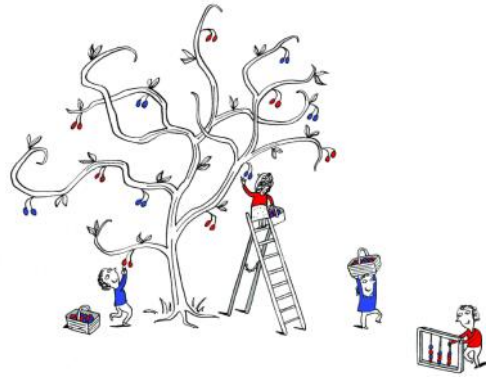
Accent

Dŵr Cymru
Welsh Water



Measure of Success

Quantitative findings (version 3)

Rachel Risely
Tel +44 (0)20 8742 2211
Rachel.risely@accent-mr.com
November 2017
3082 menu based HH main pres_v03

DCWW Customer engagement

Background	As part of DCWW Customer Engagement Programme for PR19, there is a requirement to ensure a comprehensive understanding of customer views on the performance measures
Core Objective	Explore customer valuations across a range of measures within context of a) impact on bills of improved performance, b) historical performance levels achieved, c) comparisons with other companies' performance and d) allow for trading off of improvements across measures within a fixed bill profile
Desired Outcome	Insight should help DCWW decide the performance targets for the PR19 Measures of Success (MOS)

Innovative customer engagement programme required

Accent

1 Research background

Quantitative Approach

Quantification via
1,013 HH and 300 NHH surveys
Online and CATI

HH Sample: weighting applied to SEG, age and gender variables (Census 2011 data)

NHH Sample: weighting applied to number of employees (Business Population Estimates for Wales in 2016 published by BEIS)

- Survey designed around a menu exercise :

	Option A	Option B	Option C	Cost
Drinking water acceptability *(Contacts per 1,000 population)*	✓ 2.3	○ 2	○ 1.6	No change to your bill
Drinking water availability *(Average minutes lost)*	○ 12.2	✓ 10	○ 7	+£5.00
Leakage *(Litres/property/day)*	✓ 121	○ 117	○ 114	No change to your bill
Preventing pollution *(Number of cat 3 incidents)*	○ 103	✓ 90	○ 70	+£2.50
River water improvements *(km improved)*	✓ 0	○ 150	○ 225	No change to your bill
Sewage in the home *(Properties)*	○ 225	✓ 200	○ 180	+£0.25
Sewage in the street *(Properties)*	✓ 6,500	○ 6,300	○ 6,100	No change to your bill
Worst served customers - low pressure *(Properties)*	○ 35	○ 10	✓ 0	+£0.35
Worst served customers - interruptions to supply *(Properties)*	○ 1,400	○ 1,000	✓ 800	+£6.00
Worst served customers - sewer flooding *(Properties)*	✓ 1,648	○ 1,250	○ 1,000	No change to your bill
Help for customers experiencing financial hardship *(No. of customers on social tariffs)*	○ 100,000	✓ 150,000	○ 200,000	+£8.00
Longer term protection of wastewater networks to storms *(Roof equivalents)*	○ 25,000	✓ 40,000	○ 60,000	+£3.03
Reducing fossil fuel dependency *(% of total energy use)*	✓ 30%	○ 35%	○ 40%	No change to your bill
Protecting your service in extreme events *(% Resilience)*	✓ 84%	○ 87%	○ 90%	No change to your bill

Water Bill

Your choices result in total bill change of **+£25.13** (This would take your bill from £500 to £525.13)

- Providing an observed rank of desirability for each service level for comparison with predicted rank derived from the main WTP results in conjunction with the bill impact associated with delivery of each service level

Accent

More HH customers feel bill level is too much compared with WTP and WRMP samples (44% here; 31% WTP; 31% WRMP)

Household

Feeling about amount paid	MoS	WTP	WRMP
Far too little	0%	0%	0%
Too little	1%	2%	3%
About right	51%	64%	65%
Slightly too much	28%	21%	23%
Far too much	16%	10%	8%
Don't know	4%	2%	2%

*** Weighted data**

Base: MoS=1,013; WTP=1,000; WRMP=400

Non Household

Feeling about amount paid	MoS	WTP	WRMP
Far too little	0%	0%	0%
Too little	0%	1%	1%
About right	67%	67%	70%
Slightly too much	16%	15%	16%
Far too much	7%	7%	8%
Don't know	10%	10%	5%

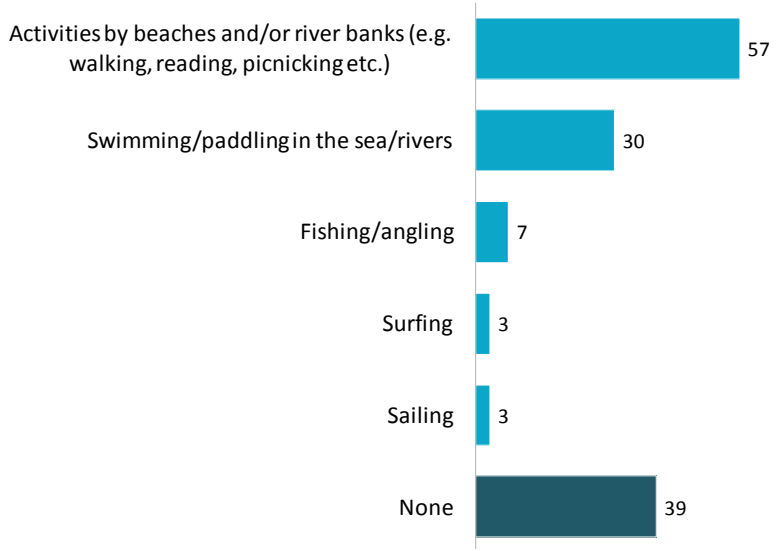
*** Weighted data**

Base: MoS=300; WTP=500; WRMP=300

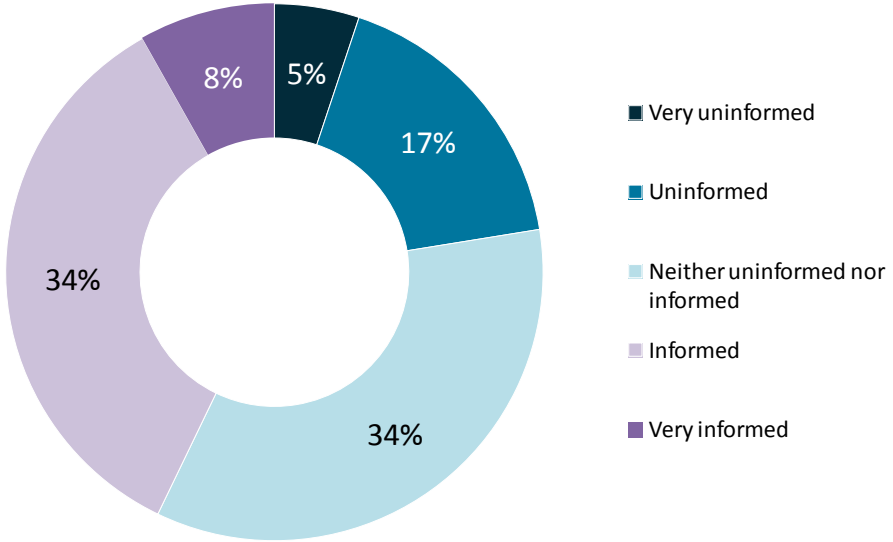
- The amount of people from SEG groups AB and C1/C2 who think their bill size is about right is significantly higher than SEG groups D and E.
- Younger participants (under 35) are significantly more likely to perceive their bill as slightly too high compared to participants over 65.

The most common leisure activities were beach/river bank based
Just over two in five considered themselves informed about the environment

Do you take part in any of the following leisure activities?



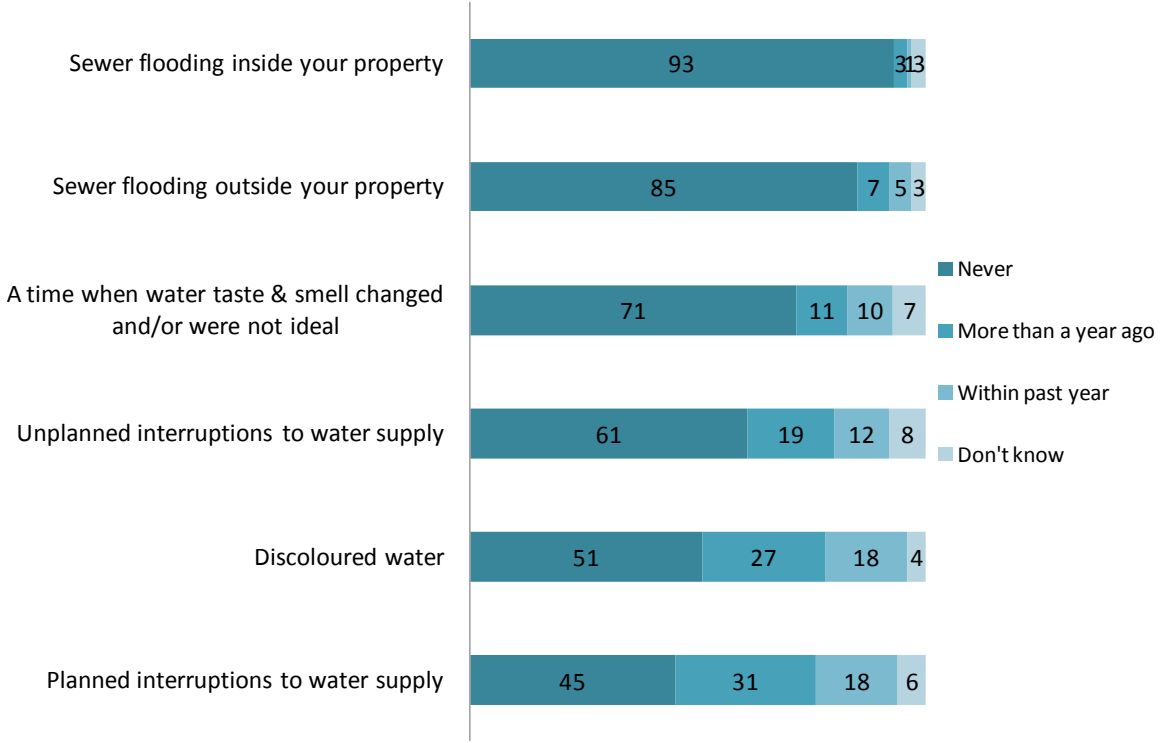
How informed do you feel about the quality of the environment?



Base: All household interviews (1,013)

Less than one in five had experienced a problem in the past year – planned interruptions and discoloured water most common

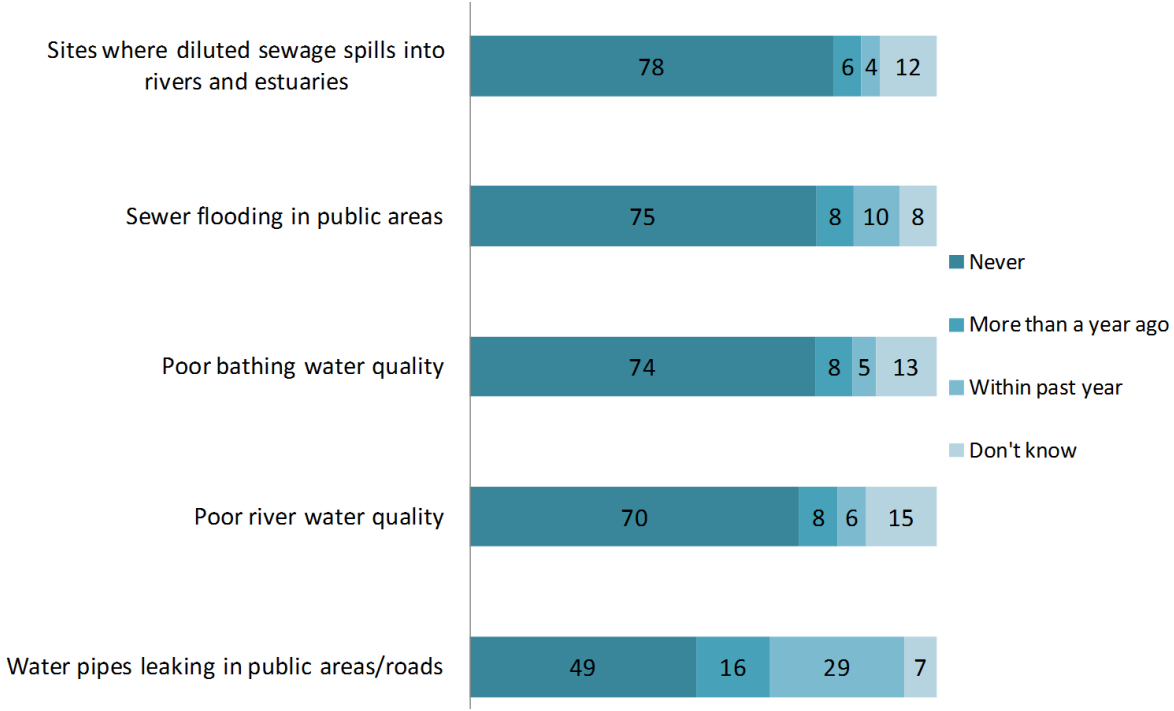
To your knowledge, have you or any of your relatives or friends experienced any of these problems at home or place of work?



Base: All household interviews (1,013)

Leaking pipes was the most common issue participants had been aware of relatives/friends experiencing

And to your knowledge, have you or any of your relatives or close friends experienced, noticed or been aware of any of the following problems in the past year or more than a year ago?



Base: All household interviews (1,013)

Qualitative summary – overview of measures

From the measures explored in the deliberative events there is some appetite for further improvements for some measures

Invest ++
Sewage in the home
Help for disadvantaged

Invest +
Leakage
Preventing pollution
River water improvements
Worst served – sewage in the home
Reducing fossil fuel dependency
Resilience of wastewater networks to storms

Stay the same
Drinking water acceptability
Drinking water availability
Sewage in the street
Worst served – low pressure
Worst served – interruptions to supply

Asset health (sewers), bill collection and customer service seen as very important
Asset health (mains burst), education/recreation seen as important

Attributes and levels

Attribute	Unit	Base	+1	+2
Drinking water acceptability	Contacts per 1,000 population	2.3	2	1.6
Drinking water availability	Average minutes lost	12.2	10	7
Leakage	litres/property/day	121	117	114
Preventing pollution	#incidents(Cat 3)	103	90	70
River water improvements	km improved	0	150	225
Sewage in the home	Properties	225	200	180
Sewage in the street	Properties	6500	6300	6100
Worst served customers - low pressure	Properties	35	10	0
Worst served customers - interruptions to supply	Properties	1400	1000	800
Worst served customers - sewer flooding	Properties	1648	1250	1000
Help for disadvantaged customers	No. customers on social tariffs	100,000	150,000	200,000
Resilience of wastewater networks to storms	Roof equivalents	25000	40000	60000
Reducing fossil fuel dependency	% of total energy use	30%	35%	40%
Protecting your service in extreme events	% Resilience	84%	87%	90%

Main choice format

	Option A	Option B	Option C	Cost
Drinking water acceptability *(Contacts per 1,000 population)*	✓ 2.3	○ 2	○ 1.6	No change to your bill
Drinking water availability *(Average minutes lost)*	○ 12.2	✓ 10	○ 7	+£5.00
Leakage *(Litres/property/day)*	✓ 121	○ 117	○ 114	No change to your bill
Preventing pollution *(Number of cat 3 incidents)*	○ 103	✓ 90	○ 70	+£2.50
River water improvements *(km improved)*	✓ 0	○ 150	○ 225	No change to your bill
Sewage in the home *(Properties)*	○ 225	✓ 200	○ 180	+£0.25
Sewage in the street *(Properties)*	✓ 6,500	○ 6,300	○ 6,100	No change to your bill
Worst served customers - low pressure *(Properties)*	○ 35	○ 10	✓ 0	+£0.35
Worst served customers - interruptions to supply *(Properties)*	○ 1,400	○ 1,000	✓ 800	+£6.00
Worst served customers - sewer flooding *(Properties)*	✓ 1,648	○ 1,250	○ 1,000	No change to your bill
Help for customers experiencing financial hardship *(No. of customers on social tariffs)*	○ 100,000	✓ 150,000	○ 200,000	+£8.00
Longer term protection of wastewater networks to storms *(Roof equivalents)*	○ 25,000	✓ 40,000	○ 60,000	+£3.03
Reducing fossil fuel dependency *(% of total energy use)*	✓ 30%	○ 35%	○ 40%	No change to your bill
Protecting your service in extreme events *(% Resilience)*	✓ 84%	○ 87%	○ 90%	No change to your bill

Your choices result in total bill change of **+£25.13** (This would take your bill from £500 to £525.13)

Accent

Costs (£/hh/yr)

Attribute	+1	+2
Drinking water acceptability	£6.00	£16.00
Drinking water availability	£5.00	£10.00
Leakage	£0.66	£1.10
Preventing pollution	£2.50	£7.50
River water improvements	£2.50	£3.75
Sewage in the home	£0.25	£0.45
Sewage in the street	£1.00	£2.00
Worst served customers - low pressure	£0.25	£0.35
Worst served customers - interruptions to supply	£4.00	£6.00
Worst served customers - sewer flooding	£3.98	£6.48
Help for customers experiencing financial hardship	£8.00	£17.00
Longer term protection of wastewater networks to storms	£3.03	£7.06
Reducing fossil fuel dependency	£1.25	£2.50
Protecting your service in extreme events	£1.25	£3.75

Pilot summary – £11.19 overall bill impact

	Option A	Option B	Option C	None	Cost
Drinking water acceptability *(Contacts per 1,000 population)*	☑ 2.3	☐ 2	☐ 1.6	☐	No change to your bill
Drinking water availability *(Average minutes lost)*	☑ 12.2	☐ 10	☐ 7	☐	No change to your bill
Leakage *(Litres/property/day)*	☐ 121	☑ 117	☐ 114	☐	+£0.66 every year for 5 years
Preventing pollution *(Number of cat 3 incidents)*	☐ 103	☑ 90	☐ 70	☐	+£2.5 every year for 5 years
River water improvements *(km improved)*	☐ 0	☑ 150	☐ 225	☐	+£2.5 every year for 5 years
Sewage in the home *(Properties)*	☐ 225	☐ 200	☑ 180	☐	+£0.45 every year for 5 years
Sewage in the street *(Properties)*	☐ 6500	☑ 6300	☐ 6100	☐	+£1 every year for 5 years
Worst served customers - low pressure *(Properties)*	☑ 35	☐ 10	☐ 0	☐	No change to your bill
Worst served customers - interruptions to supply *(Properties)*	☑ 1400	☐ 1000	☐ 800	☐	No change to your bill
Worst served customers - sewer flooding *(Properties)*	☑ 1648	☐ 1250	☐ 1000	☐	No change to your bill
Help for disadvantaged customers *(No. customers on social tariffs)*	☐ 100,000	☐ 150,000	☑ 200,000	☐	+£0.33 every year for 5 years
Resilience of wastewater networks to storms *(Roof equivalents)*	☑ 25000	☐ 40000	☐ 60000	☐	No change to your bill
Reducing fossil fuel dependency *(% of total energy use)*	☐ 30%	☐ 35%	☑ 40%	☐	+£2.5 every year for 5 years
Protecting your service in extreme events *(% Resilience)*	☐ 84%	☑ 87%	☐ 90%	☐	+£1.25 every year for 5 years

Your choices result in total bill change of **+£11.19** (This would take your bill from £520 to £531.19)

Accent

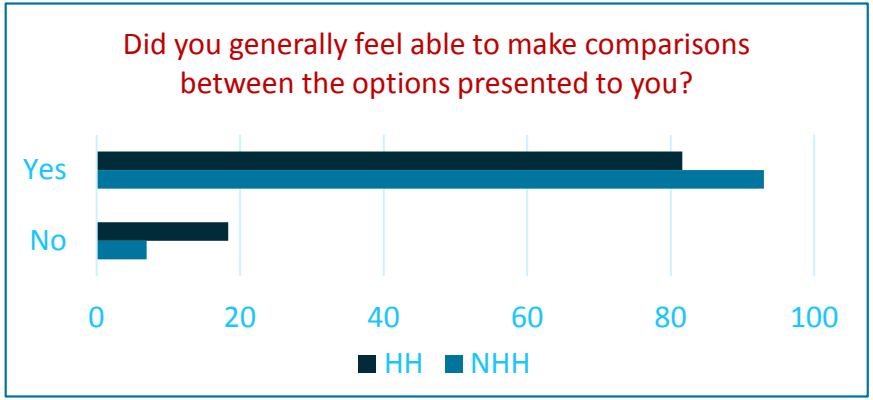
Overall summary – Zero bill impact chosen

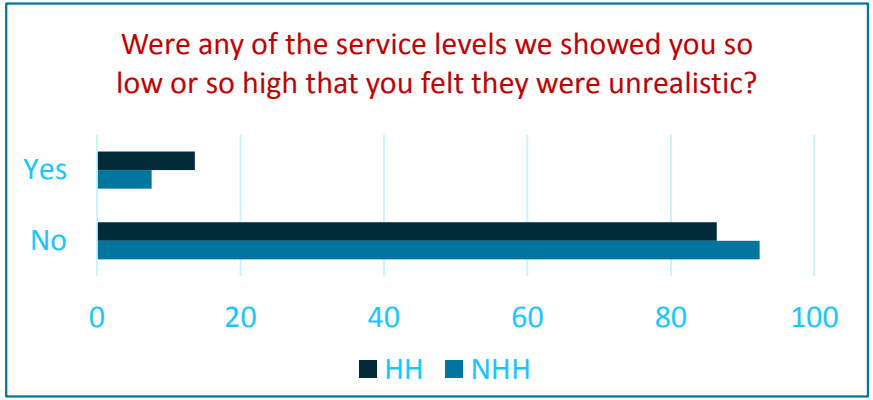
	Option A	Option B	Option C	Cost
Drinking water acceptability *(Contacts per 1,000 population)*	2.3	2	1.6	No change to your bill
Drinking water availability *(Average minutes lost)*	12.2	10	7	No change to your bill
Leakage *(Litres/property/day)*	121	117	114	No change to your bill
Preventing pollution *(Number of cat 3 incidents)*	103	90	70	No change to your bill
River water improvements *(km improved)*	0	150	225	No change to your bill
Sewage in the home *(Properties)*	225	200	180	No change to your bill
Sewage in the street *(Properties)*	6,500	6,300	6,100	No change to your bill
Worst served customers - low pressure *(Properties)*	35	10	0	No change to your bill
Worst served customers - interruptions to supply *(Properties)*	1,400	1,000	800	No change to your bill
Worst served customers - sewer flooding *(Properties)*	1,648	1,250	1,000	No change to your bill
Help for customers experiencing financial hardship *(No. of customers on social tariffs)*	100,000	150,000	200,000	No change to your bill
Longer term protection of wastewater networks to storms *(Roof equivalents)*	25,000	40,000	60,000	No change to your bill
Reducing fossil fuel dependency *(% of total energy use)*	30%	35%	40%	No change to your bill
Protecting your service in extreme events *(% Resilience)*	84%	87%	90%	No change to your bill

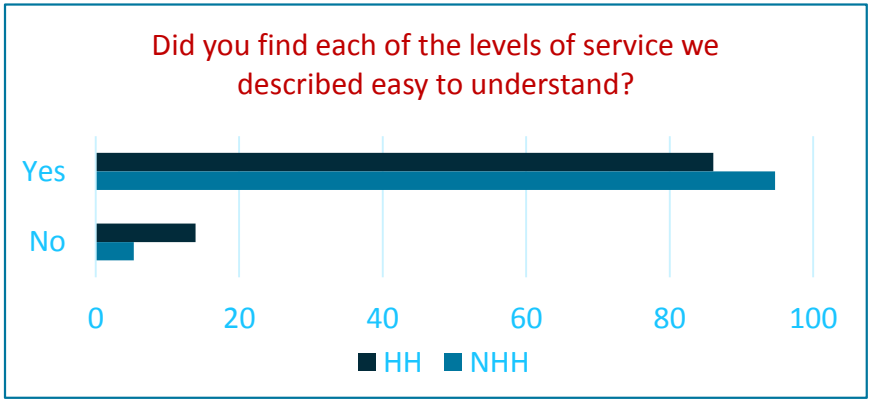
- BUT: The average bill increase chosen by respondents was £15.81 for households, and £13.75 for non-households.
  - For households:
    - £16.20 for those who thought current bill was “About right” and £14.54 for those who said “Far too much”.
    - £18.01 for AB, £16.30 for C1/C2, and £12.94 for DE.
  - For non-households:
    - £13.58 of those who thought current bill was “About right” £16.69 for those who said “Far too much”.
- In total, 31% of households and 38% of non-households chose Option A for every measure, with the remainder choosing at least one improvement.
  - For households:
    - 27% of those who thought current bill was “About right” chose Option A every time, while 44% of those who said “Far too much” did so.
    - 27% for AB, 29% for C1/C2, 42% for DE.
  - For non-households:
    - 37% of those who thought current bill was “About right” chose Option A every time, while 57% of those who said “Far too much” did so.
- Results suggest lower WTP than at pilot, but pilot respondents had spent a full day in a workshop, so would have been more engaged and better informed.

Accent

Survey performance statistics good



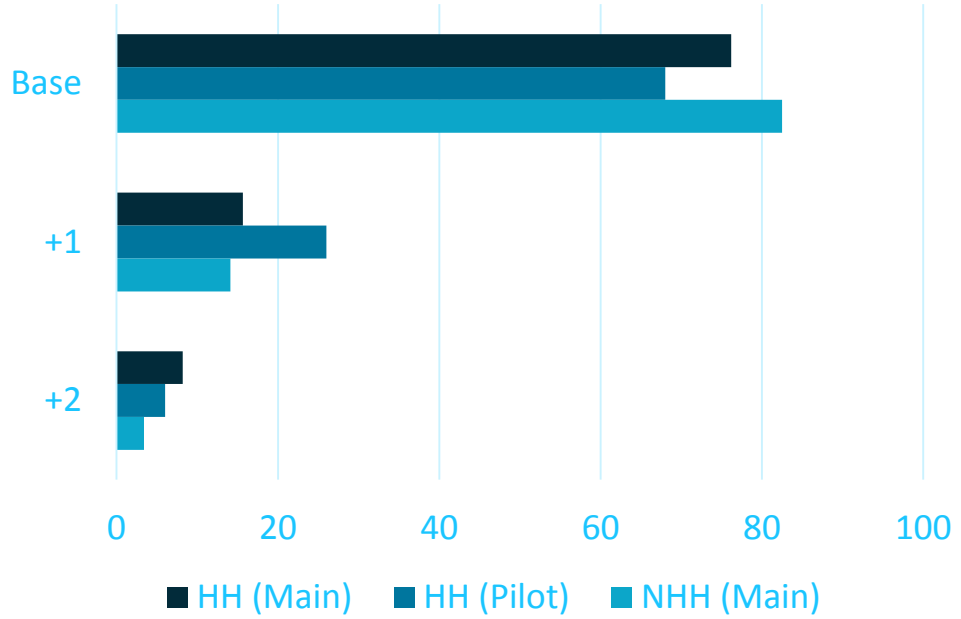




- The vast majority generally felt able to make comparisons in the SP exercises
- …and found each of the levels easy to understand.
- Very few found any levels to be unrealistically low or high.
- Mean interview length was 19min (HH) and 20min (NHH); significantly shorter than Main WTP survey (HH=36min;NHH=25min).

Accent

Drinking water acceptability

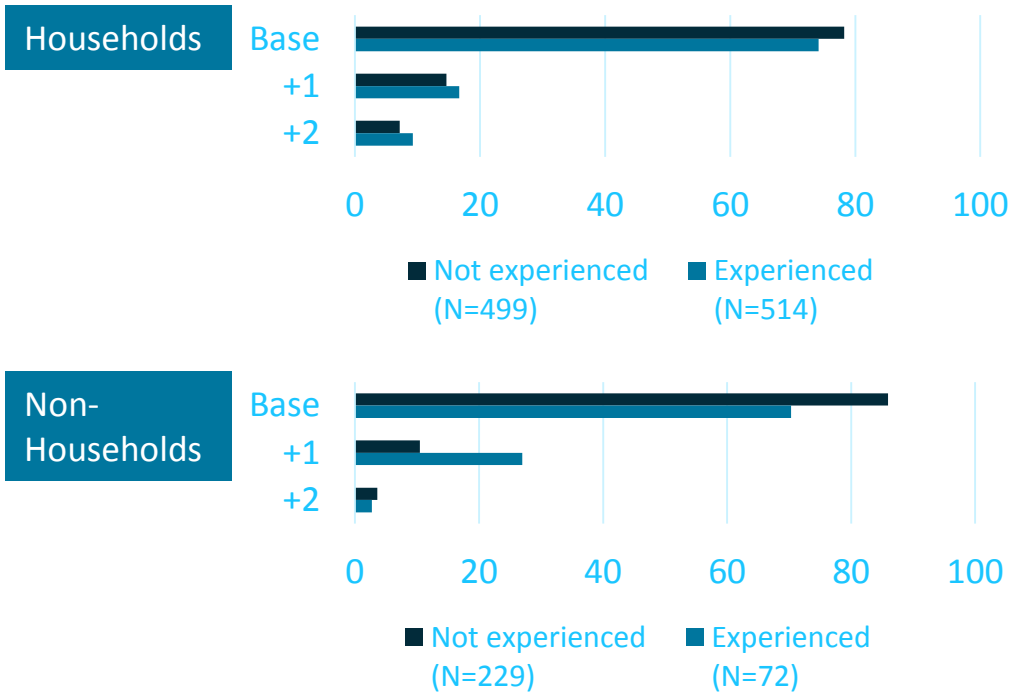


- Strong preference for Base service.
- Although not directly comparable, this result seems consistent with main WTP research which found £0.76/hh/yr for Base to +1, which is well below the cost of £6.00/hh/yr tested here.

Lower bound mean WTP for 'Base to +1': £1.43 (HH Main); £1.92 (HH Pilot) £1.05 (NHH Main)

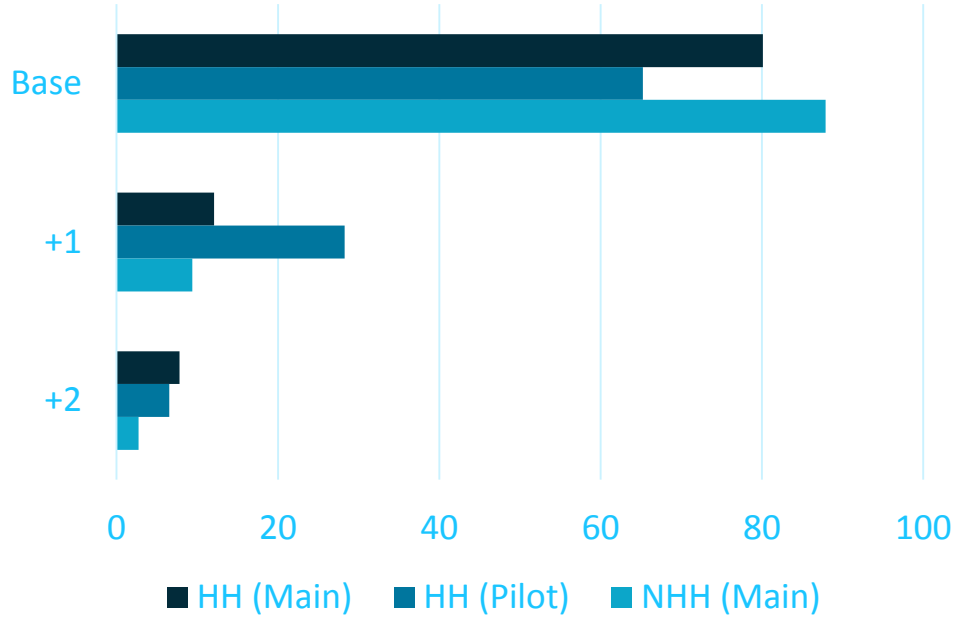
Accent

Drinking water acceptability choices, by experience



- Households slightly more likely to choose drinking water acceptability improvements if they had experienced discoloured water or taste and smell issues themselves.
- Non-households substantially more likely to choose improvements if they had experienced an issue.

Drinking water availability

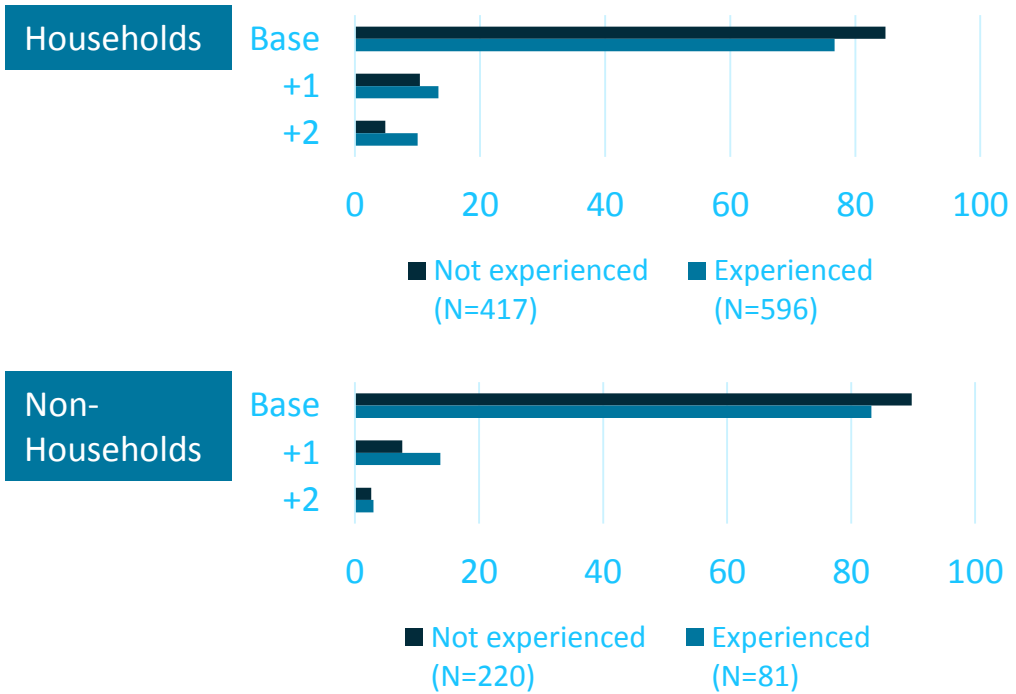


- Similarly, strong preference for Base service.
- Again, while not directly comparable, this seems consistent with main WTP research which found £4.15/hh/yr for Base to +1, which is below the cost of £5.00/hh/yr tested here.

Lower bound mean WTP for ‘Base to +1’: £0.99 (HH Main); £1.74 (HH Pilot) £0.61 (NHH Main)

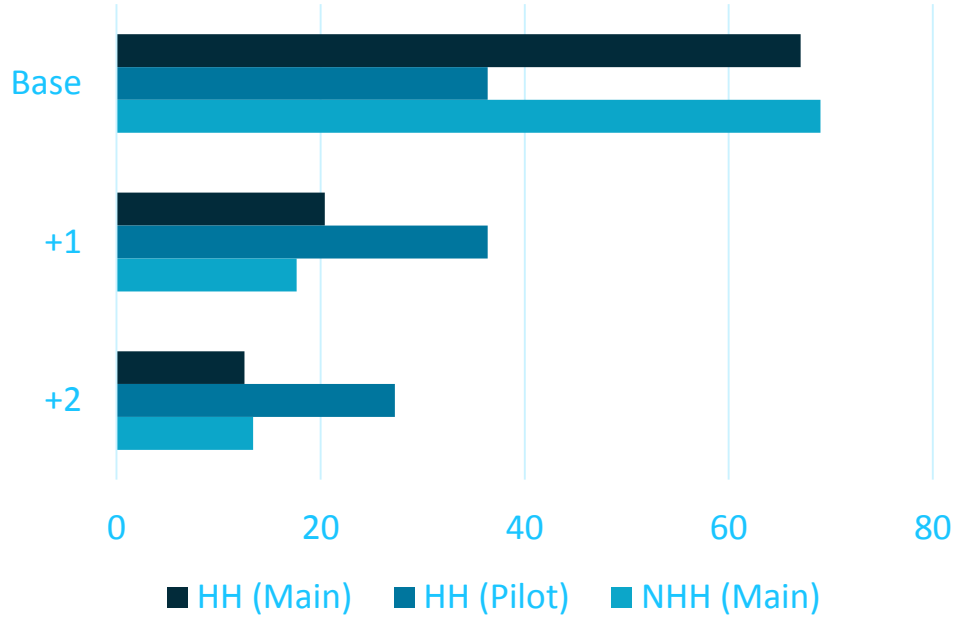
Accent

Drinking water availability choices, by experience



- Households and non-households somewhat more likely to choose drinking water availability improvements if they had experienced a planned or unplanned interruption themselves.

Leakage

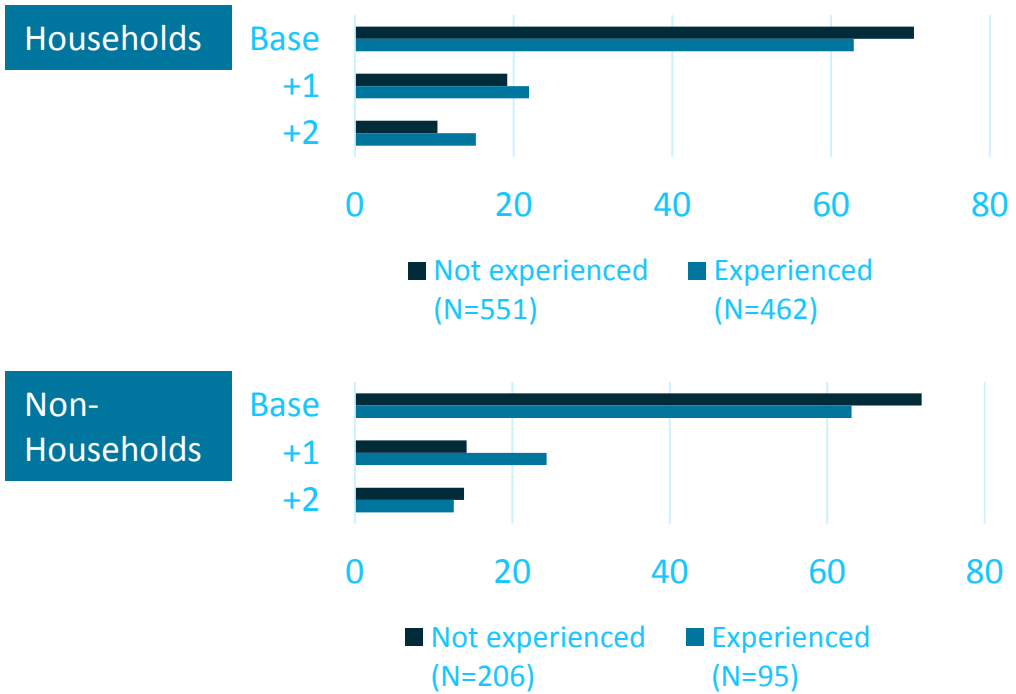


- Again, a strong preference for Base service.
- This was not tested in the main WTP research, but the Water resources SP research found very high WTP for leakage reduction so this result appears to be in conflict.
- However, the attribute was described differently in each case, and the reduction was larger in WRMP survey.

Lower bound mean WTP for ‘Base to +1’: £0.22 (HH Main); £0.42 (HH Pilot) £0.21 (NHH Main)

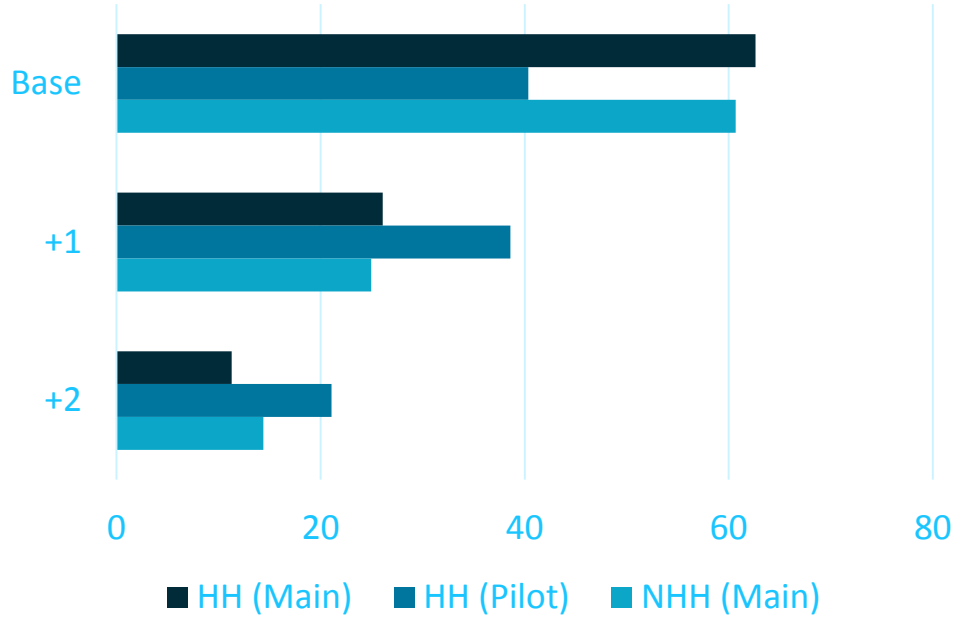
Accent

Leakage choices, by experience



- Households and non-households more likely to choose leakage improvements if they had experienced water pipes leaking in public areas/roads themselves.

Preventing pollution

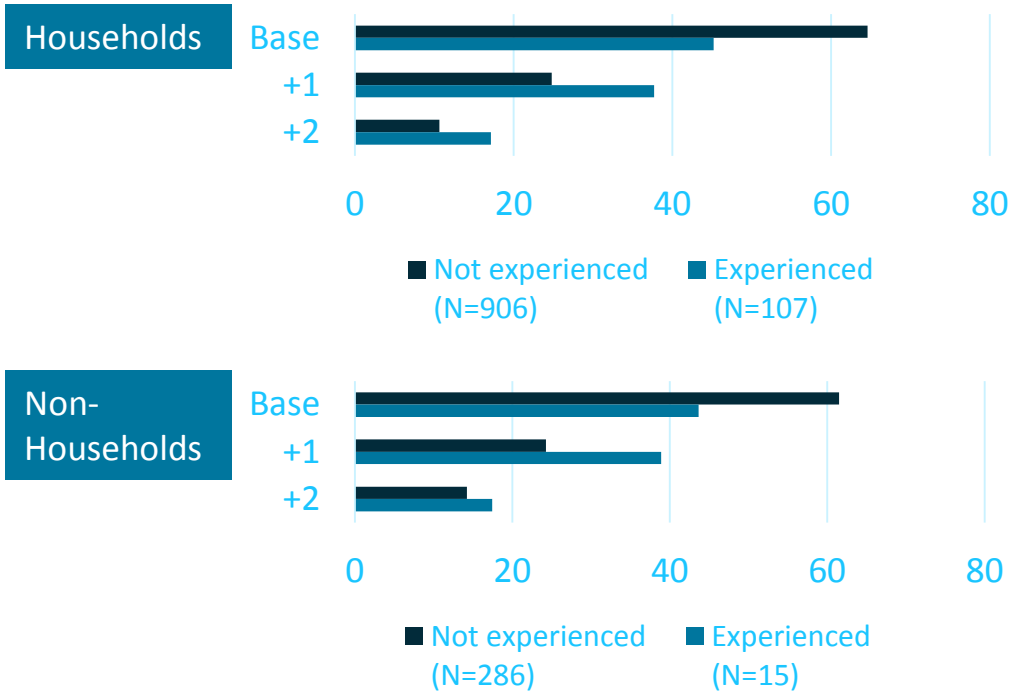


- Again, a strong preference for Base service.
- This result is consistent with the main WTP research which found £2.32/hh/yr for Base to +1, which is below the cost of £2.50/hh/yr tested here.

Lower bound mean WTP for ‘Base to +1’: £0.93 (HH Main); £1.49 (HH Pilot) £0.98 (NHH Main)

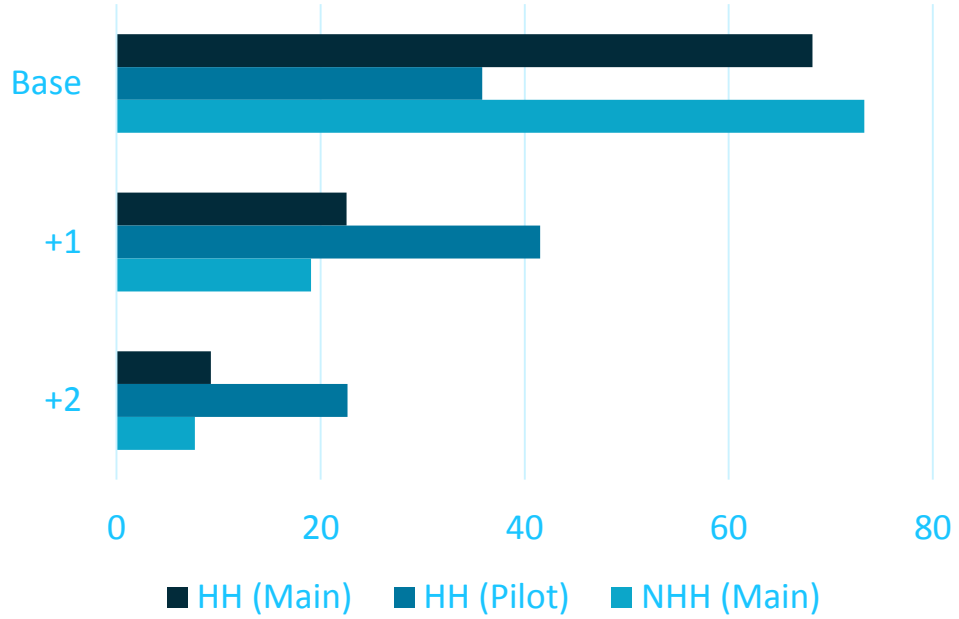
Accent

Preventing pollution choices, by experience



- Households and non-households substantially more likely to choose preventing pollution improvements if they had experienced sites where diluted sewage spills into rivers and estuaries themselves.

River water improvements

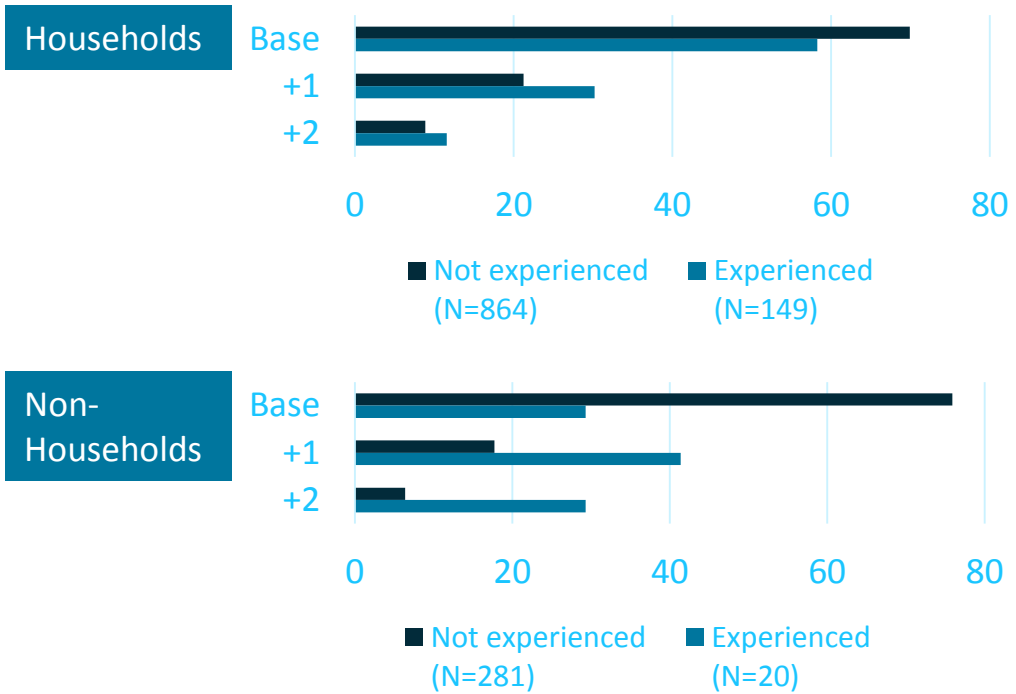


- Again, a strong preference for Base service.
- This finding appears to be in conflict with the result from the main WTP research which found £23.26/hh/yr for Base to +1, which is well above the cost of £2.50/hh/yr tested here.
- However, the attribute was described differently in each case.

Lower bound mean WTP for 'Base to +1': £0.79 (HH Main); £1.60 (HH Pilot) £0.67 (NHH Main)

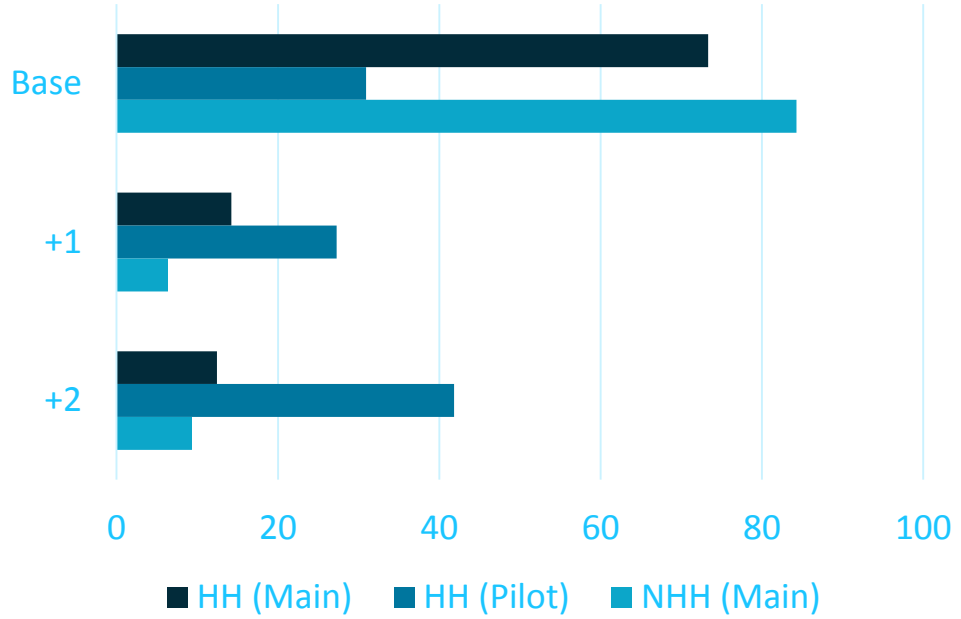
Accent

River water improvement choices, by experience



- Households somewhat more likely to choose river water improvements if they had experienced poor river water quality themselves.
- Non-households substantially more likely to choose improvements if they had experienced poor river water quality.

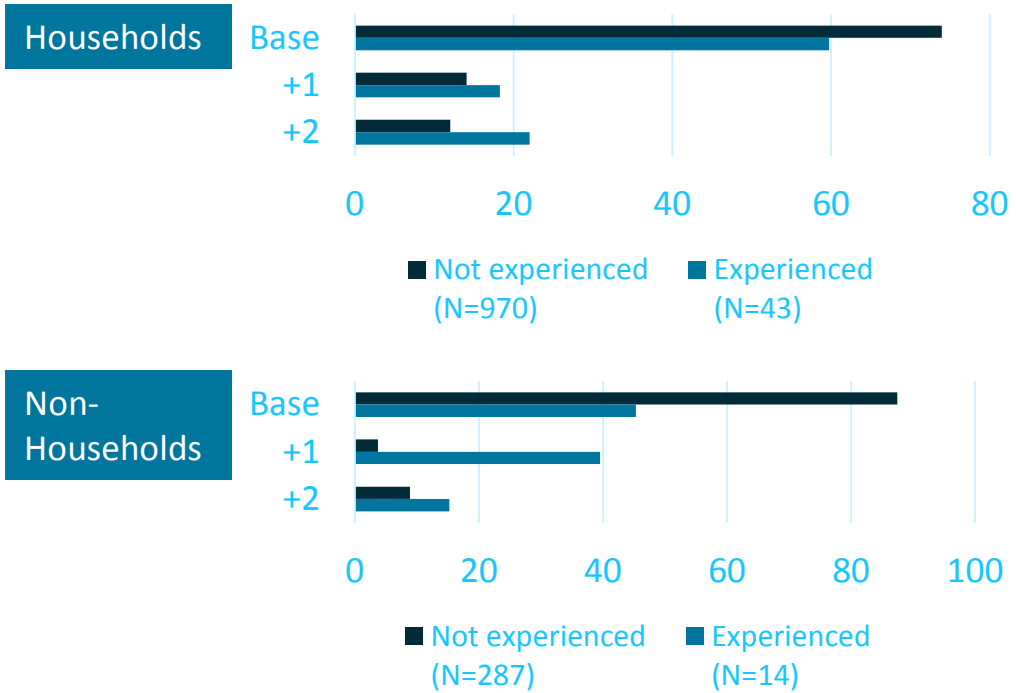
Sewage in the home



- Again, a strong preference for Base service.
- This is consistent with the main WTP research, which found £0.31/hh/yr for Base to +1, which is only just above the cost of £0.25/hh/yr tested here, while the size of the improvement was almost twice as large in the case of the main WTP research

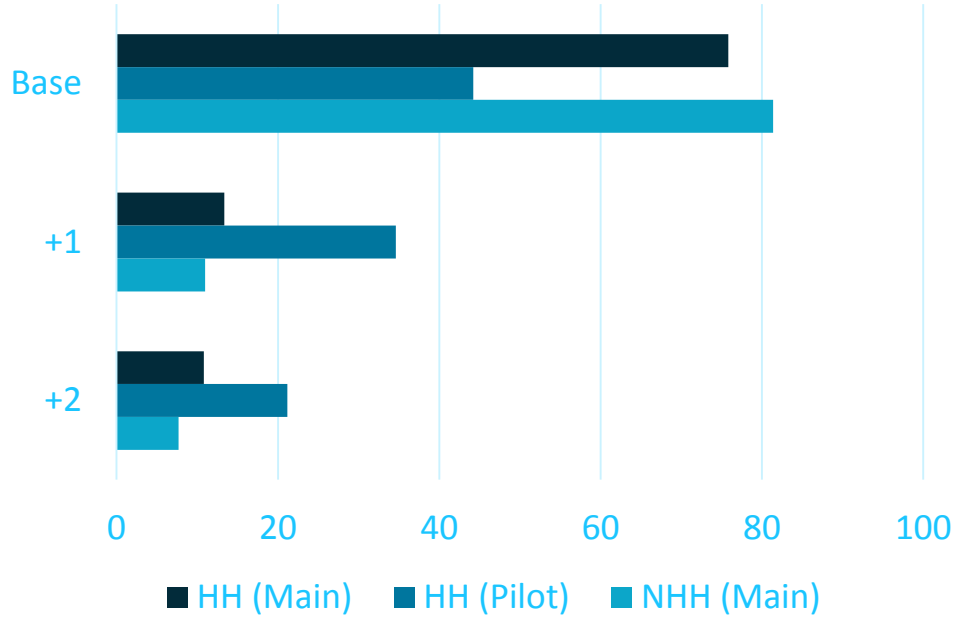
Lower bound mean WTP for 'Base to +1': £0.07 (HH Main); £0.17 (HH Pilot) £0.04 (NHH Main)

Sewage in the home choices, by experience



- Households somewhat more likely to choose sewage in the home improvements if they had experienced sewage in the home themselves.
- Non-households substantially more likely to choose improvements if they had experienced an issue.

Sewage in the street

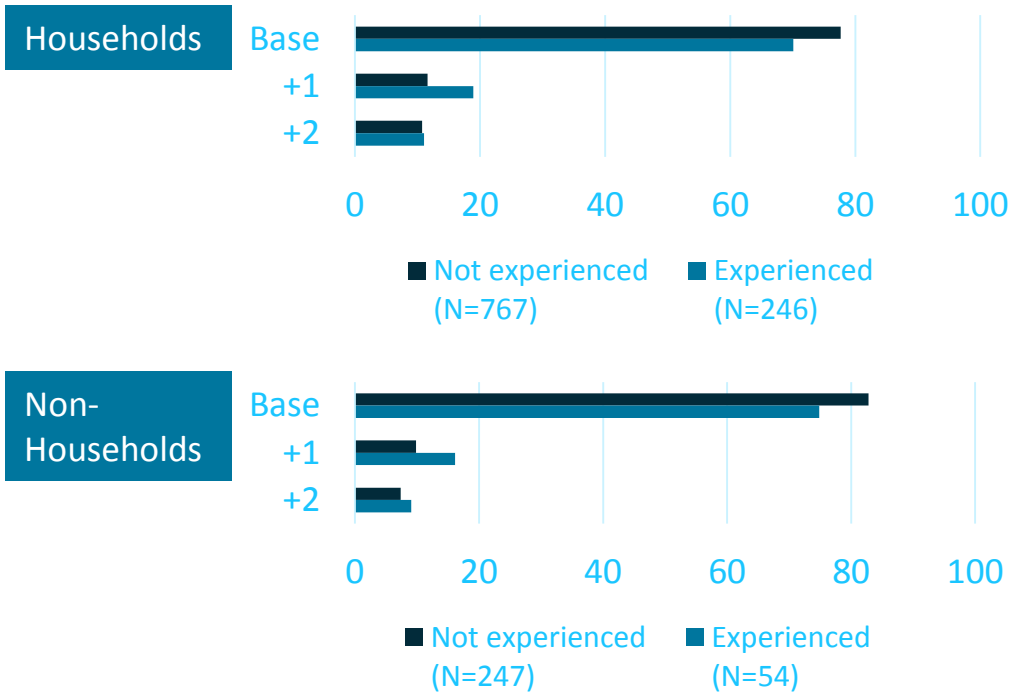


- Again, a strong preference for Base service.
- This is consistent with the main WTP research, which found WTP of £1.78/hh/yr for a Base to +1 reduction of 1,500 properties, whereas here the reduction was only 200 properties for a cost of £1.00/hh/yr.

Lower bound mean WTP for 'Base to +1': £0.24 (HH Main); £0.56 (HH Pilot) £0.19 (NHH Main)

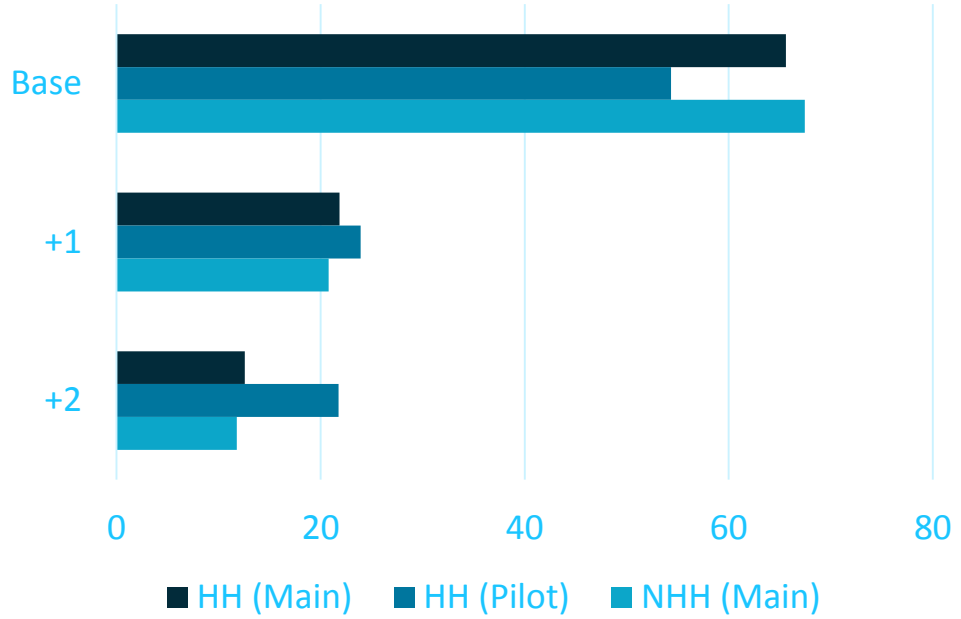
Accent

Sewage in the street choices, by experience



- Households and non-households somewhat more likely to choose sewage in the street improvements if they had experienced sewage outside their property or in a public area themselves.

Worst served customers – low pressure

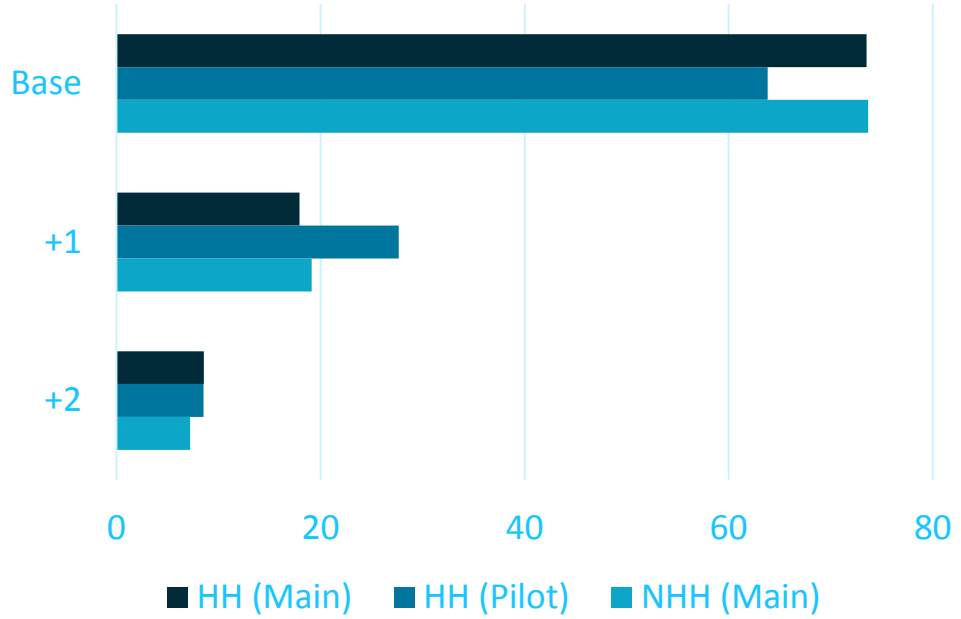


- Again, a strong preference for Base service.
- This is also consistent with the main WTP research, where WTP was £0.03/hh/yr for a reduction of 50 properties, whereas here the cost was £0.25/hh/yr for a reduction of 25 properties.

Lower bound mean WTP for 'Base to +1': £0.09 (HH Main); £0.11 (HH Pilot) £0.08 (NHH Main)

Accent

Worst served customers – interruptions to supply

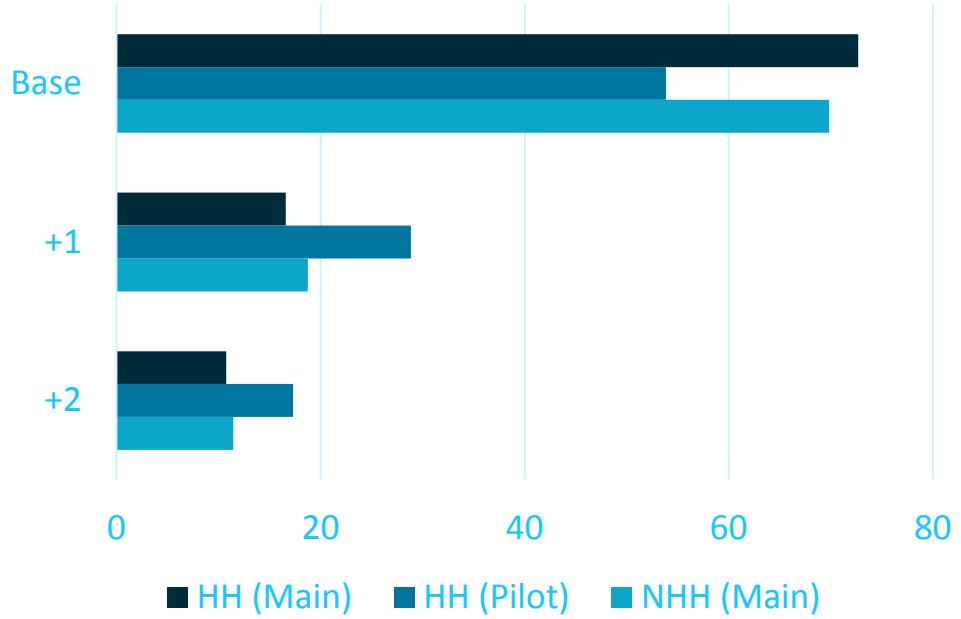


- Again, a strong preference for Base service.
- This appears consistent with the main WTP research based on the value of avoided interruptions, but the measures are not directly comparable.

Lower bound mean WTP for 'Base to +1': £1.06 (HH Main); £1.45 (HH Pilot) £1.05 (NHH Main)

Accent

Worst served customers – sewer flooding

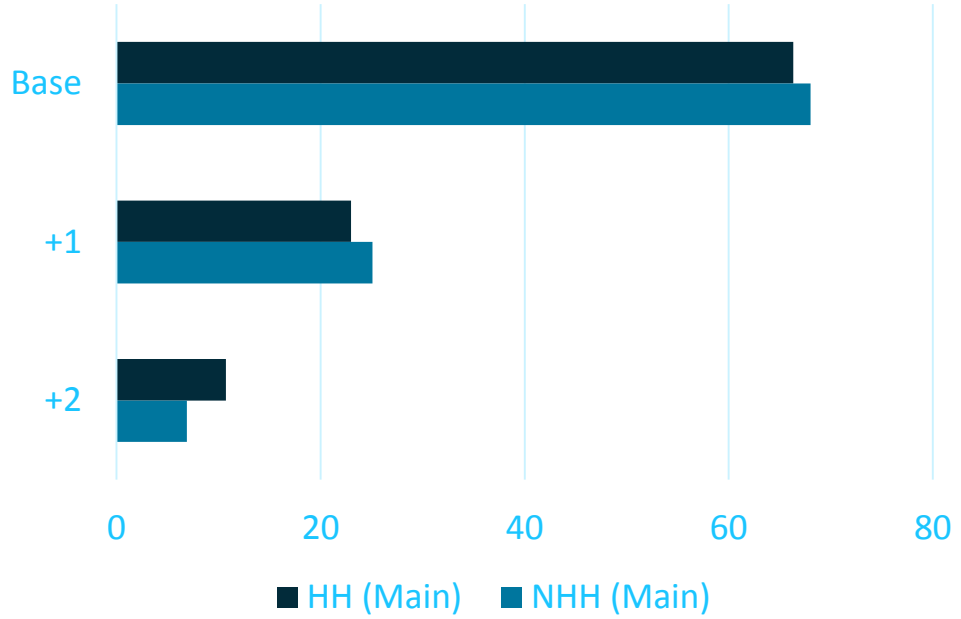


- Again, a strong preference for Base service.
- Again, this appears consistent with the main WTP research based on the value of avoided interruptions, but the measures are not directly comparable.

Lower bound mean WTP for 'Base to +1': £1.09 (HH Main); £1.84 (HH Pilot) £1.20 (NHH Main)

Accent

Help for disadvantaged customers

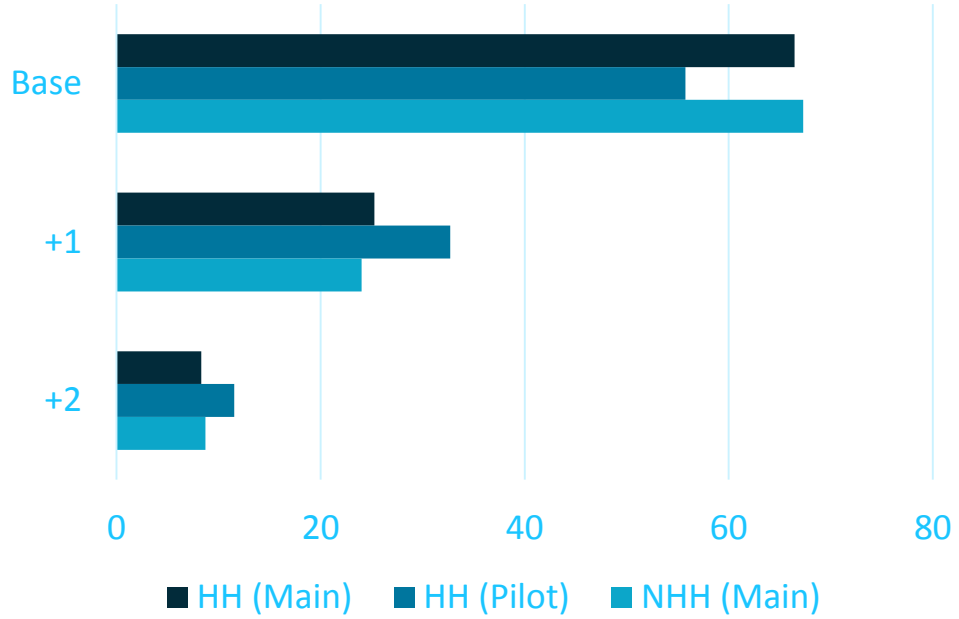


- Again, a strong preference for Base service.
- This measure was not previously explored in the WTP research.
- (NB Pilot results not shown here because the costs used in the pilot survey were substantially too low).

Lower bound mean WTP for ‘Base to +1’: £2.70 (HH Main); £2.56 (NHH Main)

Accent

Resilience of wastewater networks to storms

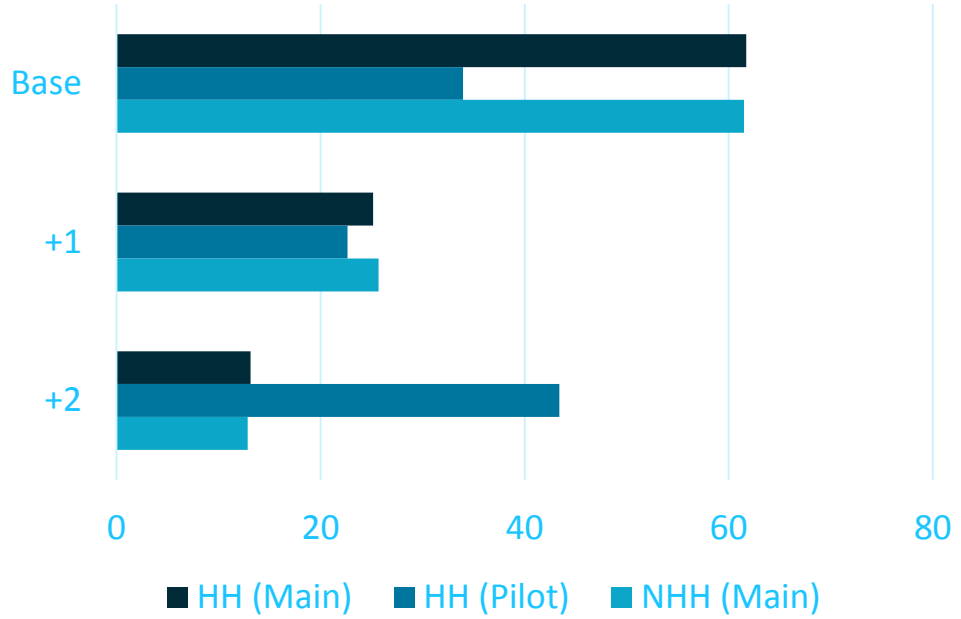


- Again, a strong preference for Base service.
- And again, this measure was not previously explored in the WTP research.

Lower bound mean WTP for ‘Base to +1’: £1.02 (HH Main); £1.34 (HH Pilot) £0.99 (NHH Main)

Accent

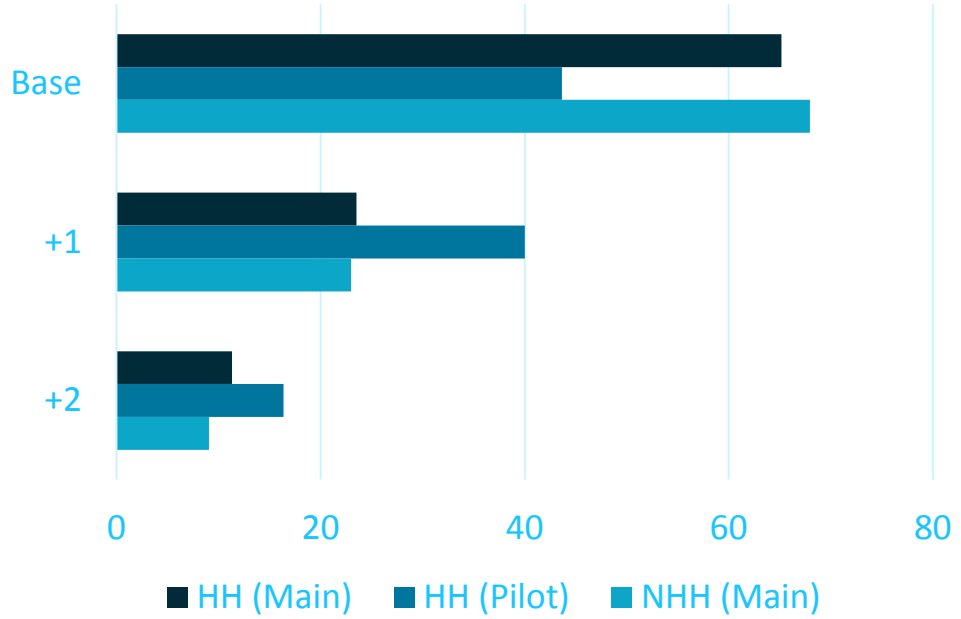
Reducing fossil fuel dependency



- Again, a strong preference for Base service.
- And again, this measure was not previously explored in the WTP research.

Lower bound mean WTP for ‘Base to +1’: £0.48 (HH Main); £0.83 (HH Pilot) £0.48 (NHH Main)

Protecting your service in extreme events



- Again, a strong preference for Base service.
- And again, this measure was not previously explored in the WTP research.

Lower bound mean WTP for ‘Base to +1’: £0.44 (HH Main); £0.70 (HH Pilot) £0.40 (NHH Main)

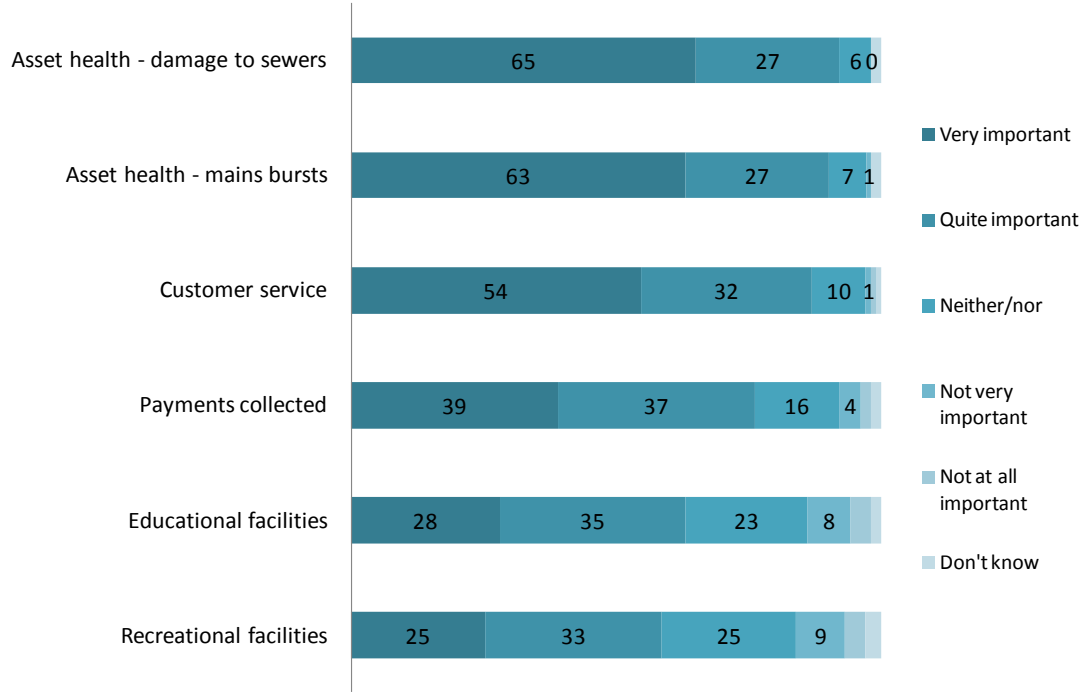
Accent

All Willingness to Pay Results (£/Year)

	HH (Main) Base to +1	+1 to +2	HH (Pilot) Base to +1	+1 to +2	NHH (Main) Base to +1	+1 to +2
Drinking water acceptability	1.43	0.82	1.92	0.60	1.05	0.34
Drinking water availability	0.99	0.39	1.74	0.33	0.61	0.14
Leakage	0.22	0.06	0.42	0.12	0.21	0.06
Preventing pollution	0.93	0.56	1.49	1.05	0.98	0.72
River water improvements	0.79	0.12	1.60	0.28	0.67	0.10
Sewage in the home	0.07	0.02	0.17	0.08	0.04	0.02
Sewage in the street	0.24	0.11	0.56	0.21	0.19	0.08
Worst served customers - low pressure	0.09	0.01	0.11	0.02	0.08	0.01
Worst served customers - interruptions to supply	1.06	0.17	1.45	0.17	1.05	0.14
Worst served customers - sewer flooding	1.09	0.27	1.84	0.43	1.20	0.29
Help for customers experiencing financial hardship	2.70	0.96	5.57	4.82	2.56	0.62
Longer term protection of wastewater networks to storms	1.02	0.33	1.34	0.47	0.99	0.35
Reducing fossil fuel dependency	0.48	0.16	0.83	0.54	0.48	0.16
Protecting your service in extreme events	0.44	0.28	0.70	0.41	0.40	0.23

Asset health and customer service are the most important additional measures tested

How important is it that Welsh Water focuses on:

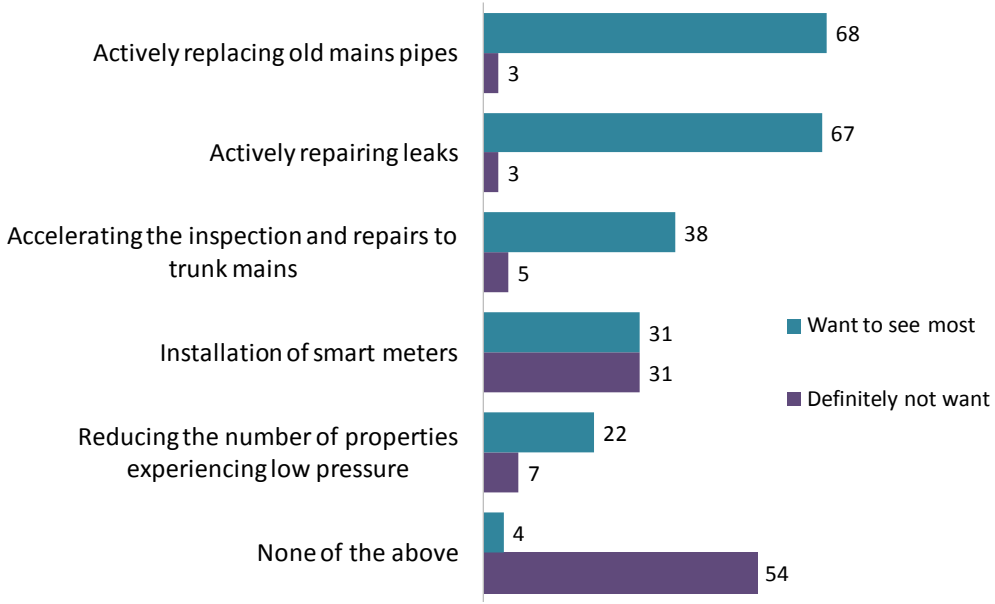


- Customer service is significantly more important to participants who are less environmentally conscious (74% vs 61% or less)
- Educational facilities are significantly more important to women than to men
- Recreational facilities are significantly more important to participants who are very environmentally conscious (46% vs 27% or less)
- Damage to sewers is significantly more important to participants older than 55 vs younger than 35

Base: All household interviews (1,013)

Replacing pipes and repairing leaks are the key priorities, with smart meters unpopular with a significant minority

Considering all the options, which, if any, would you most want to see Welsh Water put in place?
And which measures, if any, would you definitely not want to see Welsh Water implement?



- 18-24 year olds are significantly more likely to think of accelerating inspections as not to be implemented vs other age groups (28% vs 7% or less)
- Participants over 45 are significantly more likely to think smart meters needn't be implemented

Base: All household interviews (1,013)

Summary and conclusions

- For every measure, the majority of households and non-households chose to stick with the base service option, with no change to their bill.
- In comparison to pilot, results suggest lower WTP, but this is likely to be driven by the fact that the pilot respondents had also spent a full day in a workshop, so would have been more engaged and better informed.
- In most cases, the findings were consistent with those from prior WTP research.
  - However, we would have expected to see improvement options chosen based on the WTP research for River water quality and Leakage
  - Issues rated as very important by most included customer service, and the two asset health measures. Bills collected, educational and recreational facilities were rated as at least quite important by most.
- Survey performance stats were good, suggesting few problems with understanding and ability to choose. Mean interview length was also substantially shorter than main WTP survey.

Further discussion of overall WTP disparity

- WTP seems generally to be lower in MoS research, which is consistent with the fact that there was a much greater feeling that current bills are too much in this sample. Not clear why the sample has changed, or is different.

- Improvements tend to be a bit less than previously shown.

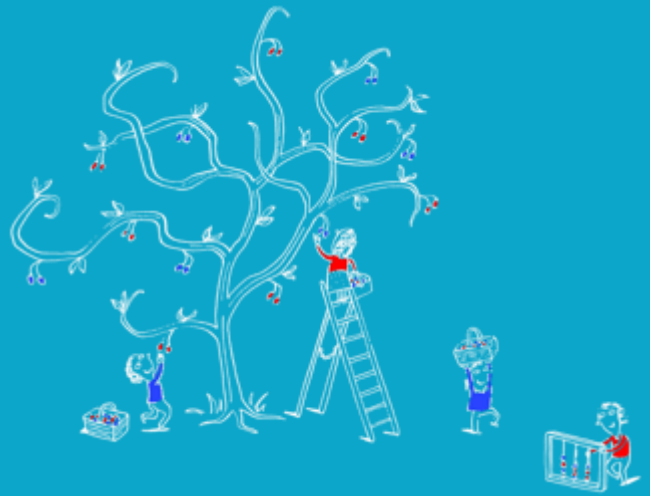
- Attributes don’t include bathing water quality, which was highly valued, (but do include leakage which was also highly valued in WRMP research.)

Further discussion of RWQ disparity

- WTP seems generally to be lower in MoS research.
- Generally, PR19-style WTP research weights value more towards environment and away from personal risk issues.
- Improvement was approx. double in WTP survey
- More detailed description of RWQ in WTP survey, including images.
- WTP survey value was possibly over-stated due to the WTP/WTA effect.
- WTP may be skewed to the right, meaning that the majority could prefer base, while a minority could have such high WTP as to lift the mean well above the median.
- Remaining gap could warrant an approach of treating the WTP survey value as an upper bound and use other evidence to triangulate, e.g. NWEBS.

Further discussion of Leakage disparity

- Leakage value seemed over-stated in WR research. Possibly because TUB value over-stated in PR19 research hence could not scale down.
- Size of improvement was almost 3* larger in WRMP survey
- Expression as a percentage might have made the reduction more meaningful, and valued by people.
- Context of WRMP research might have encouraged higher valuations (seems to have done so.)
  - ‘To cope with the effects of population growth and climate change Welsh Water must take new measures now to either increase the amount of water available, or to try and encourage customers to use less water.’
- Remaining gap could warrant an approach of treating the WTP survey value as an upper bound and use other evidence to triangulate.



Any questions please contact us

0208 742 2211