool Water | 0 | 3 |
| Northumbrian Water | 6 | 2 |
| Portsmouth Water | 1 | 2 |
| Severn Trent Water | 12 | 4 |
| South East Water | 3 | 5 |
| Southern Water | 5 | 17 |
| South Staffs Water | 2 | 14 |
| South West Water | 2 | 5 |
| Sutton & East Surrey (SES) Water | 1 | 1 |
| Thames Water | 15 | 10 |
| United Utilities | 15 | 6 |
| Welsh Water/Dwr Cymru | 6 | 7 |
| Wessex Water | 2 | 11 |
| Yorkshire Water | 8 | 1 |
| Base | 402 | 151 |

* = less than 0.5%

The final allocation of wastewater company for the household and non-household samples is shown in Table 7.

Table 7: Wastewater company

| | HH % | NHH % |
|-----------------------|------------|------------|
| Anglian Water | 11 | 13 |
| Hafren Dyfrdwy | * | 0 |
| Northumbrian Water | 6 | 3 |
| Severn Trent Water | 14 | 10 |
| Southern Water | 10 | 7 |
| South West Water | 3 | 4 |
| Thames Water | 21 | 26 |
| United Utilities | 16 | 15 |
| Welsh Water/Dwr Cymru | 6 | 5 |
| Wessex Water | 4 | 1 |
| Yorkshire Water | 8 | 10 |
| Base | 402 | 151 |

* = less than 0.5%

3.3 Demographics

Age

The age profile of the household sample is shown in Table 8 compared to the Census 2011. The sample has an older profile than the census.

Table 8: Age band

| | Census % | HH % |
|-------------|----------|------------|
| 18-29 | 20 | 13 |
| 30-64 | 57 | 71 |
| 65 or older | 23 | 16 |
| Base | | 402 |

Gender

The gender profile of the sample is shown in Table 9 compared to the Census 2011. The HH sample is more male oriented than the Census.

Table 9: Gender

| | Census % | HH % |
|-------------------------|----------|------------|
| Male | 49 | 61 |
| Female | 51 | 39 |
| Non binary | - | 0 |
| Prefer to self-identify | - | 0 |
| Base | | 402 |

Occupation of head of household

The household sample was asked how they would describe the occupation type of the main income earner in their household.

The sample has more in the 'Supervisory or clerical/ junior managerial/ professional/ administrative' category than the Census (19% compared to 6%) and fewer retired (15% compared to 29%) and fewer students (1% compared to 6%).

Table 10: Occupation of head of household

| | Census % | HH % |
|--|----------|------------|
| Higher managerial/ professional/ administrative | 7 | 10 |
| Intermediate managerial/ professional/ administrative | 21 | 25 |
| Supervisory or clerical/ junior managerial/ professional/ administrative | 6 | 19 |
| Skilled manual worker | 10 | 14 |
| Semi or unskilled manual work | 17 | 10 |
| Unemployed | 4 | 6 |
| Retired | 29 | 15 |
| Student | 6 | 1 |
| Base | | 402 |

Those who stated that the head of household was retired was asked whether the main income earner had a state pension, a private pension or both.

Table 11: Pension type

| | HH % |
|----------------------|-----------|
| State only | 19 |
| Private only | 24 |
| Both | 58 |
| Base: retired | 59 |

Ethnic group

The ethnic group of the sample was compared with the Census. The sample under-represented non White people.

Table 12: Ethnic group

| | Census % | HH % |
|---|----------|------------|
| English, Welsh, Scottish, Northern Irish or British | 80 | 85 |
| Irish | 1 | 1 |
| Gypsy or Irish Traveller | * | * |
| Any other White background | 4 | 3 |
| White and Black Caribbean | 1 | 1 |
| White and Black African | * | * |
| White and Asian | 1 | 2 |
| Any other Mixed background | 1 | * |
| Indian | 3 | 2 |
| Pakistani | 2 | 1 |
| Bangladeshi | 1 | * |
| Chinese | 1 | * |
| Any other Asian background | 1 | * |
| Caribbean | 2 | 1 |
| African | 1 | 1 |
| Any other Black background | 1 | * |
| Arab | * | |
| Any other ethnic group | 1 | * |
| Prefer not to say | - | * |
| Base | | 402 |

* = less than 0.5%

Household size

46% of the panel sample were 1 or 2 person households. See Table 13.

Table 13: People in household

| | HH % |
|-------------|------------|
| 1-2 | 46 |
| 3 or 4 | 43 |
| 5 or more | 11 |
| Base | 402 |

Vulnerability

The household sample was asked if they or another member of their household were:

- disabled or suffers from a debilitating illness
- has a learning difficulty
- relies on water for medical reasons
- is visually impaired (i.e. struggles to read even with glasses)
- is over the age of 75 years old
- speaks English as a second language
- is deaf or hard of hearing
- is a new parent

For six tenths (62%) none of the factors applied. The main one that did apply was disability or suffering from a debilitating illness (10%).

Table 14: Vulnerability

| | HH % |
|--|------------|
| I or another member of my household is disabled or suffer(s) from a debilitating illness | 10 |
| I or another member of my household am/is over the age of 75 years old | 4 |
| I or another member of my household is deaf or hard of hearing | 6 |
| I or another member of my household speaks English as a second language | 5 |
| I or another member of my household relies on water for medical reasons | 6 |
| I or another member of my household have/has a learning difficulty | 5 |
| I or another member of my household is a new parent | 6 |
| I or another member of my household is visually impaired | 4 |
| None of these apply to me | 62 |
| Prefer not to say | 5 |
| Base | 402 |

Ability to pay

The extent to which the household sample may have financial difficulties was probed by asking which of the following statements they most agreed with:

- I can always afford to pay my household bills
- I can usually afford to pay my household bills
- I sometimes struggle to pay my household bills
- I usually struggle to pay my household bills
- I always struggle to pay for my household bills

44% said they could always afford to pay their household bills. 6% of the sample said they usually or always struggled to pay their household bills.

Table 15: Financial vulnerability

| | HH % |
|---|------------|
| I can always afford to pay my household bills | 44 |
| I can usually afford to pay my household bills | 30 |
| I sometimes struggle to pay my household bills | 20 |
| I usually struggle to pay my household bills | 3 |
| I always struggle to pay for my household bills | 3 |
| Base | 402 |

Water meter status

58% of the household sample and 77% of the non-household sample had a water meter.

Table 16: Whether has water meter

| | HH % | NHH % |
|-------------------|------------|------------|
| Yes | 58 | 77 |
| No | 35 | 19 |
| Don't Know | 6 | 4 |
| Prefer not to say | 1 | |
| Base | 402 | 151 |

Those who had a water meter were asked if they asked for it to be fitted: 48% of the household sample and 49% of the non-household sample who had water meters said they did.

3.4 Non household sample characteristics

How organisation uses water

The main use of water was for normal domestic use for their organisation's customers and employees, mentioned by 81%.

Table 17: Water use types

| | NHH % |
|--|------------|
| Normal domestic use for their organisation's customers and employees | 81 |
| The supply of services your organisation provides (e.g. cleaning services etc.) | 33 |
| An ingredient or part of the product or service your organisation provides | 25 |
| The manufacturing process which is essential to the running of your organisation | 21 |
| Base | 151 |

Number of sites

Seven tenths of the non-household sample operated from one site. 16% operated from four or more sites:

Table 18: Number of sites

| | NHH % |
|-------------------|------------|
| 1 | 40 |
| 2 | 23 |
| 3 | 15 |
| 4+ | 21 |
| Prefer not to say | 1 |
| Base | 151 |

Number of employees

The number of employees the organisation has in the UK was probed. Eight per cent were sole traders and 16% had less than four employees. 6% were large organisations with 250 or more employees:

Table 19: Number of employees

| | NHH % |
|------------------------|------------|
| None, sole trader | 11 |
| Fewer than 4 employees | 5 |
| 4 to 49 employees | 26 |
| 50 to 249 employees | 31 |
| 250+ employees | 26 |
| Prefer not to say | 1 |
| Base | 151 |

Industry classification

The non-household sample was asked what the core activity of their organisation was. The main areas were wholesale and retail trade, manufacturing and hotels & catering:

Table 20: Industry classification

| | NHH % |
|--|------------|
| Wholesale and retail trade (including motor vehicles repair) | 18% |
| Construction | 11% |
| Manufacturing | 10% |
| Finance and insurance activities | 8% |
| IT and Communication | 7% |
| Professional, scientific and technical activities | 7% |
| Hotels & catering | 5% |
| Administrative and Support Service Activities | 5% |
| Transport and storage | 4% |
| Arts, entertainment and recreation | 4% |
| Energy or water service & supply | 3% |
| Education | 3% |
| Human health and social work activities | 3% |
| Other service activities | 3% |
| Public administration and defence | 2% |
| Agriculture, forestry and fishing | 1% |
| Real estate activities | 1% |
| Other | 6% |
| Base | 151 |

3.5 Billing

For households, 97% of the sample were bill payers and the remaining 2% were non bill payers.

Table 21: Are you the person in your household who is responsible, either solely or jointly, for paying for your water services bill?

| | HH % |
|--|------------|
| I have complete responsibility for payment | 76 |
| I share responsibility for payment with others in my household | 21 |
| I have no responsibility | 2 |
| Base | 402 |

Nine tenths of HH customers received combined bills. See Table 22.

Table 22: Whether separate water and wastewater bills

| | HH % |
|-------------------------|------------|
| Separate bills | 9 |
| Combined bills | 90 |
| Don't know | 1 |
| Base bill payers | 392 |

Household bill payers were asked how often they made payments for water and sewerage services. This was used to show participants the appropriate bands for the following question on water and sewerage bills. The majority (54%) made payments monthly with about a fifth six monthly.

Table 23: How often do you make payment for water and sewerage services

| | HH % |
|--|------------|
| Annually | 9 |
| Every six months | 21 |
| Every month, over eight months of the year | 12 |
| Every month | 53 |
| Other | 3 |
| Don't know | 3 |
| Base bill payers | 392 |

Household bill amounts, grouped into seven categories, are shown in Table 24.

Table 24: Household bill amounts

| | HH % |
|-------------------------|------------|
| Less than £120 per year | 3 |
| £120 - £239.99 per year | 27 |
| £240 - £359.99 per year | 23 |
| £360 - £479.99 per year | 22 |
| £480 - £719.99 per year | 13 |
| £720 - £959.99 per year | 4 |
| £960 or more per year | 3 |
| I'm not sure | 4 |
| Base | 380 |

For the non-household sample the bill distribution was as shown in Table 25.

Table 25: Non-household bill amounts

| Bill amount | NHH % |
|----------------------------|------------|
| Less than £1,000 per year | 22 |
| £1,000 to £5,000 per year | 46 |
| £5,000 to £25,000 per year | 28 |
| More than £25,000 per year | 3 |
| I'm not sure | 1 |
| Base | 151 |

3.6 Service issues

Participants were asked if they had ever experienced any water or wastewater service issues. Overall, 70% of the household sample had experienced at least one service issue compared to 82% of the non-household sample.

As shown in Table 26, the main service issues for households were planned water supply interruptions, hosepipe bans, unexpected low pressure and discolouration of water coming out of your tap. For the non-household sample, the main service issues were unexpected low pressure, planned water supply interruptions, hosepipe bans and discolouration of water coming out of your tap.

Table 26: Whether experienced any of the following service issues

| | HH % | NHH % |
|--|------------|------------|
| Planned water supply interruption | 29 | 35 |
| Unexpected low pressure | 23 | 36 |
| Hosepipe ban | 24 | 28 |
| Discolouration of water coming out of your tap | 19 | 28 |
| Unexpected water supply interruption | 17 | 25 |
| A change to the taste and/or smell of your tap water | 13 | 21 |
| Boil water notice | 11 | 8 |
| Sewer flooding: outside your property | 9 | 12 |
| Pollution in a river | 7 | 14 |
| Emergency drought restrictions (e.g. tap water being cut off on a rota basis to conserve supplies) | 6 | 12 |
| Pollution in the sea near a beach | 7 | 11 |
| Do not drink notice | 5 | 11 |
| Sewer flooding: inside your property | 5 | 11 |
| Other | 0 | 1 |
| I haven't experienced any of these | 30 | 18 |
| Base bill payers | 402 | 151 |

All participants who had mentioned the following two service issues were then asked if they had experienced them in the last 12 months:

- Discolouration of water coming out of your tap
- A change to the taste and/or smell of your tap water

Table 27 shows the proportion that had experienced each in the last 12 months.

Table 27: Proportion who had experienced the following service issues in last 12 months

| | HH % | NHH % |
|--|------------|------------|
| Discolouration of water coming out of your tap | 11 | 19 |
| A change to the taste and/or smell of your tap water | 9 | 16 |
| Base bill payers | 402 | 151 |

3.7 Use of rivers and beaches in the UK

The household sample was asked if they or anyone in their household, used rivers in the UK for any of the following activities:

- Water contact activities (e.g. canoeing, rowing, rafting, paddleboarding, swimming, paddling)
- Fishing
- Walking, running, cycling or sitting nearby or other activities on or around the water (e.g. narrowboating, other types of boating)

Walking, running, cycling or sitting nearby or other activities on or around the water was the most frequently cited activity with 69% of the sample doing it sometimes or often. Fishing was done least with 59% saying they never did it. See Table 28.

Table 28: Use of rivers in the UK

| | Water contact activities % | Fishing % | Walking, running, cycling or sitting nearby or other activities on or around the water % |
|-------------|-------------------------------|--------------|--|
| Often | 13 | 8 | 39 |
| Sometimes | 14 | 18 | 30 |
| Rarely | 25 | 15 | 14 |
| Never | 49 | 59 | 17 |
| Base | 402 | 402 | 402 |

Similarly, the household sample was asked if they or anyone in their household, used the beach or sea in the UK for any of the same activities.

Again, walking, running, cycling or sitting nearby or other activities on or around the water was the most frequently cited activity with 64% of the sample doing it sometimes or often. Again, fishing was done least with 60% saying they never did it. See Table 29.

Table 29: Use of beaches or the sea in the UK

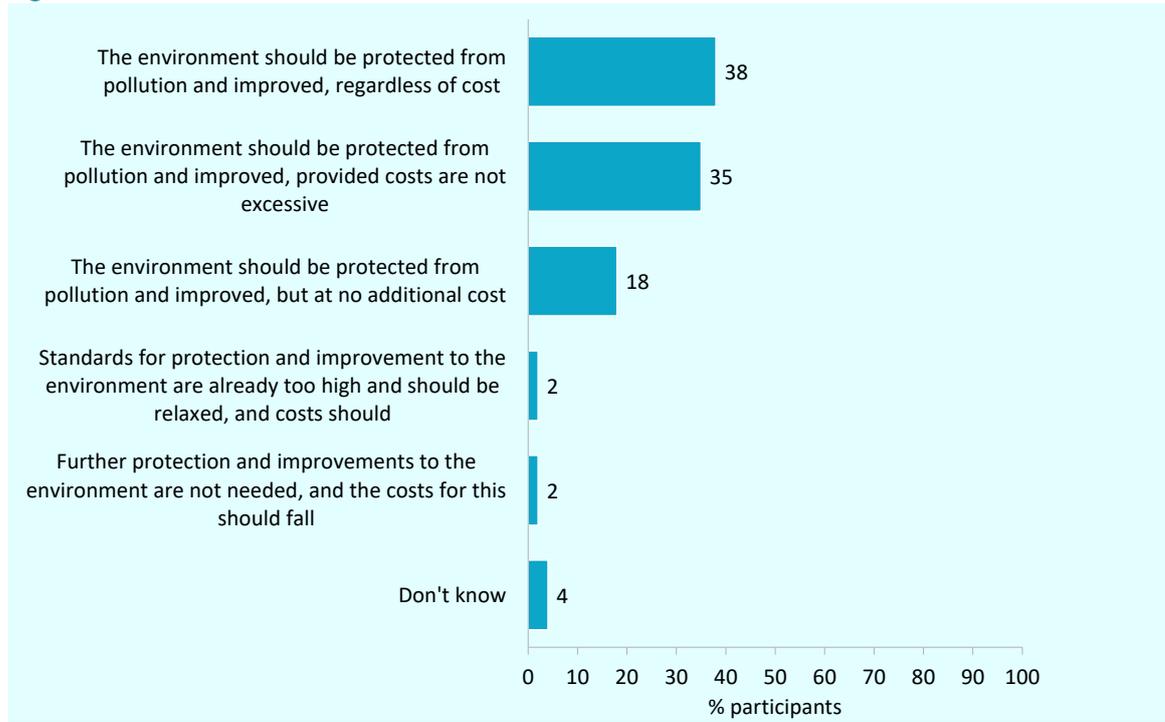
| | Water contact activities % | Fishing % | Walking, running, cycling or sitting nearby or other activities on or around the water % |
|-------------|-------------------------------|--------------|--|
| Often | 14 | 8 | 31 |
| Sometimes | 18 | 16 | 33 |
| Rarely | 21 | 15 | 18 |
| Never | 47 | 60 | 18 |
| Base | 402 | 402 | 402 |

3.8 Attitudes to environmental costs

The household sample was asked to state which of a set of five statements about pollution control and the costs of pollution control they agreed with most. Figure 7 shows the findings.

Two statements ‘the environment should be protected from pollution and improved, **regardless of cost**’ and ‘The environment should be protected from pollution and improved, **provided costs are not excessive**’ gained most support with 38% agreeing most with the first and 35% agreeing most with the second.

Figure 7: Attitudes to environmental costs



Base: HH 402

4 SP1 Impact Exercise Findings

4.1 Introduction

This section focuses on findings from the impact exercise. It includes feedback from pilot participants following the exercise, diagnostics concerning the choice data, econometric models, the impact scores generated from those models, and an analysis of the validity of these impact scores by comparing them against prior expectations.

4.2 Participant feedback

Feedback from participants following the impact exercise was positive. As shown in Figure 8 (household) and Figure 9 (non-household), only small proportions of participants disagreed a) that they were able to understand the choices, b) that they found the options believable, c) that their choices were based on how much impact each option would have on their household/organisation, and d) that they found it easy to choose between the options.

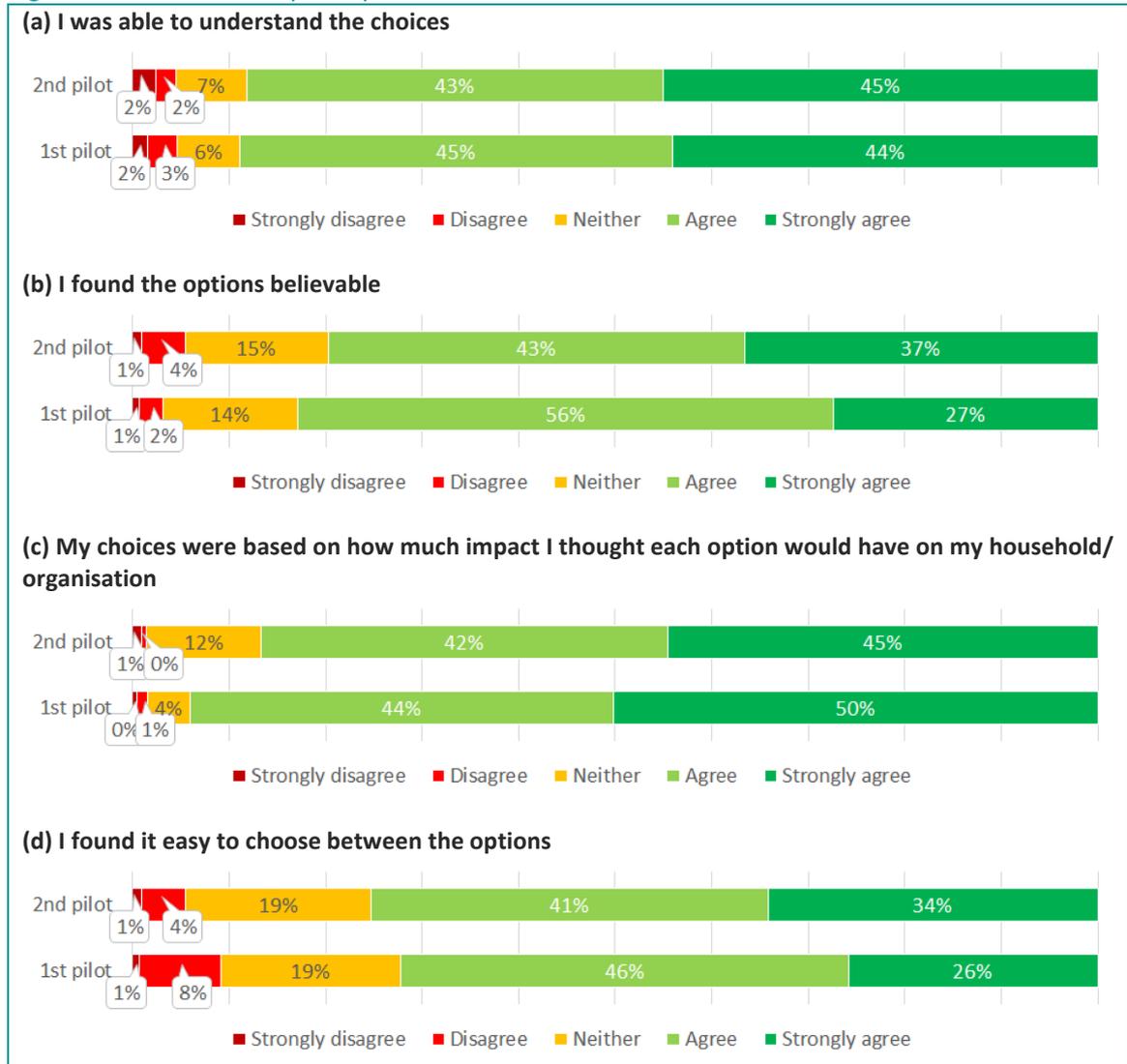
The highest proportion of participants disagreeing was found among non-household participants, 9% of whom disagreed that it was easy to choose between the options. However, a review of the reasons given did not suggest any cause for concern with regard to the validity of the vast majority of responses. (See Appendix D3 for a complete list of verbatim responses.)

Among the very few who indicated that they were not able to understand the choices, a number gave such reasons as 'Because they were explained simply, but in great detail', 'i wasn't', 'I did understand', suggesting that, in fact, they did not disagree at all (see Appendix D3).

The percentages in the top two 'Agree' categories were similar between the two pilot surveys.

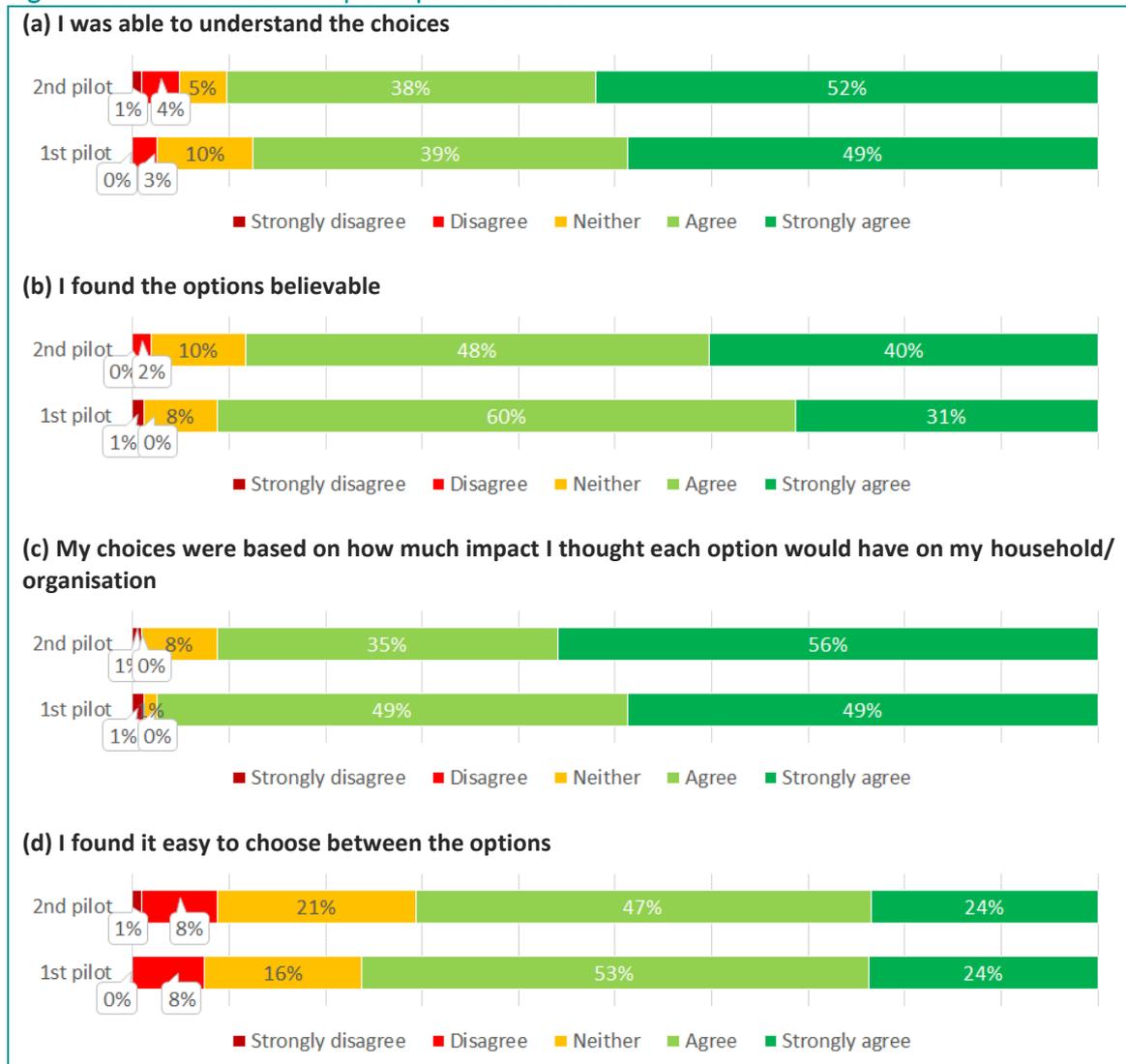
Overall, the responses to the follow-up questions do not suggest any issues around the format or design of the exercise that need addressing. The findings provide support for considering the responses to the choice questions to be valid and meaningful in the vast majority of cases.

Figure 8: SP1 household participant feedback



Base: Pilot 2 = 202; Pilot 1 = 450 (Panel sample)

Figure 9: SP1 non-household participant feedback

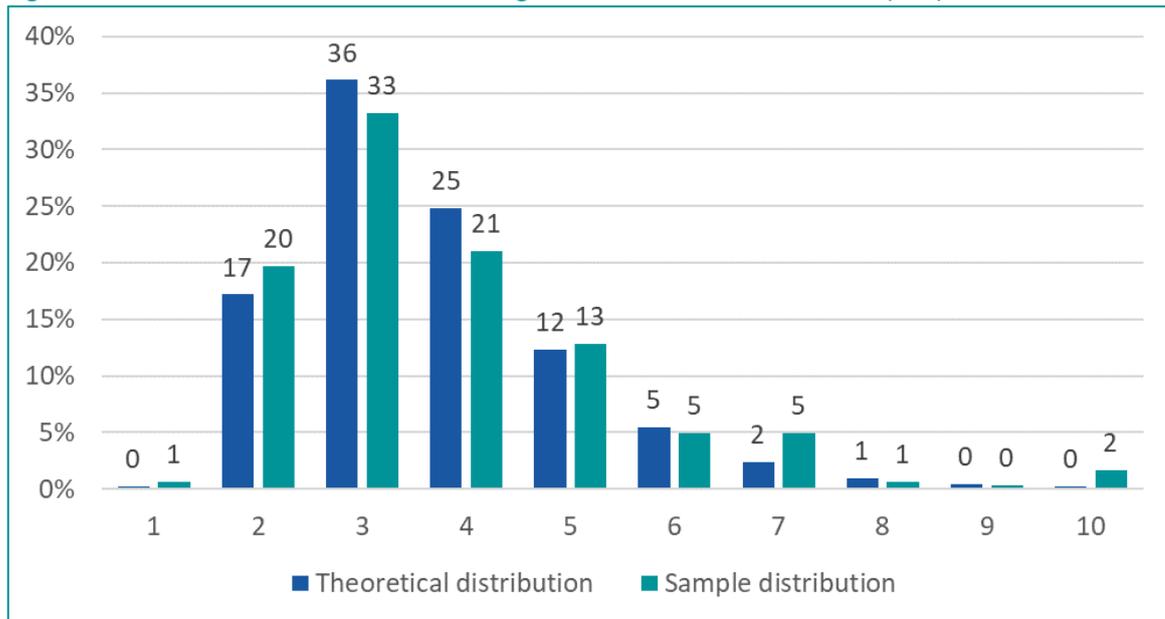


Base: Pilot 2 = 102; Pilot 1 = 80

4.3 Diagnostics

Making the same choices repeatedly (e.g., Option A chosen nine times in a row) can be indicative of not engaging with the survey, and a large number of non-traders implies a poor-quality dataset for analysis. Figure 10 compares the sample distribution of the maximum length of runs of identical choices (e.g., same option chosen at most 5 times in a row) against the theoretical distribution that is obtained when there are equal choice probabilities for Option A and Option B in each question. Only a tiny proportion (1.6%) chose the same option across all 10 choice occasions. A somewhat higher proportion of participants made long runs of identical choices than expected based on the theoretical distribution, but the two distributions are very similar, indicating that non-trading is not a cause for concern.

Figure 10: Distribution of the maximum length of runs of identical choices (SP1)



Base: 304 participants (full sample)

4.4 Econometric modelling

The SP1 choices were analysed using a conditional logit model with choice as the dependent variable, a {1,0} variable indicating whether any given scenario was seen as having a greater impact than the other scenario available in any given choice occasion. The model estimates the impact of each scenario in comparison to a base scenario/variable which is omitted. (The decision which variable is chosen as the base variable is arbitrary and has no influence on the final outcome.)

Separate models were estimated for the household and non-household samples. Larger coefficients on any of the variables imply a greater impact of that scenario compared to scenarios that have smaller coefficients. The models are shown in Table 30 and Table 31 respectively.

The findings from the econometric analysis are positive, although have a worse goodness of fit than obtained from the 1st pilot. The majority of coefficients are highly statistically significant, i.e., most scenarios have a statistically larger or smaller impact than the omitted base scenario which is a storm overflow elsewhere lasting 4 hours for households and coastal bathing water being neither Excellent nor Good quality for non-households. However, the pseudo-R2 statistics – a measure of overall goodness of fit - are 0.08 and 0.13 for the household and non-household models respectively, which are lower than those obtained in the 1st pilot (0.15 and 0.27 respectively). This indicates a lower degree of explanatory power of the models in comparison to those from the 1st pilot, which is consistent with there being a smaller degree of variation in impact estimates across service issues than was previously found.

Table 30: SP1 household econometric model

| | Coef. | Std. Err. | z | P>z |
|---|-------|-----------|------|-------|
| Sewer flooding: inside your property (1 month) | 2.392 | 0.347 | 6.90 | 0.000 |
| Emergency drought restrictions (2 months) | 1.795 | 0.271 | 6.62 | 0.000 |
| Sewer flooding: outside your property (1 week) | 1.715 | 0.265 | 6.46 | 0.000 |
| Planned water supply interruption (6 hours) | 1.405 | 0.260 | 5.41 | 0.000 |
| Unexpected water supply interruption (24 hours) | 1.389 | 0.269 | 5.16 | 0.000 |
| Do not drink notice (48 hours) | 1.338 | 0.241 | 5.54 | 0.000 |
| Unexpected water supply interruption (6 hours) | 1.326 | 0.273 | 4.86 | 0.000 |
| Water taste and smell (24 hours) | 1.233 | 0.239 | 5.17 | 0.000 |
| Discoloured water (6 hours) | 1.197 | 0.251 | 4.77 | 0.000 |
| Discoloured water (24 hours) | 1.166 | 0.238 | 4.90 | 0.000 |
| Boil water notice (48 hours) | 1.159 | 0.258 | 4.49 | 0.000 |
| Water taste and smell (6 hours) | 1.092 | 0.241 | 4.53 | 0.000 |
| Significant pollution incident nearby (4 weeks) | 0.915 | 0.277 | 3.30 | 0.001 |
| Significant pollution incident elsewhere (4 weeks) | 0.815 | 0.221 | 3.69 | 0.000 |
| Unexpected low water pressure (6 hours) | 0.744 | 0.257 | 2.90 | 0.004 |
| Minor pollution incident nearby (1 day) | 0.687 | 0.229 | 3.00 | 0.003 |
| Storm overflow nearby (4 hours) | 0.614 | 0.219 | 2.81 | 0.005 |
| Hosepipe ban (5 months) | 0.574 | 0.259 | 2.22 | 0.027 |
| Low flows in rivers elsewhere (2 months) | 0.554 | 0.234 | 2.37 | 0.018 |
| Minor pollution incident elsewhere (1 day) | 0.478 | 0.249 | 1.92 | 0.055 |
| River water nearby is not High quality | 0.387 | 0.230 | 1.68 | 0.092 |
| Low flows in rivers nearby (2 months) | 0.323 | 0.226 | 1.43 | 0.152 |
| River water elsewhere is not High quality | 0.289 | 0.217 | 1.33 | 0.184 |
| Coastal bathing water is neither Excellent nor Good quality | 0.134 | 0.240 | 0.56 | 0.578 |
| Coastal bathing water is not Excellent quality | 0.107 | 0.244 | 0.44 | 0.661 |
| Storm overflow elsewhere (4 hours) | 0.000 | | | |
| No. of observations | | 4,040 | | |
| No. of participants | | 202 | | |
| Pseudo R ² | | 0.08 | | |

Note: Conditional logit estimates on unweighted data. Dependent variable: choice. Standard errors clustered by participant.

Table 31: SP1 non-household econometric model

| | Coef. | Std. Err. | z | P>z |
|---|-------|-----------|------|-------|
| Sewer flooding: inside your property (1 month) | 2.878 | 0.586 | 4.91 | 0.000 |
| Do not drink notice (48 hours) | 2.396 | 0.403 | 5.95 | 0.000 |
| Emergency drought restrictions (2 months) | 2.376 | 0.457 | 5.20 | 0.000 |
| Sewer flooding: outside your property (1 week) | 2.072 | 0.461 | 4.50 | 0.000 |
| Water taste and smell (6 hours) | 2.070 | 0.444 | 4.67 | 0.000 |
| Unexpected water supply interruption (24 hours) | 2.063 | 0.457 | 4.52 | 0.000 |
| Discoloured water (6 hours) | 1.913 | 0.420 | 4.55 | 0.000 |
| Boil water notice (48 hours) | 1.907 | 0.424 | 4.50 | 0.000 |
| Significant pollution incident nearby (4 weeks) | 1.903 | 0.446 | 4.27 | 0.000 |
| Unexpected water supply interruption (6 hours) | 1.880 | 0.549 | 3.43 | 0.001 |
| Planned water supply interruption (6 hours) | 1.676 | 0.444 | 3.77 | 0.000 |
| Unexpected low water pressure (6 hours) | 1.534 | 0.422 | 3.64 | 0.000 |
| Discoloured water (24 hours) | 1.443 | 0.430 | 3.35 | 0.001 |
| Water taste and smell (24 hours) | 1.355 | 0.445 | 3.05 | 0.002 |
| Significant pollution incident elsewhere (4 weeks) | 1.294 | 0.432 | 3.00 | 0.003 |
| Storm overflow nearby (4 hours) | 1.082 | 0.395 | 2.74 | 0.006 |
| Minor pollution incident elsewhere (1 day) | 1.072 | 0.417 | 2.57 | 0.010 |
| Minor pollution incident nearby (1 day) | 1.033 | 0.430 | 2.40 | 0.016 |
| Low flows in rivers elsewhere (2 months) | 0.971 | 0.386 | 2.51 | 0.012 |
| Hosepipe ban (5 months) | 0.903 | 0.432 | 2.09 | 0.036 |
| Low flows in rivers nearby (2 months) | 0.835 | 0.382 | 2.19 | 0.029 |
| Storm overflow elsewhere (4 hours) | 0.569 | 0.423 | 1.35 | 0.179 |
| River water nearby is not High quality | 0.369 | 0.389 | 0.95 | 0.342 |
| Coastal bathing water is not Excellent quality | 0.281 | 0.422 | 0.67 | 0.505 |
| River water elsewhere is not High quality | 0.216 | 0.432 | 0.50 | 0.617 |
| Coastal bathing water is neither Excellent nor Good quality | 0.000 | | | |
| No. of observations | | 2,040 | | |
| No. of participants | | 102 | | |
| Pseudo R ² | | 0.13 | | |

Note: Conditional logit estimates on unweighted data. Dependent variable: choice. Standard errors clustered by participant.

4.5 Impact scores

Figure 11 and Figure 12 show the impact scores for each of the 26 scenarios for households and non-households, respectively, compared against impact scores obtained from the 1st pilot. The impact scores were calculated as exponentiated coefficients (odds ratios) based on the corresponding estimates in Table 30 and Table 31, and were scaled to sum to 100 across the full set of scenarios covered in the exercise. These scores are an index representing the relative impact of each scenario.

The highest impacts among household customers were associated with

- Sewer flooding: inside your property (1 month)
- Emergency drought restrictions (2 months)
- Sewer flooding: outside your property (1 week)
- Planned water supply interruption (6 hours)
- Unexpected water supply interruption (24 hours)

The top five scenarios in terms of impact on non-household customers were

- Sewer flooding: inside your property (1 month)
- Do not drink notice (48 hours)
- Emergency drought restrictions (2 months)
- Sewer flooding: outside your property (1 week)
- Water taste and smell (6 hours)

The impact ranking for households was very similar between the 2nd and the 1st pilot. Four out of five top-ranked scenarios in the 2nd pilot ranked among the top five in the 1st pilot, and the impact rank correlation between the two surveys is 0.95 (on a 0-1 scale) when scenarios that appeared in one survey only are excluded, and the ranks are adjusted accordingly. The rank correlation between impact rankings from the 2nd and the 1st pilot is very high also for non-households (0.94).

While the top five scenarios accounted for 60% and 80% of the ‘total impact’ for household and non-households, respectively, in the 1st pilot, these percentages are down to 40% only, for both samples, in the 2nd pilot, i.e., the ‘total impact’ was more evenly distributed among the various scenarios in the 2nd pilot compared to the 1st pilot. This more even distribution is consistent with there being a lower goodness of fit in the 2nd pilot models than was found in the 1st pilot models.

Of particular note is that finding that the impact score for internal sewer flooding, the highest-impact issue, was only 14.1 and 13.2, for household and non-household customers, respectively, in the 2nd pilot, compared to 30.7 and 52.5, respectively, in the 1st pilot. In addition, the impact score of a planned water supply interruption lasting 6 hours, one of the SP2 pivot attributes, was double that in the 1st pilot. These differences translate into considerable differences in the relative valuation of internal sewer flooding in comparison to a short planned water supply interruption between the two pilot surveys, as shown in Table 32. Here it can be seen that the relative impacts of internal sewer flooding to a short supply interruption were very much higher in the 1st pilot than at the 2nd pilot.

There were no substantive revisions to the SP1 design between the 1st pilot and the 2nd, and so differences in design cannot explain the differences in observed findings. The differences could, at least to some extent, reflect differences in sample demographics. However, a more likely explanation, in our view, is that the finding is related to differences in the quality of response obtained from the panel providers used in the 1st and 2nd pilots. The time taken to complete the SP1 exercise was substantially lower amongst participants in the 2nd pilot (median=129 seconds) than in the 1st (median=221 seconds), and so it would be consistent for the responses to be less well-considered, and for there to consequently be more randomness in them. This would lead to the observed finding of a poorer goodness of fit, and less variation in impact scores, for the 2nd pilot than the 1st.

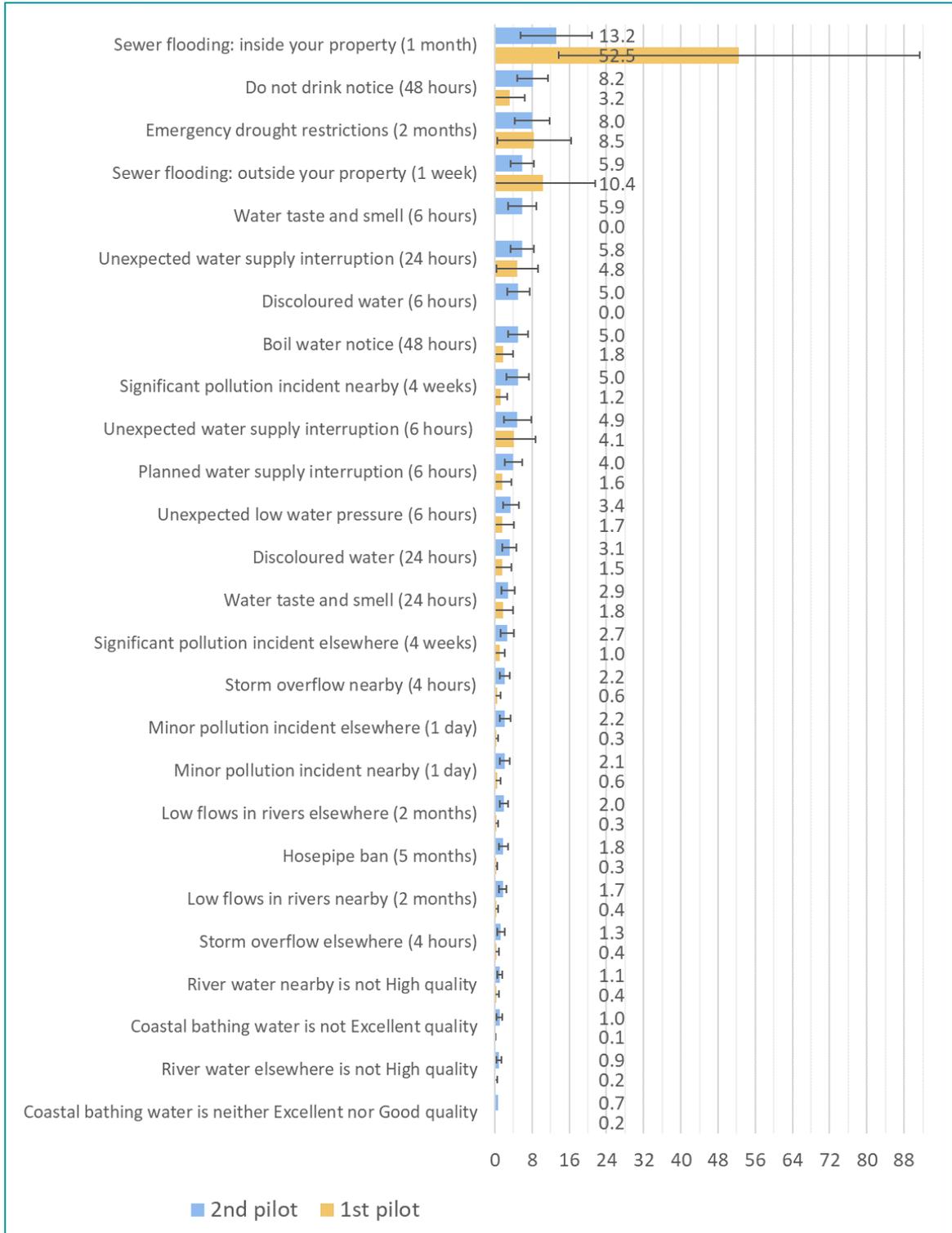
Figure 11: Impact scores for the household sample: 2nd pilot vs 1st pilot (panel)



Base: 2nd pilot = 202; 1st Pilot (Panel) = 450

Note: The error bars show 95% confidence intervals calculated using the delta method. The duration of 'Sewer flooding: inside your property' was 1 week in the 1st pilot as opposed to 1 month in the 2nd pilot. 'Discoloured water (6 hours)' and 'Water taste and smell (6 hours)' not included in the first pilot. Not shown: 'Planned water supply interruption (24 hours)' (included in 1st pilot only).

Figure 12: Impact scores for the non-household sample: 2nd pilot vs 1st pilot



Base: 2nd pilot = 102; 1st pilot = 80

Note: The error bars show 95% confidence intervals calculated using the delta method. The duration of 'Sewer flooding: inside your property' was 1 week in the 1st pilot as opposed to 1 month in the 2nd pilot. 'Discoloured water (6 hours)' and 'Water taste and smell (6 hours)' not included in the 1st pilot. Not shown: 'Planned water supply interruption (24 hours)' (included in 1st pilot only).

Table 32: Pilot 1 vs Pilot 2 relative impacts of internal sewer flooding to a short planned supply interruption

| | Impact of internal sewer flooding as a multiple of short planned supply interruption impact |
|-----------------|---|
| HH | |
| Pilot 1 (PAF) | 37.8 |
| Pilot 1 (Panel) | 13.6 |
| Pilot 2 (Panel) | 2.7 |
| | |
| NHH | |
| Pilot 1 | 33.1 |
| Pilot 2 | 3.3 |

4.6 Expectation-based validity analysis

As a test of the validity of the rankings derived from the econometric models, we checked the relative impacts between pairs of scenarios against prior expectations. In most cases, the rankings were in line with expectation; however, there were some minor violations observed in the 2nd pilot as shown in Table 33.

In most cases, the rank differences are small, and these are also subject to sampling error. These findings are therefore supportive of the design's expected ability to generate valid impact scores from the full main stage sample.

Table 33: Impact exercise design restrictions : Violations

| | More impactful | Less impactful | Violations | |
|----|---|--|--------------------------------------|--------------------------------------|
| | | | HH (ranks) | NHH (ranks) |
| 1 | Unexpected water supply interruption (6 hours) | Planned water supply interruption (6 hours) | 7 th vs 4 th | |
| 2 | Unexpected water supply interruption (24 hours) | Planned water supply interruption (6 hours) | 5 th vs 4 th | |
| 3 | Unexpected water supply interruption (24 hours) | Unexpected water supply interruption (6 hours) | | |
| 4 | Emergency drought restrictions (2 months) | Hosepipe ban (5 months) | | |
| 5 | Low flows in rivers nearby (2 months) | Low flows in rivers elsewhere (2 months) | 22 nd vs 19 th | 21 st vs 19 th |
| 6 | Storm overflow nearby (4 hours) | Storm overflow elsewhere (4 hours) | | |
| 7 | Minor pollution incident nearby (1 day) | Minor pollution incident elsewhere (1 day) | | 18 th vs 17 th |
| 8 | Significant pollution incident nearby (4 weeks) | Significant pollution incident elsewhere (4 weeks) | | |
| 9 | River water nearby is not High quality | River water elsewhere is not High quality | | |
| 10 | Minor pollution incident nearby (1 day) | Storm overflow nearby (4 hours) | | 18 th vs 16 th |
| 11 | Significant pollution incident nearby (4 weeks) | Storm overflow nearby (4 hours) | | |
| 12 | Significant pollution incident nearby (4 weeks) | Minor pollution incident nearby (1 day) | | |
| 13 | Minor pollution incident nearby (1 day) | Storm overflow elsewhere (4 hours) | | |
| 14 | Significant pollution incident nearby (4 weeks) | Storm overflow elsewhere (4 hours) | | |
| 15 | Significant pollution incident nearby (4 weeks) | Minor pollution incident elsewhere (1 day) | | |
| 16 | Minor pollution incident elsewhere (1 day) | Storm overflow elsewhere (4 hours) | | |
| 17 | Significant pollution incident elsewhere (4 weeks) | Storm overflow elsewhere (4 hours) | | |
| 18 | Significant pollution incident elsewhere (4 weeks) | Minor pollution incident elsewhere (1 day) | | |
| 19 | Coastal bathing water is neither Excellent nor Good quality | Coastal bathing water is not Excellent quality | | 26 th vs 24 th |
| 20 | Discoloured water (24 hours) | Discoloured water (6 hours) | 10 th vs 9 th | 13 th vs 7 th |
| 21 | Water taste and smell (24 hours) | Water taste and smell (6 hours) | | 14 th vs 5 th |

Note: The impact exercise was designed to exclude any choice sets that included the pairs of scenarios shown in the table.

5. SP2 Compensation Exercise Findings

5.1 Introduction

This section focuses on findings from the compensation exercise. It includes feedback from pilot participants following the exercise, analysis of the contingent valuation data, and derived valuations for all the service issue scenarios based on combining this analysis with the impact scores obtained in the previous section.

5.2 Participant feedback

Feedback from participants following the compensation exercise was positive as shown in Figure 13 (household) and Figure 14 (non-household). Only small proportions disagreed a) that they were able to understand the choices, b) that the options were believable, c) that their choices were based on how much impact each option would have on their household/organisation and whether the amount of money shown was enough to compensate for, and d) that they found it easy to choose between the options.

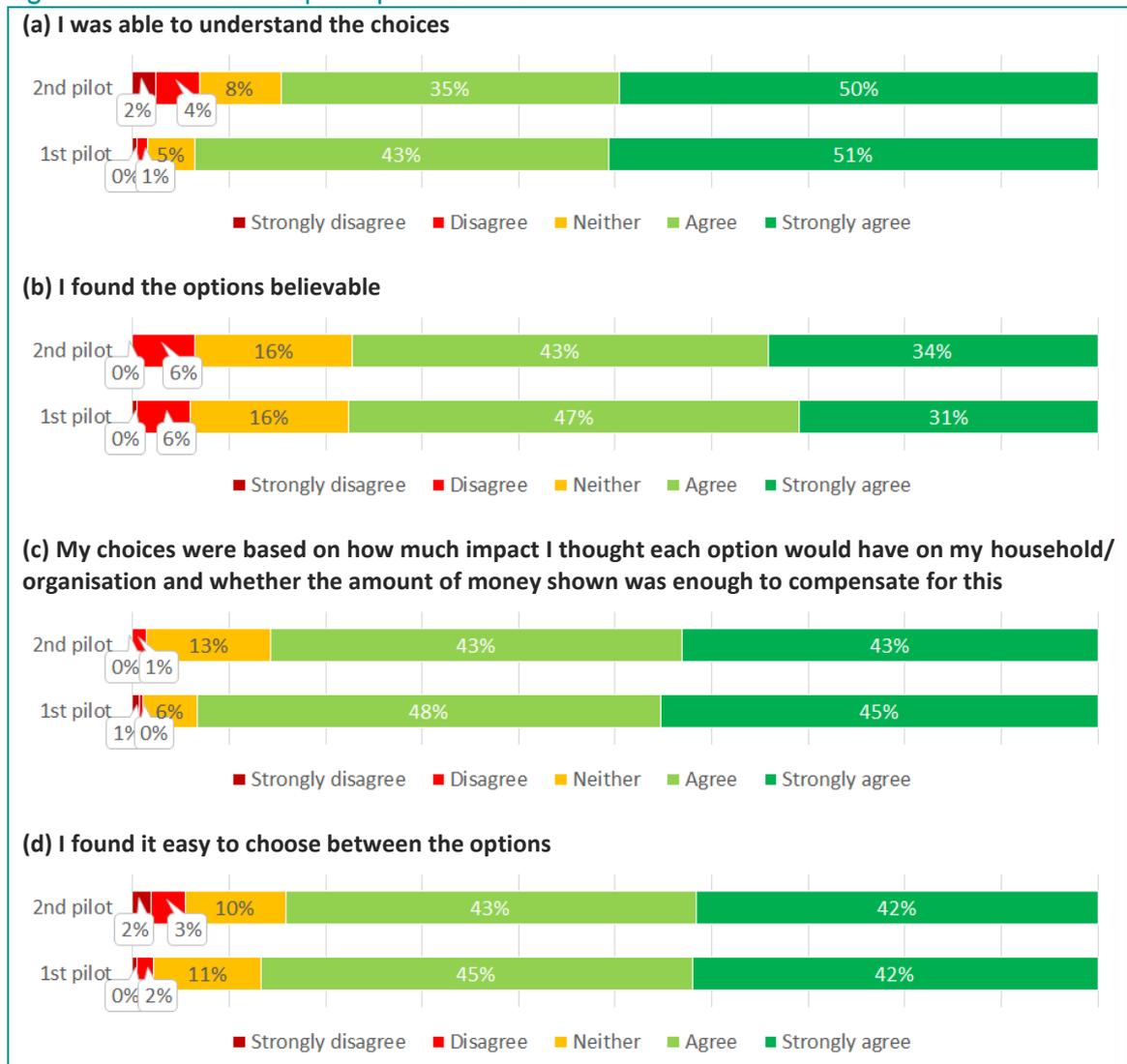
The percentages in the top two 'Agree' categories were somewhat lower in the 2nd pilot than in the 1st pilot, the differences being statistically significant at the 5% level, for households only, for the following aspects:

- 'I was able to understand the choices'
- 'My choices were based on how much impact I thought each option would have on my household and whether the amount of money shown was enough to compensate for this'

As in the 1st pilot study, we found that around 40% of those who disagreed that the options were believable, found compensation amounts to be unbelievably high or seemed to question whether any compensation would be paid at all. For example:

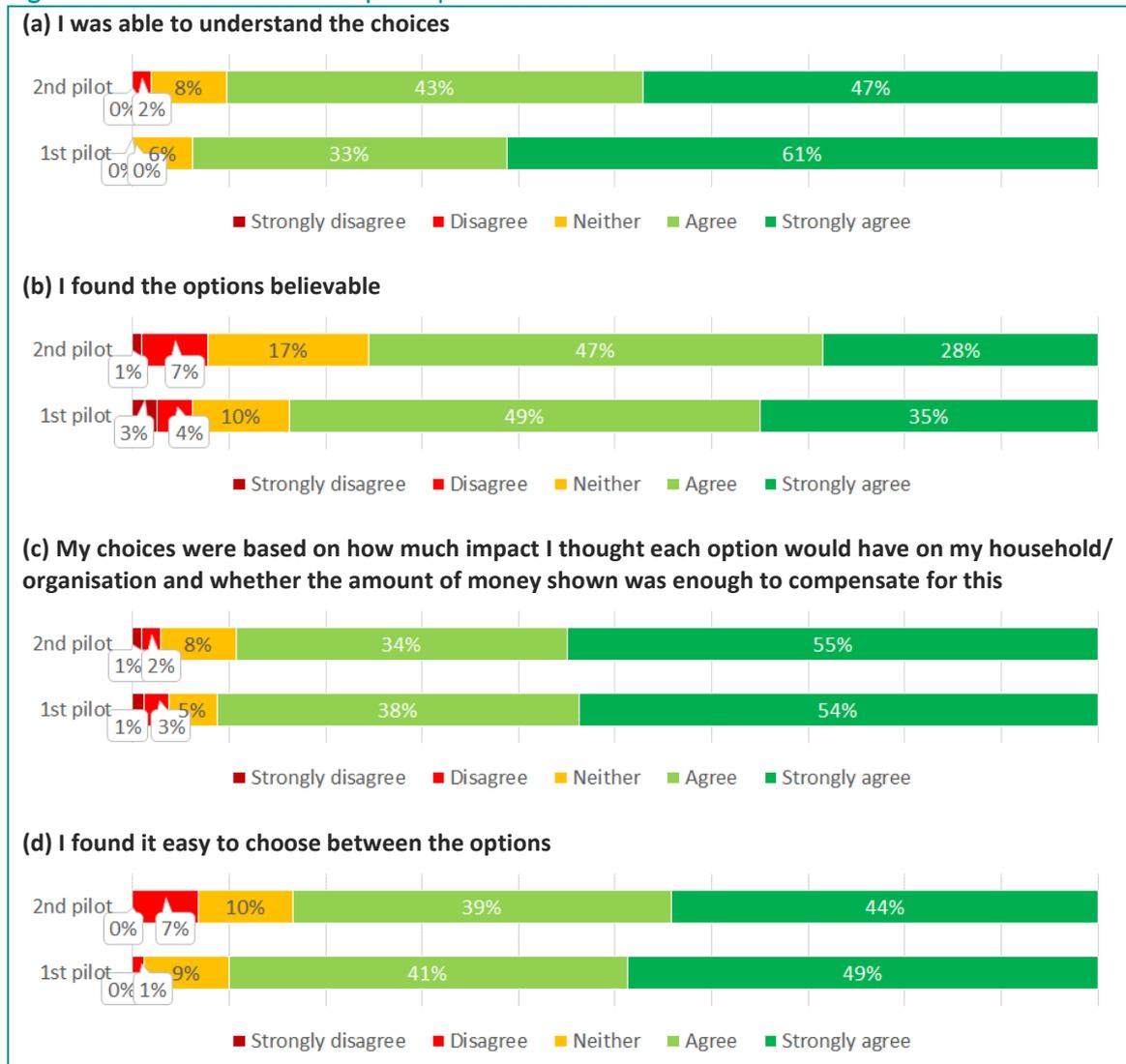
- *I doubt so much would be paid out*
- *I DON'T THINK THAT THEY WILL PAY THAT LEVEL OF COMPENSATION*
- *THE AMOUNTS WOULD NEVER BE PAID*
- *They would not offer a free year or two*

Figure 13: SP2 household participant feedback



Base: Pilot 2 = 202; Pilot 1 = 450 (Panel sample)

Figure 14: SP2: non-household participant feedback



Base: Pilot 2 = 102; Pilot 1 = 80

The selected responses to feedback follow-up questions¹⁰ shown in Table 34 suggest that

- Some participants may have viewed the ‘one-off payment’ as a fee/charge to be paid to the water company in order to
 - prevent the issue from occurring (response no. 3) or
 - be sent a boil water notice when tap water was not safe to drink (response no. 4)
 instead of as a compensation payment to be received from the water company in the event of a service issue;
- Some participants may have misunderstood the ‘Boil water notice’ questions as offering a choice between being sent vs not being sent a notice when tap water was not safe to drink (responses no. 4 and no. 7).

¹⁰ The full set of verbatim responses is included in Appendix D3.

Table 34: Selected SP2 feedback follow-up responses

| No. | Why were you unable to understand the choices? |
|-----|--|
| 1 | I didn't under stand what it Ment but a one off payment |
| 2 | I misunderstood the first two questions [Those relating to a planned water supply interruption] |
| 3 | Maybe it was my screen layout but i couldn't tell for sure if it meant the cost would prevent the problem. |
| No. | What was not believable about the options shown? |
| 4 | I cannot believe that there would be a charge to be notified about these issues. Surely this would never be accepted |
| 5 | giving the compensation |
| 6 | The percentage of payment to be made in first option. Too much money. |
| No. | Why was it difficult choosing between the options? |
| 7 | Ensure of the implications of no notice given. How would I know to boil the water? |
| 8 | Planned is better obviously the payments required were too much for this option. |

An examination of the reasons given by the participants for their choices also suggests that some participants did not interpret the SP2 questions as intended. Participants who chose not to experience the service issue (Option B) in the follow-up valuation question, having also chosen Option B in the first valuation question, were asked to explain why they chose Option B. Around 25% of the responses indicate that the participants did view the ‘one-off payment’ as a fee/charge to be paid to the water company or, at least, potentially suggest that they may have viewed the payments as fees/charges instead of compensations. The relevant responses are shown in Table 35 (planned supply interruption) and Table 36 (boil water notice). Note that most of these participants agreed or strongly agreed that they were able to understand the choices.

While it is conceivable that some participants may have thought that they would have to pay a fee if they opted to be sent a ‘Boil water notice’ when tap water was not safe to drink (see response no. 21 in Table 36), it is not clear how the ‘one-off payment’ came to be seen as a fee/charge in the context of a planned water supply interruption, although it is possible that this misinterpretation was carried over from the ‘Boil water notice’ exercise when the latter came before the ‘Planned water supply interruption’¹¹, perhaps because the planned supply interruption, too, involved a notice by the water company, albeit an advance notice (see response no. 3 in Table 35).

Table 35: Selected reasons for choosing ‘No planned water supply interruption’

| No. | Reason for choosing ‘Option B’ (no service issue) |
|-----|---|
| 1 | Unable to afford the one off payment |
| 2 | We shouldnt have to pay it |
| 3 | Why would you be expected to pay for something that should be done as standard |
| 4 | Cheaper |
| 5 | Can't afford extra payments |
| 6 | Because I am already paying enough for water supply and due to the cost of living crisis I feel like any extra costs would be tough |
| 7 | Cheaper |
| 8 | I do not want to pay |
| 9 | I'm not paying extra money for that |
| 10 | i cant afford the charges |

¹¹ The order of the two exercises was randomised across participants.

| No. | Reason for choosing 'Option B' (no service issue) |
|-----|--|
| 11 | As stated before. ['Why should I pay for this. God gave water for free. It's these greedy companies that are raping people financially for this commodity. Its not fair. And some of us are not flourished with cash either so have to watch our pennies'] |
| 12 | i dony think that option one would really affect us enough to pay extra |
| 13 | Cheaper |
| 14 | Rather not pay a percentage of rates in 1 payment even if planned. |
| 15 | Cost |
| 16 | Because nobody would want their water service interrupted and I'm happy paying full price for my services not being interrupted |
| 17 | is cheaper |
| 18 | The costs are still too high |

Note: Reasons for choices only asked of participants who chose 'Option B' in both the first and the follow-up question.

Table 36: Selected reasons for choosing 'No boil water notice'

| No. | Reason for choosing 'Option B' (no service issue) |
|-----|--|
| 1 | Couldn't afford the extra payments |
| 2 | Cos I wouldn't be able to pay the full one of payments |
| 3 | It is ridiculous to be expected to pay for a notification on a public health and safety issue |
| 4 | Cheaper |
| 5 | I can't afford an extra payment |
| 6 | Again, the cost of living crisis means there isn't ample money after paying all other bills |
| 7 | Cheaper |
| 8 | I do not want to pay |
| 9 | I'm not paying extra money for that |
| 10 | Because we would be able to communicate the problem with employees and place clear notices on taps around the building. Less expensive this way. |
| 11 | i cant afford to pay extra |
| 12 | I thought the cost made it most appropriate |
| 13 | Why should I pay for this. God gave water for free. It's these greedy companies that are raping people financially for this commodity. Its not fair. And some of us are not flourished with cash either so have to watch our pennies |
| 14 | It didn't seem the most practical to choose for that scenario and the impact was not great enough to factor in the cost. |
| 15 | I don't mind boiling water |
| 16 | Same again. Would not like to pay lump sum |
| 17 | the price |
| 18 | Because nobody wants their own water supply interrupted and would be happy to pay full price for a fair working service that doesn't affect your normal routine. |
| 19 | 160% would potentially be a great deal of money ... choose the cheaper option |
| 20 | firts looks very expensive |
| 21 | Although I really anted to opt for the boil notice, the costs were far too high. |

Note: Reasons for choices only asked of participants who chose 'Option B' in both the first and the follow-up question.

While the feedback statistics are supportive overall of the design of the compensation exercise the reasons participants gave for their choices and/or for negative feedback suggest that some participants viewed the 'one-off payment' as a fee/charge to be paid to the water company and that some participants may have misunderstood the 'Boil water notice' questions as offering a choice between being sent vs not being sent a notice when tap water was not safe to drink. To remedy these issues, we recommend revising the questionnaire as follows:

RECOMMENDATIONS:

Further clarify the instructions to this exercise and/or the choices themselves to avoid misinterpretation

Refer to compensation as ‘Compensation’ instead of a ‘One-off payment’

Retain the feedback questions within the main stage questionnaire to allow checking the robustness of key findings to the exclusion of participants who give feedback indicating invalid responses.

With regard to the second of the above recommendations, this would reverse a change made following the previous round of testing. Originally, the design for the SP2 exercise included the term ‘Compensation’ rather than ‘One-off payment’; however, in the previous cognitive interviews, it was found that some participants interpreted compensation as a signal of the severity of the service issue shown, which would be inconsistent with the valuation construct. Consequently, the term ‘One-off payment’ was proposed as a replacement.

The findings from the present round of testing suggest that this revised term has not been correctly interpreted by some. One option would be to add further explanatory text to overcome the potential misinterpretation. However, our recommendation is instead to revert back to the original term of ‘Compensation’. This is because the recommendation to change the term was driven by a particular issue with the External sewer flooding service issue, which was one of the original two ‘pivot’ service issues included in the SP2 exercise. For this service issue, there was necessarily some ambiguity in the description with respect to how severe the impact would be on the customer, given that customers have different styles of property and the service issue had to be described in a way that was applicable to all of these. Due to its high impact nature, there were also high amounts needed to fully compensate customers, in an economic sense, for the disutility experienced.

Given that the External sewer flooding service issue was no longer used as a pivot attribute, the argument for avoiding using the term ‘Compensation’ is weaker. In the case of Planned supply interruptions and Boil water notices, there is substantially less ambiguity over the severity of the impact that would occur, and also a lower required compensation due to the lower impact nature of the incidents. Consequently, the original advantage of the ‘Compensation’ term – its natural connection with the idea of being paid for a harm – appear to us to dominate over the potential disadvantage of its being associated with financial damages, and we therefore recommend its reinstatement in place of the term ‘One-off payment’.

5.3 Contingent valuation results

Estimates of the proportions choosing not to experience the service issues covered in the compensation exercise are shown in [Figure 15](#) for households and in [Figure 16](#) for non-households¹².

¹² The estimates were obtained from the *DCchoice* package for the R environment (R Core Team 2021), and were checked against estimates obtained using several different algorithms available from the *Icens* package. See Nakatani, Tomoaki, Hideo Aizaki, and Kazuo Sato (2020). *DCchoice: An R Package for Analyzing Dichotomous Choice Contingent Valuation Data*. R package version 0.0.17 and Gentleman R., and Alain Vandal (2021). *Icens: NPMLE for Censored and Truncated Data*. R package version 1.64.0. The main advantage

As expected, all curves are downward sloping, indicating that participants were more likely to choose not to experience the service issues when a low compensation was offered than when compensations were high.

The main concern regarding pilot testing of the compensation exercise is to make sure that the range of compensation amounts is appropriate. For the purposes of estimating median values, the critical issue is that the amounts shown span the median; whilst to estimate the mean it is necessary to ensure that the upper end of the range is sufficient to adequately 'choke off' the majority of the demand.

In the 1st pilot, at the highest compensation levels shown there were still substantial proportions of participants choosing not to take the compensation offered. Because of this, mean valuation estimates from the 1st pilot survey were considered unlikely to be accurate, and median valuations were imprecisely estimated.

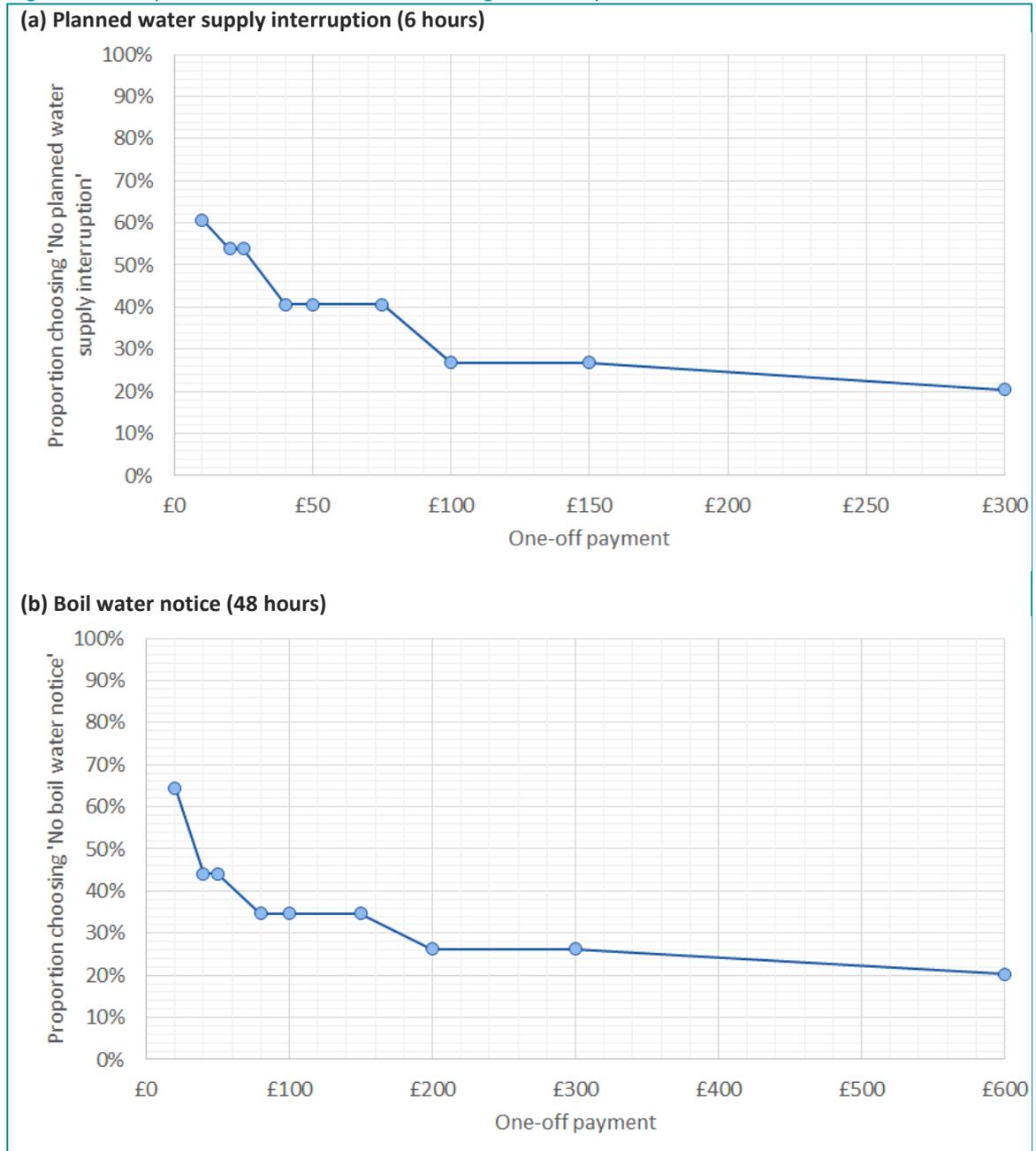
The curves shown in Figure 15 and Figure 16 indicate that the issue identified with the 1st pilot data has adequately been resolved, insofar as there are only 20% of households, and 10% of non-households, still rejecting the compensation offer at the highest levels shown, for both pivot service issues. This finding means that median and mean values can both be estimated from the data for both service issues and both customer types.

At the lower end of compensation amounts, the proportions rejecting the compensation offer are well under 100%. However, pinning down the tail of the distribution at the left-hand end has a lesser impact on estimation of the mean than pinning down the right-hand tail. Hence there is little value in including smaller amounts offered than the ones shown while, at the right-hand end, the highest amount shown also seems adequate, particularly given the risk that inclusion of very high amounts can potentially have on the plausibility of the exercise.

For this reason, we would not recommend any changes to the compensation levels shown for this exercise.

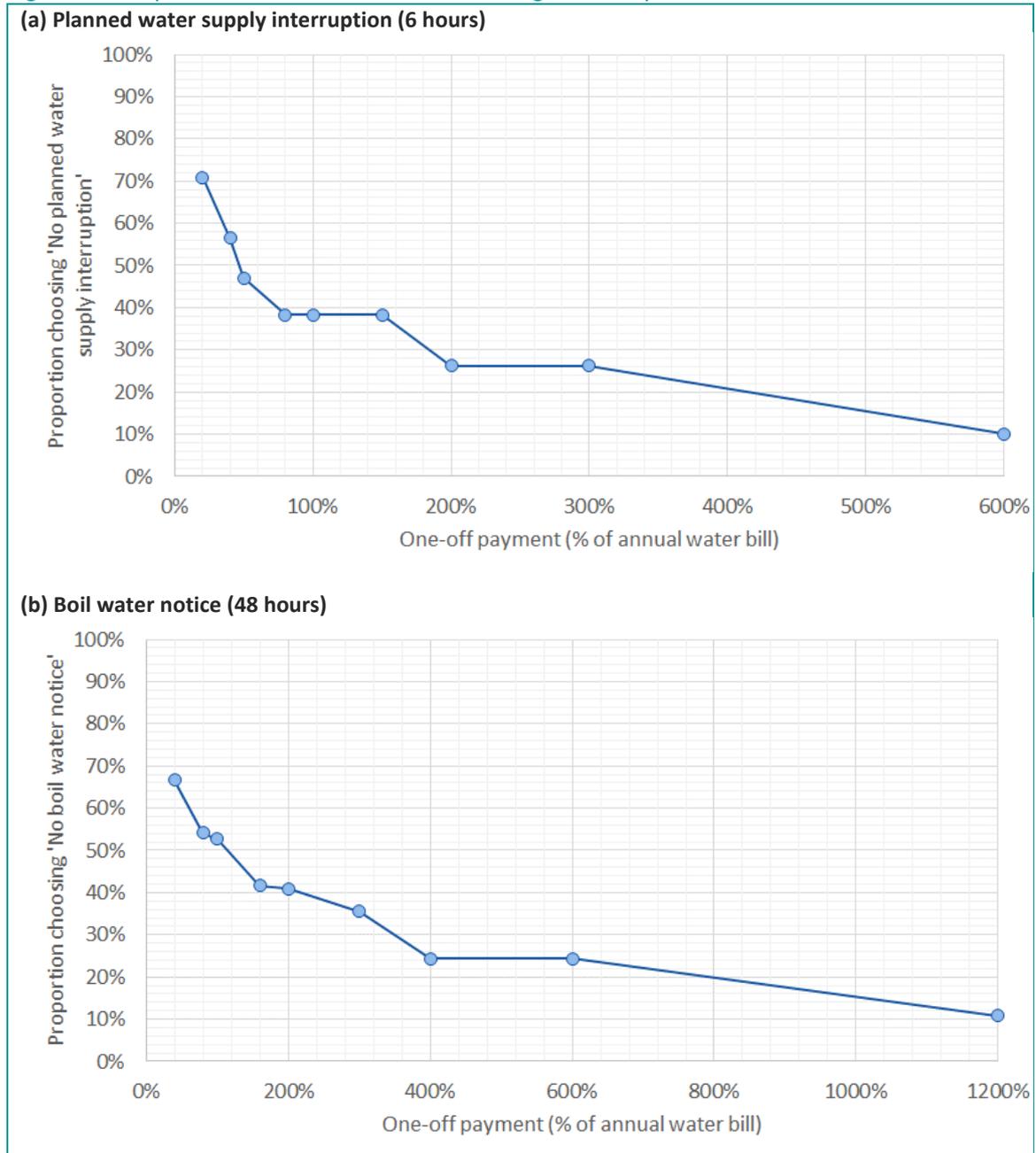
of the non-parametric approach over parametric estimates is that NPML estimation avoids a-priori specification of a functional form for the 'demand' function.

Figure 15: Proportions of households choosing not to experience the service issue



No weighting was applied for the purposes of the pilot analysis.

Figure 16: Proportions of non-households choosing not to experience the service issue



No weighting was applied for the purposes of the pilot analysis.

Though the samples are not necessarily representative of the customer base, as no weighting has been applied at the pilot stage and the non-household sample is small, it is indicative to note the implied valuations arising from the choice data. For example, based on the curve in panel (a) of Figure 15 we estimate that just over 60% of household customers are willing to forego a £10 compensation to avoid a planned water supply interruption lasting 6 hours, which indicates that these customers' valuation of avoiding the service issue is £10 or higher.

Table 37 presents estimates of mean and median valuations of avoiding the service issues covered in the compensation exercise.

Table 37: Valuations of avoiding service issues

Planned water supply interruption (6 hours)

| | HH | NHH |
|---------------------|-------------|--|
| Mean | £85 | 138% of the annual water and wastewater bill |
| Mean conf. interval | (£68, £103) | |
| Median | £29 | 47% of the annual water and wastewater bill |

Boil water notice (48 hours)

| | HH | NHH |
|---------------------|--------------|--|
| Mean | £161 | 274% of the annual water and wastewater bill |
| Mean conf. interval | (£127, £198) | |
| Median | £34 | 115% of the annual water and wastewater bill |

Note: The mean is a lower bound Turnbull estimate, as explained in the text. Bootstrap confidence intervals based on 10,000 replications. (Interval not reported for NHH due to convergence issues in non-parametric ML estimation.) The median was estimated by interpolating between the relevant probability estimates.

To estimate the implied mean valuation, we used the Turnbull approach, which calculates the lower-bound of the mean valuation and represents a conservative estimate of the true mean. It is a conservative estimate as it assumes that the valuation of those who prefer ‘no service issue’ to, say, a £10 compensation, but prefer experiencing the service issue ‘in return for’ a £20 compensation, is £10 and no more, instead of attempting to smooth out the distribution between compensation levels. The Turnbull approach effectively treats the piecewise linear curves shown in are well under 100%. and Figure 16 as ‘step functions’.

Households’ mean valuation of a 6-hour planned water supply interruption is consistent with the mean valuation of £154 of a 6-hour unexpected water supply interruption found in the 1st pilot survey (household panel sample), given the lower impact of a planned interruption compared to an unexpected interruption¹³. It is also not out of line with the values included in a compilation of valuations from several studies undertaken for PR19¹⁴, i.e.,

- £91 and £157 for a planned 3–6-hour interruption, and
- £121 and £226 for a planned 6–12-hour interruption.

Importantly, the 1st pilot study found a 5-fold (11-fold) difference between the relative mean (median) valuations of the two pivot scenarios¹⁵ obtained from the compensation exercise and their relative impacts derived from the impact exercise (for the household Panel sample). In the 2nd pilot survey, we find that household customers’ relative valuation of a boil water notice (48 hours) and a planned water supply interruption (6 hours) is around 2.5 times higher than the relative impact of the two scenarios, when the comparison is based on mean valuations, and only 1.5 times when based on median

¹³ This conclusion does not extend to non-households. However, as noted in the 1st pilot study, even at the highest compensation levels a considerable proportion of non-household customers chose not to experience the service issue leading to severe downward bias in mean valuations.

¹⁴ Accent/PJM Economics, June 2018, ‘Comparative Review of PR19 WTP Results’. This study does not include valuations of a ‘Boil water notice (48 hours)’ or a comparable incident.

¹⁵ A sewer flooding incident outside one’s property (1 week) and an unexpected water supply interruption (6 hours).

valuations. This indicates a much greater degree of consistency between the choices made in SP1 and SP2 in comparison to the 1st pilot.

5.4 Scenario valuations

Table 38 presents household valuations for individual scenarios obtained by combining impact scores from Figure 11 and Figure 12 with the value estimates for 'Planned water supply interruption (6 hours)' and 'Boil water notice (48 hours)' shown in Table 37 above. The table includes comparisons against a compilation¹⁶ of valuations from several studies undertaken for PR19.

Compared to the 1st pilot, the choice of pivot scenario has a much smaller impact on the calculation of scenario valuations. Valuations based on the supply-interruptions pivot tend to be lower than PR19 valuations, as do valuations based on the median value of the boil-water scenario. Conversely, most valuations pivoted on the mean boil-water notice valuation lie within the range of PR19 valuations, with notable exceptions being internal and external sewer flooding¹⁷.

The values obtained from the 2nd pilot are less spread apart than might have been expected, particularly considering the low values estimated for internal sewer flooding in comparison with those obtained at PR19. This is consistent with the lower goodness-of-fit estimated with the SP1 econometric models, as discussed in Section 4.

As set out in that section, the relative impacts of internal sewer flooding in relation to a short planned supply interruption were very much lower in the 2nd pilot than in the 1st. Furthermore, we would expect the SP1 findings from the main sample, and hence the relative values across service issues, to be closer to those from the 1st pilot, given the anticipated use of PAF as well as panel methods in the main stage, than those from the 2nd pilot. The results in Table 38 should not therefore be considered indicative of the values that might be expected to emerge from the main sample with respect to internal sewer flooding. We would instead expect the findings to be significantly higher than shown here.

¹⁶ Accent/PJM Economics, June 2018, 'Comparative Review of PR19 WTP Results'

¹⁷ The duration of the do not drink notice differs considerably between the present study (48 hours) and PR19 reference studies (2 weeks).

Table 38: Scenario valuations (households)

| Scenario | Pivot scenario: Planned water supply interruption (6 hours) | | Pivot scenario: Boil water notice (48 hours) | | PR19 comparative review ^(a) | | |
|---|--|-----------------------|---|-----------------------|--|----------|-----------------------|
| | Mean ^(b) | Median ^(b) | Mean ^(b) | Median ^(b) | Min | Max | Median ^(c) |
| Sewer flooding: inside your property (1 month) ⁽¹⁾ | £228 | £79 | £551 | £117 | £1,772 | £123,477 | £50,970 |
| Emergency drought restrictions (2 months) ⁽²⁾ | £126 | £43 | £304 | £65 | £43 | £730 | £491 |
| Sewer flooding: outside your property (1 week) ⁽³⁾ | £116 | £40 | £280 | £60 | £714 | £8,317 | £4,422 |
| Unexpected water supply interruption (24 hours) ⁽⁴⁾ | £84 | £29 | £202 | £43 | £90 | £332 | £295 |
| Planned water supply interruption (6 hours) ⁽⁵⁾ | £85 | £29 | £205 | £44 | £91 | £226 | £157 |
| Do not drink notice (48 hours) ⁽⁶⁾ | £80 | £27 | £192 | £41 | £431 | £63,964 | £548 |
| Unexpected water supply interruption (6 hours) ⁽⁷⁾ | £79 | £27 | £190 | £40 | £136 | £3,822 | £515 |
| Discoloured water (24 hours) ⁽⁸⁾ | £67 | £23 | £162 | £34 | £75 | £314 | £231 |
| Water taste and smell (24 hours) ⁽⁹⁾ | £72 | £25 | £173 | £37 | £147 | £38,235 | £266 |
| Discoloured water (6 hours) ⁽¹⁰⁾ | £69 | £24 | £167 | £36 | £60 | £139 | £90 |
| Boil water notice (48 hours) ⁽¹¹⁾ | £67 | £23 | £161 | £34 | | | |
| Water taste and smell (6 hours) ⁽¹¹⁾ | £62 | £21 | £150 | £32 | | | |
| Significant pollution incident nearby (4 weeks) ⁽¹²⁾ | £52 | £18 | £126 | £27 | | | |
| Significant pollution incident elsewhere (4 weeks) ⁽¹²⁾ | £47 | £16 | £114 | £24 | | | |
| Storm overflow nearby (4 hours) ⁽¹¹⁾ | £39 | £13 | £93 | £20 | | | |
| Minor pollution incident elsewhere (1 day) ⁽¹²⁾ | £34 | £12 | £81 | £17 | | | |
| Minor pollution incident nearby (1 day) ⁽¹²⁾ | £42 | £14 | £100 | £21 | | | |
| Unexpected low water pressure (6 hours) ⁽¹³⁾ | £44 | £15 | £106 | £23 | £21 | £158,790 | £421 |
| Hosepipe ban (5 months) ⁽¹⁴⁾ | £37 | £13 | £90 | £19 | £32 | £325 | £97 |
| Low flows in rivers elsewhere (2 months) ⁽¹⁵⁾ | £36 | £13 | £88 | £19 | | | |
| River water nearby is not High quality ⁽¹⁶⁾ | £31 | £11 | £74 | £16 | | | |
| River water elsewhere is not High quality ⁽¹⁶⁾ | £28 | £10 | £67 | £14 | | | |
| Coastal bathing water is neither Excellent nor Good quality ⁽¹⁷⁾ | £24 | £8 | £58 | £12 | | | |
| Low flows in rivers nearby (2 months) ⁽¹⁵⁾ | £29 | £10 | £70 | £15 | | | |
| Coastal bathing water is not Excellent quality ⁽¹⁷⁾ | £23 | £8 | £56 | £12 | | | |
| Storm overflow elsewhere (4 hours) ⁽¹¹⁾ | £21 | £7 | £50 | £11 | | | |

Notes:

(a) Accent/PJM Economics, June 2018, 'Comparative Review of PR19 WTP Results'. Only attributes valued on a per-property basis are considered.

(b) Mean and median values are reported on a per-incident basis, with the value being contemporaneous with the timing of the incident.

(c) Median across studies

- (1) PR19: duration of incident not indicated; extent of damage varies across studies
- (2) PR19: 'Rota cuts and/or standpipes'; duration of incident, where indicated, varies across studies ranging from 2-4 weeks to 2 months
- (3) PR19: two estimates referring to flooding on peoples' land and in gardens not considered
- (4) PR19: includes 'unexpected'/'unplanned' interruptions of 'up to 24 hours', '12-24 hours', '>24 hours'
- (5) PR19: duration of incident: '3-6 hours', '6-12 hours'
- (6) PR19: 'Water not safe to drink'; duration of incident is 2 weeks, where indicated
- (7) PR19: duration of incident: '3-6 hours', 'around 6 hours', '4-8 hours', '6-12 hours'
- (8) PR19: duration of incident: '24 hours', not indicated (for one study)
- (9) PR19: duration of incident: 'few days', '3 days'
- (10) PR19: duration of incident: 'few hours'
- (11) PR19: not covered
- (12) PR19: valuations are per incident
- (13) PR19: 'Low water pressure'; duration of incident not indicated except for one study (3-6 hours)
- (14) PR19: 'Temporary use ban'
- (15) PR19: valuations are per mile of river
- (16) PR19: valuations are per km of river
- (17) PR19: valuations are per bathing water site

6. SP3 Combined Impact- Compensation Exercise Findings

6.1 Introduction

This section focuses on findings from the combined impact-compensation exercise. It includes feedback from pilot participants following the exercise, diagnostics concerning the choice data, econometric models and a sensitivity analysis, and the impact scores generated from those models, including a comparison against impact scores based on the SP1 impact exercise.

6.2 Participant feedback

Participant feedback was positive overall for SP3, although substantially less positive than for SP1 and SP2.

- For households, the combined proportion of participants in the 'Agree' categories was significantly lower ($p < 0.05$) on all questions, except for the question regarding whether choices were based on impact (panel c).
- For households, the proportion of participants in the top 'Strongly agree' category was considerably lower in SP3 on all feedback questions.
- The proportion of participants who strongly agreed that they found it easy to choose between the options in SP3 was only half or less the corresponding proportion in SP1 and SP2, for both households and non-households, the relevant differences being highly statistically significant except for non-households in the comparison between SP3 and SP1 ($p = 0.052$).

A problematic issue, in terms of SP design, that emerges from the responses to the feedback follow-up questions, which were asked of participants who disagreed or strongly disagreed regarding the feedback statements, is that some participants appear to have viewed the 'one-off payment' as a fee/charge to be paid to the water company as shown in Table 44, similarly to what occurred in the SP2 compensation exercise.

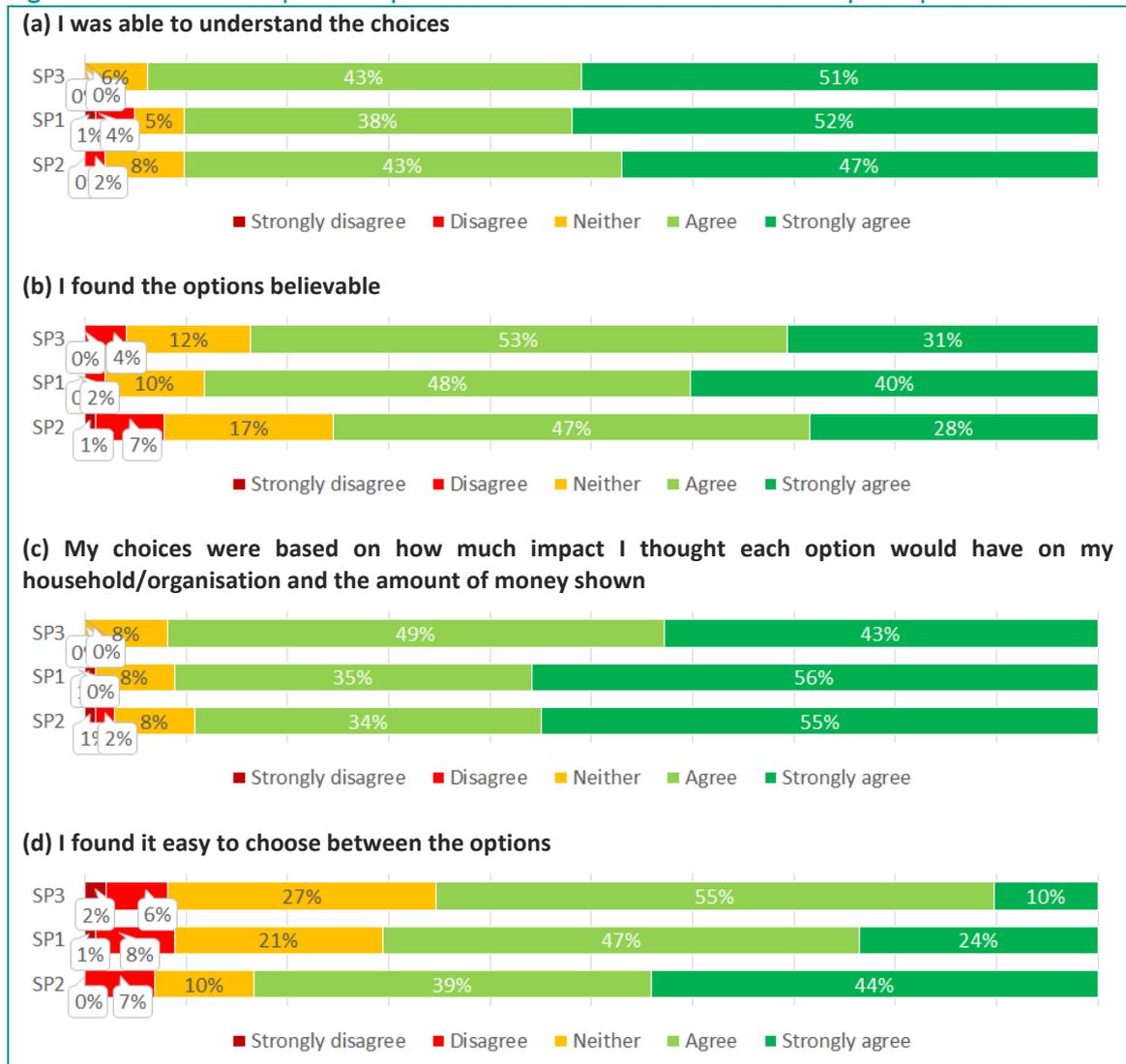
Figure 17: SP3 household participant feedback



Base: SP3 = 200; SP1 = 202; SP2 = 202.

Note: The panel (c) questions were 'My choices were based on how much impact I thought each option would have on my household/ organisation' in SP1 and 'My choices were based on how much impact I thought each option would have on my household/ organisation and whether the amount of money shown was enough to compensate for this' in SP2.

Figure 18: Combined impact-compensation exercise SP3: non-household participant feedback



Base: SP3 = 49; SP1 = 102; SP2 = 102

Table 39: Selected SP3 feedback follow-up responses

| No. | Why were you unable to understand the choices? |
|-----|--|
| 1 | I based my decisions on price |
| 2 | Loaded questions that were unfairly canvassed. Do you really need to justify your existence or substantiate an additional charge this way? |
| 3 | Why were you unable to understand the choices? |

| No. | What was not believable about the options shown? |
|-----|--|
| 4 | By the astronomical charges for something that the customer has not done |
| 5 | I do not expect to pay an additional sum for many of these events. |
| 6 | Unrealistic charges |
| 6 | some of the amounts being asked to pay for. also the drought period would be too long here |
| 7 | the cost |
| 8 | The money situation that i would be placed in made it difficult |

RECOMMENDATION

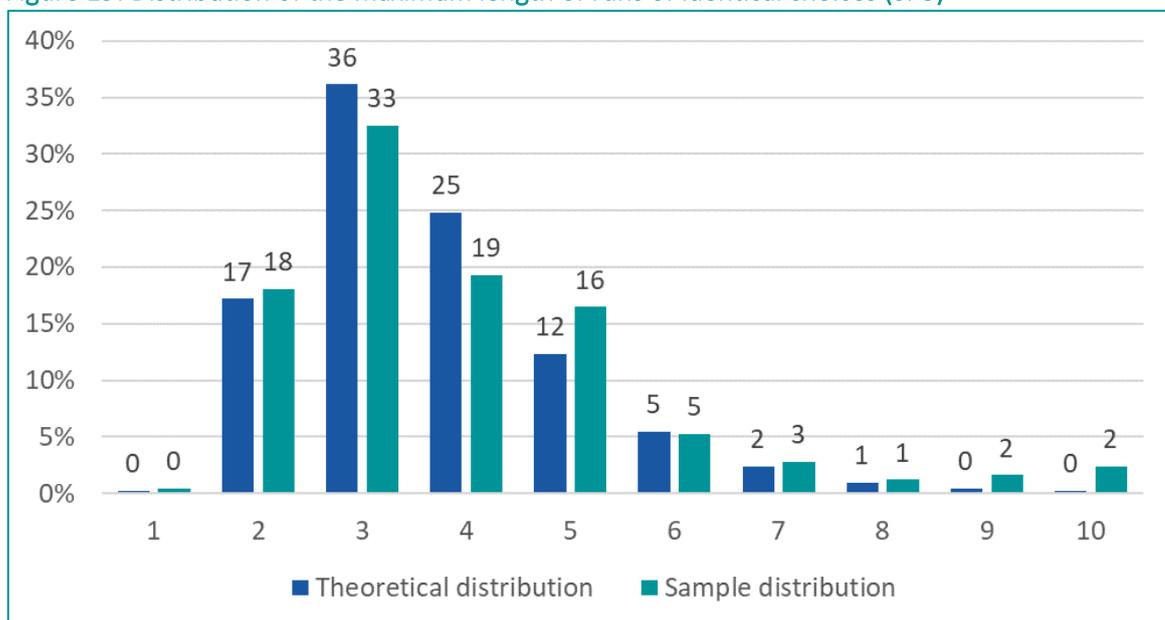
As for SP2, we would recommend referring to compensation as 'Compensation' instead of a 'One-off payment' and adding clarifications to ensure the exercise is correctly interpreted.

6.3 Diagnostics

Making the same choices repeatedly (e.g., Option A chosen nine times in a row) can be indicative of not engaging with the survey, and a large number of non-traders implies a poor-quality dataset for analysis. Figure 10 compares the sample distribution of the maximum length of runs of identical choices (e.g., same option chosen at most 5 times in a row) against the theoretical distribution that is obtained when there are equal choice probabilities for Option A and Option B in each question.

A small proportion (2.4%) chose the same option across all 10 choice occasions. The proportion of participants choosing the same option at least 5 times in a row was 30% against a theoretical expectation of 22%, the difference being highly statistically significant ($p < 0.01$), suggesting that non-trading is potentially more of a cause for concern in the SP3 pilot data than was the case in the SP1 data.

Figure 19: Distribution of the maximum length of runs of identical choices (SP3)



Base: 249 participants (full sample)

6.4 Econometric modelling

The choices were analysed using a conditional logit model with choice as the dependent variable, a {1,0} variable indicating which of the two scenarios shown was preferred by the participant on each choice occasion. Each scenario may or may not have involved a) some service issue/environmental damage and b) a compensation payment. The model estimates the 'utility' of each scenario in comparison to a base scenario which involves no service issue and no compensation payment.

Separate models were estimated for the household and non-household samples. Larger negative coefficients, in absolute value, on any of the service-issue variables imply a greater impact of that service issue compared to issues that have smaller negative coefficients. The models are shown in Table 40 and Table 41 respectively.

While the models fit the data reasonably well, and none of the coefficients on the service-issue variables are positive and statistically significant, which would indicate that the relevant issues were preferred to 'No service issue', the majority of service-issue coefficients are not statistically significant at the 5% level. The compensation enters the models in different functional forms across columns (1) to (3): linear, log, and piecewise linear. None of these yield a statistically significant effect of the compensation on utility, i.e., overall, the participants choices are not sensitive to the compensation amounts, and the sign on the compensation variables is almost invariably negative¹⁸. These models are therefore not suitable for the purpose of deriving valuations of service issue scenarios.

¹⁸ The p -values on the compensation variables in the household models are: (1) $p = 0.75$; (2) $p = 0.24$; (3) $p = 0.08$, $p = 0.08$, $p = 0.45$, $p = 0.87$, respectively. In the non-household models: (1) $p = 0.44$; (2) $p = 0.45$; (3) $p = 0.53$; $p = 0.93$; $p = 0.08$; $p = 0.37$.

Table 40: SP3 household econometric models

| | (1) Linear | (2) Log | (3) Piecewise linear |
|---|---------------|------------|----------------------------|
| Compensation (£) | -4.087e-06 | | |
| Ln(1 + Compensation/400) ^(a) | | -0.1369 | |
| Compensation = 0 (dummy) | | | -0.2562 |
| Compensation × (0 < Compensation ≤ 60) | | | -0.004898 |
| Compensation × (60 < Compensation ≤ 300) | | | 9.320e-04 |
| Compensation × (300 < Compensation) | | | -2.189e-06 |
| Unexpected water supply interruption (6 hours) | -0.3049 | -0.2903 | -0.4339 |
| Unexpected water supply interruption (24 hours) | -0.3453 | -0.3337 | -0.5105 |
| Planned water supply interruption (6 hours) | -0.2322 | -0.2276 | -0.3229 |
| Unexpected low water pressure (6 hours) | 0.1134 | 0.1149 | -0.01803 |
| Boil water notice (48 hours) | -0.4287 | -0.4215 | -0.5170 |
| Do not drink notice (48 hours) | -0.6793* | -0.6657* | -0.7357* |
| Discoloured water (24 hours) | -0.5446 | -0.5384 | -0.6085* |
| Water taste and smell (24 hours) | -0.2505 | -0.2516 | -0.3083 |
| Sewer flooding: inside your property (1 month) | -1.9140** | -1.5289** | -2.1723** |
| Sewer flooding: outside your property (1 week) | -1.1931** | -0.9934** | -1.4580** |
| Hosepipe ban (5 months) | -0.5364 | -0.5252 | -0.5893* |
| Emergency drought restrictions (2 months) | -0.8593** | -0.8080** | -1.1914** |
| Low flows in rivers nearby (2 months) | 0.1004 | 0.1030 | 0.07622 |
| Low flows in rivers elsewhere (2 months) | -0.1833 | -0.1878 | -0.1557 |
| Storm overflow nearby (4 hours) | -0.2958 | -0.2965 | -0.2941 |
| Minor pollution incident nearby (1 day) | 0.05248 | 0.05465 | 0.02454 |
| Significant pollution incident nearby (4 weeks) | -1.1591** | -1.1695** | -1.1594** |
| Storm overflow elsewhere (4 hours) | -0.2270 | -0.2278 | -0.2518 |
| Minor pollution incident elsewhere (1 day) | -0.3033 | -0.3107 | -0.3108 |
| Significant pollution incident elsewhere (4 weeks) | -0.8083* | -0.8104** | -0.7806* |
| River water nearby is not High quality | -0.08781 | -0.08685 | -0.1111 |
| River water elsewhere is not High quality | 0.02498 | 0.02405 | 0.01980 |
| Coastal bathing water is not Excellent quality | -0.6375* | -0.6361* | -0.6360* |
| Coastal bathing water is neither Excellent nor Good quality | -0.2968 | -0.2982 | -0.2876 |
| Discoloured water (6 hours) | -0.6406* | -0.6395* | -0.7141* |
| Water taste and smell (6 hours) | 0.06519 | 0.06499 | -0.03275 |
| | | | |
| No. of observations | 4,000 | 4,000 | 4,000 |
| No. of participants | 200 | 200 | 200 |
| Pseudo R ² | 0.08 | 0.08 | 0.08 |

Note: Conditional logit estimates on unweighted data. Dependent variable: choice. Standard errors clustered by participant in parentheses. ** $p < 0.01$, * $p < 0.05$.

(a) Variable defined to show the log of percentage changes around an average household bill of £400.

Table 41: SP3 non-household econometric models

| | (1) Linear | (2) Log | (3) Piecewise linear |
|---|---------------|------------|----------------------------|
| Compensation (% of bill) | -0.005158 | | |
| Ln(1 + Compensation) | | -0.1875 | |
| Compensation = 0 (dummy) | | | -0.1652 |
| Compensation × (0 < Compensation ≤ 40%) | | | -0.1247 |
| Compensation × (40% < Compensation ≤ 150%) | | | -0.7411 |
| Compensation × (150% < Compensation) | | | -0.006180 |
| Unexpected water supply interruption (6 hours) | -0.7539 | -0.7308 | -0.8217 |
| Unexpected water supply interruption (24 hours) | -0.9715 | -0.9353 | -1.0323 |
| Planned water supply interruption (6 hours) | 0.2315 | 0.2466 | 0.07121 |
| Unexpected low water pressure (6 hours) | -0.7413 | -0.7365 | -0.9155 |
| Boil water notice (48 hours) | -1.5505* | -1.5193* | -1.6677* |
| Do not drink notice (48 hours) | -1.8570* | -1.8045* | -1.9108* |
| Discoloured water (24 hours) | -0.9188 | -0.8890 | -0.9777 |
| Water taste and smell (24 hours) | -0.8471 | -0.8362 | -0.9399 |
| Sewer flooding: inside your property (1 month) | -2.5167** | -2.1173* | -2.6592** |
| Sewer flooding: outside your property (1 week) | -2.3589** | -2.0034** | -2.4932** |
| Hosepipe ban (5 months) | -1.6709* | -1.6426* | -1.7406* |
| Emergency drought restrictions (2 months) | -1.7318** | -1.6000** | -1.4672 |
| Low flows in rivers nearby (2 months) | -0.9054 | -0.9130 | -0.9070 |
| Low flows in rivers elsewhere (2 months) | -0.4109 | -0.4198 | -0.3949 |
| Storm overflow nearby (4 hours) | -0.6019 | -0.6035 | -0.5820 |
| Minor pollution incident nearby (1 day) | -0.7339 | -0.7418 | -0.7722 |
| Significant pollution incident nearby (4 weeks) | -2.6888** | -2.6713** | -2.7222** |
| Storm overflow elsewhere (4 hours) | -0.5069 | -0.5081 | -0.5336 |
| Minor pollution incident elsewhere (1 day) | -0.5810 | -0.5886 | -0.5741 |
| Significant pollution incident elsewhere (4 weeks) | -1.8541** | -1.8480** | -1.8768** |
| River water nearby is not High quality | -0.4662 | -0.4615 | -0.4281 |
| River water elsewhere is not High quality | -0.1675 | -0.1692 | -0.1611 |
| Coastal bathing water is not Excellent quality | -1.3808* | -1.3780* | -1.3854* |
| Coastal bathing water is neither Excellent nor Good quality | -1.3559* | -1.3712* | -1.2675 |
| Discoloured water (6 hours) | -1.1860 | -1.1764 | -1.3627* |
| Water taste and smell (6 hours) | -0.3655 | -0.3488 | -0.4804 |
| | | | |
| No. of observations | 980 | 980 | 980 |
| No. of participants | 49 | 49 | 49 |
| Pseudo R ² | 0.16 | 0.16 | 0.17 |

Note: Conditional logit estimates on unweighted data. Dependent variable: choice. Standard errors clustered by participant in parentheses. ** $p < 0.01$, * $p < 0.05$.

We investigated the sensitivity of the baseline model in column (1) to excluding:

- Participants who (strongly) disagreed or neither agreed nor disagreed on any of the feedback questions;
- Participants whose completion time for SP3 was less than the 10th percentile of the distribution of completion times (households: 60 seconds; non-households: 71 seconds);
- Participants whose completion time for SP3 was less than the 25th percentile of the distribution of completion times (households: 96 seconds; non-households: 122 seconds).

The relevant models are shown in Table 42 for households and Table 43 for non-households. None of the coefficients on the compensation variable were found to be

statistically different from zero at the 5% level¹⁹. Only in the non-household model in column (2) does the coefficient come close the being statistically significant albeit with the ‘wrong’ (negative) sign.

Table 42: SP3 household econometric models: sensitivity analysis

| | (1) Positive feedback only | (2) Completion time > 10 th percentile | (3) Completion time > 25 th percentile |
|---|-------------------------------------|--|--|
| Compensation (£) | -6.323e-06 | -3.556e-06 | 7.276e-07 |
| Unexpected water supply interruption (6 hours) | 0.4501 | -0.2755 | -0.4300 |
| Unexpected water supply interruption (24 hours) | 0.02092 | -0.2916 | -0.4708 |
| Planned water supply interruption (6 hours) | 0.1212 | -0.1653 | -0.4380 |
| Unexpected low water pressure (6 hours) | 0.3546 | 0.1444 | 0.003337 |
| Boil water notice (48 hours) | -0.02355 | -0.4867 | -0.5605 |
| Do not drink notice (48 hours) | -0.2846 | -0.7156* | -1.0165** |
| Discoloured water (24 hours) | 0.4478 | -0.5582 | -0.7428* |
| Water taste and smell (24 hours) | 0.1545 | -0.3347 | -0.5670 |
| Sewer flooding: inside your property (1 month) | -1.4443* | -1.9548** | -2.2472** |
| Sewer flooding: outside your property (1 week) | -0.6947 | -1.1975** | -1.3883** |
| Hosepipe ban (5 months) | 0.09853 | -0.4920 | -0.6322 |
| Emergency drought restrictions (2 months) | -0.03161 | -0.8748** | -1.1945** |
| Low flows in rivers nearby (2 months) | 0.1224 | 0.1593 | 0.06038 |
| Low flows in rivers elsewhere (2 months) | 0.2775 | -0.2248 | -0.4782 |
| Storm overflow nearby (4 hours) | -0.2620 | -0.2241 | -0.4100 |
| Minor pollution incident nearby (1 day) | 0.5161 | 0.09533 | -0.2304 |
| Significant pollution incident nearby (4 weeks) | -0.7420 | -1.1389** | -1.2453** |
| Storm overflow elsewhere (4 hours) | 0.7732 | -0.1397 | -0.3422 |
| Minor pollution incident elsewhere (1 day) | 0.07520 | -0.4609 | -0.8204* |
| Significant pollution incident elsewhere (4 weeks) | 0.05222 | -0.7621* | -1.2271** |
| River water nearby is not High quality | 0.6159 | -0.08742 | -0.2932 |
| River water elsewhere is not High quality | 0.3622 | 0.02733 | -0.2265 |
| Coastal bathing water is not Excellent quality | -0.4378 | -0.5838* | -0.8461** |
| Coastal bathing water is neither Excellent nor Good quality | 0.5085 | -0.3467 | -0.7657* |
| Discoloured water (6 hours) | 0.06882 | -0.6257 | -0.8764* |
| Water taste and smell (6 hours) | 0.1469 | 0.1063 | -0.1591 |
| | | | |
| No. of observations | 1,720 | 3,600 | 2,980 |
| No. of participants | 86 | 180 | 149 |
| Pseudo R ² | 0.08 | 0.08 | 0.09 |

Note: Conditional logit estimates on unweighted data. Dependent variable: choice. Standard errors clustered by participant in parentheses. ** $p < 0.01$, * $p < 0.05$.

¹⁹ The p -values on the compensation variables (1) $p = 0.76$; (2) $p = 0.80$; (3) $p = 0.96$, respectively, in the household models and (1) $p = 0.90$; (2) $p = 0.07$; (3) $p = 0.39$, respectively, in the non-household models.

Table 43: SP3 non-household econometric models: sensitivity analysis

| | (1) Positive feedback only | (2) Completion time > 10 th percentile | (3) Completion time > 25 th percentile |
|---|-------------------------------------|--|--|
| Compensation (% of bill) | -0.001213 | -0.01039 | -0.005636 |
| Unexpected water supply interruption (6 hours) | -0.1371 | -1.2005* | -1.7227* |
| Unexpected water supply interruption (24 hours) | -0.7205 | -1.3789 | -2.0596* |
| Planned water supply interruption (6 hours) | 0.9128 | -0.1923 | -0.5819 |
| Unexpected low water pressure (6 hours) | -0.8894 | -0.8904 | -0.9544 |
| Boil water notice (48 hours) | -1.9641* | -1.8751** | -2.3361* |
| Do not drink notice (48 hours) | -1.6986 | -2.1872** | -2.8445** |
| Discoloured water (24 hours) | -0.9294 | -1.1920 | -1.7002 |
| Water taste and smell (24 hours) | -0.6720 | -1.2939 | -1.2358 |
| Sewer flooding: inside your property (1 month) | -2.1309* | -2.9796** | -3.8490** |
| Sewer flooding: outside your property (1 week) | -2.2614* | -3.0770** | -3.9541** |
| Hosepipe ban (5 months) | -1.6792 | -2.1133** | -2.5493** |
| Emergency drought restrictions (2 months) | -1.6152 | -2.2153** | -2.5071** |
| Low flows in rivers nearby (2 months) | -0.02858 | -1.4360* | -1.6079 |
| Low flows in rivers elsewhere (2 months) | 0.2410 | -0.7650 | -0.9874 |
| Storm overflow nearby (4 hours) | 0.5038 | -0.7423 | -1.3725 |
| Minor pollution incident nearby (1 day) | -0.3003 | -0.8366 | -1.7725 |
| Significant pollution incident nearby (4 weeks) | -3.7877** | -3.3382** | -3.8230** |
| Storm overflow elsewhere (4 hours) | 0.3181 | -1.1274 | -1.1720 |
| Minor pollution incident elsewhere (1 day) | 0.6501 | -1.0728 | -1.3180 |
| Significant pollution incident elsewhere (4 weeks) | -1.5360 | -2.2464** | -3.1333** |
| River water nearby is not High quality | 0.1750 | -0.9577 | -1.8299 |
| River water elsewhere is not High quality | -0.2238 | -0.1935 | -0.6658 |
| Coastal bathing water is not Excellent quality | -2.0552* | -1.5205* | -2.0849** |
| Coastal bathing water is neither Excellent nor Good quality | -0.9470 | -1.8989** | -2.5322** |
| Discoloured water (6 hours) | -0.7977 | -1.6416* | -2.2513* |
| Water taste and smell (6 hours) | 2.461e-04 | -0.5436 | -0.9666 |
| No. of observations | 600 | 880 | 720 |
| No. of participants | 30 | 44 | 36 |
| Pseudo R ² | 0.22 | 0.20 | 0.24 |

Note: Conditional logit estimates on unweighted data. Dependent variable: choice. Standard errors clustered by participant in parentheses. ** $p < 0.01$, * $p < 0.05$.

We posit two possible explanations for the above findings showing a complete lack of sensitivity to compensation amounts.

- First, the feedback responses indicated that some participants appear to have viewed the ‘one-off payment’ as a fee/charge to be paid to the water company instead of as compensation. This would tend to produce a negative association between the compensation/payment under a given scenario and the probability of that scenario being chosen. It is unfortunately not possible to identify everyone who responded in this way as we only have the feedback responses from some participants to indicate that this was an issue for some subset of participants.
- Second, it is possible that some participants may have focused on the service issues involved in each option ignoring compensations, which would tend to lead to downward bias. This may have occurred because the service issue attribute was more ‘prominent’ in terms of layout. There is no direct evidence of this, but it is certainly a potential explanation.

RECOMMENDATION

- Although it should be possible to improve the survey materials to try and prevent these two issues, without a further pilot, there is no guarantee that the changes would have the desired effect. On this basis, and given the lack of time available in the programme to undertake a third pilot, we would recommend abandoning the SP3 exercise in favour of the first version combining SP1 and SP2, which was found to work effectively in this 2nd pilot.

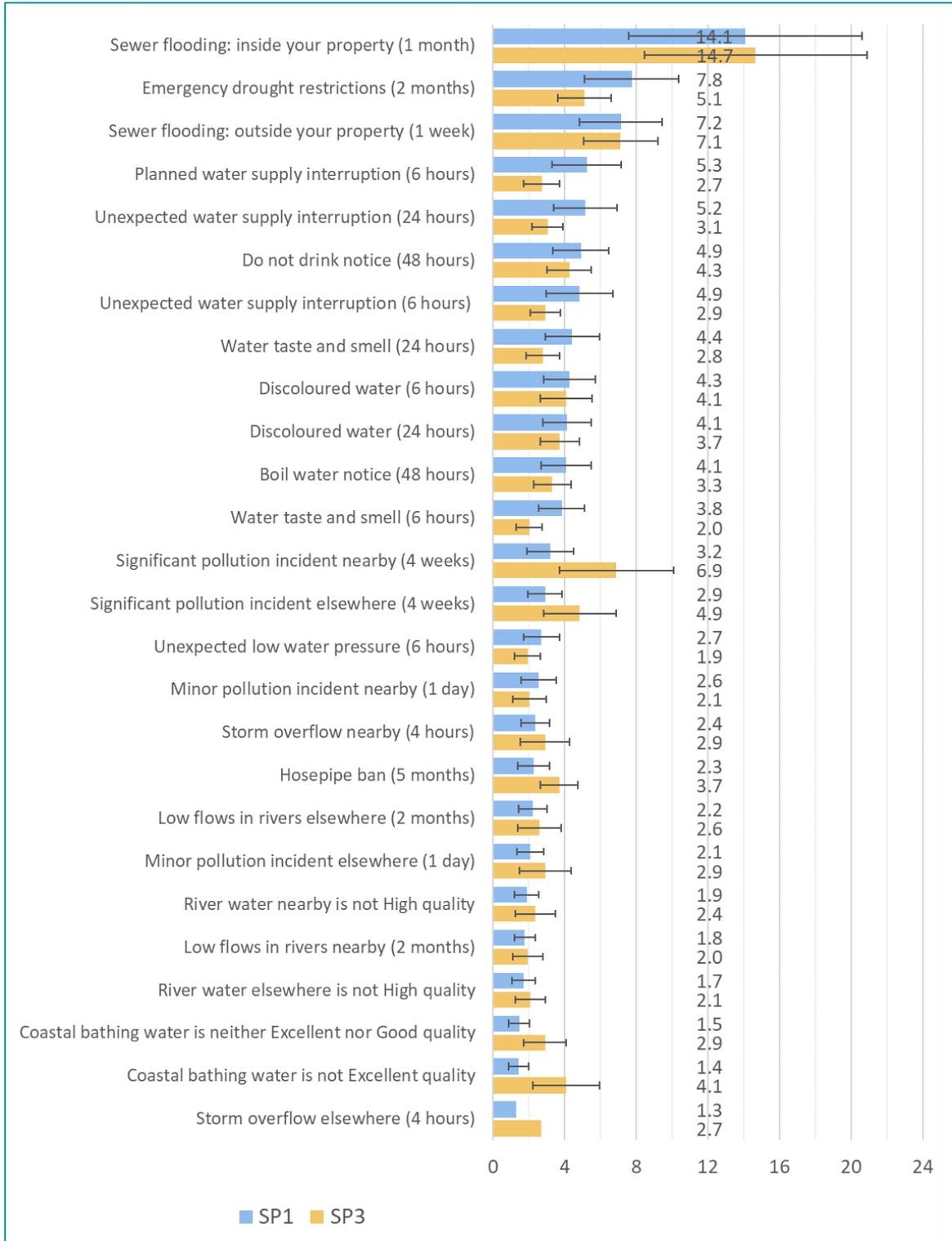
6.5 Impact scores

Figure 20 and Figure 21 show the SP3 impact scores for each of the 26 service issue scenarios for households and non-households, respectively, compared against impact scores obtained from the impact exercise (SP1). The SP3 impact scores were calculated as exponentials of the negatives of the coefficients in the respective baseline models (column 1) in Table 40 and Table 41, and were scaled to sum to 100 across the full set of scenarios covered in the exercise. These scores are an index representing the relative impact of each scenario.

As in SP1 we find that the impact score for internal sewer flooding is the highest of all the service issues, as expected. Confidence intervals are fairly broad for both sets of impact scores, and approximately of equal size in the case of households, where the sample sizes were equivalent. In the case of non-households, confidence intervals are extremely broad for SP3, which is consistent with the small sample size of only 49 participants in this case, which clearly appears to be too small to reliably estimate values from this design.

In general, confidence intervals overlap with one another when comparing SP1 and SP3, indicating a consistency between the designs, although sample sizes are too small for these comparisons to have any substantial power.

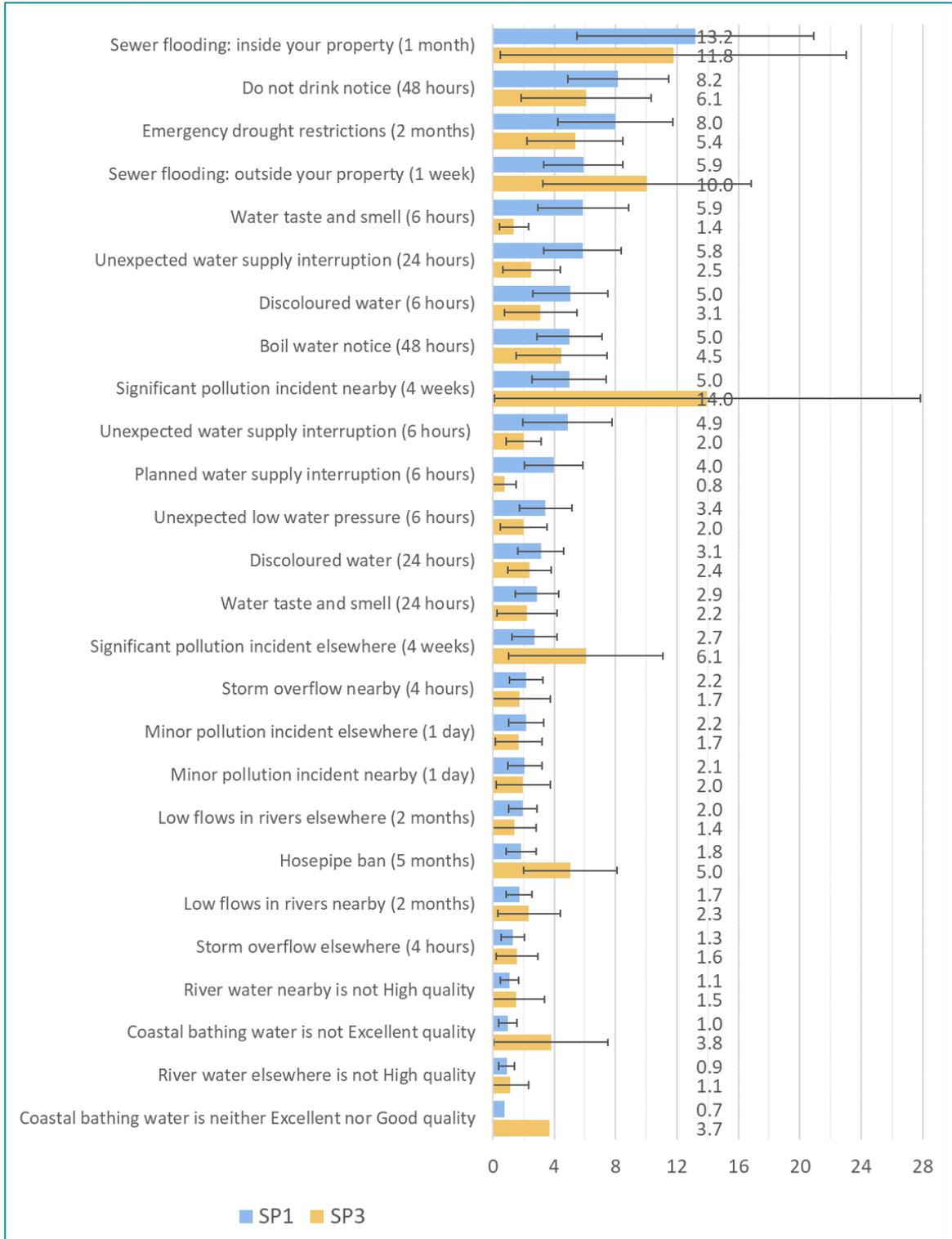
Figure 20: Impact scores for the household sample: SP3 vs SP1



Base: SP3 = 200; SP1 = 202

Note: The error bars show 95% confidence intervals calculated using the delta method.

Figure 21: Impact scores for the non-household sample: SP3 vs SP1



Base: SP3 = 49; SP1 = 102

Note: The error bars show 95% confidence intervals calculated using the delta method.

7 Conclusions and Recommendations

The results of the 2nd pilot have provided further mixed evidence with respect to the stated preference design approaches.

On the positive side, the key issues identified at the 1st pilot stage were both effectively resolved in Version 1 of the survey:

- At the highest compensation levels shown there were much lower proportions of participants choosing not to take the compensation offered than in the 1st pilot. Hence, mean and median valuations could be estimated for both households and non-households from the pilot survey.
- Estimates of the relative value of the two ‘pivot’ scenarios included in the compensation exercise were much more closely aligned when obtained from the compensation exercise as when obtained from the impact exercise. This indicates that participants were choosing consistently across the two exercises in line with the assumed underlying preference function.

Furthermore, feedback from participants remained equally strong in Version 1 as in the 1st pilot.

However, the 2nd pilot impact exercise choice data appeared to be substantially more random than that of the 1st pilot, leading to impact scores that were much less spread apart. Consequently, values for internal sewer flooding were substantially lower than expected. This appears to be a consequence of the change in panel data provider (1st pilot=Kantar; 2nd pilot=Dynata), rather than any change to the survey design, as there were no substantive changes to the impact exercise design between 1st and 2nd pilots, while the stated preference exercise completion times were much shorter in the 2nd pilot than in the 1st pilot.

The main stage is expected to include a combination of PAF data and a mix of online panels for households, and so we would expect the main stage data to conform more closely to the 1st pilot than to the 2nd pilot. This therefore mitigates against the need to make any change to the design on account of the issue uncovered.

A further issue identified with respect to Version 1 concerns the use the term ‘One-off payment’ in place of ‘Compensation’ in the compensation choice exercise. This appears to have caused some participants to believe that they would have to make a payment, rather than them receiving the payment, despite the fact that the questionnaire text should have made this clear.

Given that there will always be some participants that skim through the survey quickly, it is important that there is no cause for misinterpretation over this fundamental point.

Consequently, we recommend reverting back to the use of the term 'Compensation' instead of 'One-off payment'.

This is the only change we recommend making with respect to Version 1 of the survey. In other respects, the survey design appears to have performed well, and we have confidence that it should return valid and reliable estimates of customers' values for avoiding each of the different types of service issues included in the design.

The findings with respect to Version 2 are substantially less positive.

The key issue concerns the finding of a complete lack of sensitivity of choices, on average, with respect to the compensation level shown. The consequence of this is that it has been impossible to estimate the values of avoiding any of the service issues shown. A number of different models were estimated, including on different sensitivity samples, but this result stayed the same.

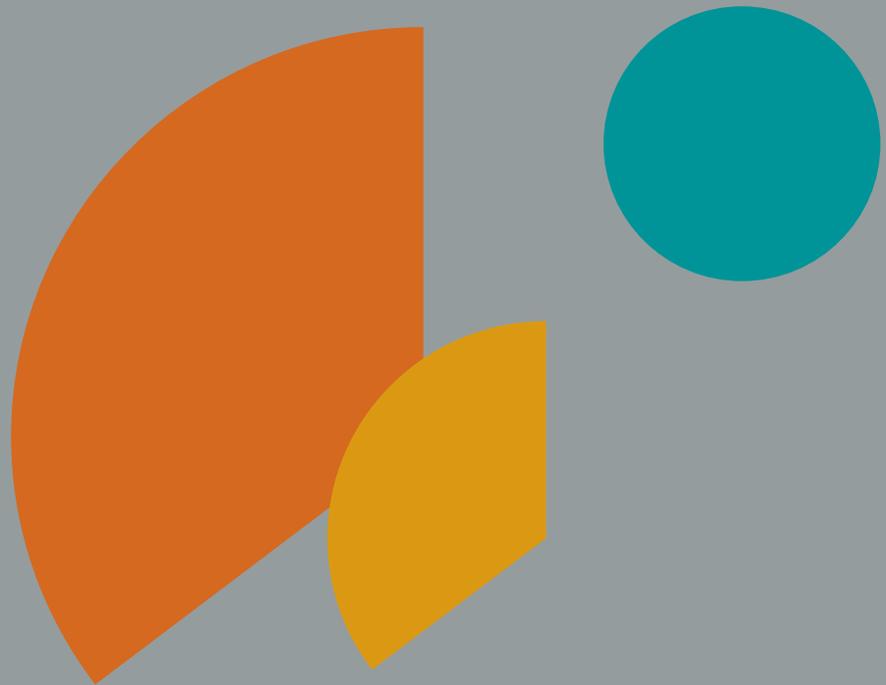
We posit two possible explanations for this finding:

- First, the feedback responses indicated that some participants appear to have viewed the 'one-off payment' as a fee/charge to be paid to the water company instead of as compensation. This would tend to produce a negative association between the compensation/payment under a given scenario and the probability of that scenario being chosen.
- Second, it is possible that some participants may have focused on the service issues involved in each option ignoring compensations, which would tend to lead to downward bias. This may have occurred because the service issue attribute was more 'prominent' in terms of layout. There is no direct evidence of this, but it is certainly a potential explanation.

Although it should be possible to improve the survey materials to try and prevent these two issues, without a further pilot, there is no guarantee that the changes would have the desired effect. On this basis, and given the lack of time available in the programme to undertake a third pilot, we recommend abandoning the SP3 exercise in favour of the first version combining SP1 and SP2, which was found to work effectively in this 2nd pilot.

Appendix D1

Version 1 and Version 2 Questionnaires



Water Company Research V1

This survey is designed to get your views on water and sewerage services. It is being undertaken on behalf of Ofwat, the regulator, and Consumer Council for Water (CCW), the consumer organisation which represents the interests of water and sewerage customers in England and Wales.

The research will be used to help water companies plan investment in their service from 2025, and will influence your future water services and bills.

This research is being conducted by Accent, an independent research agency on behalf of Ofwat and CCW.

NOT PANEL: Anyone completing the survey will be eligible for a £10 voucher (either an Amazon voucher, an M&S voucher, Love2Shop voucher). Alternatively we can donate your incentive to WaterAid. Details on how claim your voucher are given at the end of the survey.

The questionnaire will take about 15 minutes to complete.

Any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society. If you would like to confirm Accent's credentials type Accent in the search box at: <https://www.mrs.org.uk/researchbuyersguide>.

Q1. Any data collected over the course of this interview that could be used to identify you, such as your name, address, or other contact details, will be held securely and will not be shared with any third party, including your water company, unless you give permission (or unless we are legally required to do so). Our privacy statement is available at <https://www.accent-mr.com/privacy-policy/>.

Do you agree to proceeding with the interview on this basis?

Yes

No **THANK AND CLOSE IF ONLINE**

Q2. ASK HH ONLY: Do you or any of your close family work in market research or for a water company?

Yes **THANK & CLOSE**

No

Q3. IF NHH ASK: Are you solely or jointly responsible as the decision maker for paying your organisation's water and wastewater bill?

Yes

No **THANK AND CLOSE**

Q4. **IF POSTCODE DATA NOT AVAILABLE FROM SAMPLE** Please tell us the first half of your postcode. So if your full postcode is ME1 3BN please just tell us ME1 3. (This will be used to check who supplies your water and wastewater services) **NHH ONLY If your organisation operates across multiple sites, please answer for the site you typically work from**

IF HH AND REFUSE GO TO Q6
IF NHH AND REFUSE THANK AND CLOSE

Q5. **IF HH AND DIFFERENT WATER AND WASTEWATER:** Based on your postcode area, we believe your clean water service company should be #WATER COMPANY# and your wastewater service company should be #WASTEWATER COMPANY#. You may receive separate bills from each organisation or one combined bill. Is that correct?
IF SAME WATER AND WASTEWATER: Based on your postcode area, we believe your clean water service and wastewater service company should be #WATER COMPANY#. Is that correct?

Yes **GO TO Q8**
No **GO TO Q6**
Don't know **GO TO Q8**

Q6. **IF HH:** Which water company supplies clean water to your home?
IF NHH: Which of the following companies bill you for clean water services at your premises?

Affinity Water
Anglian Water
Bournemouth Water
Bristol Water
Cambridge Water
Essex & Suffolk Water
Hafren Dyfrdwy
Hartlepool Water
Northumbrian Water
Portsmouth Water
Severn Trent Water
South East Water
Southern Water
South Staffs Water
South West Water
Sutton & East Surrey (SES) Water
Thames Water
United Utilities
Welsh Water/Dŵr Cymru
Wessex Water
Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: Retailers

ADSM
Berendsen UK Limited
Blackpool Borough Council
BT
Business Stream
Castle Water
Clear Business Water
ConservAqua Ltd
Everflow
First Business Water
Greene King Brewing & Retailing
Heineken UK Limited

Independent Water Networks
J Sainsbury
John Lewis PLC
Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (Please specify) **THEN THANK AND CLOSE**
Don't know **THANK AND CLOSE**
None **THANK AND CLOSE**

Q6B **IF NHH:** Do these bills include wastewater services or do you receive separate bills for wastewater?

Include wastewater services
Receive separate bill for wastewater

Q7. **IF HH:** Which company provides wastewater (sewerage) services to your home?
IF NHH AND Q6B=2: Which of the following companies bill you for wastewater services at your premises?

Anglian Water
Hafren Dyfrdwy
Northumbrian Water
Severn Trent Water
Southern Water
South West Water
Thames Water
United Utilities
Welsh Water/Dŵr Cymru
Wessex Water
Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: Retailers

ADSM
Berendsen UK Limited
Blackpool Borough Council
BT
Business Stream
Castle Water
Clear Business Water
ConservAqua Ltd
Everflow
First Business Water
Greene King Brewing & Retailing

Heineken UK Limited
Independent Water Networks
J Sainsbury
John Lewis PLC
Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (please specify) THEN THANK AND CLOSE

Don't know THANK AND CLOSE

None THANK AND CLOSE

Q8. IF HH: Are you the person in your household who is responsible, either solely or jointly, for paying for your water services bill?

I have complete responsibility for payment

I share responsibility for payment with others in my household

I have no responsibility

Don't know

BILLPAYER: = CODE 1 OR 2

NONBILLPAYER: = CODE 3-4

Q9. IF HH Which of the following age groups do you fall into?

Under 18 THANK AND CLOSE

18-29

30-64

65 or older

Prefer not to say

USE HH QUOTA IF PANEL

Q10. IF HH What is your sex? (A question about gender identity will follow)

Male

Female

USE HH QUOTA IF PANEL

Q10a IF HH: Is the gender you identify with the same as your sex registered at birth? **We would like to collect this to ensure that people of all backgrounds are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.**

Yes

No (type in gender identity)

Prefer not to say

Q11. IF ONE SUPPLIER FOR WATER AND WASTEWATER DON'T ASK (BUT CODE AS ONE BILL FOR BOTH SERVICES) IF HH & BILLPAYER: Do you receive separate bills for water and sewerage services or one bill for both services?

Separate bills

One bill for both services

Don't know

Q12b IF HH & BILLPAYER: How often do you make payment for water and sewerage services?

Annually

Every six months

Every month, over eight months of the year

Every month

Other (please specify)

Don't know **GO TO Q14**

Q13 IF HH & BILLPAYER AND Q12B=1, 4-5 ASK: How much, roughly, do you pay for water and sewerage services each month, or in total for a year? The month amounts assume that the bills are paid evenly over a 12-month period, but some customers pay over a different number of months.

IF HH & BILLPAYER AND Q12B=3 ASK: How much, roughly, do you pay for water and sewerage services for each of the eight months, or in total for a year?

IF HH & BILLPAYER AND Q12B=2 ASK: How much, roughly, do you pay for water and sewerage services every 6 months, or in total for a year?

IF NHH: Which of the following bands do you estimate that your organisation's annual total water bill at your premises falls into – that's the amount for both water and sewerage services.

IF HH and 12B=1, 4 or 5: Less than £10 per month/Less than £120 per year

IF HH and 12B=1, 4 or 5: £10 - £19.99 per month/£120 - £239.99 per year

IF HH and 12B=1, 4 or 5: £20 - £29.99 per month/£240 - £359.99 per year

IF HH and 12B=1, 4 or 5: £30 - £39.99 per month/£360 - £479.99 per year

IF HH and 12B=1, 4 or 5: £40 - £59.99 per month/£480 - £719.99 per year

IF HH and 12B=1, 4 or 5: £60 - £79.99 per month/£720 - £959.99 per year

IF HH and 12B=1, 4 or 5: £80 or more per month /£960 or more per year

IF HH and 12B=3: Less than £15 per month/Less than £120 per year

IF HH and 12B=3: £15 - £29.99 per month/£120 - £239.99 per year

IF HH and 12B=3: £30 - £39.99 per month/£240 - £359.99 per year

IF HH and 12B=3: £40 - £59.99 per month/£360 - £479.99 per year

IF HH and 12B=3: £60 - £89.99 per month/£480 - £719.99 per year

IF HH and 12B=3: £90 - £199.99 per month/£720 - £959.99 per year

IF HH and 12B=3: £120 or more per month /£960 or more per year

IF HH and 12B=2: Less than £60 every 6 months/Less than £120 per year

IF HH and 12B=2: £60 - £119.99 every 6 months /£120 - £239.99 per year

IF HH and 12B=2: £120 - £179.99 every 6 months /£240 - £359.99 per year

IF HH and 12B=2: £180 - £239.99 every 6 months /£360 - £479.99 per year

IF HH and 12B=2: £240 - £359.99 every 6 months /£480 - £719.99 per year

IF HH and 12B=2: £360- £479.99 every 6 months /£720 - £959.99 per year

IF HH and 12B=2: £480 or more every 6 months /£960 or more per year

- IF NHH: Less than £1,000 per year
- IF NHH: £1,000 to £5,000 per year
- IF NHH: £5,000 to £25,000 per year
- IF NHH: More than £25,000 per year
- I'm not sure

Service issues

Q14 Have you ever experienced any of the following? *ROTATE*

Please tick one or more

Unexpected water supply interruption

Planned water supply interruption

Unexpected low pressure

Boil water notice

Do not drink notice

Discolouration of water coming out of your tap

A change to the taste and/or smell of your tap water

Sewer flooding: inside your property

Sewer flooding: outside your property

Hosepipe ban

Emergency drought restrictions (e.g. tap water being cut off on a rota basis to conserve supplies)

Pollution in a river

Pollution in the sea near a beach

Other (please specify)

I haven't experienced any of these GO TO Q15

Q14b IF ONE BELOW IN Q14 ASK: Have you experienced the following in the last 12 months?

IF BOTH BELOW IN Q14 ASK: Have you experienced any of the following in the last 12 months?

IF TICKED IN Q14: Discolouration of water coming out of your tap

IF TICKED IN Q14: A change to the taste and/or smell of your tap water

Use of rivers and beaches in the UK

IF HH: We would like to now find out a bit more about your use of rivers and beaches in the UK.

Q15 IF HH: How often do you, or anyone in your household, use rivers in the UK for any of the following activities?

| | Often (more than six times a year) | Sometimes (between one and five times a year) | Rarely (less than once a year) | Never |
|---|--|--|--------------------------------------|-------|
| Water contact activities (e.g. canoeing, rowing, rafting, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |
| Walking, running, cycling or sitting nearby or other activities on or around the water (e.g. narrowboating, other types of boating) | | | | |

Q16 **IF HH:** How often do you, or anyone in your household, use the beach or sea in the UK for any of the following activities?

| | Often (more than six times a year) | Sometimes (between one and five times a year) | Rarely (less than once a year) | Never |
|--|---|--|---|--------------|
| Water contact activities (e.g. surfing, windsurfing, dinghy sailing, canoeing, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |
| Walking, running, cycling or sitting or playing nearby or other activities on or around the water (e.g. other types of boating) | | | | |

Use of hosepipe or sprinkler

Q16a How often does your **[IF HH]** household **[IF NHH]** premises use a hosepipe or sprinkler for any purpose (e.g. washing/cleaning, or watering plants)?

- Often (more than six times a year);
- Sometimes (between one and five times a year)
- Rarely (less than once a year)
- Never

Impact of service issues

You are now going to be shown a series of ten short questions where you will be asked to choose between two different scenarios for your water or wastewater service.

Please consider, and then compare the scenarios carefully, and then **choose the one which would have the most impact** on your **IF HH:** household **IF NHH:** organisation if it were to happen

Some of the scenarios would affect your own property whereas others would affect your local area. When comparing the impact that each would have, please:

- **do** consider any concerns you may have for the local area or natural environment,
- **don't** consider any impacts on other people outside your **IF HH:** household **IF NHH:** organisation - other people will answer for themselves!

On some of the options you will see an **ⓘ**. Please click on this to see some more information about the option.

Q17 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

PLANNED water supply interruption (24 hours)

- ▶ Your water company sends you a notice that in 2 days' time your tap water supply will stop for 24 hours
- ▶ This is due to planned maintenance in your local area
- ▶ As planned, it then stops from a Wednesday morning to a Thursday morning



Planned, 24 hours

Discoloured water (24 hours)

- ▶ Your tap water starts running light brown, without warning
- ▶ This is due to traces of sediment from pipes being disturbed
- ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again
- ▶ This happens for 24 hours from a Wednesday morning



24 hours



Q18 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q19 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q20 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q21 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q22 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q23 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q24 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q24b Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q24c Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q25 We would now like to ask you a few questions about the choices you have just made. How strongly do you agree or disagree with the following statements about the choices you have just made?

| | Strongly disagree | Disagree | Neither | Agree | Strongly agree |
|--|-------------------|----------|---------|-------|----------------|
| I was able to understand the choices | | | | | |
| I found the options believable | | | | | |
| My choices were based on how much impact I thought each option would have on my [IF HH] household [IF NHH] organisation. | | | | | |

| | | | | | |
|---|--|--|--|--|--|
| I found it easy to choose between the options | | | | | |
|---|--|--|--|--|--|

Q26 ASK IF Q25.1 = 1 OR 2. OTHERS GO TO Q27: Why were you unable to understand the choices?

Q27 ASK IF Q25.2 = 1 OR 2. OTHERS GO TO Q28: What was not believable about the options shown?

Q28 ASK IF Q25.3 = 1 OR 2. OTHERS GO TO Q29: What were the main factors driving your choices if not the impact that each would have on your [IF HH] household [IF NHH] organisation?

Q29 ASK IF Q25.4 = 1 OR 2. OTHERS GO TO NEXT SECTION: Why was it difficult choosing between the options?

One-off payments for service issues

The following questions will each present you with a choice between:

a) experiencing a service issue and receiving a one-off payment from your water company,
or

b) not experiencing the issue and not receiving any payment.

In each question, the type of service issue and the one-off payment amount will vary. The amounts will not necessarily reflect current compensation entitlements and may exceed these levels - substantially in some cases.

The purpose of these questions is to see if the amounts shown are enough to make up for the impact on your [IF HH] household [IF NHH] organisation from the service issue shown. It is important to consider each amount at face value, even if it seems higher than you would imagine might be offered.

RANDOMISE ORDER OF SERVICE ISSUES SHOWN IN Q30-Q31.

Q30 Which option would you prefer?

Option A

**UNEXPECTED water supply interruption
(6 hours)**

- ▶ Your tap water supply stops working without warning
- ▶ This is due to a burst pipe in your local area
- ▶ It stops for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon




One-off payment amount *: £100



Option B

No unexpected water supply interruption



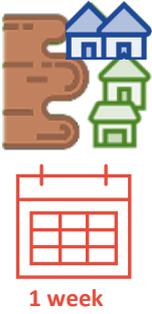
IF BILLPAYER OR NHH: * one-off payments would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise
IF NON-BILLPAYER: * one-off payments would be paid automatically, and within 7 days, by sending a cheque to your household.

If Option A one-off payments level=50% of Q30 value
If Option B one-off payments level =2*Q30 value
Then add in follow up question (Q30a) containing new compensation amounts.

Q30a Which option would you prefer?

Q30d [IF Q30=B AND Q30a=B] Why did you choose this option?

Q31 Which option would you prefer?

| Option A | Option B |
|---|---|
| <p>Sewer flooding: OUTSIDE your property (1 week)</p> <ul style="list-style-type: none">▶ Flooding from the sewer affects access to your front door / entrance▶ This results from prolonged heavy rainfall in your local area▶ It gives off a foul smell, and could cause damage▶ It takes 1 week for access to your property to get back to normal  <p>One-off payment amount *: £200</p> <p><input type="radio"/></p> | <p>NO Sewer flooding: OUTSIDE your property</p> <p><input type="radio"/></p> |

IF BILLPAYER OR NHH: * one-off payments would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise
[IF NON-BILLPAYER] * one-off payments would be paid automatically, and within 7 days, by sending a cheque to your household.

If Option A one-off payments level=50% of Q31 value
If Option B one-off payments level =2*Q31 value
Then add in follow up question (Q31a) containing new compensation amounts.

Q31A Which option would you prefer?

Q31B [IF Q31=B AND Q31A=B] Why did you choose this option?

Q32 We would now like to ask you a few questions about the choices you have just made. How strongly to do you agree or disagree with the following statements about the choices you have just made?

| | Strongly disagree | Disagree | Neither | Agree | Strongly agree |
|---|-------------------|----------|---------|-------|----------------|
| I was able to understand the choices | | | | | |
| I found the options believable | | | | | |
| My choices were based on how much impact I thought each option would have on my [IF HH] household [IF NHH] organisation and whether the amount of money shown | | | | | |
| I found it easy to choose between the options | | | | | |

Q33 ASK IF Q32.1 = 1 OR 2. OTHERS GO TO Q34: Why were you unable to understand the choices?

Q34 ASK IF Q32.2 = 1 OR 2. OTHERS GO TO Q35: What was not believable about the options shown?

Q35 ASK IF Q32.3 = 1 OR 2. OTHERS GO TO Q36: What were the main factors driving your choices?

Q36 ASK IF Q32.4 = 1 OR 2. OTHERS GO TO NEXT SECTION: Why was it difficult choosing between the options?

Attitudes to environmental costs

Q37 IF HH: Please look at the following five statements about pollution control and the costs of pollution control. Which one do you agree with most? *SINGLE CHOICE*

The environment should be protected from pollution and improved, **regardless of cost**

The environment should be protected from pollution and improved, **provided costs are not excessive**

The environment should be protected from pollution and improved, **but at no additional cost**

Further protection and improvements to the environment are not needed, and the costs for this should fall

Standards for protection and improvement to the environment are already too high and should be relaxed, and costs should fall

Don't know

Q38 Please use this box to leave any further comments about this topic or this survey. Please note, your water company will be unable to respond to individuals.

Classification Questions

We will now ask you a few questions about you and your IF HH household IF NHH organisation. These will only be used to ensure we have spoken to a wide range of customers. All responses you give will be kept strictly confidential.

Q39 IF HH: How would you describe the occupation type of the main income earner in your household?

Higher managerial/ professional/ administrative (e.g. Established doctor, Solicitor, Board Director in a large organisation (200+ employees, top level civil servant/public service employee))

Intermediate managerial/ professional/ administrative (e.g. Newly qualified (under 3 years) doctor, Solicitor, Board director small organisation, middle manager in large organisation, principle officer in civil service/local government)

Supervisory or clerical/ junior managerial/ professional/ administrative (e.g. Office worker, Student Doctor, Foreman with 25+ employees, salesperson, etc)

Skilled manual worker (e.g. Skilled Bricklayer, Carpenter, Plumber, Painter, Bus/ Ambulance Driver, HGV driver, AA patrolman, pub/bar worker, etc)

Semi or unskilled manual work. (e.g. Manual workers, all apprentices to be skilled trades, Caretaker, Park keeper, non-HGV driver, shop assistant)

Unemployed

Retired

Student

Prefer not to say **GO TO Q44**

Q40 IF Q39=7 (RETIRED) ASK: Does the main income earner have a state pension, a private pension or both?

State only

Private only

Both

Prefer not to say **GO TO Q44**

Q41 IF Q40= PRIVATE OR BOTH ASK: How would you describe the main income earner's occupation type before retirement?

Higher managerial/ professional/ administrative (e.g. Established doctor, Solicitor, Board Director in a large organisation (200+ employees, top level civil servant/public service employee))

Intermediate managerial/ professional/ administrative (e.g. Newly qualified (under 3 years) doctor, Solicitor, Board director small organisation, middle manager in large organisation, principle officer in civil service/local government)

Supervisory or clerical/ junior managerial/ professional/ administrative (e.g. Office worker, Student Doctor, Foreman with 25+ employees, salesperson, etc)

Skilled manual worker (e.g. Skilled Bricklayer, Carpenter, Plumber, Painter, Bus/ Ambulance Driver, HGV driver, AA patrolman, pub/bar worker, etc)

Semi or unskilled manual work. (e.g. Manual workers, all apprentices to be skilled trades, Caretaker, Park keeper, non-HGV driver, shop assistant)

None of these

Prefer not to say

Q44 IF HH: To which of these ethnic groups do you consider you belong to? **We would like to collect this to ensure that people of all backgrounds are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.**

WHITE

English, Welsh, Scottish, Northern Irish or British

Irish

Gypsy or Irish Traveller

Any other White background

MIXED

White and Black Caribbean

White and Black African

White and Asian

Any other Mixed background

ASIAN OR ASIAN BRITISH

Indian

Pakistani

Bangladeshi

Chinese

Any other Asian background

BLACK OR BLACK BRITISH

Caribbean
African
Any other Black background

OTHER ETHNIC GROUP

Arab
Any other ethnic group
Prefer not to say

Q45 **IF HH:** Thinking about all the people in your household, including yourself, how many people live here?

1 or 2
3 or 4
5 or more
Prefer not to say

Q46 Please let us know if any of the following apply to you. *RANDOMISE ROWS*
We would like to collect this to ensure that with a variety of particular needs are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.

I or another member of my household is disabled or suffer(s) from a debilitating illness
I or another member of my household have/has a learning difficulty
I or another member of my household relies on water for medical reasons
I or another member of my household is visually impaired (i.e. struggles to read even with glasses)
I or another member of my household am/is over the age of 75 years old
I or another member of my household speaks English as a second language
I or another member of my household is deaf or hard of hearing
I or another member of my household is a new parent
None of these apply to me
Prefer not to say

Q47 **IF HH:** Which of the following statements do you most agree with? Please remember, this research is entirely confidential and that it is only by understanding the views of people who are struggling to pay their household bills (eg gas, electricity, telephone etc) that change can be made.

I can always afford to pay my household bills
I can usually afford to pay my household bills
I sometimes struggle to pay my household bills
I usually struggle to pay my household bills
I always struggle to pay for my household bills
Prefer not to say

Q47a. **IF HH:** Thinking about your household finances, do you expect your household to be better off, worse off or about the same in 12 months' time?

Better off
The same
Worse off
Don't know

Q47b **IF NHH:** How does your organisation mainly use water? **You can choose more than one answer**

The manufacturing process which is essential to the running of your organisation (e.g. to power machinery, agricultural production etc.)
The supply of services your organisation provides (e.g. cleaning services etc.)

An ingredient or part of the product or service your organisation provides (e.g. food or drink, chemical, cosmetics manufacturer etc.)

Normal domestic use for your organisation's customers and employees (e.g. customer toilets, supply of drinking water)

None of the above

Don't Know

Q48 IF NHH: How many sites does your organisation operate from?

1

2

3

4+

Prefer not to say

Q49 IF NHH: How many employees does your organisation have in the UK?

None, sole trader

Fewer than 4 employees

4 to 49 employees

50 to 249 employees

250+ employees

Prefer not to say

Q50 IF NHH: Which of the following best defines the core activity of your organisation?

Agriculture, forestry and fishing

Mining and quarrying

Energy or water service & supply

Manufacturing

Construction

Wholesale and retail trade (including motor vehicles repair)

Transport and storage

Hotels & catering

IT and Communication

Finance and insurance activities

Real estate activities

Professional, scientific and technical activities

Administrative and Support Service Activities

Public administration and defence

Education

Human health and social work activities

Arts, entertainment and recreation

Other service activities

Other (please specify)

Prefer not to say

Q52 IF HH: Do you have a water meter?

IF NHH: Does your premises have a water meter?

Yes

No

Don't Know

Prefer not to say

Q53 IF Q52=1 ASK: Did you ask to have a water meter fitted for your household?

Yes

No

Prefer not to say

Q54 IF HH AND POSTAL: Which of these best describes you?

- I have never used the internet
- I have used the internet but do not have regular access to it
- I have regular access to the internet
- Prefer not to say

Q55 IF HH NON PANEL: We mentioned that there would be a £10 incentive for completing this survey. This incentive will be administered by Accent, within 4 weeks.

This can be sent as an Amazon, Marks & Spencer or Love2Shop voucher by email or by post. Alternatively we can donate your incentive to WaterAid. Which would you prefer?

- Amazon voucher by email **COLLECT EMAIL ADDRESS**
- M&S Voucher by email **COLLECT EMAIL ADDRESS**
- Love2Shop by email **COLLECT EMAIL ADDRESS**
- Amazon voucher by post **COLLECT ADDRESS**
- M&S voucher by post **COLLECT ADDRESS**
- Love2Shop by post **COLLECT ADDRESS**
- Donation to Water Aid

If you have any queries about your incentive, please contact us on 0131 220 8770.

Q56 Thank you. Would you be willing to be contacted again if we need to clarify any of the answers you have given today?

- Yes
- No

Thank you. This research was conducted under the terms of the MRS code of conduct and is completely confidential.



Water Company Research V2

This survey is designed to get your views on water and sewerage services. It is being undertaken on behalf of Ofwat, the regulator, and Consumer Council for Water (CCW), the consumer organisation which represents the interests of water and sewerage customers in England and Wales.

The research will be used to help water companies plan investment in their service from 2025, and will influence your future water services and bills.

This research is being conducted by Accent, an independent research agency on behalf of Ofwat and CCW.

NOT PANEL: Anyone completing the survey will be eligible for a £10 voucher (either an Amazon voucher, an M&S voucher, Love2Shop voucher). Alternatively we can donate your incentive to WaterAid. Details on how claim your voucher are given at the end of the survey.

The questionnaire will take about 15 minutes to complete.

Any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society. If you would like to confirm Accent's credentials type Accent in the search box at: <https://www.mrs.org.uk/researchbuyersguide>.

Q1 Any data collected over the course of this interview that could be used to identify you, such as your name, address, or other contact details, will be held securely and will not be shared with any third party, including your water company, unless you give permission (or unless we are legally required to do so). Our privacy statement is available at <https://www.accent-mr.com/privacy-policy/>.

Do you agree to proceeding with the interview on this basis?

Yes

No **THANK AND CLOSE IF ONLINE**

Q2 **ASK HH ONLY:** Do you or any of your close family work in market research or for a water company?

Yes **THANK & CLOSE**

No

Q3 **IF NHH ASK:** Are you solely or jointly responsible as the decision maker for paying your organisation's water and wastewater bill?

Yes

No **THANK AND CLOSE**

Q4 IF POSTCODE DATA NOT AVAILABLE FROM SAMPLE Please tell us the first half of your postcode. So if your full postcode is ME1 3BN please just tell us ME1 3. (This will be used to check who supplies your water and wastewater services) **NHH ONLY If your organisation operates across multiple sites, please answer for the site you typically work from**

IF HH AND REFUSE GO TO Q6
IF NHH AND REFUSE THANK AND CLOSE

Q5 IF HH AND DIFFERENT WATER AND WASTEWATER: Based on your postcode area, we believe your clean water service company should be #WATER COMPANY# and your wastewater service company should be #WASTEWATER COMPANY#. You may receive separate bills from each organisation or one combined bill. Is that correct?
IF SAME WATER AND WASTEWATER: Based on your postcode area, we believe your clean water service and wastewater service company should be #WATER COMPANY#. Is that correct?

Yes **GO TO Q8**
No **GO TO Q6**
Don't know **GO TO Q8**

Q6 IF HH: Which water company supplies clean water to your home?
IF NHH: Which of the following companies bill you for clean water services at your premises?

Affinity Water
Anglian Water
Bournemouth Water
Bristol Water
Cambridge Water
Essex & Suffolk Water
Hafren Dyfrdwy
Hartlepool Water
Northumbrian Water
Portsmouth Water
Severn Trent Water
South East Water
Southern Water
South Staffs Water
South West Water
Sutton & East Surrey (SES) Water
Thames Water
United Utilities
Welsh Water/Dŵr Cymru
Wessex Water
Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: Retailers

ADSM
Berendsen UK Limited
Blackpool Borough Council
BT
Business Stream
Castle Water
Clear Business Water
ConservAqua Ltd
Everflow
First Business Water
Greene King Brewing & Retailing

Heineken UK Limited
Independent Water Networks
J Sainsbury
John Lewis PLC
Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (Please specify) THEN THANK AND CLOSE

Don't know THANK AND CLOSE

None THANK AND CLOSE

Q6B IF NHH: Do these bills include wastewater services or do you receive separate bills for wastewater?

Include wastewater services

Receive separate bill for wastewater

Q7 IF HH: Which company provides wastewater (sewerage) services to your home?
IF NHH AND Q6B=2: Which of the following companies bill you for wastewater services at your premises?

Anglian Water
Hafren Dyfrdwy
Northumbrian Water
Severn Trent Water
Southern Water
South West Water
Thames Water
United Utilities
Welsh Water/Dŵr Cymru
Wessex Water
Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: **Retailers**

ADSM
Berendsen UK Limited
Blackpool Borough Council
BT
Business Stream
Castle Water
Clear Business Water
ConservAqua Ltd
Everflow
First Business Water

Greene King Brewing & Retailing
Heineken UK Limited
Independent Water Networks
J Sainsbury
John Lewis PLC
Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (please specify) THEN THANK AND CLOSE
Don't know THANK AND CLOSE
None THANK AND CLOSE

Q8 IF HH: Are you the person in your household who is responsible, either solely or jointly, for paying for your water services bill?

I have complete responsibility for payment
I share responsibility for payment with others in my household
I have no responsibility
Don't know

BILLPAYER: = CODE 1 OR 2
NONBILLPAYER: = CODE 3-4

Q9 IF HH Which of the following age groups do you fall into?

Under 18 THANK AND CLOSE
18-29
30-64
65 or older
Prefer not to say

USE HH QUOTA IF PANEL

Q10 IF HH What is your sex? (A question about gender identity will follow)

Male
Female

USE HH QUOTA IF PANEL

Q10a IF HH: Is the gender you identify with the same as your sex registered at birth? **We would like to collect this to ensure that people of all backgrounds are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.**

Yes

No (type in gender identity)

Prefer not to say

Q11 IF ONE SUPPLIER FOR WATER AND WASTEWATER DON'T ASK (BUT CODE AS ONE BILL FOR BOTH SERVICES) IF HH & BILLPAYER: Do you receive separate bills for water and sewerage services or one bill for both services?

Separate bills

One bill for both services

Don't know

Q12b IF HH & BILLPAYER: How often do you make payment for water and sewerage services?

Annually

Every six months

Every month, over eight months of the year

Every month

Other (please specify)

Don't know **GO TO Q14**

Q13 IF HH & BILLPAYER AND Q12B=1, 4-5 ASK: How much, roughly, do you pay for water and sewerage services each month, or in total for a year? The month amounts assume that the bills are paid evenly over a 12-month period, but some customers pay over a different number of months.

IF HH & BILLPAYER AND Q12B=3 ASK: How much, roughly, do you pay for water and sewerage services for each of the eight months, or in total for a year?

IF HH & BILLPAYER AND Q12B=2 ASK: How much, roughly, do you pay for water and sewerage services every 6 months, or in total for a year?

IF NHH: Which of the following bands do you estimate that your organisation's annual total water bill at your premises falls into – that's the amount for both water and sewerage services.

IF HH and 12B=1, 4 or 5: Less than £10 per month/Less than £120 per year

IF HH and 12B=1, 4 or 5: £10 - £19.99 per month/£120 - £239.99 per year

IF HH and 12B=1, 4 or 5: £20 - £29.99 per month/£240 - £359.99 per year

IF HH and 12B=1, 4 or 5: £30 - £39.99 per month/£360 - £479.99 per year

IF HH and 12B=1, 4 or 5: £40 - £59.99 per month/£480 - £719.99 per year

IF HH and 12B=1, 4 or 5: £60 - £79.99 per month/£720 - £959.99 per year

IF HH and 12B=1, 4 or 5: £80 or more per month /£960 or more per year

IF HH and 12B=3: Less than £15 per month/Less than £120 per year

IF HH and 12B=3: £15 - £29.99 per month/£120 - £239.99 per year

IF HH and 12B=3: £30 - £39.99 per month/£240 - £359.99 per year

IF HH and 12B=3: £40 - £59.99 per month/£360 - £479.99 per year

IF HH and 12B=3: £60 - £89.99 per month/£480 - £719.99 per year

IF HH and 12B=3: £90 - £199.99 per month/£720 - £959.99 per year

IF HH and 12B=3: £120 or more per month /£960 or more per year

IF HH and 12B=2: Less than £60 every 6 months/Less than £120 per year

IF HH and 12B=2: £60 - £119.99 every 6 months /£120 - £239.99 per year

IF HH and 12B=2: £120 - £179.99 every 6 months /£240 - £359.99 per year

IF HH and 12B=2: £180 - £239.99 every 6 months /£360 - £479.99 per year

IF HH and 12B=2: £240 - £359.99 every 6 months /£480 - £719.99 per year

IF HH and 12B=2: £360- £479.99 every 6 months /£720 - £959.99 per year

IF HH and 12B=2: £480 or more every 6 months /£960 or more per year
 IF NHH: Less than £1,000 per year
 IF NHH: £1,000 to £5,000 per year
 IF NHH: £5,000 to £25,000 per year
 IF NHH: More than £25,000 per year
 I'm not sure

Service issues

Q14 Have you ever experienced any of the following? *ROTATE*

Please tick one or more

Unexpected water supply interruption

Planned water supply interruption

Unexpected low pressure

Boil water notice

Do not drink notice

Discolouration of water coming out of your tap

A change to the taste and/or smell of your tap water

Sewer flooding: inside your property

Sewer flooding: outside your property

Hosepipe ban

Emergency drought restrictions (e.g. tap water being cut off on a rota basis to conserve supplies)

Pollution in a river

Pollution in the sea near a beach

Other (please specify)

I haven't experienced any of these GO TO Q15

Q14b IF ONE BELOW IN Q14ASK: Have you experienced the following in the last 12 months?

IF BOTH BELOW IN Q14 ASK: Have you experienced any of the following in the last 12 months?

IF TICKED IN Q14: Discolouration of water coming out of your tap

IF TICKED IN Q14: A change to the taste and/or smell of your tap water

Use of rivers and beaches in the UK

IF HH: We would like to now find out a bit more about your use of rivers and beaches in the UK.

Q15 IF HH: How often do you, or anyone in your household, use rivers in the UK for any of the following activities?

| | Often (more than six times a year) | Sometimes (between one and five times a year) | Rarely (less than once a year) | Never |
|---|--|--|--------------------------------------|-------|
| Water contact activities (e.g. canoeing, rowing, rafting, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |
| Walking, running, cycling or sitting nearby or other activities on or around the water (e.g. narrowboating, other types of boating) | | | | |

Q16 **IF HH:** How often do you, or anyone in your household, use the beach or sea in the UK for any of the following activities?

| | Often (more than six times a year) | Sometimes (between one and five times a year) | Rarely (less than once a year) | Never |
|--|---|--|---|--------------|
| Water contact activities (e.g. surfing, windsurfing, dinghy sailing, canoeing, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |
| Walking, running, cycling or sitting or playing nearby or other activities on or around the water (e.g. other types of boating) | | | | |

Use of hosepipe or sprinkler

Q16a How often does your **[IF HH]** household **[IF NHH]** premises use a hosepipe or sprinkler for any purpose (e.g. washing/cleaning, or watering plants)?

- Often (more than six times a year);
- Sometimes (between one and five times a year)
- Rarely (less than once a year)
- Never

Service Scenario Choices

You are now going to be shown a series of ten short questions where you will be asked to choose between two different scenarios for your water or wastewater service. **Please read the following instructions carefully.**

Each scenario will show a different type of service issue that could happen to your **IF HH:** household **IF NHH:** premises.

Some of the scenarios would affect your own **IF HH:** property **IF NHH:** premises whereas others would affect your local area. When comparing the impact that each would have, please:

- **do** consider any concerns you may have for the local area or natural environment,
- **don't** consider any impacts on other people outside your **IF HH:** household **IF NHH:** organisation - other people will answer for themselves!

On some of the options you will see an **ⓘ**. Please click on this to see some more information about the option.

NEW SCREEN

Additionally, some of these scenarios will involve your water and/or wastewater provider making a one-off payment to your **IF HH:** household **IF NHH:** organisation.

The amounts will not necessarily reflect current compensation entitlements and may exceed these levels – substantially in some cases.

The purpose of these questions is to see if the amounts shown are enough to make up for the impact on your IF HH: household IF NHH: organisation from the service issue shown. It is important that you consider each amount at face value, even if it seems higher than you would imagine might be offered.

For each question, please state which option you prefer. If neither of the options is appealing, please still choose the better of the two.

Q17 Which option would you prefer? If neither is appealing, please still choose the better of the two

| Option A | Option B |
|--|--|
| <p>PLANNED water supply interruption (24 hours)</p> <ul style="list-style-type: none"> ▶ Your water company sends you a notice that in 2 days' time your tap water supply will stop for 24 hours ▶ This is due to planned maintenance in your local area ▶ As planned, it then stops from a Wednesday morning to a Thursday morning  <p>Planned, 24 hours</p> <p>One-off payment amount*: £50</p> <p><input type="radio"/></p> | <p>UNEXPECTED water supply interruption (6 hours)</p> <ul style="list-style-type: none"> ▶ Your tap water supply stops working without warning ▶ This is due to a burst pipe in your local area ▶ It stops for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon  <p>6 hours</p> <p>One-off payment amount*: £100</p> <p><input type="radio"/></p> |

IF BILLPAYER OR NHH: * one-off payments would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise IF NON-BILLPAYER: * one-off payments would be paid automatically, and within 7 days, by sending a cheque to your household.

Q18 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q19 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q20 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q21 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q22 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q23 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q24 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q24b Which option would you prefer? If neither is appealing, please still choose the better of the two

Q24c Which option would you prefer? If neither is appealing, please still choose the better of the two

Q25 We would now like to ask you a few questions about the choices you have just made. How strongly do you agree or disagree with the following statements about the choices you have just made?

| | Strongly disagree | Disagree | Neither | Agree | Strongly agree |
|---|-------------------|----------|---------|-------|----------------|
| I was able to understand the choices | | | | | |
| I found the options believable | | | | | |
| My choices were based on how much impact I thought each option would have on my [IF HH] household [IF NHH] organisation and the amount of money shown | | | | | |
| I found it easy to choose between the options | | | | | |

Q26 **ASK IF Q25.1 = 1 OR 2. OTHERS GO TO Q27:** Why were you unable to understand the choices?

Q27 **ASK IF Q25.2 = 1 OR 2. OTHERS GO TO Q28:** What was not believable about the options shown?

Q28 **ASK IF Q25.3 = 1 OR 2. OTHERS GO TO Q29:** What were the main factors driving your choices?

Q29 **ASK IF Q25.4 = 1 OR 2. OTHERS GO TO NEXT SECTION:** Why was it difficult choosing between the options?

Attitudes to environmental costs

Q37 **IF HH:** Please look at the following five statements about pollution control and the costs of pollution control. Which one do you agree with most? **SINGLE CHOICE**

The environment should be protected from pollution and improved, **regardless of cost**

The environment should be protected from pollution and improved, **provided costs are not excessive**

The environment should be protected from pollution and improved, **but at no additional cost**

Further protection and improvements to the environment are not needed, and the costs for this should fall

Standards for protection and improvement to the environment are already too high and should be relaxed, and costs should fall

Don't know

Q38 Please use this box to leave any further comments about this topic or this survey. Please note, your water company will be unable to respond to individuals.

Classification Questions

We will now ask you a few questions about you and your IF HH household IF NHH organisation. These will only be used to ensure we have spoken to a wide range of customers. All responses you give will be kept strictly confidential.

Q39 **IF HH:** How would you describe the occupation type of the main income earner in your household?

Higher managerial/ professional/ administrative (e.g. Established doctor, Solicitor, Board Director in a large organisation (200+ employees, top level civil servant/public service employee))

Intermediate managerial/ professional/ administrative (e.g. Newly qualified (under 3 years) doctor, Solicitor, Board director small organisation, middle manager in large organisation, principle officer in civil service/local government)

Supervisory or clerical/ junior managerial/ professional/ administrative (e.g. Office worker, Student Doctor, Foreman with 25+ employees, salesperson, etc)

Skilled manual worker (e.g. Skilled Bricklayer, Carpenter, Plumber, Painter, Bus/ Ambulance Driver, HGV driver, AA patrolman, pub/bar worker, etc)

Semi or unskilled manual work. (e.g. Manual workers, all apprentices to be skilled trades, Caretaker, Park keeper, non-HGV driver, shop assistant)

Unemployed

Retired

Student

Prefer not to say **GO TO Q44**

Q40 IF Q39=7 (RETIRED) ASK: Does the main income earner have a state pension, a private pension or both?

State only

Private only

Both

Prefer not to say **GO TO Q44**

Q41 IF Q40= PRIVATE OR BOTH ASK: How would you describe the main income earner's occupation type before retirement?

Higher managerial/ professional/ administrative (e.g. Established doctor, Solicitor, Board Director in a large organisation (200+ employees, top level civil servant/public service employee))

Intermediate managerial/ professional/ administrative (e.g. Newly qualified (under 3 years) doctor, Solicitor, Board director small organisation, middle manager in large organisation, principle officer in civil service/local government)

Supervisory or clerical/ junior managerial/ professional/ administrative (e.g. Office worker, Student Doctor, Foreman with 25+ employees, salesperson, etc)

Skilled manual worker (e.g. Skilled Bricklayer, Carpenter, Plumber, Painter, Bus/ Ambulance Driver, HGV driver, AA patrolman, pub/bar worker, etc)

Semi or unskilled manual work. (e.g. Manual workers, all apprentices to be skilled trades, Caretaker, Park keeper, non-HGV driver, shop assistant)

None of these

Prefer not to say

Q44 IF HH: To which of these ethnic groups do you consider you belong to? **We would like to collect this to ensure that people of all backgrounds are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.**

WHITE

English, Welsh, Scottish, Northern Irish or British

Irish

Gypsy or Irish Traveller

Any other White background

MIXED

White and Black Caribbean

White and Black African

White and Asian

Any other Mixed background

ASIAN OR ASIAN BRITISH

Indian

Pakistani

Bangladeshi
Chinese
Any other Asian background

BLACK OR BLACK BRITISH

Caribbean
African
Any other Black background

OTHER ETHNIC GROUP

Arab
Any other ethnic group
Prefer not to say

Q45 **IF HH:** Thinking about all the people in your household, including yourself, how many people live here?

1 or 2
3 or 4
5 or more
Prefer not to say

Q46 Please let us know if any of the following apply to you. *RANDOMISE ROWS*
We would like to collect this to ensure that with a variety of particular needs are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.

I or another member of my household is disabled or suffer(s) from a debilitating illness
I or another member of my household have/has a learning difficulty
I or another member of my household relies on water for medical reasons
I or another member of my household is visually impaired (i.e. struggles to read even with glasses)
I or another member of my household am/is over the age of 75 years old
I or another member of my household speaks English as a second language
I or another member of my household is deaf or hard of hearing
I or another member of my household is a new parent
None of these apply to me
Prefer not to say

Q47 **IF HH:** Which of the following statements do you most agree with? **Please remember, this research is entirely confidential and that it is only by understanding the views of people who are struggling to pay their household bills (eg gas, electricity, telephone etc) that change can be made.**

I can always afford to pay my household bills
I can usually afford to pay my household bills
I sometimes struggle to pay my household bills
I usually struggle to pay my household bills
I always struggle to pay for my household bills
Prefer not to say

Q47a. **IF HH:** Thinking about your household finances, do you expect your household to be better off, worse off or about the same in 12 months' time?

Better off
The same
Worse off
Don't know

Q47b **IF NHH:** How does your organisation mainly use water? **You can choose more than one answer**

The manufacturing process which is essential to the running of your organisation (e.g. to power machinery, agricultural production etc.)

The supply of services your organisation provides (e.g. cleaning services etc.)

An ingredient or part of the product or service your organisation provides (e.g. food or drink, chemical, cosmetics manufacturer etc.)

Normal domestic use for your organisation's customers and employees (e.g. customer toilets, supply of drinking water)

None of the above

Don't Know

Q48 IF NHH: How many sites does your organisation operate from?

1

2

3

4+

Prefer not to say

Q49 IF NHH: How many employees does your organisation have in the UK?

None, sole trader

Fewer than 4 employees

4 to 49 employees

50 to 249 employees

250+ employees

Prefer not to say

Q50 IF NHH: Which of the following best defines the core activity of your organisation?

Agriculture, forestry and fishing

Mining and quarrying

Energy or water service & supply

Manufacturing

Construction

Wholesale and retail trade (including motor vehicles repair)

Transport and storage

Hotels & catering

IT and Communication

Finance and insurance activities

Real estate activities

Professional, scientific and technical activities

Administrative and Support Service Activities

Public administration and defence

Education

Human health and social work activities

Arts, entertainment and recreation

Other service activities

Other (please specify)

Prefer not to say

Q52 IF HH: Do you have a water meter?

IF NHH: Does your premises have a water meter?

Yes

No

Don't Know

Prefer not to say

Q53 IF Q52=1 ASK: Did you ask to have a water meter fitted for your household?

Yes
No
Prefer not to say

Q54 IF HH AND POSTAL: Which of these best describes you?

I have never used the internet
I have used the internet but do not have regular access to it
I have regular access to the internet
Prefer not to say

Q55 IF HH NON PANEL: We mentioned that there would be a £10 incentive for completing this survey. This incentive will be administered by Accent, within 4 weeks.

This can be sent as an Amazon, Marks & Spencer or Love2Shop voucher by email or by post. Alternatively we can donate your incentive to WaterAid. Which would you prefer?

Amazon voucher by email **COLLECT EMAIL ADDRESS**
M&S Voucher by email **COLLECT EMAIL ADDRESS**
Love2Shop by email **COLLECT EMAIL ADDRESS**
Amazon voucher by post **COLLECT ADDRESS**
M&S voucher by post **COLLECT ADDRESS**
Love2Shop by post **COLLECT ADDRESS**
Donation to Water Aid

If you have any queries about your incentive, please contact us on 0131 220 8770.

Q56 Thank you. Would you be willing to be contacted again if we need to clarify any of the answers you have given today?

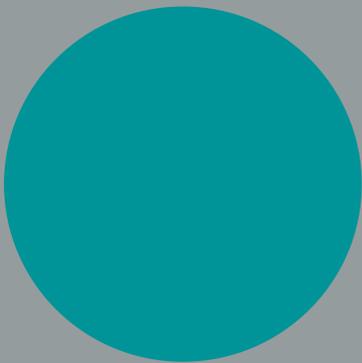
Yes
No

Thank you. This research was conducted under the terms of the MRS code of conduct and is completely confidential.



Appendix D2

Attributes



UNEXPECTED water supply interruption (6 hours)

- ▶ Your water supply stops working without warning, affecting taps, toilets, dishwasher, etc
- ▶ This is due to a burst pipe in your local area
- ▶ It stops for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



6 hours

PLANNED water supply interruption (6 hours)

- ▶ Your water company sends you a notice in the post that in 2 days' time your water supply will stop for 6 hours, affecting all taps, toilets, dishwasher, etc
- ▶ This is due to planned maintenance in your local area
- ▶ As planned, it then stops between 12:00 and 18:00 on a Wednesday afternoon



**Planned,
6 hours**

UNEXPECTED water supply interruption (24 hours)

- ▶ Your water supply stops working without warning, affecting all taps, toilets, dishwasher, etc
- ▶ This is due to a burst pipe in your local area
- ▶ Water would be made available nearby to collect in buckets or bottles and vulnerable people would be delivered water directly
- ▶ It stops for 24 hours, from a Wednesday morning to a Thursday morning



24 hours

UNEXPECTED low water pressure (6 hours)

- ▶ Your tap water supply starts running with a low pressure, without warning
- ▶ This is due to a burst pipe in your local area
- ▶ It takes longer to fill a kettle, sink or bath and a shower would be weak. Some appliances like dishwashers and washing machines may not work properly
- ▶ This happens for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



6 hours

Boil water notice (48 hours)

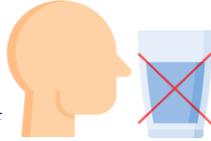
- ▶ Your water company sends you a notice saying you need to boil tap water before drinking, cooking or preparing food to avoid the risk of becoming ill
- ▶ This is due to traces of e-coli being found in the water supply in your area
- ▶ You can still safely use tap water for washing and cleaning
- ▶ Bottled water would be delivered to vulnerable customers that need it
- ▶ You can still safely use tap water for washing and cleaning. The notice arrives on a Wednesday. After two days the water will be safe to drink again and your water company will notify you



48 hours

Do not drink notice (48 hours)

- ▶ Your water company sends you a notice saying not to drink your tap water, or use it for cooking or preparing food, to avoid the risk of becoming ill
- ▶ This is due to traces of a harmful chemical being found in the water supply in your area
- ▶ You can still safely use tap water for washing and cleaning
- ▶ Water would be made available nearby to collect in your own buckets or bottles and vulnerable people would be delivered bottled water directly
- ▶ The notice arrives on a Wednesday. After two days the water will be safe to drink again and your water company will notify you



48 hours

Discoloured water (6 hours)

- ▶ Your tap water starts running light brown, without warning
- ▶ This is due to traces of sediment from pipes being disturbed
- ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again
- ▶ This happens for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



6 hours

Discoloured water (24 hours)

- ▶ Your tap water starts running light brown, without warning
- ▶ This is due to traces of sediment from pipes being disturbed
- ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again
- ▶ This happens for 24 hours from a Wednesday morning



Water taste and smell (6 hours)

- ▶ Your tap water starts tasting or smelling different, without warning
- ▶ This is due to chlorine, and the taste and smell is like a swimming pool
- ▶ The water is safe to drink, and for use in the dishwasher or washing machine
- ▶ This happens for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



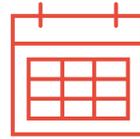
Water taste and smell (24 hours)

- ▶ Your tap water starts tasting or smelling different, without warning
- ▶ This is due to chlorine, and the taste and smell is like a swimming pool
- ▶ The water is safe to drink, and for use in the dishwasher or washing machine
- ▶ This happens for 24 hours from a Wednesday morning



Sewer flooding: INSIDE your property (1 month)

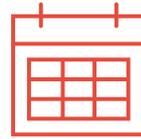
- ▶ Flooding from the sewer gets inside your property, affecting your living areas
- ▶ This results from prolonged heavy rainfall in your local area
- ▶ It gives off a foul smell, and damages floors, walls and furniture
- ▶ It takes 1 month for your property to get back to normal



1 month

Sewer flooding: OUTSIDE your property (1 week)

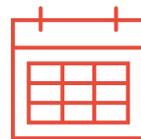
- ▶ Flooding from the sewer affects access to your front door / entrance
- ▶ This results from prolonged heavy rainfall in your local area
- ▶ It gives off a foul smell, and could cause damage
- ▶ It takes 1 week for access to your property to get back to normal



1 week

Hosepipe ban (5 months)

- ▶ Your water company sends you a notice saying you must not use a hosepipe or sprinkler
- ▶ This is due to an extended period of dry weather leading to a water shortage
- ▶ The hosepipe ban begins in May and lasts for 5 months



5 months

Emergency drought restrictions (2 months)

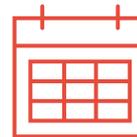
- ▶ Your water company cuts off the tap water supply from 2pm to 7am every day
- ▶ This is due to a severe drought leading to an extreme water shortage in your area
- ▶ Standpipes would be available nearby to collect water in your own buckets or bottles and vulnerable people would be delivered bottled water directly
- ▶ The restrictions begin in July and last for 2 months



2 months

Low flows in rivers NEARBY (2 months)

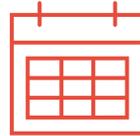
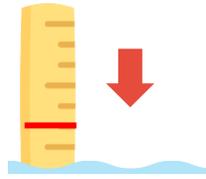
- ▶ The water level in a nearby stretch of river (less than 5 miles away) has a flow that is lower than the minimum it should be naturally
- ▶ This could affect habitats and harm the wildlife living in and by the river
- ▶ This is due to a combination of extended dry weather and water being taken from it for public water supply
- ▶ This happens from July and lasts for 2 months



**Nearby,
2 months**

Low flows in rivers ELSEWHERE (2 months)

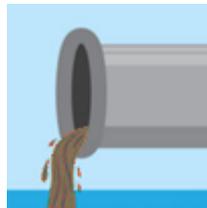
- ▶ The water level in a stretch of river somewhere in your region, but not nearby, has a flow that is lower than the minimum it should be naturally
- ▶ This could harm the wildlife living in and by the river
- ▶ This is due to a combination of extended dry weather and water being taken from it for public water supply
- ▶ This happens from July and lasts for 2 months



**Elsewhere,
2 months**

Storm overflow NEARBY (4 hours)

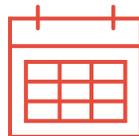
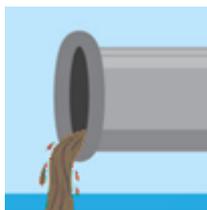
- ▶ Rainwater mixed with untreated sewage regularly spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to prolonged heavy rainfall and is allowed by the regulator to reduce the risk of sewer flooding
- ▶ There is no damage to the river and visible pollution is minor



**Nearby,
4 hours**

Minor pollution incident NEARBY (1 day)

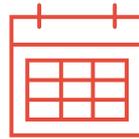
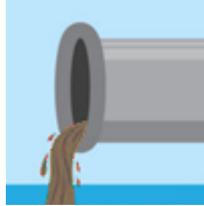
- ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be minor
- ▶ The spill begins on a Wednesday and lasts for 4 hours. The river is then back to normal after 1 day



**Nearby,
1 day**

Significant pollution incident NEARBY (4 weeks)

- ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and would be significant, including possible harm to wildlife and health risks to river users, plus visible sewage litter
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks



Nearby,
4 weeks

Storm overflow ELSEWHERE (4 hours)

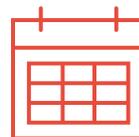
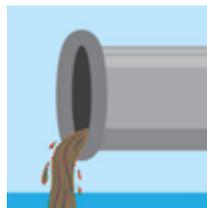
- ▶ Rainwater mixed with untreated sewage regularly spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to prolonged heavy rainfall and is allowed by the regulator to reduce the risk of sewer flooding
- ▶ There is no damage to the river and visible pollution is minor



Elsewhere,
4 hours

Minor pollution incident ELSEWHERE (1 day)

- ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be minor
- ▶ The spill begins on a Wednesday and lasts for 4 hours. The river is then back to normal after 1 day

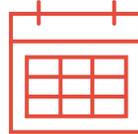
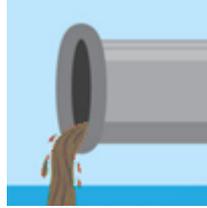


Elsewhere

1 day

Significant pollution incident ELSEWHERE (4 weeks)

- ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river would be significant, including possible harm to wildlife and health risks to river users, plus visible sewage litter
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks



Elsewhere
,
4 weeks

River water NEARBY is not High quality

- ▶ A nearby stretch of river (less than 5 miles away) meets Medium rather than High quality standards, as defined by the government ⓘ
- ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area
- ▶ This has some effect on habitats for fish and wildlife, and can lead to algae (green slime) in the water



Local

River water ELSEWHERE is not High quality

- ▶ A stretch of river in your region, but not nearby, meets Medium rather than High quality standards, as defined by the government ⓘ
- ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area
- ▶ This has some effect on habitats for fish and wildlife, and can lead to algae (green slime) in the water



Elsewhere

ⓘ button show card:

| River water quality level | Definition |
|---------------------------|---|
| High | <ul style="list-style-type: none"> ▪ There will be a diverse and natural range of plants, insects, fish, birds and other animals. ▪ Water will generally have the right degree of clarity and there will be no noticeable pollution. ▪ Water will generally be suitable for contact activities, such as rowing or swimming |
| Medium | <ul style="list-style-type: none"> ▪ There will be plants, insects, fish, birds and other animals, but there will be some fish and other wildlife missing. ▪ Water will be slightly murky or discoloured in parts, and there will sometimes be visible pollution in some places, and some algal blooms. ▪ Water may be suitable for contact activities in some areas but not others. |
| Low | <ul style="list-style-type: none"> ▪ There may be limited or no plants or wildlife, or the water may be dominated by a single plant species. ▪ Water will generally be murky or discoloured, and may sometimes be bad-smelling in some places. There may also regularly be visible pollution in some places, and frequent algal blooms. ▪ Water will be unsuitable for contact activities. |

Coastal bathing water is not Excellent quality

- ▶ The sea water at the beach you would be most likely to visit meets Good rather than Excellent quality standards, as defined by the government ⓘ
- ▶ This is due to the quality of treated wastewater entering the water nearby
- ▶ You could still swim in the sea, but there would be a small increase in the chance that you might get ill if you swallowed some water



Water not Excellent

ⓘ button show card:

| Bathing water quality level | Definition |
|-----------------------------|--|
| Excellent | The highest standard which means the bathing water is consistently very clean, with less than a 3%, or 3 in 100, chance of a stomach upset. |
| Good | Between 'Sufficient' and 'Excellent'. This means there is between a 3% and a 5% chance of a stomach upset. |
| Sufficient | The minimum standard required for bathing water which means there is between a 5% and an 8% chance of a stomach upset. |

Coastal bathing water is neither Excellent nor Good quality

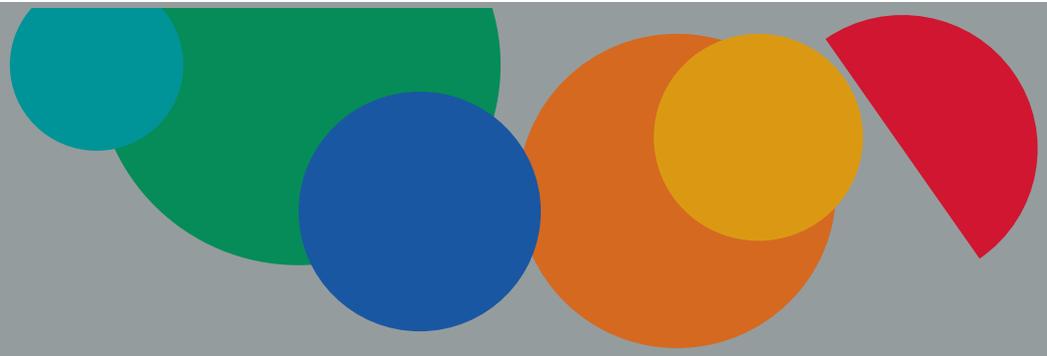
- ▶ The sea water at the beach you would be most likely to visit meets Sufficient rather than Good or Excellent quality standards, as defined by the government ⓘ
- ▶ This is due to the quality of treated wastewater entering the water nearby
- ▶ You could still swim in the sea, but there would be a small increase in the chance that you might get ill if you swallowed some water



Water not Excellent

ⓘ button show card:

(Same as for previous bathing water quality card)



Appendix D3

Verbatim responses to feedback follow-up questions

SP1 Impact Exercise

Table 44: Feedback follow-up questions: impact exercise

| Sample | Why were you unable to understand the choices? |
|--------|---|
| HH | Because they were explained simply, but in great detail. |
| HH | I don't know |
| HH | Nothing |
| HH | They were not really clear |
| HH | Very little made any sense and whoever designed it I perceive did a bad job of it |
| HH | i wasn't |
| HH | the choices alternated between bad and worse |
| HH | they didn't make total sense |
| HH | wasn't sure |
| NHH | Easy to understand buttons |
| NHH | I did understand |
| NHH | Some would have been difficult to actually happen here |
| NHH | The text was confusing |
| NHH | fghf hfg hfgfhg fgh |

Table 45: Feedback follow-up questions: impact exercise

| Sample | What was not believable about the options shown? |
|--------|--|
| HH | ? |
| HH | Never had any of these problems in the past |
| HH | Non seemed relevant to us |
| HH | None |
| HH | Not truth |
| HH | Well comparing sea to home is stupid in terms of impact they are not comparable |
| HH | i just don't believe them |
| HH | seems bad |
| HH | taste of drinking water |
| HH | too cheap |
| HH | uhyb hbu h gvct gf t hyv y uv |
| NHH | It's not realistic |
| NHH | that the two, seemingly independent, events could be part of a comparison. I'm not sure I have the skills to choose which would be the more disruptive |

Table 46: Feedback follow-up questions: impact exercise

| Sample | What were the main factors driving your choices if not the impact that each would have on your household/premises? |
|--------|--|
| HH | No |
| HH | Price |
| HH | i have three young kids |
| NHH | Keeping business running smoothly |

Table 47: Feedback follow-up questions: impact exercise

| Sample | Why was it difficult choosing between the options? |
|--------|--|
| HH | Because most options would have an impact, hard to assess which would cause most impact |
| HH | Because some would have more acute effect on my household but others were probably worse from an environmental point of view |
| HH | Both options were not happening or unlikely to happen |
| HH | I don't know |
| HH | Most were important |
| HH | Some of the situations applied to me equally. |
| HH | asda |
| HH | is really hard choice |
| HH | neither were desirable |

| Sample | Why was it difficult choosing between the options? |
|--------|--|
| HH | some had no effect |
| HH | some were equally disruptive to me |
| NHH | Depends on which option was available. No water for a time between 2pm to 7am is period that is manageable. Pollution in nearby rivers does not directly effect us but can be detrimental to our area. |
| NHH | It was difficult to quantify the impact as for some of the examples the impact would be very similar |
| NHH | It wasn't always clear how either of the choices would affect my company more. |
| NHH | Regardless whether issue was nearby or far away, the implications were very high |
| NHH | Some of the options had consequences that were roughly comparable and choosing the one with the greater effect wasn't obvious |
| NHH | Sometimes it was a close call and neither would have a big impact. The personal scenarios were easier than the river ones. |
| NHH | Sort of |
| NHH | Trying to pick the better of two evils |
| NHH | VERY DIFFICULT ALIENATING MY FEELINGS FOR THE WILD LIFE AND YHE LOCALS FROM MY OW N INTERESTS |

SP2 Compensation exercise

Table 48: Feedback follow-up questions: compensation exercise

| Sample | Why were you unable to understand the choices? |
|--------|--|
| HH | Don't know not straight forward |
| HH | Hi we're cuddles and kisses to you but I think I can do to help you to know that I have to do the same thing that has been able to see if I can do it now if I can do it for the crawl space in your colleagues anyway I hope that you have a good d |
| HH | I am not too sure |
| HH | I didn't quite understand the other option |
| HH | I didn't under stand what it Ment but a one off payment |
| HH | I misunderstood the first two questions |
| HH | Its obvious to most I would imagine |
| HH | Maybe it was my screen layout but i couldn't tell for sure if it meant the cost would prevent the problem. |
| HH | No comments |
| HH | Nothing |
| HH | The layout wasn't clear. |
| HH | did not make any sense |
| HH | i undersrod then |
| HH | n\ |
| NHH | Not trusted |
| NHH | baised tricky survey mant to give the oiytcome you want |

Table 49: Feedback follow-up questions: compensation exercise

| Sample | What was not believable about the options shown? |
|--------|--|
| HH | Can't see them paying that much |
| HH | Don't know |
| HH | I cannot believe that there would be a charge to be notified about these issues. Surely this would never be accepted |
| HH | I do not know why |
| HH | I don't believe the compensation would be that amount , |
| HH | I doubt so much would be paid out |
| HH | I have never faced nor can i forsee facing the issues |
| HH | No comments |
| HH | Not applicable to us |
| HH | "did not make any sense" |
| HH | giving the compensation |
| HH | hasnt happened in the past |
| HH | i had never had problem like this |

| Sample | What was not believable about the options shown? |
|--------|--|
| NHH | All of them |
| NHH | I DON'T THINK THAT THEY WILL PAY THAT LEVEL OF COMPENSATION |
| NHH | THE AMOUNTS WOULD NEVER BE PAID |
| NHH | The amount of compensation was far higher than would be expected for short delays when generally we don't even receive any notification of planned drops |
| NHH | The compensation levels |
| NHH | The level of compensation was too high to be believable. I don't think the level of outages would result in such generous compensation |
| NHH | The percentage of payment to be made in first option. Too much money. |
| NHH | They would not offer a free year or two |

Table 50: Feedback follow-up questions: compensation exercise

| Sample | What were the main factors driving your choices? |
|--------|---|
| HH | The money. I'm not greedy; it would go to my mum. |
| HH | confusion |
| HH | n\`a |
| NHH | fgy hfg h |
| NHH | rather not say thank you |
| NHH | to get it done as quick as possible |

Table 51: Feedback follow-up questions: compensation exercise

| Sample | Why was it difficult choosing between the options? |
|--------|--|
| HH | Because neither were good choices |
| HH | Both options were very similar in some cases. |
| HH | Both to me didn't make sense |
| HH | Did not understand |
| HH | Don't know |
| HH | Ensure of the implications of no notice given. How would I know to boil the water? |
| HH | Most were unlikely |
| HH | The layout wasn't clear |
| HH | Well it's hard to know how much money would be needed to take the extra steps. Such as boiling water for drinkable use. |
| HH | asda |
| HH | confusion |
| NHH | It felt unrealistic to choose between an event not happening vs. 'choosing' an event to happen for the sake of compensation. |
| NHH | Na |
| NHH | On one side you consider the side effects of the issue. On the other you consider how much credit you could receive |
| NHH | Planned is better obviously the payments required were too much for this option. |
| NHH | The layouts are not consistent |
| NHH | Time |
| NHH | When the payment reduced I wasn't sure it would counter balance the inconvenience and it might depend on what was happening that day |

SP3 Combined impact-compensation exercise

Table 52: Feedback follow-up questions: combined impact-compensation exercise

| Sample | Why were you unable to understand the choices? |
|--------|--|
| HH | Because the choices are complicated and there's lots of errors |
| HH | Hard to work out the effect it would have on me and my family |
| HH | I based my decisions on price |
| HH | I was able to understand the choices |
| HH | I wasn't |

| Sample | Why were you unable to understand the choices? |
|--------|--|
| HH | ITS QAS A BIT DIFFICULT |
| HH | I'm not sure |
| HH | Loaded questions that were unfairly canvassed. Do you really need to justify your existence or substantiate an additional charge this way? |
| HH | Na |
| HH | Too much choice |
| HH | Yes |
| HH | don't know |
| HH | none |
| HH | noo |

Table 53: Feedback follow-up questions: combined impact-compensation exercise

| Sample | What was not believable about the options shown? |
|--------|---|
| HH | By the astronomical charges for something that the customer has not done |
| HH | How the questionnaire was written! |
| HH | I do not expect to pay an additional sum for many of these events. |
| HH | I don't understand |
| HH | N/A |
| HH | Nothing really |
| HH | Southern Water are capable of much mal practice but even some of those scenarios could probably not happen near my property |
| HH | The amount of compensation offered would only be paid by household bills going up in price to cover the compensation costs. The timescale of each event was too specific and the choice was a case of the lesser of the two evils |
| HH | They wrote believable |
| HH | Unrealistic charges |
| HH | i doubt that any of these situations would arise |
| HH | non |
| HH | none |
| HH | nothing in particular but combinations did not correspond |
| HH | some of the amounts being asked to pay for. also the drought period would be too long here |
| HH | that water companies would actually compensate anybody |
| HH | the cost |
| HH | the fear factor made the options unbelievable |
| HH | unlikely scenarios |
| NHH | Extreme scenario |
| NHH | I'm still, struggling to envisage sewage water everywhere and we're not near a beach so proximity to a beach. |

Table 54: Feedback follow-up questions: combined impact-compensation exercise

| Sample | What were the main factors driving your choices? |
|--------|--|
| HH | Mdj dj knxkdkdk kckdkdk |
| HH | Putting myself in that situation and which one would I'd rather deal with out of the choices |
| HH | Saving and maintaining water supplies. |
| HH | The overall impact on my environment |
| HH | Whatever grabbed my attention first |
| HH | Which would impact my life less |
| HH | none |
| HH | simplicity |

Table 55: Feedback follow-up questions: combined impact-compensation exercise

| Sample | Why was it difficult choosing between the options? |
|--------|--|
| HH | Because both options were not nice if happen |
| HH | Because it is difficult choosing between interruption and compensation |
| HH | Cos they were bad either way to have to deal with |
| HH | I found the choices dealt with very different scenarios |

| Sample | Why was it difficult choosing between the options? |
|--------|---|
| HH | None of them were really palatable |
| HH | Not sure |
| HH | Nothing |
| HH | Plenty to read and take in |
| HH | Some of the choice grouping were difficult to prioritise. |
| HH | Some were equally as bad |
| HH | Some were more difficult than others as it's a hard choice |
| HH | Sometimes both were equally awful |
| HH | Sometimes it's hard to imagine how our lives would be affected |
| HH | TOO MANY CHOICES |
| HH | The money situation that i would be placed in made it difficult |
| HH | They didn't seem relevant to me. |
| HH | They were all so awful! |
| HH | Too much choice |
| HH | Trying to put yourself in that situation |
| HH | Various factors |
| HH | We'll ask your Mother or Father to complete it and you'll get your response. |
| HH | Working out what would be best for the family |
| HH | hard to know which would be more likely and/or disruptive |
| HH | i didnt like any |
| HH | in some cases the damage was bad in both |
| HH | just so |
| HH | none |
| HH | not difficult |
| HH | "not fully understand the implications. And these questions require more time to fully consider." |
| HH | the options were either local or would affect more people. difficulty was trying not to be a nimby |
| HH | yes |
| HH | you were choosing between options that should never happen if the companies spent more on maintenance and invested money instead of paying shareholders |
| NHH | Both not ideal |
| NHH | We've had so few problems with our water supply and sewerage and it's difficult to assess the actual impact if something like that happens. |
| NHH | Weighing up time, financial and environmental factors. |
| NHH | because the options were both bad scenarios |



Appendix E

Outcome Delivery Incentive Research: Testing and Development

Cognitive Testing (Wave 3) Report

June 2022

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1 Introduction

1.1 Background

| | |
|-----------------------|--|
| <p>Context</p> | <p>The core objectives of the study were to develop a methodology for obtaining the customer evidence to support ODI rate setting at PR24 (Stage 1), and to develop and test the materials based on this methodology (Stage 2).</p> <ul style="list-style-type: none">■ Stage 1 (completed) consisted of desk research, industry consultation and the development of options and recommendations for the measurement of customer preferences and values■ Stage 2 (current stage) consists of the development of the survey instrument, along with qualitative and quantitative testing with customers. <p>This report is the output of the third phase of cognitive testing for Stage 2 of this study. It has been run in parallel with a second quantitative pilot, which has been reported on separately.</p> |
| <p>Core objective</p> | <p>Cognitive testing was required to ensure accessibility of the survey questionnaire and its embedded stimuli.</p> <p>Comprehensibility and accessibility were assessed during earlier phases of cognitive testing but were tested again during this wave, given some of the changes that have been made to improve the clarity of instructions and better communicate what is required of participants within the questionnaire and, specifically, at stated preference tasks. An additional focus of this phase of cognitive testing was to test new wording, 'pivot' service issues, and compensation levels for the 'compensation for service issues' stated preference task (SP task 2) and a new combined service issue and compensation stated preference task (SP task 3).</p> |

1.2 Overview of methodology

This report details the findings from the third phase of cognitive testing of the latest iteration of the quantitative survey tool and materials, which were developed according to the recommendations set out in the Stage 1 report and in accordance with the findings of the second phase of cognitive testing.

The objectives of this third phase of testing were:

- To further test accessibility and understanding of the questionnaire.
- To explore understanding and ease of completion of the new 'Stated Preference 3' exercise, which combined trading off both service issues and associated compensation.
- To capture any further feedback on the stimuli used in the stated preference exercises; service issues impact exercise (exercise 1) & compensation exercise (exercise 2), both used in the version 1 questionnaire, and a new combined service issue and compensation exercise (exercise 3, as above), used in the version 2 questionnaire, through spontaneous feedback and probing.
 - Specifically, we sought to test and gauge participants' responses to the levels of compensation being offered in the event of a customer experiencing service issues. These were set based on findings from earlier cognitive testing as well as the pilot exercises completed to date. We also sought to test the revised question wording that advised participants that these levels of compensation would be higher than they might imagine.
- To further test the performance of the two new service issues within the compensation exercise; a short, planned supply interruption and a boil water notice. These service issues were considered to be preferable to the initial two, and in particular in comparison to an external sewer flooding incident, because they are lower impact, and hence should require lower compensation; both would affect any property equally; and there is little room for ambiguity in the service issue description.

Cognitive testing is important as the survey focuses on unfamiliar areas for consumers. Cognitive interviews involve taking a participant through the survey and include additional questions to probe for levels of comprehension, ease of completion and response to stimuli.

We interviewed fifteen customers across household (HH) and non-household (NHH) groups. Interviews were conducted online, via the Zoom video meeting platform. Two versions of the survey were tested:

- Version 1 included refined versions of the original two stated preference exercises (the 'impact' and 'compensation' exercises). This was tested 6 times, across both HH and NHH samples.
- Version 2 included, instead, a newly designed stated preference exercise combining service issue and compensation level variation across a sequence of questions. This version was tested 9 times in total.

For HH interviews, interviewers shared their screen and control of their computer, and participants were asked to complete the survey questionnaire themselves, as though they were completing online. Participants were asked to work through the questionnaire autonomously on the most part but were asked to highlight areas of the questionnaire that were inaccessible, difficult to understand, or troublesome to navigate or complete.

As extensive cognitive testing had been undertaken in the earlier phase, this approach was deemed adequate to identify any areas for further change.

NHH participants were interviewed with the interviewer’s camera off, to replicate as closely as possible the telephone-based (CATI) interview mode. Rather than completing the survey themselves, NHH participants were read the questions in the style of a CATI interview. The images to support the stated preference exercises were shared onscreen with NHH participants at the appropriate times, again replicating the anticipated approach for stimulus-assisted CATI interviews.

At key points during questionnaire completion, interviewers used additional cognitive probes to assess how well the question wording had been understood, clarity of instructions and service issue descriptions, and how easy or difficult it was to provide an answer. These probes focused on the presentation of service issues and associated compensation levels during this phase of testing, as this was the primary focus. These additional cognitive probes collectively formed the topic guide, which was used to direct all interviews, and was agreed and approved for use before fieldwork took place.

Recruitment and Incentives

All participants in cognitive testing were recruited by our recruitment partner, Riteangle, in line with prescribed quotas. The following incentives were offered to participants completing cognitive interviews:

- £30 for households
- £45 for non-households

1.3 Sample design

Minimum quotas were set on gender, water company and age to ensure cognitive interviews were conducted with a range of different household and NHH customers. The two achieved subsamples for the cognitive interviews were as follows:

Household (HH, n=10)

All HH participants were responsible, either jointly or solely, for paying water bills of the household.

| Gender | | Social Grade | | | Age | | | |
|---|--------|--------------|------|----|-------|-------|-------|-----|
| Male | Female | AB | C1C2 | DE | 18-34 | 35-44 | 45-64 | 65+ |
| 5 | 5 | 4 | 4 | 2 | 4 | 2 | 2 | 2 |
| Water companies | | | | | | | | |
| Customers of Essex and Suffolk, SES Water, Severn Trent, Thames Water, Yorkshire Water and United Utilities were included in the sample | | | | | | | | |

Non-household customers (NHH, n=8)

All participants were responsible, either jointly or solely, for paying business' water bills, or otherwise responsible for issues of water supply.

| Size | | | Reliant on water for business purposes | Wales |
|--|--------|-------|--|-------|
| Micro/small | Medium | Large | | |
| 5 | 2 | 1 | 7 | 0 |
| Water companies | | | | |
| Customers of Bristol Water, Severn Trent and United Utilities were included in this sample | | | | |

NHH participants represented businesses in the health, education, manufacturing, catering, real estate and other service industries.

2 Findings

Overall observations

Refinements to stated preference task instructions have been successful and have added clarity where it was lacking previously. Some evidence was collected to suggest that task instructions were long and could be made more succinct. Further, even though not explicitly tested during this phase, issues inputting postcodes persist for household and non-household participants alike.

Participants told us that clear instructions and the presentation of succinct but comprehensive service issue and compensation information meant that completing stated preference tasks was straightforward, even if making the decision was sometimes challenging; either because a lack of relevance to the participant (and their business) or because service issues stood to create comparable levels of inconvenience.

When it came to compensation, data collected during interviews suggested that compensation levels were credible on the whole (SP task 3). The exception to this was in the event of sewer flooding inside a household property. In this case, the £30,000 offered to household participants was questioned in one case.

That said, for both household and non-household participants in this phase of testing, decision-making was primarily driven by a desire to avoid experiencing (or at least minimise) the disruption and inconvenience from service issues, ensuring business continuity in the case of non-household participants. One-off payments played a relatively minor role in making choices.

2.1 Postcode entry

Some participants struggled with the format for inputting their home or business postcode. The dropdown containing their postcode area was often ignored, with letters being typed into the numeric fields and, if this dropdown was used, multiple digits were often entered into each numeric field.

Please tell us the first half of your postcode. So if your full postcode is ME1 3BN please just tell us ME1 3. (This will be used to check who supplies your water and wastewater services)

Area e.g. e.g.
 1 3

Prefer not to answer

Recommendation 1: Improve postcode input to ease participant experience without compromising water company look up functionality.

2.2 Use of rivers and beaches in the UK

A small number of participants in this phase of testing sought clarity on whether they should include recreation at and around canals at the ‘rivers’ question. Further, some confusion was caused by the presence of the section header ‘Use of rivers and beaches in the UK’ at the initial ‘rivers’ question. Some participants were left unsure of where they input their use of beaches or the sea prior to the next question being displayed.

Use of rivers and beaches in the UK

How often do you, or anyone in your household, use rivers in the UK for any of the following activities?

| | Often (more than six times a year) | Sometimes (between one and five times a year) | Rarely (less than once a year) | Never |
|--|--|--|--------------------------------------|----------------------------------|
| Water contact activities (e.g. canoeing, rowing, rafting, paddleboarding, swimming, paddling) | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |
| Fishing | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |
| Walking, running, cycling or sitting nearby or other activities on or around the water (e.g. narrowboating, other types of boating, walking, running, cycling or sitting nearby) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Recommendation 2: Add an instruction to include canal-related activities at the first of these two questions and use a separate question header for each of these two questions; ‘Use of rivers & canals in the UK’ and ‘Use of beaches & the sea in the UK’.

2.3 SP task 1 (service issues alone, as used in Version 1 questionnaire)

Instructions

Impact of service issues

You are now going to be shown a series of ten short questions where you will be asked to choose between two different scenarios for your water or wastewater service.

Please consider, and then compare the scenarios carefully, and then **choose the one which would have the most impact** on your household if it were to happen.

Some of the scenarios would affect your own property whereas others would affect your local area. When comparing the impact that each would have, please:

- **do** consider any concerns you may have for the local area or natural environment,
- **don't** consider any impacts on other people outside your household - other people will answer for themselves!

On some of the options you will see an ⓘ. Please click on this to see some more information about the option.

The data collected during phase 3 interviews suggest that these instructions are clear for both household and non-household samples. After reading the instructions, participants confirmed their understanding and were able to play back to the interviewer what would be expected of them during the task before they began completing it, demonstrating good levels of comprehension.

Previous phases of cognitive testing revealed that some participants were confused by the apparently contradictory instructions at this screen:

- do consider any concerns you may have for the local area or natural environment,
- don't consider any impacts on other people outside your household/organisation - other people will answer for themselves!

As a result of this confusion, clarity was provided with the addition of 'natural' in the first line prior to phase 3 testing taking place. Whilst comprehension of this element of the instructions was not explicitly probed during this testing phase, confusion was spontaneously raised by one household participant. This participant suggested we add further clarity to communicate that this should be read as 'in general as regards the environment and not relating to other people'.

"The area is other people, isn't it?" URN 117

Recommendation 3: Consider making further refinements to the wording of this instruction to emphasise that participants should consider the environment and not other people in the local area.

Ease of completion

Participants were able to complete the task with little issue. We asked them to provide feedback on the layout, clarity of information, and how able they were to complete the task based on the information presented.

Feedback suggested that what was required of them was clear, that the bold text in the service issue scenarios aided understanding, and that the images were well received by many. Non-household participants commented that some of the scenarios did not directly pertain to their business, which sometimes made choosing one scenario over the other difficult, as both seemed 'irrelevant'.

"I found it easy to choose between the options that pertain to my business, but those that didn't were harder to choose from." URN 122

"Some were very close and hard to choose between, and some weren't as relevant to the business." URN 124

Some participants re-read the two scenarios but showed no signs of poor comprehension. Rather, this should be taken as evidence that participants are attending to, and processing, the information being presented.

Approach to completing the task

As well as sharing feedback on the information presented, participants also shared with interviewers how they made their choices during this task. There was plenty of data to suggest that non-household participants favoured those scenarios with little (or less) impact on business continuity and some were motivated by minimising inconvenience to colleagues specifically. Household participants were driven by minimising inconvenience to them and their families, dictated by factors such as duration of the issue, where it occurred and its impact on them (e.g., some participants did not go to the beach or use the sea, so issues here would have little impact on them).

On the whole, the situations presented were thought to be realistic and believable. Those that had not experienced, or had experienced few, water service issues shared their ignorance about whether and when such issues may arise, but none questioned the authenticity of the service issues that were presented.

2.4 SP task 2 (compensation task, as used in Version 1 questionnaire)

Instructions

One-off payments for service issues

The following questions will each present you with a choice between:

a) experiencing a service issue and receiving a one-off payment from your water company,

or

b) not experiencing the issue and not receiving any payment.

In each question, the type of service issue and the one-off payment amount will vary. The amounts will not necessarily reflect current compensation entitlements and may exceed these levels - substantially in some cases.

The purpose of these questions is to see if the amounts shown are enough to make up for the impact on your household from the service issue shown. It is important to consider each amount at face value, even if it seems higher than you would imagine might be offered.

Like task 1, instructions here were understood and participants were clear what would be expected of them during the task.

Since phase 2 cognitive testing, the payment vehicle has been changed from 'compensation' to 'one-off payments'. We also revised the information at this instruction screen to encourage participants to expect higher compensation amounts than they may have otherwise expected to see, and to clarify the purpose of the questions.

When asked, participants told us that this information was made clear within the instructions page and was easy to understand for most. Some mentioned that this information seemed long-winded and one commented that they had not come across the term 'at face value', suggesting instead that the instruction might read, 'amounts may vary in reality from what is shown here, which is displayed for research purposes.' Others told us that they would not know what level of compensation to expect in any case.

Recommendation 4: We have considered whether the length of instructions for this task could be reduced without negative consequences, but concluded that the instructions are all important, and as concise as they could feasibly be. Hence, no change is recommended here.

Ease of completion

It was not always clear that 'NO Boil water notice' and 'NO PLANNED water supply interruption' indicated the absence of the service issue, and caused some confusion, especially in the case of 'NO Boil water notice', as participants sometimes interpreted this as the need to boil water, but with no advice to do so.

“The options with just text threw me off at first but it later became clear that you were asking if you would rather money from compensation or no interruptions at all.” URN 122

Recommendation 5: Add clarity here, by changing the wording to ‘No service issue’ in the header, and adding a bullet underneath saying ‘There would be no issue affecting the water service at your property’.

Approach to completing the task

Many participants told us that they made decisions based on whether the level of payment being offered was ‘enough’ or ‘worth it’, clearly demonstrating assimilation of the instructions. Others were more motivated by the complete avoidance of any issue, especially where this might impact business continuity, in which case the level of compensation played a minimal role in the decision. Non-household participants choose in favour of avoiding service issues on the most part, irrespective of the level of payment on offer, however, a small number were swayed when the payment reached 1.5 times annual water bills (planned water supply interruption) and 3 times annual bills (boil water notice).

Feedback on attributes

Planned water supply interruption

The information here was clear, evidently adequate to allow participants to make a decision and the images were sometimes cited as useful, too. Further, the scenario was deemed believable, and levels of one-off payments were also clear and realistic. However, some commented that the process by which one would have to claim, or would receive the compensation, was not clear. The explanation of the asterisk that accompanies compensation is placed on the questionnaire screen below the choice buttons and its position required participants to scroll down to access it.

Recommendation 6: Bring the information accompanying the asterisk up, placing it before the choice radio buttons to give greater clarity and aid understanding of the proposed compensation process. Placing above the radio buttons may also encourage those not actively seeking such information to read it anyway.

Boil water notice

Again, the information presented here was clear, easy to understand and sufficient to make a decision in this task. One-off payment amounts were clear, realistic and believable. However, the above comment concerning the mechanism for receiving the payment also applies here.

Recommendation 7: Bring the information accompanying the asterisk up, placing it before the choice radio buttons to give greater clarity and aid understanding of the proposed compensation process. Placing above the radio buttons may also encourage those not actively seeking such information to read it anyway.

Compensation

Feedback on the use of ‘one-off payment’

Participants were satisfied with the use of ‘one-off payment’, but readily likened this to ‘compensation’. This may, however, be because the term ‘current compensation entitlements’ appears in the instructions page (see above). When asked to suggest alternative ways to describe this sum, then, participants suggested ‘compensation’ as an equivalent. However, there was a broader understanding that this was being paid in recognition of an inconvenience or disruption to service, i.e., ‘compensation’ in consumer parlance.

Recommendation 8: Remove all references to ‘compensation’ in instruction pages if ‘one-off payment’ is to be the description of choice at these tasks.

Believability of one-off payments

Household participants in cognitive testing confirmed that one-off payments offered during this task were credible; none raised an issue over the conceivability of the sums on offer for either the planned supply interruption or the ‘boil water notice’.

Many non-household participants were satisfied that one-off payments were believable. A small number suggested that the sums were higher than they might have expected. Some of these were able to recall that this was made clear to them from the outset, and so proceeded with the task as requested.

One participant concerned about the levels of compensation on offer (and this related specifically to having been offered 3 and 6 times annual water bills for a planned supply interruption and 6 and 12 times the annual bill in the ‘boil water notice’ scenario) took issue not with the levels of one-off payment per se but, rather, with the ‘compensation culture’ they believed was becoming increasingly apparent in this country. The participant was outspoken in his preference to seek solutions that were based on effective communication and not on financial ‘easing’. This should not be interpreted as disbelief or rejection of the sums on offer.

“I think the compensation culture in this country doesn’t need any further fuel – the solution is much more valuable (...) problems are solved with effective communication.” URN 126

2.5 SP task 3 (combined service issue and compensation task, as used in Version 2 questionnaire)

Instructions

Screen 1 of 2

Service Scenario Choices

You are now going to be shown a series of ten short questions where you will be asked to choose between two different scenarios for your water or wastewater service. **Please read the following instructions carefully.**

Each scenario will show a different type of service issue that could happen to your household.

Some of the scenarios would affect your own property whereas others would affect your local area. When comparing the impact that each would have, please:

- **do** consider any concerns you may have for the local area or natural environment,
- **don't** consider any impacts on other people outside your household - other people will answer for themselves!

On some of the options you will see an ⓘ. Please click on this to see some more information about the option.

Screen 2 of 2

Additionally, some of these scenarios will involve your water and/or wastewater provider making a one-off payment to your household.

The amounts will not necessarily reflect current compensation entitlements and may exceed these levels - substantially in some cases.

The purpose of these questions is to see if the amounts shown are enough to make up for the impact on your household from the service issue shown. It is important that you consider each amount at face value, even if it seems higher than you would imagine might be offered.

For each question, please state which option you prefer. If neither of the options is appealing, please still choose the better of the two.

Some participants noted that the instructions were long-winded or wordy, whilst others shared that they were familiar with the anticipated question format, having completed what they thought to be similar tasks in online surveys previously. No spontaneous comments were forthcoming regarding separating other people from the local 'natural' environment within the instructions. Interestingly, both NHH participants that were shown this task asked whether it would be possible to see an example or visual representation of the items that would be presented in the task. In any case, interviewers noted that most participants were able to understand the task easily when the first choice was presented.

“Yes, I think so [I understand the task]. I’ve seen this sort of thing in questionnaires before.” URN 119

Recommendation 9: We have considered whether the length of instructions for this task could be reduced without negative consequences, but concluded that the instructions are all important, and as concise as they could feasibly be. Hence, no change is recommended here.

Ease of interpreting the instructions aside, this is the first point at which a particular point of confusion was uncovered; a lack of certainty over whether the one-off payments were being made to customers by water companies or whether these were due to water companies from the participant as a customer (see additional findings, below).

Participants were probed on their understanding of the levels of compensation that would be presented during this task. We can be comfortable that both household and non-household participants knew to expect levels of payment that might not be reflective of current compensation levels – this is being clearly communicated by the revised instructions page. However, one household participant asked how ‘authentic’ the task might be if these sums were out of line with current levels, undermining the task’s credibility.

“Yes, I was warned about that in the notes.” URN 115

“Yes, it says that it may exceed these levels substantially in some places.” URN 119

“The thing about taking the numbers at face value (...) so they’re saying, ‘is this money enough compensation for what this problem is going to be, but we might not really pay this amount of money’, so it’s kind of hard to take it – you can’t really take it as realistically; it’s just a number they’ve plucked out of thin air and they’re saying that’s not what we’re really going to do.” URN 116

Ease of completion

Most participants told us that they had been given adequate information upon which to base their decision of which service issue they would rather experience and that they understood the choices they were being asked to make.

Two non-household participants, however, demonstrated a poor grasp of the task. One shared a view on which of the attributes they would rather read (specifically, which contained the least text to read, which was more visually appealing). In order to maximize the data from the interview, the interviewer chose to revisit the task instructions and took time to explain what the task required, setting the interview on course. Another non-household participant described the significant and detrimental impact that the service issues would have on their business and then consistently went on to choose the scenario that had been described as having the most negative impact on the business.

As with SP task 2, the lack of a service issue was not always clear, leading to confusion and the need for the interviewer to add clarity in some places. This issue aside, most participants told us that the attributes gave enough information upon which to make a decision and were clearly presented. One noted that attributes contained a lot of information to read. Where difficulty was experienced in choosing between the two options this was either because the service issues would have an equal impact, or because they were unlikely to impact the participant's household or business in any significant way.

Recommendation 10: Add clarity to the 'No service issue' option, by adding a bullet underneath saying 'There would be no issue affecting your water or wastewater service'.

As with SP task 2, this task would benefit from the one-off payment terms being incorporated into the amount of the payment, embedded into the core information being presented in order to better enable participants to make their choice.

Recommendation 11: Bring the information accompanying the asterisk up, placing it before the choice radio buttons to give greater clarity and aid understanding of the proposed compensation process. Placing above the radio buttons may also encourage those not actively seeking such information to read it anyway.

Approach to completing the task

Most participants were clear that the task was 'to see if the amounts shown are enough to make up for the impact on your household/organisation from the service issue shown.' Participants made decisions on the basis of wishing to avoid service issues, to minimize the duration of any disruption, opting for issues further away with no direct impact on them, avoiding environmental impact or, in one case, with a view to maximising the compensation payments they would receive (household participant). That said, household participants generally showed an insensitivity to the one-off sums being offered and were driven instead by the avoidance of issues or interruptions.

"It was a weighted judgement. I was weighing up inconvenience to myself against damage to the environment. URN 115

"They [one off payments] contributed and were considered, but I don't think they were necessarily the main factor." URN 116

Although they demonstrated a clear grasp of the task, non-household participants showed a clear preference for minimizing interruption to their business and favouring business continuity, with these participants often sharing with interviewers that money was a lesser factor in their decision making, even if their attention was initially drawn to the financial element of the service issue scenario.

"I was drawn to the one-off payment" (...) "I'm not bothered about the payment"
URN 125

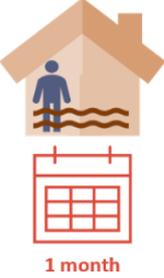
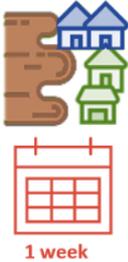
Compensation

On the most part, the payments were said to be clearly presented. However, participants sometimes mistook sums of, for example, £20000 and £30000 as “£2000 and £3000, respectively, as was found during phase 2 cognitive testing.

Recommendation 12: Separate thousands in compensation sums with a comma; e.g. £20,000 rather than £20000.

Feedback on the use of ‘one-off payment’

You're on choice 2 of 10
Which option would you prefer? If neither is appealing, please still choose the better of the two

| Option A | Option B |
|---|---|
| <p>Sewer flooding: INSIDE your property (1 month)</p> <ul style="list-style-type: none"> ▶ Flooding from the sewer gets inside your property, affecting your living areas ▶ This results from prolonged heavy rainfall in your local area ▶ It gives off a foul smell, and damages floors, walls and furniture ▶ It takes 1 month for your property to get back to normal  <p>One-off payment amount *: £30000</p> | <p>Sewer flooding: OUTSIDE your property (1 week)</p> <ul style="list-style-type: none"> ▶ Flooding from the sewer affects access to your front door / entrance ▶ This results from prolonged heavy rainfall in your local area ▶ It gives off a foul smell, and could cause damage ▶ It takes 1 week for access to your property to get back to normal  <p>One-off payment amount *: £500</p> |
| <input type="radio"/> | <input type="radio"/> |

* one-off payments would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise

Most participants were satisfied with the use of ‘one-off payment’, with this description being well-understood. One non-household participant in this phase of testing, however, evidenced a misunderstanding of the meaning of ‘one-off payment’. As was observed in the instructions to this task, it became clear here that this participant was unsure whether this one-off payment was being paid by water companies to customers or vice versa. It was suggested that the standard utility provider language of ‘credit’ or ‘debit’ might add clarity in this respect.

Recommendation 13: ‘One-off payment’ may not be understood by all and may require revision. The earlier recommendation (11) to bring the additional information accompanying the asterisk may eliminate the any uncertainty here.

One household participant noted that the position of the asterisk before the value of the one-off payment led him to believe that he should multiply the amounts shown, which caused temporary confusion.

Recommendation 14: Reposition the asterisk such that it appears after the one-off payment being offered, e.g. ‘One-off payment amount: £500*’ This recommendation should be combined with the recommendation above (11) to move the additional information relating to the asterisk.

Alternatives to one-off payment suggested included ‘compensation’ and descriptions that acknowledged a water company’s liability for the service interruption, for example, ‘paid for your business interruption’. There is no evidence to suggest that describing the one-off payment differently would have impacted participants’ decisions.

Believability of one-off payments

Both household and non-household participants told us that they considered the levels of compensation on offer to be realistic on the whole. In fact, both samples tended to think that the levels of compensation being offered were on the low side relative to the service issue being presented.

One household participant was offered £2,500 for sewer flooding outside the property, which was regarded as high. The highest level of compensation offered to HH participants was £30,000 in recognition of sewer flooding inside a property. Reactions here were mixed. Whilst one participant felt that this would be inadequate to compensate a householder for the damage, expense and, critically, lost time and inconvenience, that this issue might cause, another questioned whether a water company would, in reality, pay out such a sum.

“Thirty thousand is a reasonable amount, but I think it should be more than that. It’s not just about refunding the costs, it’s about the inconvenience and the stress and the time.” URN 116

“I don’t think it is [realistic], really [relates to £30,000 offered in the event of sewer flooding inside the property]. I don’t think any water company is going to be handing out thirty thousand pounds, particularly when you’ve got home insurance.” URN 115

Whether deemed to be realistic or not, participants were able to reassure interviewers that they had taken the figure at ‘face value’ and that perceptions of the sum offered had not affected decision-making at this task. Even if sums had seemed high, participants had not dismissed these as unrealistic and, in some cases, referred back to the information advising them that these might be higher than anticipated.

“No, I’m taking it at face value for the purpose of this exercise. What I might do in real life might be different, I don’t know.” URN 115

Appendix E1

Topic Guide (Phase 3, Household)



FINAL Wave 3 Cognitive interview Topic Guide: Household

| | |
|------------------|--|
| Participant Name | |
| Date / time | |
| Telephone Number | |
| URN | |

Introduction

5 mins (5)

Good morning/afternoon/evening. My name is ... and I work for an independent market research company called Accent. We are conducting research for Ofwat, the water industry regulator, and Consumer Council for Water, the consumer organisation which represents the interests of water and sewerage customers in England and Wales.

The research is about views on water and sewerage services, and changes to water bills for the five years from 2025. Specifically, we want to get your feedback on a questionnaire that we plan to use to ask a large number of people to share their views on water and sewerage. Your feedback while completing the questionnaire, along with feedback from others, will allow us to understand how well the questionnaire works and how it might be improved. **[Spontaneous interviews – ALL W3]** With this in mind, I will be asking you to share your thoughts on the questionnaire as you work through it.

The research is being conducted in accordance with the Code of Conduct of the Market Research Society (MRS) and also with the Data Protection Act. This means that everything you say is confidential and will not be attributed to you personally unless you give your permission for us to pass your comments on in named format.

Our discussion is being recorded. This is standard market research procedure and is to ensure accuracy – so I do not have to try to remember what you have said – and for analysis purposes only. The recordings will not be passed to any third party not associated with the research project, and in reporting the findings from this research everything that you say will be confidential and will be reported in anonymised form only.

Our discussion will last around **45** minutes.

I'd like to stress that we are interested in your views. There are no right or wrong answers today; and this is not a test of your ability to complete the questionnaire. Instead, it is a test of how well the questionnaire has been designed to make it easy to complete. I haven't been involved in the design and development of the questionnaire, which means you can be open and honest when sharing your views on completing it.

In a moment, I will hand over control of my screen to you so you can complete the survey, as though you were completing it online.

As you are answering questions if you come across anything which you don't understand or need further clarification on, please ask me as we go along. At a number of points through the questionnaire, I will stop you and ask for your feedback on various aspects and elements of it.

Interviewer instructions

NA (5)

- **Share window with Accis questionnaire and allow participant to control your screen to complete questionnaire.**
- **Allow participant to complete the questionnaire. Stop and probe at the questions below (unless 'think aloud' commentary provides adequate insight).**
- Make a note of:
 - Any significant pauses or delays in responding
 - Participants re-reading questions/text or changing their response
 - Mentions of any question or section of text being confusing/complicated/unclear/long, or missing important information
 - Response options that they struggle to choose between
 - Questions they ask about elements of the survey (try not to answer these unless they mean the participant is unable to progress).
- **At questionnaire version screen, select the appropriate answer based on interview allocation on the profile sheet (VERSION 1 (contains 2 SP tasks) or VERSION 2 (contains a combined SP task))**

VERSION 1 (2 SP tasks)

Impact of service issues SP choices

10 mins (15)

- Impact of service issues SP preamble/introduction [**stop and probe before participant starts SP task**]
 - Were these instructions clear?
 - Was it clear what you would have to do?
 - If not:
 - What, if anything, would make this introduction easier to understand?
 - **ONLY FOR THOSE THAT RAISE THE ISSUE OF DISENTANGLING 'OTHER PEOPLE OUTSIDE YOUR HOUSEHOLD' AND 'LOCAL AREA/ NATURAL ENVIRONMENT'**
 - Given that other people in the local area will have the opportunity to voice their own views by answering these same questions, we **don't** want you to 'speak for them', but we **do** want you to consider the impact of the scenarios on your local area, habitats and the natural environment. How do you think we can best get this across to people like you who are filling in the survey?
- Impact of service issues SP choices (there are 10)
 - As you work through this set of questions, please let me know if there is anything that is unclear or difficult to understand. If you have suggestions on how we might

make things easier, please let me know. **[Interviewer to note feedback on attributes, if spontaneously offered – no probing here. Interviewer to also note any insights the participant shares on how they are making their decisions, where they are struggling]**

- I would now like to ask you a few questions about the choices you have just made... **[Note the participant’s response to each element of this question and probe on reasons for these responses – especially where the response is ‘strongly disagree’ or ‘disagree’]**
 - For *I was able to understand the choices*: What would have helped?
 - For *I found the options believable*: What was not believable? What would have made the option(s) more believable?
 - For *My choices were based on how much impact I thought each option would have on my organisation*: What did you base your choices on if not the impact on your organisation?
 - For *I found it easy to choose between the options*: Why is this, and what would have made it easier to choose?

Compensation for service issues SP task

25 mins (40)

- Compensation for service issues SP preamble/introduction **[Stop and probe before participant starts SP task]**
 - Are these instructions clear?
 - Is it clear what you will have to do?
 - If not:
 - What, if anything, would make this introduction easier to understand?
 - Is it clear that some of the amounts you will be shown will be higher than you might expect?
- For **PLANNED water supply interruption (6 hours)**:
 - How clear or unclear is the explanation of this service issue?
 - What would make it clearer or easier to understand?
 - Are you satisfied with the explanation ‘planned maintenance in your area’?
 - Do the images here aid understanding?
 - Does this tile give enough information to allow you to decide on which option you prefer?
 - Was the one-off payment clear?
 - Were the one-off payments offered **believable**?
 - **If believed to be unrealistic**:
 - Did you dismiss the offer because you didn’t believe you would really be compensated?

- If I could assure you that this amount was available, would you have chosen to experience the service issue instead?
- **[If participant opted for no service issue after being presented with 2 levels of payment]** What amount would have made you choose differently? Why?
- For **Boil water notice (48 hours)**:
 - How clear or unclear is the explanation of this service issue?
 - What would make it clearer or easier to understand?
 - Is it clear **why** this notice has been given?
 - Is it clear **what** you will have to do for this period?
 - Do the images here aid understanding?
 - Does this tile give enough information to allow you to decide on which option you prefer?
 - Was the one-off payment clear?
 - Were the one-off payments offered **believable**?
 - **If believed to be unrealistic:**
 - Did you dismiss the offer because you didn't believe you would really be compensated?
 - If I could assure you that this amount was available, would you have chosen to experience the service issue instead?
 - **[If participant opted for no service issue after being presented with 2 levels of payment]** What amount would have made you choose differently? Why?
- After completing compensation SP choices
 - **One-off payment**
 - We used the term 'one off payment' in these tasks. How do you feel about this term?
 - What does the term 'one-off payment' mean to you?
 - Do you think it is an appropriate way to describe the money being offered in these scenarios?
 - Is there another, better way to describe the money in these scenarios, do you think? Would you have chosen differently if this term had been used instead?
 - **Decision-making**
 - How did you decide on each choice you made?
 - Which factors drew you most to a particular option? Why?
 - Which factors deterred you most from a particular option? Why?

- I would now like to ask you a few questions about the choices you have just made... **[Note the participant's response to each element of this question and probe on reasons for these responses – especially where the response is 'strongly disagree' or 'disagree']**
 - For *I was able to understand the choices*: What would have helped?
 - For *I found the options believable*: What was not believable? What would have made the option(s) more believable?
 - For *My choices were based on how much impact I thought each option would have on my household and whether the amount of money shown was enough to compensate for this*: why do you say this?
 - For *I found it easy to choose between the options*: why is this and what would have made it easier to choose?

Wrap and close

5 min (45)

Record BACS details for incentive payment and add to profile sheet.

Thank and close.

VERSION 2 (1 combined SP task)

Service Scenario Choices SP task

30 mins (35)

- Service scenario choices SP preamble/introduction **[stop and probe before participant starts SP task – appears over 2 pages]**
 - Were these instructions clear?
 - Was it clear what you would have to do?
 - If not:
 - What, if anything, would make this introduction easier to understand?
 - **ONLY FOR THOSE THAT RAISE THE ISSUE OF DISENTANGLING 'OTHER PEOPLE OUTSIDE YOUR HOUSEHOLD' AND 'LOCAL AREA/ NATURAL ENVIRONMENT'**
 - Given that other people in the local area will have the opportunity to voice their own views by answering these same questions, we **don't** want you to 'speak for them', but we **do** want you to consider the impact of the scenarios on your local area, habitats and the natural environment. How do you think we can best get this across to people like you who are filling in the survey?
 - Is it clear that some of the amounts you will be shown will be higher than you might expect?
- Service scenario SP choices (there are 10)
 - As you work through this set of questions, please let me know if there is anything that is unclear, difficult to understand, or you're not sure what to do/what you're

doing at any point. If you have suggestions on how we might make things easier, please let me know. **[Interviewer to note feedback on attributes, if spontaneously offered – no specific probing. Interviewer to also note any insights the participant shares on how they are making their decisions, where they are struggling]**

- After completing service scenario SP choices **[navigate back if required to help P remember]**
 - **One-off payment**
 - Were the one-off payments clear?
 - Were the one-off payments offered believable? **[probe which were and which weren't]**
 - **If believed to be unrealistic:**
 - Did you dismiss the offer because you didn't believe you would really be compensated?
 - If I could assure you that this amount was available, would you have chosen to experience the service issue instead?
 - We used the term 'one off payment' in these tasks. How do you feel about this term?
 - What does the term 'one-off payment' mean to you?
 - Do you think it is an appropriate way to describe the money being offered in these scenarios?
 - Is there another, better way to describe the money in these scenarios, do you think? Would you have chosen differently if this term had been used instead?
 - **Decision-making**
 - How did you decide on each choice you made?
 - Did the tiles give enough information to allow you to decide on which option you preferred?
 - Which factors drew you most to a particular option? Why?
 - Which factors deterred you most from a particular option? Why?
 - What was the relative importance of the one-off payment and the nature of the service scenario outlined?
- We would now like to ask you a few questions about the choices you have just made... **[Note the participant's response to each element of this question and probe on reasons for these responses – especially where the response is 'strongly disagree' or 'disagree']**
 - *For I was able to understand the choices:* What would have helped?
 - *For I found the options believable:* What was not believable? What would have made the option(s) more believable?

- For *My choices were based on how much impact I thought each option would have on my household and the amount of money shown*. What did you base your choices on if not the impact on your household?
- For *I found it easy to choose between the options*: Why is this, and what would have made it easier to choose?

Wrap and close

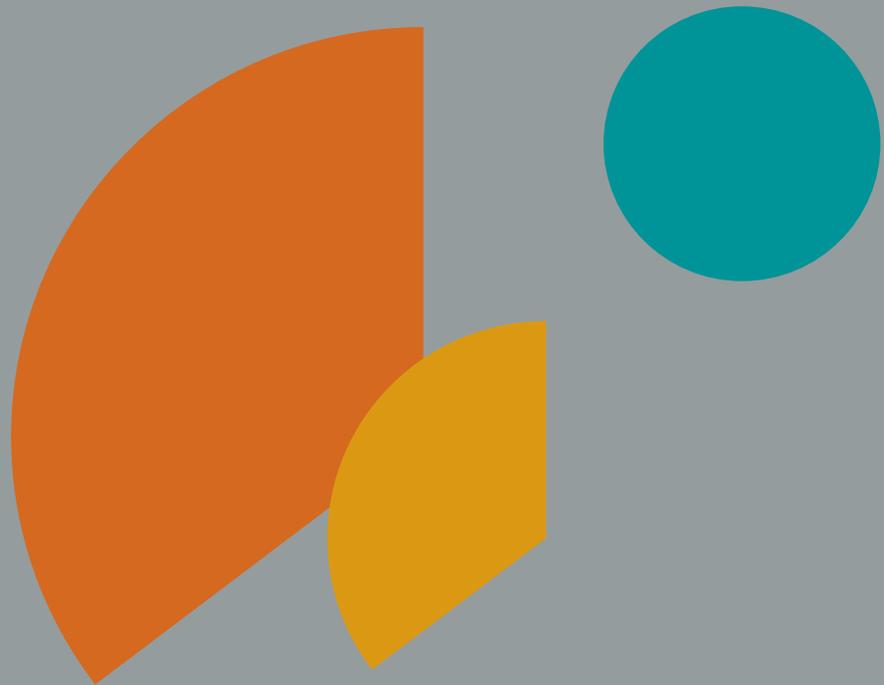
5 min (40)

Record BACS details for incentive payment and add to profile sheet

Thank and close.

Appendix E2

Version 1 and Version 2 Questionnaires



Water Company Research V1

This survey is designed to get your views on water and sewerage services. It is being undertaken on behalf of Ofwat, the regulator, and Consumer Council for Water (CCW), the consumer organisation which represents the interests of water and sewerage customers in England and Wales.

The research will be used to help water companies plan investment in their service from 2025, and will influence your future water services and bills.

This research is being conducted by Accent, an independent research agency on behalf of Ofwat and CCW.

NOT PANEL: Anyone completing the survey will be eligible for a £10 voucher (either an Amazon voucher, an M&S voucher, Love2Shop voucher). Alternatively we can donate your incentive to WaterAid. Details on how claim your voucher are given at the end of the survey.

The questionnaire will take about 15 minutes to complete.

Any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society. If you would like to confirm Accent's credentials type Accent in the search box at: <https://www.mrs.org.uk/researchbuyersguide>.

Q12. Any data collected over the course of this interview that could be used to identify you, such as your name, address, or other contact details, will be held securely and will not be shared with any third party, including your water company, unless you give permission (or unless we are legally required to do so). Our privacy statement is available at <https://www.accent-mr.com/privacy-policy/>.

Do you agree to proceeding with the interview on this basis?

Yes

No **THANK AND CLOSE IF ONLINE**

Q13. ASK HH ONLY: Do you or any of your close family work in market research or for a water company?

Yes **THANK & CLOSE**

No

Q14. IF NHH ASK: Are you solely or jointly responsible as the decision maker for paying your organisation's water and wastewater bill?

Yes

No **THANK AND CLOSE**

Q15. **IF POSTCODE DATA NOT AVAILABLE FROM SAMPLE** Please tell us the first half of your postcode. So if your full postcode is ME1 3BN please just tell us ME1 3. (This will be used to check who supplies your water and wastewater services) **NHH ONLY If your organisation operates across multiple sites, please answer for the site you typically work from**

IF HH AND REFUSE GO TO Q6
IF NHH AND REFUSE THANK AND CLOSE

Q16. **IF HH AND DIFFERENT WATER AND WASTEWATER:** Based on your postcode area, we believe your clean water service company should be #WATER COMPANY# and your wastewater service company should be #WASTEWATER COMPANY#. You may receive separate bills from each organisation or one combined bill. Is that correct?
IF SAME WATER AND WASTEWATER: Based on your postcode area, we believe your clean water service and wastewater service company should be #WATER COMPANY#. Is that correct?

Yes **GO TO Q8**
No **GO TO Q6**
Don't know **GO TO Q8**

Q17. **IF HH:** Which water company supplies clean water to your home?
IF NHH: Which of the following companies bill you for clean water services at your premises?

Affinity Water
Anglian Water
Bournemouth Water
Bristol Water
Cambridge Water
Essex & Suffolk Water
Hafren Dyfrdwy
Hartlepool Water
Northumbrian Water
Portsmouth Water
Severn Trent Water
South East Water
Southern Water
South Staffs Water
South West Water
Sutton & East Surrey (SES) Water
Thames Water
United Utilities
Welsh Water/Dŵr Cymru
Wessex Water
Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: Retailers

ADSM
Berendsen UK Limited
Blackpool Borough Council
BT
Business Stream
Castle Water
Clear Business Water
ConservAqua Ltd
Everflow
First Business Water
Greene King Brewing & Retailing
Heineken UK Limited

Independent Water Networks
J Sainsbury
John Lewis PLC
Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (Please specify) **THEN THANK AND CLOSE**
Don't know **THANK AND CLOSE**
None **THANK AND CLOSE**

Q6B **IF NHH:** Do these bills include wastewater services or do you receive separate bills for wastewater?

Include wastewater services
Receive separate bill for wastewater

Q18. **IF HH:** Which company provides wastewater (sewerage) services to your home?
IF NHH AND Q6B=2: Which of the following companies bill you for wastewater services at your premises?

Anglian Water
Hafren Dyfrdwy
Northumbrian Water
Severn Trent Water
Southern Water
South West Water
Thames Water
United Utilities
Welsh Water/Dŵr Cymru
Wessex Water
Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: Retailers

ADSM
Berendsen UK Limited
Blackpool Borough Council
BT
Business Stream
Castle Water
Clear Business Water
ConservAqua Ltd
Everflow
First Business Water
Greene King Brewing & Retailing

Heineken UK Limited
Independent Water Networks
J Sainsbury
John Lewis PLC
Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (please specify) THEN THANK AND CLOSE

Don't know THANK AND CLOSE

None THANK AND CLOSE

Q19. IF HH: Are you the person in your household who is responsible, either solely or jointly, for paying for your water services bill?

I have complete responsibility for payment

I share responsibility for payment with others in my household

I have no responsibility

Don't know

BILLPAYER: = CODE 1 OR 2

NONBILLPAYER: = CODE 3-4

Q20. IF HH Which of the following age groups do you fall into?

Under 18 THANK AND CLOSE

18-29

30-64

65 or older

Prefer not to say

USE HH QUOTA IF PANEL

Q21. IF HH What is your sex? (A question about gender identity will follow)

Male

Female

USE HH QUOTA IF PANEL

Q10a **IF HH:** Is the gender you identify with the same as your sex registered at birth? **We would like to collect this to ensure that people of all backgrounds are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.**

Yes

No (type in gender identity)

Prefer not to say

Q22. **IF ONE SUPPLIER FOR WATER AND WASTEWATER DON'T ASK (BUT CODE AS ONE BILL FOR BOTH SERVICES) IF HH & BILLPAYER:** Do you receive separate bills for water and sewerage services or one bill for both services?

Separate bills

One bill for both services

Don't know

Q12b **IF HH & BILLPAYER:** How often do you make payment for water and sewerage services?

Annually

Every six months

Every month, over eight months of the year

Every month

Other (please specify)

Don't know **GO TO Q14**

Q13 **IF HH & BILLPAYER AND Q12B=1, 4-5 ASK:** How much, roughly, do you pay for water and sewerage services each month, or in total for a year? The month amounts assume that the bills are paid evenly over a 12-month period, but some customers pay over a different number of months.

IF HH & BILLPAYER AND Q12B=3 ASK: How much, roughly, do you pay for water and sewerage services for each of the eight months, or in total for a year?

IF HH & BILLPAYER AND Q12B=2 ASK: How much, roughly, do you pay for water and sewerage services every 6 months, or in total for a year?

IF NHH: Which of the following bands do you estimate that your organisation's annual total water bill at your premises falls into – that's the amount for both water and sewerage services.

IF HH and 12B=1, 4 or 5: Less than £10 per month/Less than £120 per year

IF HH and 12B=1, 4 or 5: £10 - £19.99 per month/£120 - £239.99 per year

IF HH and 12B=1, 4 or 5: £20 - £29.99 per month/£240 - £359.99 per year

IF HH and 12B=1, 4 or 5: £30 - £39.99 per month/£360 - £479.99 per year

IF HH and 12B=1, 4 or 5: £40 - £59.99 per month/£480 - £719.99 per year

IF HH and 12B=1, 4 or 5: £60 - £79.99 per month/£720 - £959.99 per year

IF HH and 12B=1, 4 or 5: £80 or more per month /£960 or more per year

IF HH and 12B=3: Less than £15 per month/Less than £120 per year

IF HH and 12B=3: £15 - £29.99 per month/£120 - £239.99 per year

IF HH and 12B=3: £30 - £39.99 per month/£240 - £359.99 per year

IF HH and 12B=3: £40 - £59.99 per month/£360 - £479.99 per year

IF HH and 12B=3: £60 - £89.99 per month/£480 - £719.99 per year

IF HH and 12B=3: £90 - £199.99 per month/£720 - £959.99 per year

IF HH and 12B=3: £120 or more per month /£960 or more per year

IF HH and 12B=2: Less than £60 every 6 months/Less than £120 per year

IF HH and 12B=2: £60 - £119.99 every 6 months /£120 - £239.99 per year

IF HH and 12B=2: £120 - £179.99 every 6 months /£240 - £359.99 per year

IF HH and 12B=2: £180 - £239.99 every 6 months /£360 - £479.99 per year

IF HH and 12B=2: £240 - £359.99 every 6 months /£480 - £719.99 per year

IF HH and 12B=2: £360- £479.99 every 6 months /£720 - £959.99 per year

IF HH and 12B=2: £480 or more every 6 months /£960 or more per year

- IF NHH: Less than £1,000 per year
- IF NHH: £1,000 to £5,000 per year
- IF NHH: £5,000 to £25,000 per year
- IF NHH: More than £25,000 per year
- I'm not sure

Service issues

Q14 Have you ever experienced any of the following? *ROTATE*

Please tick one or more

Unexpected water supply interruption

Planned water supply interruption

Unexpected low pressure

Boil water notice

Do not drink notice

Discolouration of water coming out of your tap

A change to the taste and/or smell of your tap water

Sewer flooding: inside your property

Sewer flooding: outside your property

Hosepipe ban

Emergency drought restrictions (e.g. tap water being cut off on a rota basis to conserve supplies)

Pollution in a river

Pollution in the sea near a beach

Other (please specify)

I haven't experienced any of these GO TO Q15

Q14b IF ONE BELOW IN Q14 ASK: Have you experienced the following in the last 12 months?

IF BOTH BELOW IN Q14 ASK: Have you experienced any of the following in the last 12 months?

IF TICKED IN Q14: Discolouration of water coming out of your tap

IF TICKED IN Q14: A change to the taste and/or smell of your tap water

Use of rivers and beaches in the UK

IF HH: We would like to now find out a bit more about your use of rivers and beaches in the UK.

Q15 IF HH: How often do you, or anyone in your household, use rivers in the UK for any of the following activities?

| | Often (more than six times a year) | Sometimes (between one and five times a year) | Rarely (less than once a year) | Never |
|---|--|--|--------------------------------------|-------|
| Water contact activities (e.g. canoeing, rowing, rafting, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |
| Walking, running, cycling or sitting nearby or other activities on or around the water (e.g. narrowboating, other types of boating) | | | | |

Q16 IF HH: How often do you, or anyone in your household, use the beach or sea in the UK for any of the following activities?

| | Often (more than six times a year) | Sometimes (between one and five times a year) | Rarely (less than once a year) | Never |
|--|--|--|--------------------------------------|-------|
| | | | | |

| | | | | |
|---|--|---------------------------|--|--|
| | | and five times a year) | | |
| Water contact activities (e.g. surfing, windsurfing, dinghy sailing, canoeing, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |
| Walking, running, cycling or sitting or playing nearby or other activities on or around the water (e.g. other types of boating) | | | | |

Use of hosepipe or sprinkler

Q16a How often does your [IF HH] household [IF NHH] premises use a hosepipe or sprinkler for any purpose (e.g. washing/cleaning, or watering plants)?

- Often (more than six times a year);
- Sometimes (between one and five times a year)
- Rarely (less than once a year)
- Never

Impact of service issues

You are now going to be shown a series of ten short questions where you will be asked to choose between two different scenarios for your water or wastewater service.

Please consider, and then compare the scenarios carefully, and then **choose the one which would have the most impact** on your IF HH: household IF NHH: organisation if it were to happen

Some of the scenarios would affect your own property whereas others would affect your local area. When comparing the impact that each would have, please:

- **do** consider any concerns you may have for the local area or natural environment,
- **don't** consider any impacts on other people outside your IF HH: household IF NHH: organisation - other people will answer for themselves!

On some of the options you will see an ⓘ. Please click on this to see some more information about the option.

Q17 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

| | |
|---|--|
| <div style="background-color: #003366; color: white; padding: 5px; text-align: center; font-weight: bold;"> PLANNED water supply interruption (24 hours) </div> <ul style="list-style-type: none"> ▶ Your water company sends you a notice that in 2 days' time your tap water supply will stop for 24 hours ▶ This is due to planned maintenance in your local area ▶ As planned, it then stops from a Wednesday morning to a Thursday morning <div style="text-align: center;">   Planned, 24 hours </div> | <div style="background-color: #003366; color: white; padding: 5px; text-align: center; font-weight: bold;"> Discoloured water (24 hours) </div> <ul style="list-style-type: none"> ▶ Your tap water starts running light brown, without warning ▶ This is due to traces of sediment from pipes being disturbed ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again ▶ This happens for 24 hours from a Wednesday morning <div style="text-align: center;">   24 hours </div> |
|---|--|



Q18 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q19 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q20 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q21 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q22 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q23 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q24 Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q24b Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q24c Which of these would have the most impact on your IF HH: household IF NHH: organisation?

Q25 We would now like to ask you a few questions about the choices you have just made. How strongly do you agree or disagree with the following statements about the choices you have just made?

| | Strongly disagree | Disagree | Neither | Agree | Strongly agree |
|--|-------------------|----------|---------|-------|----------------|
| I was able to understand the choices | | | | | |
| I found the options believable | | | | | |
| My choices were based on how much impact I thought each option would have on my [IF HH] household [IF NHH] organisation. | | | | | |

| | | | | | |
|---|--|--|--|--|--|
| I found it easy to choose between the options | | | | | |
|---|--|--|--|--|--|

Q26 ASK IF Q25.1 = 1 OR 2. OTHERS GO TO Q27: Why were you unable to understand the choices?

Q27 ASK IF Q25.2 = 1 OR 2. OTHERS GO TO Q28: What was not believable about the options shown?

Q28 ASK IF Q25.3 = 1 OR 2. OTHERS GO TO Q29: What were the main factors driving your choices if not the impact that each would have on your [IF HH] household [IF NHH] organisation?

Q29 ASK IF Q25.4 = 1 OR 2. OTHERS GO TO NEXT SECTION: Why was it difficult choosing between the options?

One-off payments for service issues

The following questions will each present you with a choice between:

c) experiencing a service issue and receiving a one-off payment from your water company,
or

d) not experiencing the issue and not receiving any payment.

In each question, the type of service issue and the one-off payment amount will vary. The amounts will not necessarily reflect current compensation entitlements and may exceed these levels - substantially in some cases.

The purpose of these questions is to see if the amounts shown are enough to make up for the impact on your [IF HH] household [IF NHH] organisation from the service issue shown. It is important to consider each amount at face value, even if it seems higher than you would imagine might be offered.

RANDOMISE ORDER OF SERVICE ISSUES SHOWN IN Q30-Q31.

Q30 Which option would you prefer?

Option A

**UNEXPECTED water supply interruption
(6 hours)**

- ▶ Your tap water supply stops working without warning
- ▶ This is due to a burst pipe in your local area
- ▶ It stops for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon




One-off payment amount *: £100



Option B

No unexpected water supply interruption



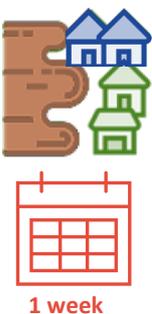
IF BILLPAYER OR NHH: * one-off payments would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise
IF NON-BILLPAYER: * one-off payments would be paid automatically, and within 7 days, by sending a cheque to your household.

If Option A one-off payments level=50% of Q30 value
If Option B one-off payments level =2*Q30 value
Then add in follow up question (Q30a) containing new compensation amounts.

Q30a Which option would you prefer?

Q30d [IF Q30=B AND Q30a=B] Why did you choose this option?

Q31 Which option would you prefer?

| Option A | Option B |
|--|---|
| <p>Sewer flooding: OUTSIDE your property (1 week)</p> <ul style="list-style-type: none">▶ Flooding from the sewer affects access to your front door / entrance▶ This results from prolonged heavy rainfall in your local area▶ It gives off a foul smell, and could cause damage▶ It takes 1 week for access to your property to get back to normal  <p>One-off payment amount *: £200</p> <p><input type="radio"/></p> | <p>NO Sewer flooding: OUTSIDE your property</p> <p><input type="radio"/></p> |

IF BILLPAYER OR NHH: * one-off payments would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise
[IF NON-BILLPAYER] * one-off payments would be paid automatically, and within 7 days, by sending a cheque to your household.

If Option A one-off payments level=50% of Q31 value
If Option B one-off payments level =2*Q31 value
Then add in follow up question (Q31a) containing new compensation amounts.

Q31A Which option would you prefer?

Q31B [IF Q31=B AND Q31A=B] Why did you choose this option?

Q32 We would now like to ask you a few questions about the choices you have just made. How strongly to do you agree or disagree with the following statements about the choices you have just made?

| | Strongly disagree | Disagree | Neither | Agree | Strongly agree |
|---|-------------------|----------|---------|-------|----------------|
| I was able to understand the choices | | | | | |
| I found the options believable | | | | | |
| My choices were based on how much impact I thought each option would have on my [IF HH] household [IF NHH] organisation and whether the amount of money shown | | | | | |
| I found it easy to choose between the options | | | | | |

Q33 ASK IF Q32.1 = 1 OR 2. OTHERS GO TO Q34: Why were you unable to understand the choices?

Q34 ASK IF Q32.2 = 1 OR 2. OTHERS GO TO Q35: What was not believable about the options shown?

Q35 ASK IF Q32.3 = 1 OR 2. OTHERS GO TO Q36: What were the main factors driving your choices?

Q36 ASK IF Q32.4 = 1 OR 2. OTHERS GO TO NEXT SECTION: Why was it difficult choosing between the options?

Attitudes to environmental costs

Q37 IF HH: Please look at the following five statements about pollution control and the costs of pollution control. Which one do you agree with most? *SINGLE CHOICE*

The environment should be protected from pollution and improved, **regardless of cost**

The environment should be protected from pollution and improved, **provided costs are not excessive**

The environment should be protected from pollution and improved, **but at no additional cost**

Further protection and improvements to the environment are not needed, and the costs for this should fall

Standards for protection and improvement to the environment are already too high and should be relaxed, and costs should fall

Don't know

Q38 Please use this box to leave any further comments about this topic or this survey. Please note, your water company will be unable to respond to individuals.

Classification Questions

We will now ask you a few questions about you and your IF HH household IF NHH organisation. These will only be used to ensure we have spoken to a wide range of customers. All responses you give will be kept strictly confidential.

Q39 IF HH: How would you describe the occupation type of the main income earner in your household?

Higher managerial/ professional/ administrative (e.g. Established doctor, Solicitor, Board Director in a large organisation (200+ employees, top level civil servant/public service employee))

Intermediate managerial/ professional/ administrative (e.g. Newly qualified (under 3 years) doctor, Solicitor, Board director small organisation, middle manager in large organisation, principle officer in civil service/local government)

Supervisory or clerical/ junior managerial/ professional/ administrative (e.g. Office worker, Student Doctor, Foreman with 25+ employees, salesperson, etc)

Skilled manual worker (e.g. Skilled Bricklayer, Carpenter, Plumber, Painter, Bus/ Ambulance Driver, HGV driver, AA patrolman, pub/bar worker, etc)

Semi or unskilled manual work. (e.g. Manual workers, all apprentices to be skilled trades, Caretaker, Park keeper, non-HGV driver, shop assistant)

Unemployed

Retired

Student

Prefer not to say **GO TO Q44**

Q40 IF Q39=7 (RETIRED) ASK: Does the main income earner have a state pension, a private pension or both?

State only

Private only

Both

Prefer not to say **GO TO Q44**

Q41 IF Q40= PRIVATE OR BOTH ASK: How would you describe the main income earner's occupation type before retirement?

Higher managerial/ professional/ administrative (e.g. Established doctor, Solicitor, Board Director in a large organisation (200+ employees, top level civil servant/public service employee))

Intermediate managerial/ professional/ administrative (e.g. Newly qualified (under 3 years) doctor, Solicitor, Board director small organisation, middle manager in large organisation, principle officer in civil service/local government)

Supervisory or clerical/ junior managerial/ professional/ administrative (e.g. Office worker, Student Doctor, Foreman with 25+ employees, salesperson, etc)

Skilled manual worker (e.g. Skilled Bricklayer, Carpenter, Plumber, Painter, Bus/ Ambulance Driver, HGV driver, AA patrolman, pub/bar worker, etc)

Semi or unskilled manual work. (e.g. Manual workers, all apprentices to be skilled trades, Caretaker, Park keeper, non-HGV driver, shop assistant)

None of these

Prefer not to say

Q44 IF HH: To which of these ethnic groups do you consider you belong to? **We would like to collect this to ensure that people of all backgrounds are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.**

WHITE

English, Welsh, Scottish, Northern Irish or British

Irish

Gypsy or Irish Traveller

Any other White background

MIXED

White and Black Caribbean

White and Black African

White and Asian

Any other Mixed background

ASIAN OR ASIAN BRITISH

Indian

Pakistani

Bangladeshi

Chinese

Any other Asian background

BLACK OR BLACK BRITISH

Caribbean
African
Any other Black background

OTHER ETHNIC GROUP

Arab
Any other ethnic group
Prefer not to say

Q45 **IF HH:** Thinking about all the people in your household, including yourself, how many people live here?

1 or 2
3 or 4
5 or more
Prefer not to say

Q46 Please let us know if any of the following apply to you. *RANDOMISE ROWS*
We would like to collect this to ensure that with a variety of particular needs are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.

I or another member of my household is disabled or suffer(s) from a debilitating illness
I or another member of my household have/has a learning difficulty
I or another member of my household relies on water for medical reasons
I or another member of my household is visually impaired (i.e. struggles to read even with glasses)
I or another member of my household am/is over the age of 75 years old
I or another member of my household speaks English as a second language
I or another member of my household is deaf or hard of hearing
I or another member of my household is a new parent
None of these apply to me
Prefer not to say

Q47 **IF HH:** Which of the following statements do you most agree with? Please remember, this research is entirely confidential and that it is only by understanding the views of people who are struggling to pay their household bills (eg gas, electricity, telephone etc) that change can be made.

I can always afford to pay my household bills
I can usually afford to pay my household bills
I sometimes struggle to pay my household bills
I usually struggle to pay my household bills
I always struggle to pay for my household bills
Prefer not to say

Q47a. **IF HH:** Thinking about your household finances, do you expect your household to be better off, worse off or about the same in 12 months' time?

Better off
The same
Worse off
Don't know

Q47b **IF NHH:** How does your organisation mainly use water? **You can choose more than one answer**

The manufacturing process which is essential to the running of your organisation (e.g. to power machinery, agricultural production etc.)
The supply of services your organisation provides (e.g. cleaning services etc.)

An ingredient or part of the product or service your organisation provides (e.g. food or drink, chemical, cosmetics manufacturer etc.)

Normal domestic use for your organisation's customers and employees (e.g. customer toilets, supply of drinking water)

None of the above

Don't Know

Q48 IF NHH: How many sites does your organisation operate from?

1

2

3

4+

Prefer not to say

Q49 IF NHH: How many employees does your organisation have in the UK?

None, sole trader

Fewer than 4 employees

4 to 49 employees

50 to 249 employees

250+ employees

Prefer not to say

Q50 IF NHH: Which of the following best defines the core activity of your organisation?

Agriculture, forestry and fishing

Mining and quarrying

Energy or water service & supply

Manufacturing

Construction

Wholesale and retail trade (including motor vehicles repair)

Transport and storage

Hotels & catering

IT and Communication

Finance and insurance activities

Real estate activities

Professional, scientific and technical activities

Administrative and Support Service Activities

Public administration and defence

Education

Human health and social work activities

Arts, entertainment and recreation

Other service activities

Other (please specify)

Prefer not to say

Q52 IF HH: Do you have a water meter?

IF NHH: Does your premises have a water meter?

Yes

No

Don't Know

Prefer not to say

Q53 IF Q52=1 ASK: Did you ask to have a water meter fitted for your household?

Yes

No

Prefer not to say

Q54 IF HH AND POSTAL: Which of these best describes you?

- I have never used the internet
- I have used the internet but do not have regular access to it
- I have regular access to the internet
- Prefer not to say

Q55 IF HH NON PANEL: We mentioned that there would be a £10 incentive for completing this survey. This incentive will be administered by Accent, within 4 weeks.

This can be sent as an Amazon, Marks & Spencer or Love2Shop voucher by email or by post. Alternatively we can donate your incentive to WaterAid. Which would you prefer?

- Amazon voucher by email **COLLECT EMAIL ADDRESS**
- M&S Voucher by email **COLLECT EMAIL ADDRESS**
- Love2Shop by email **COLLECT EMAIL ADDRESS**
- Amazon voucher by post **COLLECT ADDRESS**
- M&S voucher by post **COLLECT ADDRESS**
- Love2Shop by post **COLLECT ADDRESS**
- Donation to Water Aid

If you have any queries about your incentive, please contact us on 0131 220 8770.

Q56 Thank you. Would you be willing to be contacted again if we need to clarify any of the answers you have given today?

- Yes
- No

Thank you. This research was conducted under the terms of the MRS code of conduct and is completely confidential.



Water Company Research V2

This survey is designed to get your views on water and sewerage services. It is being undertaken on behalf of Ofwat, the regulator, and Consumer Council for Water (CCW), the consumer organisation which represents the interests of water and sewerage customers in England and Wales.

The research will be used to help water companies plan investment in their service from 2025, and will influence your future water services and bills.

This research is being conducted by Accent, an independent research agency on behalf of Ofwat and CCW.

NOT PANEL: Anyone completing the survey will be eligible for a £10 voucher (either an Amazon voucher, an M&S voucher, Love2Shop voucher). Alternatively we can donate your incentive to WaterAid. Details on how claim your voucher are given at the end of the survey.

The questionnaire will take about 15 minutes to complete.

Any answer you give will be treated in confidence in accordance with the Code of Conduct of the Market Research Society. If you would like to confirm Accent's credentials type Accent in the search box at: <https://www.mrs.org.uk/researchbuyersguide>.

Q1 Any data collected over the course of this interview that could be used to identify you, such as your name, address, or other contact details, will be held securely and will not be shared with any third party, including your water company, unless you give permission (or unless we are legally required to do so). Our privacy statement is available at <https://www.accent-mr.com/privacy-policy/>.

Do you agree to proceeding with the interview on this basis?

Yes

No **THANK AND CLOSE IF ONLINE**

Q2 **ASK HH ONLY:** Do you or any of your close family work in market research or for a water company?

Yes **THANK & CLOSE**

No

Q3 **IF NHH ASK:** Are you solely or jointly responsible as the decision maker for paying your organisation's water and wastewater bill?

Yes

No **THANK AND CLOSE**

Q4 IF POSTCODE DATA NOT AVAILABLE FROM SAMPLE Please tell us the first half of your postcode. So if your full postcode is ME1 3BN please just tell us ME1 3. (This will be used to check who supplies your water and wastewater services) **NHH ONLY If your organisation operates across multiple sites, please answer for the site you typically work from**

IF HH AND REFUSE GO TO Q6
IF NHH AND REFUSE THANK AND CLOSE

Q5 IF HH AND DIFFERENT WATER AND WASTEWATER: Based on your postcode area, we believe your clean water service company should be #WATER COMPANY# and your wastewater service company should be #WASTEWATER COMPANY#. You may receive separate bills from each organisation or one combined bill. Is that correct?
IF SAME WATER AND WASTEWATER: Based on your postcode area, we believe your clean water service and wastewater service company should be #WATER COMPANY#. Is that correct?

Yes **GO TO Q8**
No **GO TO Q6**
Don't know **GO TO Q8**

Q6 IF HH: Which water company supplies clean water to your home?
IF NHH: Which of the following companies bill you for clean water services at your premises?

Affinity Water
Anglian Water
Bournemouth Water
Bristol Water
Cambridge Water
Essex & Suffolk Water
Hafren Dyfrdwy
Hartlepool Water
Northumbrian Water
Portsmouth Water
Severn Trent Water
South East Water
Southern Water
South Staffs Water
South West Water
Sutton & East Surrey (SES) Water
Thames Water
United Utilities
Welsh Water/Dŵr Cymru
Wessex Water
Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: Retailers

ADSM
Berendsen UK Limited
Blackpool Borough Council
BT
Business Stream
Castle Water
Clear Business Water
ConservAqua Ltd
Everflow
First Business Water
Greene King Brewing & Retailing

Heineken UK Limited
Independent Water Networks
J Sainsbury
John Lewis PLC
Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (Please specify) THEN THANK AND CLOSE

Don't know THANK AND CLOSE

None THANK AND CLOSE

Q6B IF NHH: Do these bills include wastewater services or do you receive separate bills for wastewater?

Include wastewater services

Receive separate bill for wastewater

Q7 IF HH: Which company provides wastewater (sewerage) services to your home?
IF NHH AND Q6B=2: Which of the following companies bill you for wastewater services at your premises?

Anglian Water
Hafren Dyfrdwy
Northumbrian Water
Severn Trent Water
Southern Water
South West Water
Thames Water
United Utilities
Welsh Water/Dŵr Cymru
Wessex Water
Yorkshire Water

IF NHH SHOW FOLLOWING TITLE AND LIST: **Retailers**

ADSM
Berendsen UK Limited
Blackpool Borough Council
BT
Business Stream
Castle Water
Clear Business Water
ConservAqua Ltd
Everflow
First Business Water

Greene King Brewing & Retailing
Heineken UK Limited
Independent Water Networks
J Sainsbury
John Lewis PLC
Kellogg Company of Great Britain Limited
LEEP Utilities
Marston's PLC
Nottingham City Council
Pennon Water Services
Regent Water
Sefton Council
SES Business Water
Smarta Water
Stonegate Pub Company
The Water Retail Company
Veolia Water Projects
Veolia Water Retail (UK) Limited
Water Plus
Wave
Wave 2 Business
Whitbread Group
YU Water

Other (please specify) THEN THANK AND CLOSE
Don't know THANK AND CLOSE
None THANK AND CLOSE

Q8 IF HH: Are you the person in your household who is responsible, either solely or jointly, for paying for your water services bill?

I have complete responsibility for payment
I share responsibility for payment with others in my household
I have no responsibility
Don't know

BILLPAYER: = CODE 1 OR 2
NONBILLPAYER: = CODE 3-4

Q9 IF HH Which of the following age groups do you fall into?

Under 18 THANK AND CLOSE
18-29
30-64
65 or older
Prefer not to say

USE HH QUOTA IF PANEL

Q10 IF HH What is your sex? (A question about gender identity will follow)

Male
Female

USE HH QUOTA IF PANEL

Q10a IF HH: Is the gender you identify with the same as your sex registered at birth? **We would like to collect this to ensure that people of all backgrounds are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.**

Yes

No (type in gender identity)

Prefer not to say

Q11 IF ONE SUPPLIER FOR WATER AND WASTEWATER DON'T ASK (BUT CODE AS ONE BILL FOR BOTH SERVICES) IF HH & BILLPAYER: Do you receive separate bills for water and sewerage services or one bill for both services?

Separate bills

One bill for both services

Don't know

Q12b IF HH & BILLPAYER: How often do you make payment for water and sewerage services?

Annually

Every six months

Every month, over eight months of the year

Every month

Other (please specify)

Don't know **GO TO Q14**

Q13 IF HH & BILLPAYER AND Q12B=1, 4-5 ASK: How much, roughly, do you pay for water and sewerage services each month, or in total for a year? The month amounts assume that the bills are paid evenly over a 12-month period, but some customers pay over a different number of months.

IF HH & BILLPAYER AND Q12B=3 ASK: How much, roughly, do you pay for water and sewerage services for each of the eight months, or in total for a year?

IF HH & BILLPAYER AND Q12B=2 ASK: How much, roughly, do you pay for water and sewerage services every 6 months, or in total for a year?

IF NHH: Which of the following bands do you estimate that your organisation's annual total water bill at your premises falls into – that's the amount for both water and sewerage services.

IF HH and 12B=1, 4 or 5: Less than £10 per month/Less than £120 per year

IF HH and 12B=1, 4 or 5: £10 - £19.99 per month/£120 - £239.99 per year

IF HH and 12B=1, 4 or 5: £20 - £29.99 per month/£240 - £359.99 per year

IF HH and 12B=1, 4 or 5: £30 - £39.99 per month/£360 - £479.99 per year

IF HH and 12B=1, 4 or 5: £40 - £59.99 per month/£480 - £719.99 per year

IF HH and 12B=1, 4 or 5: £60 - £79.99 per month/£720 - £959.99 per year

IF HH and 12B=1, 4 or 5: £80 or more per month /£960 or more per year

IF HH and 12B=3: Less than £15 per month/Less than £120 per year

IF HH and 12B=3: £15 - £29.99 per month/£120 - £239.99 per year

IF HH and 12B=3: £30 - £39.99 per month/£240 - £359.99 per year

IF HH and 12B=3: £40 - £59.99 per month/£360 - £479.99 per year

IF HH and 12B=3: £60 - £89.99 per month/£480 - £719.99 per year

IF HH and 12B=3: £90 - £199.99 per month/£720 - £959.99 per year

IF HH and 12B=3: £120 or more per month /£960 or more per year

IF HH and 12B=2: Less than £60 every 6 months/Less than £120 per year

IF HH and 12B=2: £60 - £119.99 every 6 months /£120 - £239.99 per year

IF HH and 12B=2: £120 - £179.99 every 6 months /£240 - £359.99 per year

IF HH and 12B=2: £180 - £239.99 every 6 months /£360 - £479.99 per year

IF HH and 12B=2: £240 - £359.99 every 6 months /£480 - £719.99 per year

IF HH and 12B=2: £360- £479.99 every 6 months /£720 - £959.99 per year

IF HH and 12B=2: £480 or more every 6 months /£960 or more per year
 IF NHH: Less than £1,000 per year
 IF NHH: £1,000 to £5,000 per year
 IF NHH: £5,000 to £25,000 per year
 IF NHH: More than £25,000 per year
 I'm not sure

Service issues

Q14 Have you ever experienced any of the following? *ROTATE*

Please tick one or more

Unexpected water supply interruption

Planned water supply interruption

Unexpected low pressure

Boil water notice

Do not drink notice

Discolouration of water coming out of your tap

A change to the taste and/or smell of your tap water

Sewer flooding: inside your property

Sewer flooding: outside your property

Hosepipe ban

Emergency drought restrictions (e.g. tap water being cut off on a rota basis to conserve supplies)

Pollution in a river

Pollution in the sea near a beach

Other (please specify)

I haven't experienced any of these GO TO Q15

Q14b IF ONE BELOW IN Q14ASK: Have you experienced the following in the last 12 months?

IF BOTH BELOW IN Q14 ASK: Have you experienced any of the following in the last 12 months?

IF TICKED IN Q14: Discolouration of water coming out of your tap

IF TICKED IN Q14: A change to the taste and/or smell of your tap water

Use of rivers and beaches in the UK

IF HH: We would like to now find out a bit more about your use of rivers and beaches in the UK.

Q15 IF HH: How often do you, or anyone in your household, use rivers in the UK for any of the following activities?

| | Often (more than six times a year) | Sometimes (between one and five times a year) | Rarely (less than once a year) | Never |
|---|--|--|--------------------------------------|-------|
| Water contact activities (e.g. canoeing, rowing, rafting, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |
| Walking, running, cycling or sitting nearby or other activities on or around the water (e.g. narrowboating, other types of boating) | | | | |

Q16 **IF HH:** How often do you, or anyone in your household, use the beach or sea in the UK for any of the following activities?

| | Often (more than six times a year) | Sometimes (between one and five times a year) | Rarely (less than once a year) | Never |
|--|---|--|---|--------------|
| Water contact activities (e.g. surfing, windsurfing, dinghy sailing, canoeing, paddleboarding, swimming, paddling) | | | | |
| Fishing | | | | |
| Walking, running, cycling or sitting or playing nearby or other activities on or around the water (e.g. other types of boating) | | | | |

Use of hosepipe or sprinkler

Q16a How often does your **[IF HH]** household **[IF NHH]** premises use a hosepipe or sprinkler for any purpose (e.g. washing/cleaning, or watering plants)?

- Often (more than six times a year);
- Sometimes (between one and five times a year)
- Rarely (less than once a year)
- Never

Service Scenario Choices

You are now going to be shown a series of ten short questions where you will be asked to choose between two different scenarios for your water or wastewater service. **Please read the following instructions carefully.**

Each scenario will show a different type of service issue that could happen to your **IF HH:** household **IF NHH:** premises.

Some of the scenarios would affect your own **IF HH:** property **IF NHH:** premises whereas others would affect your local area. When comparing the impact that each would have, please:

- **do** consider any concerns you may have for the local area or natural environment,
- **don't** consider any impacts on other people outside your **IF HH:** household **IF NHH:** organisation - other people will answer for themselves!

On some of the options you will see an **ⓘ**. Please click on this to see some more information about the option.

NEW SCREEN

Additionally, some of these scenarios will involve your water and/or wastewater provider making a one-off payment to your **IF HH:** household **IF NHH:** organisation.

The amounts will not necessarily reflect current compensation entitlements and may exceed these levels – substantially in some cases.

The purpose of these questions is to see if the amounts shown are enough to make up for the impact on your IF HH: household IF NHH: organisation from the service issue shown. It is important that you consider each amount at face value, even if it seems higher than you would imagine might be offered.

For each question, please state which option you prefer. If neither of the options is appealing, please still choose the better of the two.

Q17 Which option would you prefer? If neither is appealing, please still choose the better of the two

| Option A | Option B |
|--|--|
| <p>PLANNED water supply interruption (24 hours)</p> <ul style="list-style-type: none"> Your water company sends you a notice that in 2 days' time your tap water supply will stop for 24 hours This is due to planned maintenance in your local area As planned, it then stops from a Wednesday morning to a Thursday morning  <p>Planned, 24 hours</p> <p>One-off payment amount*: £50</p> <p><input type="radio"/></p> | <p>UNEXPECTED water supply interruption (6 hours)</p> <ul style="list-style-type: none"> Your tap water supply stops working without warning This is due to a burst pipe in your local area It stops for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon  <p>6 hours</p> <p>One-off payment amount*: £100</p> <p><input type="radio"/></p> |

IF BILLPAYER OR NHH: * one-off payments would be paid automatically, and within 7 days, by crediting your bank account, if you have a direct debit set up, or by sending you a cheque otherwise IF NON-BILLPAYER: * one-off payments would be paid automatically, and within 7 days, by sending a cheque to your household.

Q18 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q19 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q20 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q21 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q22 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q23 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q24 Which option would you prefer? If neither is appealing, please still choose the better of the two

Q24b Which option would you prefer? If neither is appealing, please still choose the better of the two

Q24c Which option would you prefer? If neither is appealing, please still choose the better of the two

Q25 We would now like to ask you a few questions about the choices you have just made. How strongly do you agree or disagree with the following statements about the choices you have just made?

| | Strongly disagree | Disagree | Neither | Agree | Strongly agree |
|---|-------------------|----------|---------|-------|----------------|
| I was able to understand the choices | | | | | |
| I found the options believable | | | | | |
| My choices were based on how much impact I thought each option would have on my [IF HH] household [IF NHH] organisation and the amount of money shown | | | | | |
| I found it easy to choose between the options | | | | | |

Q26 ASK IF Q25.1 = 1 OR 2. OTHERS GO TO Q27: Why were you unable to understand the choices?

Q27 ASK IF Q25.2 = 1 OR 2. OTHERS GO TO Q28: What was not believable about the options shown?

Q28 ASK IF Q25.3 = 1 OR 2. OTHERS GO TO Q29: What were the main factors driving your choices?

Q29 ASK IF Q25.4 = 1 OR 2. OTHERS GO TO NEXT SECTION: Why was it difficult choosing between the options?

Attitudes to environmental costs

Q37 IF HH: Please look at the following five statements about pollution control and the costs of pollution control. Which one do you agree with most? SINGLE CHOICE

The environment should be protected from pollution and improved, **regardless of cost**

The environment should be protected from pollution and improved, **provided costs are not excessive**

The environment should be protected from pollution and improved, **but at no additional cost**

Further protection and improvements to the environment are not needed, and the costs for this should fall

Standards for protection and improvement to the environment are already too high and should be relaxed, and costs should fall

Don't know

Q38 Please use this box to leave any further comments about this topic or this survey. Please note, your water company will be unable to respond to individuals.

Classification Questions

We will now ask you a few questions about you and your IF HH household IF NHH organisation. These will only be used to ensure we have spoken to a wide range of customers. All responses you give will be kept strictly confidential.

Q39 IF HH: How would you describe the occupation type of the main income earner in your household?

Higher managerial/ professional/ administrative (e.g. Established doctor, Solicitor, Board Director in a large organisation (200+ employees, top level civil servant/public service employee))

Intermediate managerial/ professional/ administrative (e.g. Newly qualified (under 3 years) doctor, Solicitor, Board director small organisation, middle manager in large organisation, principle officer in civil service/local government)

Supervisory or clerical/ junior managerial/ professional/ administrative (e.g. Office worker, Student Doctor, Foreman with 25+ employees, salesperson, etc)

Skilled manual worker (e.g. Skilled Bricklayer, Carpenter, Plumber, Painter, Bus/ Ambulance Driver, HGV driver, AA patrolman, pub/bar worker, etc)

Semi or unskilled manual work. (e.g. Manual workers, all apprentices to be skilled trades, Caretaker, Park keeper, non-HGV driver, shop assistant)

Unemployed

Retired

Student

Prefer not to say **GO TO Q44**

Q40 IF Q39=7 (RETIRED) ASK: Does the main income earner have a state pension, a private pension or both?

State only

Private only

Both

Prefer not to say **GO TO Q44**

Q41 IF Q40= PRIVATE OR BOTH ASK: How would you describe the main income earner's occupation type before retirement?

Higher managerial/ professional/ administrative (e.g. Established doctor, Solicitor, Board Director in a large organisation (200+ employees, top level civil servant/public service employee))

Intermediate managerial/ professional/ administrative (e.g. Newly qualified (under 3 years) doctor, Solicitor, Board director small organisation, middle manager in large organisation, principle officer in civil service/local government)

Supervisory or clerical/ junior managerial/ professional/ administrative (e.g. Office worker, Student Doctor, Foreman with 25+ employees, salesperson, etc)

Skilled manual worker (e.g. Skilled Bricklayer, Carpenter, Plumber, Painter, Bus/ Ambulance Driver, HGV driver, AA patrolman, pub/bar worker, etc)

Semi or unskilled manual work. (e.g. Manual workers, all apprentices to be skilled trades, Caretaker, Park keeper, non-HGV driver, shop assistant)

None of these

Prefer not to say

Q44 IF HH: To which of these ethnic groups do you consider you belong to? **We would like to collect this to ensure that people of all backgrounds are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.**

WHITE

English, Welsh, Scottish, Northern Irish or British

Irish

Gypsy or Irish Traveller

Any other White background

MIXED

White and Black Caribbean

White and Black African

White and Asian

Any other Mixed background

ASIAN OR ASIAN BRITISH

Indian

Pakistani

Bangladeshi
Chinese
Any other Asian background

BLACK OR BLACK BRITISH

Caribbean
African
Any other Black background

OTHER ETHNIC GROUP

Arab
Any other ethnic group
Prefer not to say

Q45 **IF HH:** Thinking about all the people in your household, including yourself, how many people live here?

1 or 2
3 or 4
5 or more
Prefer not to say

Q46 Please let us know if any of the following apply to you. *RANDOMISE ROWS*
We would like to collect this to ensure that with a variety of particular needs are represented in the study, but you do not have to answer if you do not wish to. This information will not be shared with any third party and will be destroyed within 12 months of project completion.

I or another member of my household is disabled or suffer(s) from a debilitating illness
I or another member of my household have/has a learning difficulty
I or another member of my household relies on water for medical reasons
I or another member of my household is visually impaired (i.e. struggles to read even with glasses)
I or another member of my household am/is over the age of 75 years old
I or another member of my household speaks English as a second language
I or another member of my household is deaf or hard of hearing
I or another member of my household is a new parent
None of these apply to me
Prefer not to say

Q47 **IF HH:** Which of the following statements do you most agree with? **Please remember, this research is entirely confidential and that it is only by understanding the views of people who are struggling to pay their household bills (eg gas, electricity, telephone etc) that change can be made.**

I can always afford to pay my household bills
I can usually afford to pay my household bills
I sometimes struggle to pay my household bills
I usually struggle to pay my household bills
I always struggle to pay for my household bills
Prefer not to say

Q47a. **IF HH:** Thinking about your household finances, do you expect your household to be better off, worse off or about the same in 12 months' time?

Better off
The same
Worse off
Don't know

Q47b **IF NHH:** How does your organisation mainly use water? **You can choose more than one answer**

The manufacturing process which is essential to the running of your organisation (e.g. to power machinery, agricultural production etc.)

The supply of services your organisation provides (e.g. cleaning services etc.)

An ingredient or part of the product or service your organisation provides (e.g. food or drink, chemical, cosmetics manufacturer etc.)

Normal domestic use for your organisation's customers and employees (e.g. customer toilets, supply of drinking water)

None of the above

Don't Know

Q48 IF NHH: How many sites does your organisation operate from?

1

2

3

4+

Prefer not to say

Q49 IF NHH: How many employees does your organisation have in the UK?

None, sole trader

Fewer than 4 employees

4 to 49 employees

50 to 249 employees

250+ employees

Prefer not to say

Q50 IF NHH: Which of the following best defines the core activity of your organisation?

Agriculture, forestry and fishing

Mining and quarrying

Energy or water service & supply

Manufacturing

Construction

Wholesale and retail trade (including motor vehicles repair)

Transport and storage

Hotels & catering

IT and Communication

Finance and insurance activities

Real estate activities

Professional, scientific and technical activities

Administrative and Support Service Activities

Public administration and defence

Education

Human health and social work activities

Arts, entertainment and recreation

Other service activities

Other (please specify)

Prefer not to say

Q52 IF HH: Do you have a water meter?

IF NHH: Does your premises have a water meter?

Yes

No

Don't Know

Prefer not to say

Q53 IF Q52=1 ASK: Did you ask to have a water meter fitted for your household?

Yes
No
Prefer not to say

Q54 IF HH AND POSTAL: Which of these best describes you?

I have never used the internet
I have used the internet but do not have regular access to it
I have regular access to the internet
Prefer not to say

Q55 IF HH NON PANEL: We mentioned that there would be a £10 incentive for completing this survey. This incentive will be administered by Accent, within 4 weeks.

This can be sent as an Amazon, Marks & Spencer or Love2Shop voucher by email or by post. Alternatively we can donate your incentive to WaterAid. Which would you prefer?

Amazon voucher by email **COLLECT EMAIL ADDRESS**
M&S Voucher by email **COLLECT EMAIL ADDRESS**
Love2Shop by email **COLLECT EMAIL ADDRESS**
Amazon voucher by post **COLLECT ADDRESS**
M&S voucher by post **COLLECT ADDRESS**
Love2Shop by post **COLLECT ADDRESS**
Donation to Water Aid

If you have any queries about your incentive, please contact us on 0131 220 8770.

Q56 Thank you. Would you be willing to be contacted again if we need to clarify any of the answers you have given today?

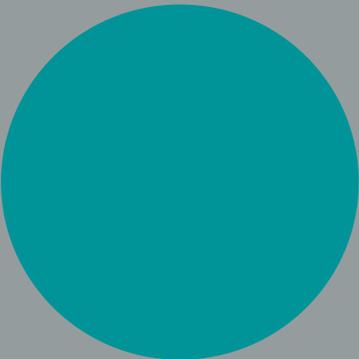
Yes
No

Thank you. This research was conducted under the terms of the MRS code of conduct and is completely confidential.



Appendix E3

Attributes



UNEXPECTED water supply interruption (6 hours)

- ▶ Your water supply stops working without warning, affecting taps, toilets, dishwasher, etc
- ▶ This is due to a burst pipe in your local area
- ▶ It stops for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



6 hours

PLANNED water supply interruption (6 hours)

- ▶ Your water company sends you a notice in the post that in 2 days' time your water supply will stop for 6 hours, affecting all taps, toilets, dishwasher, etc
- ▶ This is due to planned maintenance in your local area
- ▶ As planned, it then stops between 12:00 and 18:00 on a Wednesday afternoon



**Planned,
6 hours**

UNEXPECTED water supply interruption (24 hours)

- ▶ Your water supply stops working without warning, affecting all taps, toilets, dishwasher, etc
- ▶ This is due to a burst pipe in your local area
- ▶ Water would be made available nearby to collect in buckets or bottles and vulnerable people would be delivered water directly
- ▶ It stops for 24 hours, from a Wednesday morning to a Thursday morning



24 hours

UNEXPECTED low water pressure (6 hours)

- ▶ Your tap water supply starts running with a low pressure, without warning
- ▶ This is due to a burst pipe in your local area
- ▶ It takes longer to fill a kettle, sink or bath and a shower would be weak. Some appliances like dishwashers and washing machines may not work properly
- ▶ This happens for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



6 hours

Boil water notice (48 hours)

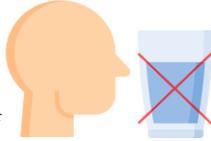
- ▶ Your water company sends you a notice saying you need to boil tap water before drinking, cooking or preparing food to avoid the risk of becoming ill
- ▶ This is due to traces of e-coli being found in the water supply in your area
- ▶ You can still safely use tap water for washing and cleaning
- ▶ Bottled water would be delivered to vulnerable customers that need it
- ▶ You can still safely use tap water for washing and cleaning. The notice arrives on a Wednesday. After two days the water will be safe to drink again and your water company will notify you



48 hours

Do not drink notice (48 hours)

- ▶ Your water company sends you a notice saying not to drink your tap water, or use it for cooking or preparing food, to avoid the risk of becoming ill
- ▶ This is due to traces of a harmful chemical being found in the water supply in your area
- ▶ You can still safely use tap water for washing and cleaning
- ▶ Water would be made available nearby to collect in your own buckets or bottles and vulnerable people would be delivered bottled water directly
- ▶ The notice arrives on a Wednesday. After two days the water will be safe to drink again and your water company will notify you



48 hours

Discoloured water (6 hours)

- ▶ Your tap water starts running light brown, without warning
- ▶ This is due to traces of sediment from pipes being disturbed
- ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again
- ▶ This happens for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



6 hours

Discoloured water (24 hours)

- ▶ Your tap water starts running light brown, without warning
- ▶ This is due to traces of sediment from pipes being disturbed
- ▶ The water is safe to drink, but you shouldn't use a dishwasher or washing machine until the water runs clear again
- ▶ This happens for 24 hours from a Wednesday morning



Water taste and smell (6 hours)

- ▶ Your tap water starts tasting or smelling different, without warning
- ▶ This is due to chlorine, and the taste and smell is like a swimming pool
- ▶ The water is safe to drink, and for use in the dishwasher or washing machine
- ▶ This happens for 6 hours, between 12:00 and 18:00 on a Wednesday afternoon



Water taste and smell (24 hours)

- ▶ Your tap water starts tasting or smelling different, without warning
- ▶ This is due to chlorine, and the taste and smell is like a swimming pool
- ▶ The water is safe to drink, and for use in the dishwasher or washing machine
- ▶ This happens for 24 hours from a Wednesday morning



Sewer flooding: INSIDE your property (1 month)

- ▶ Flooding from the sewer gets inside your property, affecting your living areas
- ▶ This results from prolonged heavy rainfall in your local area
- ▶ It gives off a foul smell, and damages floors, walls and furniture
- ▶ It takes 1 month for your property to get back to normal



1 month

Sewer flooding: OUTSIDE your property (1 week)

- ▶ Flooding from the sewer affects access to your front door / entrance
- ▶ This results from prolonged heavy rainfall in your local area
- ▶ It gives off a foul smell, and could cause damage
- ▶ It takes 1 week for access to your property to get back to normal



1 week

Hosepipe ban (5 months)

- ▶ Your water company sends you a notice saying you must not use a hosepipe or sprinkler
- ▶ This is due to an extended period of dry weather leading to a water shortage
- ▶ The hosepipe ban begins in May and lasts for 5 months



5 months

Emergency drought restrictions (2 months)

- ▶ Your water company cuts off the tap water supply from 2pm to 7am every day
- ▶ This is due to a severe drought leading to an extreme water shortage in your area
- ▶ Standpipes would be available nearby to collect water in your own buckets or bottles and vulnerable people would be delivered bottled water directly
- ▶ The restrictions begin in July and last for 2 months



2 months

Low flows in rivers NEARBY (2 months)

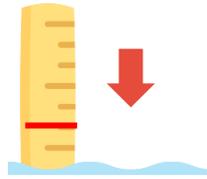
- ▶ The water level in a nearby stretch of river (less than 5 miles away) has a flow that is lower than the minimum it should be naturally
- ▶ This could affect habitats and harm the wildlife living in and by the river
- ▶ This is due to a combination of extended dry weather and water being taken from it for public water supply
- ▶ This happens from July and lasts for 2 months



**Nearby,
2 months**

Low flows in rivers ELSEWHERE (2 months)

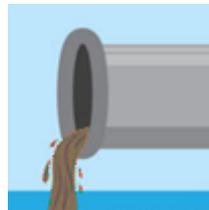
- ▶ The water level in a stretch of river somewhere in your region, but not nearby, has a flow that is lower than the minimum it should be naturally
- ▶ This could harm the wildlife living in and by the river
- ▶ This is due to a combination of extended dry weather and water being taken from it for public water supply
- ▶ This happens from July and lasts for 2 months



**Elsewhere,
2 months**

Storm overflow NEARBY (4 hours)

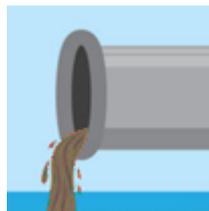
- ▶ Rainwater mixed with untreated sewage regularly spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to prolonged heavy rainfall and is allowed by the regulator to reduce the risk of sewer flooding
- ▶ There is no damage to the river and visible pollution is minor



**Nearby,
4 hours**

Minor pollution incident NEARBY (1 day)

- ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be minor
- ▶ The spill begins on a Wednesday and lasts for 4 hours. The river is then back to normal after 1 day



**Nearby,
1 day**

Significant pollution incident NEARBY (4 weeks)

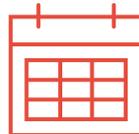
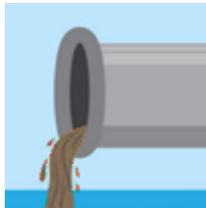
- ▶ Untreated sewage spills into a nearby stretch of river (less than 5 miles away)
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and would be significant, including possible harm to wildlife and health risks to river users, plus visible sewage litter
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks



Nearby,
4 weeks

Storm overflow ELSEWHERE (4 hours)

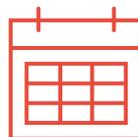
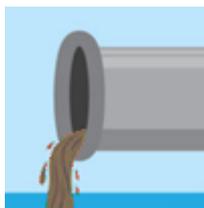
- ▶ Rainwater mixed with untreated sewage regularly spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to prolonged heavy rainfall and is allowed by the regulator to reduce the risk of sewer flooding
- ▶ There is no damage to the river and visible pollution is minor



Elsewhere,
4 hours

Minor pollution incident ELSEWHERE (1 day)

- ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river and visible pollution would be minor
- ▶ The spill begins on a Wednesday and lasts for 4 hours. The river is then back to normal after 1 day

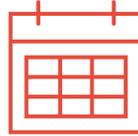
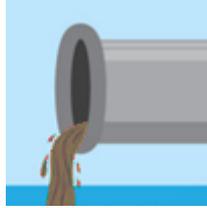


Elsewhere

1 day

Significant pollution incident ELSEWHERE (4 weeks)

- ▶ Untreated sewage spills into a stretch of river somewhere in your region, but not nearby
- ▶ This is due to sewerage equipment failure
- ▶ The damage to the river would be significant, including possible harm to wildlife and health risks to river users, plus visible sewage litter
- ▶ The spill begins on a Wednesday and lasts for 2 days. The river is then back to normal after 4 weeks



Elsewhere
,
4 weeks

River water NEARBY is not High quality

- ▶ A nearby stretch of river (less than 5 miles away) meets Medium rather than High quality standards, as defined by the government ⓘ
- ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area
- ▶ This has some effect on habitats for fish and wildlife, and can lead to algae (green slime) in the water



Local

River water ELSEWHERE is not High quality

- ▶ A stretch of river in your region, but not nearby, meets Medium rather than High quality standards, as defined by the government ⓘ
- ▶ This is due to a variety of factors, including the quality of treated wastewater, the river flow level, and the run-off from the surrounding area
- ▶ This has some effect on habitats for fish and wildlife, and can lead to algae (green slime) in the water



Elsewhere

ⓘ button show card:

| River water quality level | Definition |
|---------------------------|---|
| High | <ul style="list-style-type: none"> ▪ There will be a diverse and natural range of plants, insects, fish, birds and other animals. ▪ Water will generally have the right degree of clarity and there will be no noticeable pollution. ▪ Water will generally be suitable for contact activities, such as rowing or swimming |
| Medium | <ul style="list-style-type: none"> ▪ There will be plants, insects, fish, birds and other animals, but there will be some fish and other wildlife missing. ▪ Water will be slightly murky or discoloured in parts, and there will sometimes be visible pollution in some places, and some algal blooms. ▪ Water may be suitable for contact activities in some areas but not others. |
| Low | <ul style="list-style-type: none"> ▪ There may be limited or no plants or wildlife, or the water may be dominated by a single plant species. ▪ Water will generally be murky or discoloured, and may sometimes be bad-smelling in some places. There may also regularly be visible pollution in some places, and frequent algal blooms. ▪ Water will be unsuitable for contact activities. |

Coastal bathing water is not Excellent quality

- ▶ The sea water at the beach you would be most likely to visit meets Good rather than Excellent quality standards, as defined by the government ⓘ
- ▶ This is due to the quality of treated wastewater entering the water nearby
- ▶ You could still swim in the sea, but there would be a small increase in the chance that you might get ill if you swallowed some water



Water not Excellent

ⓘ button show card:

| Bathing water quality level | Definition |
|-----------------------------|--|
| Excellent | The highest standard which means the bathing water is consistently very clean, with less than a 3%, or 3 in 100, chance of a stomach upset. |
| Good | Between 'Sufficient' and 'Excellent'. This means there is between a 3% and a 5% chance of a stomach upset. |
| Sufficient | The minimum standard required for bathing water which means there is between a 5% and an 8% chance of a stomach upset. |

Coastal bathing water is neither Excellent nor Good quality

- ▶ The sea water at the beach you would be most likely to visit meets Sufficient rather than Good or Excellent quality standards, as defined by the government ⓘ
- ▶ This is due to the quality of treated wastewater entering the water nearby
- ▶ You could still swim in the sea, but there would be a small increase in the chance that you might get ill if you swallowed some water



Water not Excellent

ⓘ button show card:

(Same as for previous bathing water quality card)

