

Northumbrian Water
Water Resources Management Plan Survey report
July 2022

Online survey



- Online survey with current bill payers
- Panel survey with future customers and non-household customers

Face-to-face survey



- Face-to-face survey to reach audiences who are digitally disengaged or people who haven't been sufficiently engaged through the online survey

	Sample size	Target
Household	1740	1000
Non-Household (business customers)	99	100
Future customers (respondents aged 18-24 who live in the supply area but are not currently responsible for paying the water bill)	118	100
Overall	1957	1200

	Sample size	Target
Customers in vulnerable circumstances* (customers who are on the Priority Services Register or eligible for it, who struggle to pay the bills, who are unemployed with state benefits only) – Based off questions in our survey	428	250

	Sample size	Target
Berwick Customers*	80	N/A

*Customers in vulnerable circumstances and Berwick customers are included within the total of household respondents

- Across the report you will see a change of colour and arrows next to percentages on charts. This has been automatically applied by our survey software at the 95% significant level. If you see this, this means there is a 95% certainty that the software has determined there is a difference.
- The significance means that there is a difference between the population of that subgroup and the overall population. For example, a red arrow signifies this percentage is significantly smaller than the overall percentage. The blue arrow signifies that this percentage is significantly higher than the overall percentage.
- Whether or not an option is statistically significant depends on the sample that chooses that answer option and how big the difference is in percentage points.
- You will also come across an overall weighting category. This has been used for both of our MaxDiff questions as AB social grade was overrepresented in our survey so the results have been rebalanced by applying weighting. This ensures the influence of AB social grade in the sample is reduced and the influence of social grades that were underrepresented is increased.
- The weighting coefficients we used for the weighting are:
 - AB – 0.34
 - C1 –1.61
 - C2 –1.87
 - DE – 1.37
- For example, this means that the influence of AB social grade respondents in the sample was multiplied by a factor of 0.34 and the influence of C1 social grade respondents was multiplied by a factor of 1.87, to make the data representative of the population proportions

Key Insights

Two thirds of customers accept that all will have to pay for measures to increase water supply to Berwick but future customers are somewhat more reluctant

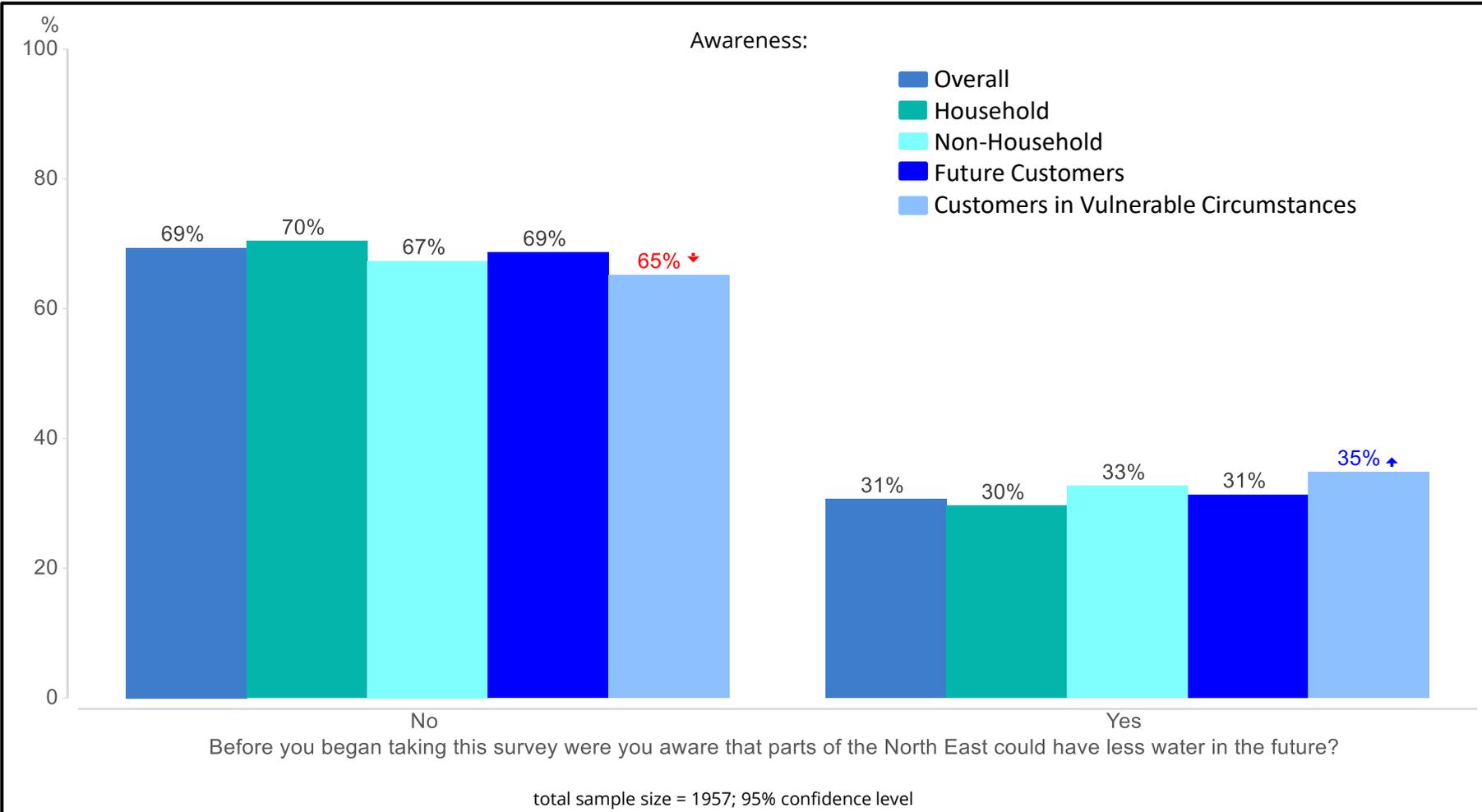
Company-side leak reduction had the highest support at all stages of the research

Pipeline solution received an equal level of support to borehole in the general question but when all options are compared in context its support increases significantly

Customer-side leak reduction follows the opposite trajectory, with higher support in isolation but falling lower down the priority list when assessed in comparison with other solutions

Abstraction receives the lowest support. In the focus groups opinions on this solution were heavily split

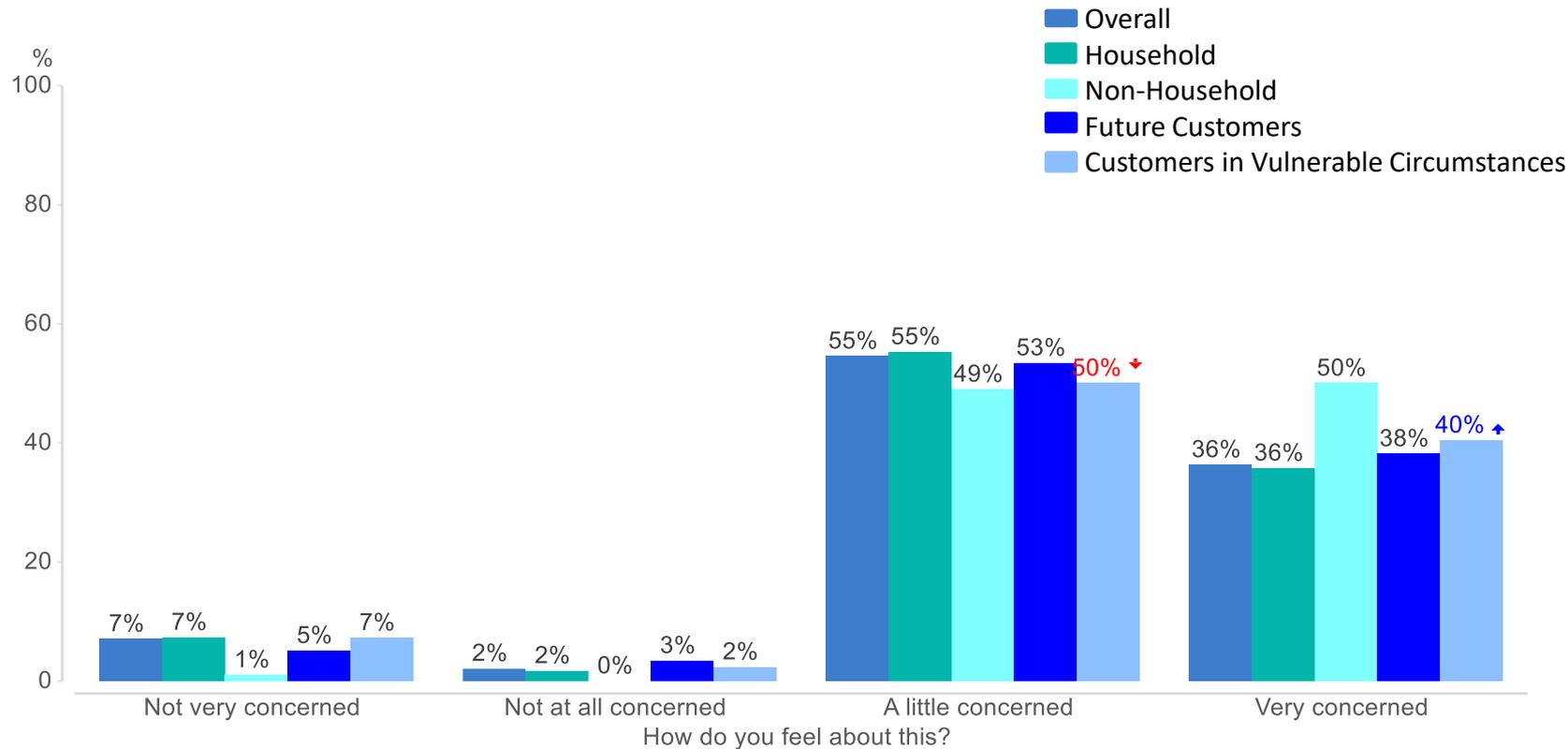
Survey results



The majority of the sample overall are not aware that the North East may have water stressed areas in the future. In the focus groups customers were surprised that there should be any deficit in the North East region due to the amount of rainfall / being next to the sea.

Customers in vulnerable circumstances seem to have a slightly higher awareness but 65% still did not know.

Level of concern:

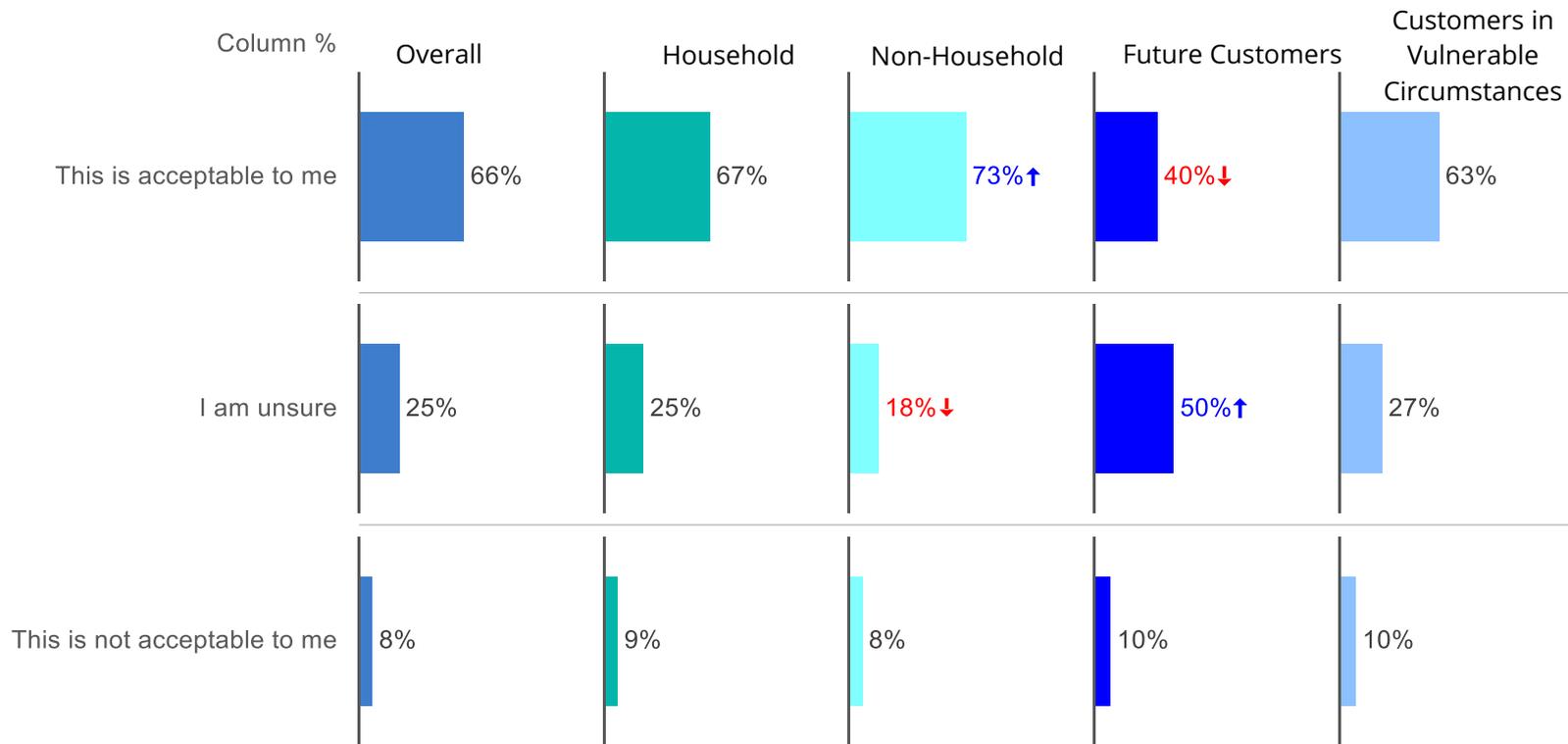


total sample size = 1957; 95% confidence level

Learning of the potential water stressed areas does cause concern with 36% being very concerned and 55% a little concerned overall. In the focus groups concerns were voiced about how this may impact on our way of life, there was a feeling of loss of control and customers were also wondering how far in advance we would all know about a deficit.

Non-Household customers have the strongest concerns (with 50% being very concerned).

Proportion who choose each option:



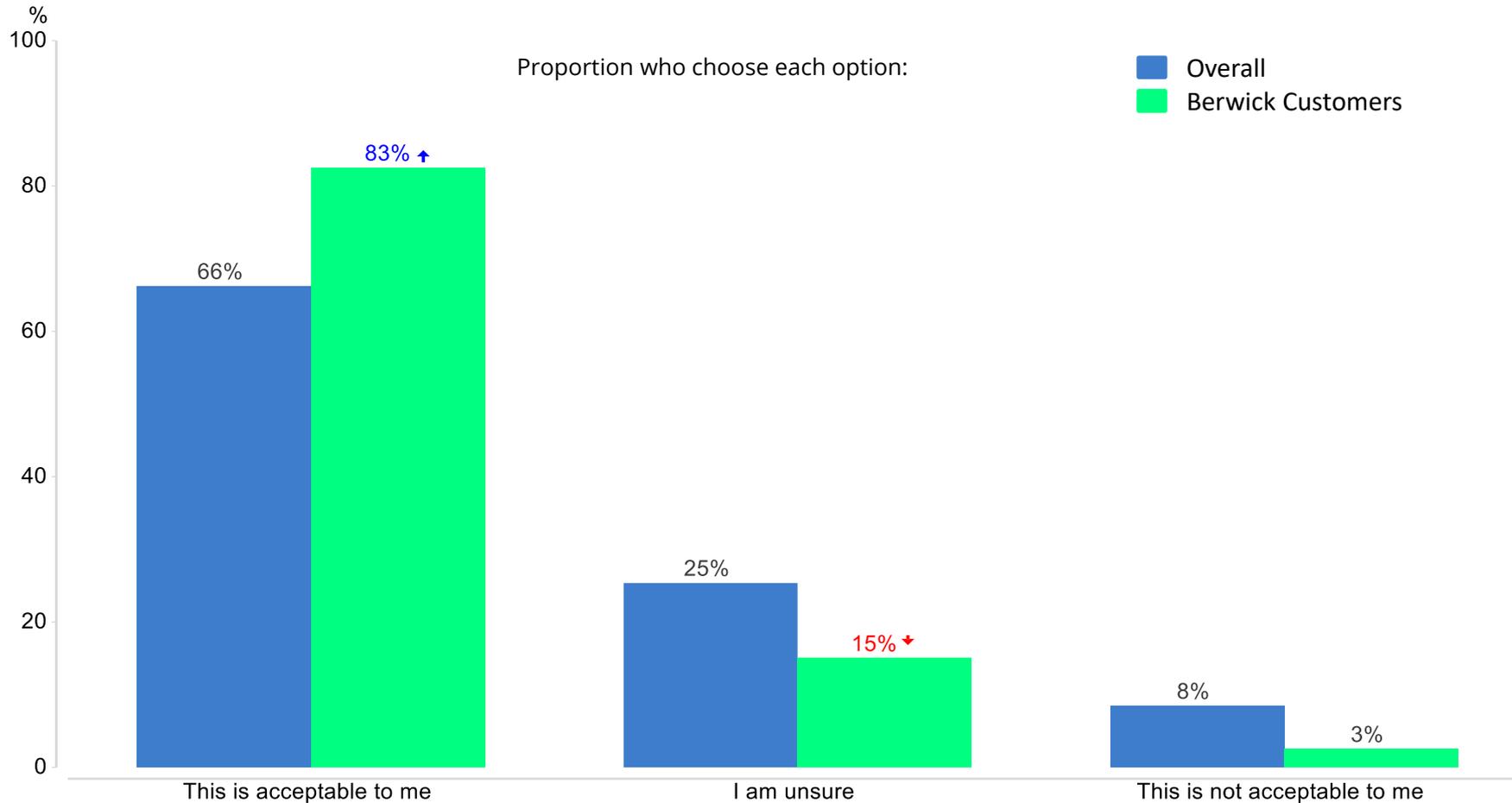
66% of the sample overall find it acceptable that the cost to provide solutions for customers in specific areas (for example Berwick) will be covered by all customers via their bills. This fits with the view expressed in the focus groups, where the vast majority of respondents were relieved the cost would be spread and there is a feeling that helping other areas may mean they will return the favour in the future.

Non-Household customers (73%) are more accepting of this whilst 50% of future customers are unsure.

Whenever Northumbrian Water invests in improving services all of its customers contribute through their bill, regardless of whether or not they will personally benefit from the improvement. For example, customers living in Berwick have contributed towards the cost of Kielder reservoir, which they do not get their water from. The options you have just seen would only increase the water supply in Berwick, but would be paid for by all Northumbrian Water customers. How do you feel about this?

total sample size = 1957; 95% confidence level

Proportion who choose each option:



66% of the sample overall find it acceptable that the cost to provide solutions for customers in Berwick will be covered by all customers via their bills.

Among customers in Berwick this proportion rose to 83%.

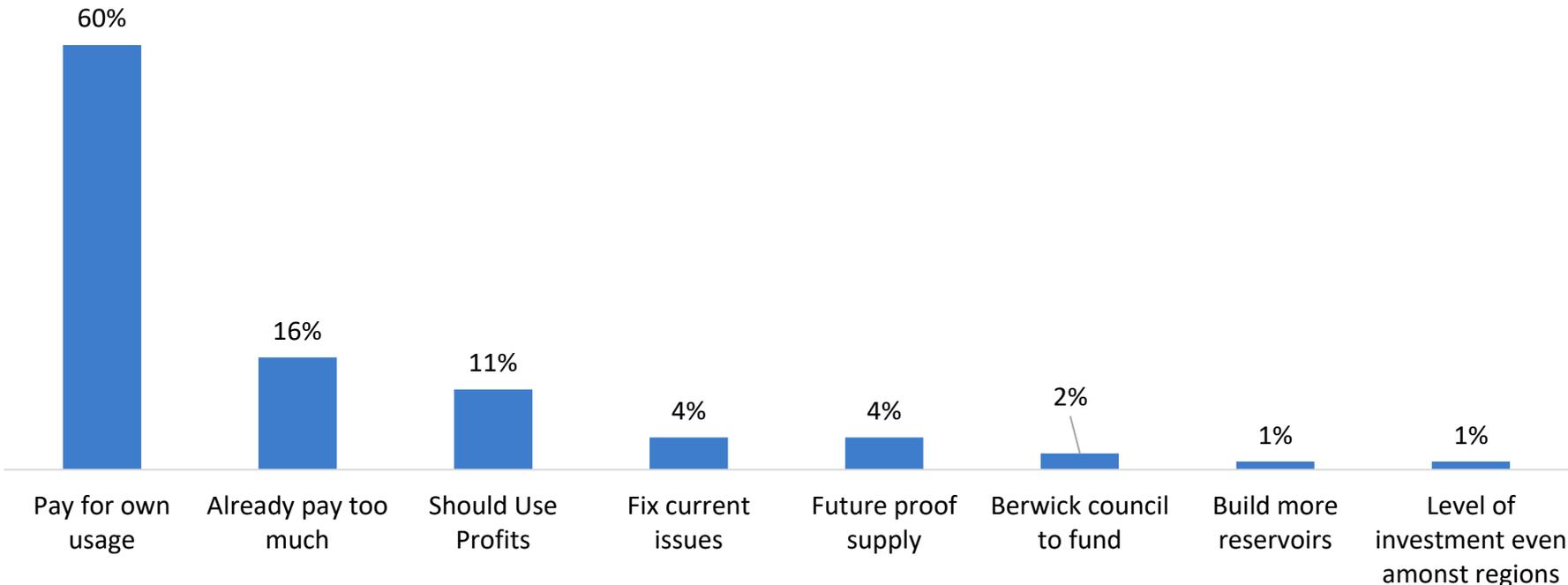
Whenever Northumbrian Water invests in improving services all of its customers contribute through their bill, regardless of whether or not they will personally benefit from the improvement. For example, customers living in Berwick have contributed towards the cost of Kielder reservoir, which they do not get their water from. The options you have just seen would only increase the water supply in Berwick, but would be paid for by all Northumbrian Water customers. How do you feel about this?

As Berwick respondents are part of the customer base they have been included in the overall sample in the comparison charts. In line with the rest of the report, when comparisons by subgroups are supplied, the subgroups are compared with the overall sample. The number of respondents in Berwick is also comparatively small so their inclusion doesn't influence the overall results.

total sample size = 1957; 95% confidence level

Proportion who choose each option:

■ Overall



Whenever Northumbrian Water invests in improving services all of its customers contribute through their bill, regardless of whether or not they will personally benefit from the improvement. For example, customers living in Berwick have contributed towards the cost of Kielder reservoir, which they do not get their water from. The options you have just seen would only increase the water supply in Berwick, but would be paid for by all Northumbrian Water customers. How do you feel about this?

Those who said this was not acceptable, Sample = 89

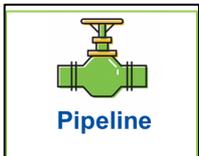
This chart is based on those who said this was not acceptable and their reasoning behind it.

60% of responses state that Berwick customers should pay for their own usage and should not have to rely on other households.

This confirms the view expressed in the focus groups where the minority of respondents not in favour of spreading the costs raised the same concerns.

Supply & Demand

S U P P L Y



D E M A N D



Respondents were shown a video illustrating a number of possible solutions aimed at increasing water available for supply or reducing demand from customers.

They were first asked whether they supported each of those measures in a general question on a five-point scale.

Then they were shown the same solutions again in a MaxDiff question format, where respondents have to make a choice and therefore delivers a clearer picture of the top priorities for customers compared to a standard question. MaxDiff was used in the analysis section as it gives us a share of preference for which solution they prefer the most or the least.

SUPPORT QUESTION

• Please select your level of support for each of these options:

	Left Anchor			Right Anchor	
	Definitely would support	Possibly would support	Undecided	Probably would not support	Definitely would not support
Abstraction 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New Borehole 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pipeline 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

MAXDIFF QUESTION

We would like you to select which options you would like your water company, **Northumbrian Water**, to implement, and what they should focus on to ensure there is enough water for everyone.

For each of the questions below, **please choose your most and least preferred option:**

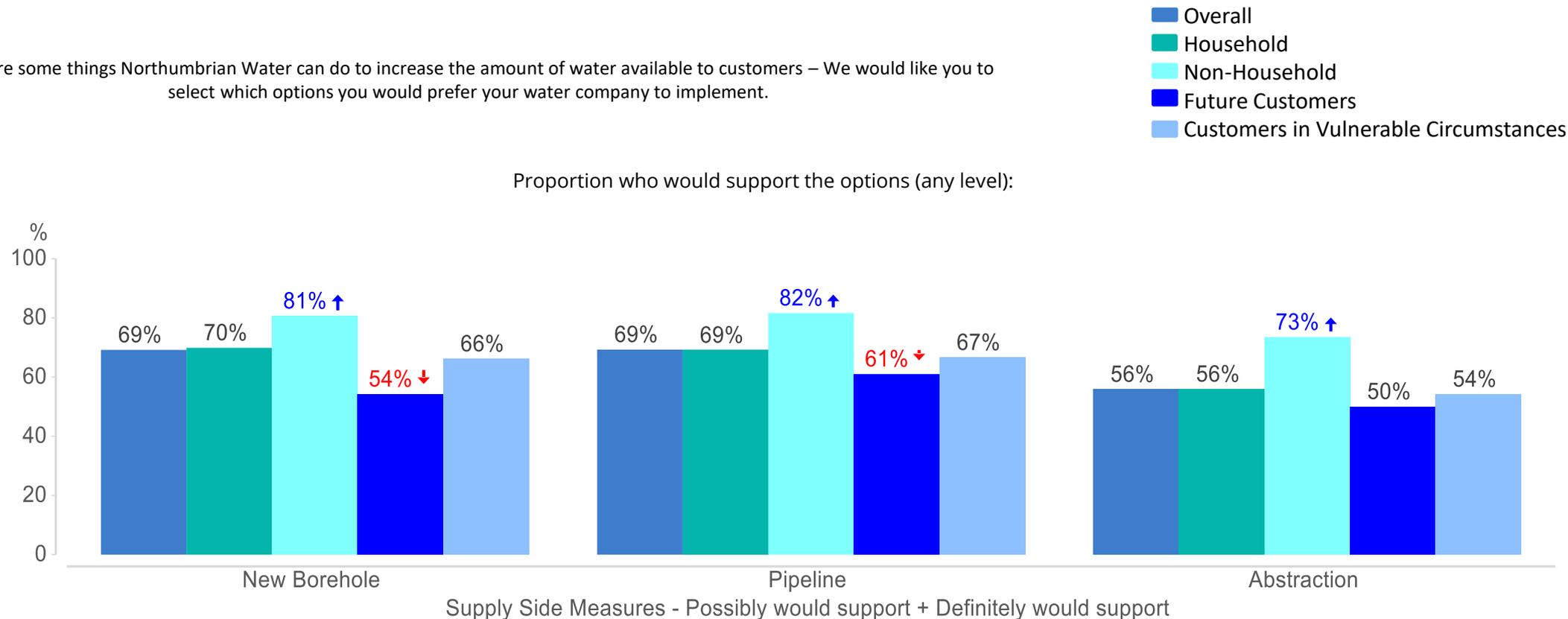
(Please note this question is repeated a few times with different combinations of options)

The screenshots above show the two question types as they were displayed to respondents – the MaxDiff question was repeated a total of 8 times with different combinations of options.

Least		Most
<input type="radio"/>	<p>Customer side leak reduction - Helping customers to find and fix leaks in their homes</p>	<input type="radio"/>
<input type="radio"/>	<p>Water Saving Devices / Behaviours - Helping Customers & Businesses to save water by giving information, advice and providing solutions</p>	<input type="radio"/>
<input type="radio"/>	<p>Smart metering - Smart water meters and apps to help customers understand how much water they use and to help them waste less water</p>	<input type="radio"/>

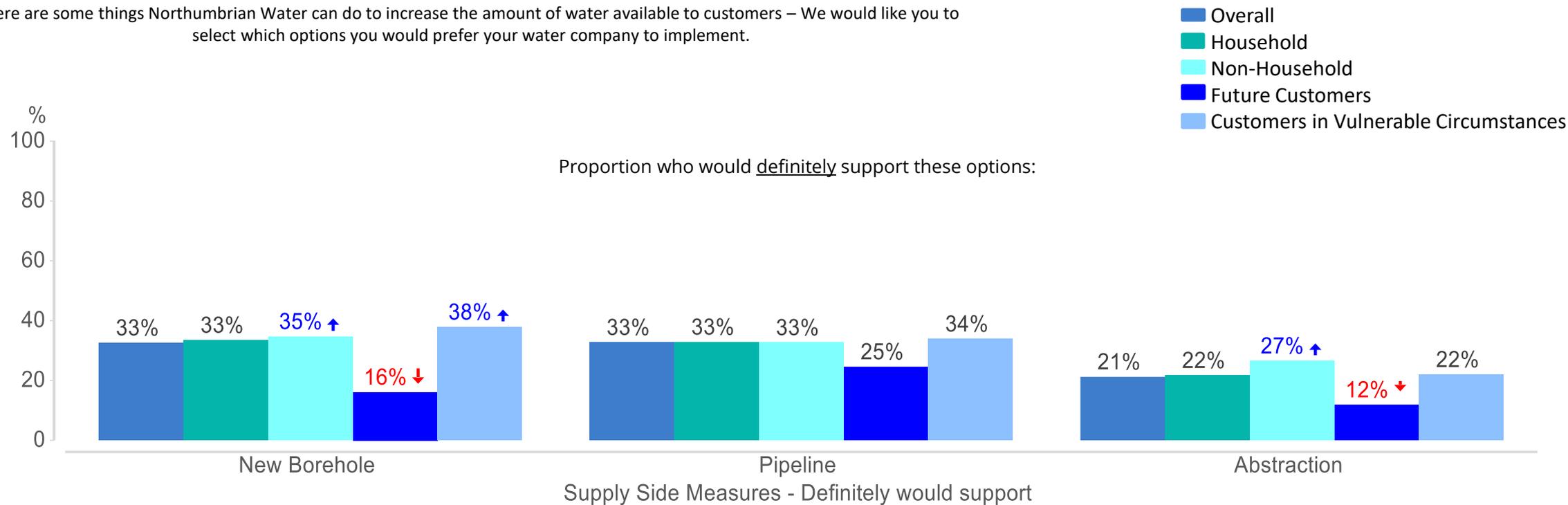
Here are some things Northumbrian Water can do to increase the amount of water available to customers – We would like you to select which options you would prefer your water company to implement.

Proportion who would support the options (any level):



total sample size = 1957; 95% confidence level

Here are some things Northumbrian Water can do to increase the amount of water available to customers – We would like you to select which options you would prefer your water company to implement.



total sample size = 1957; 95% confidence level

Note: respondents were given five options to choose from; Definitely would support, Possibly would support, Undecided, Probably would not support and Definitely would not support. The chart on page 16 shows a combination of Definitely & Possibly would support. The one on page 17 only shows Definitely would support.

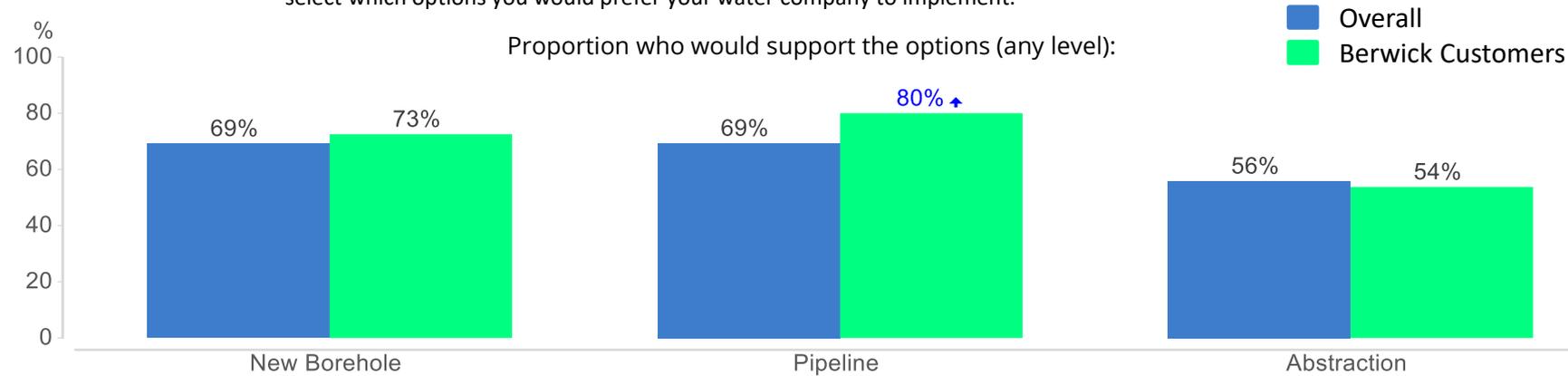
In the general question, the borehole and the pipeline solutions receive equal support (69%) while abstraction shows lower levels. In the focus groups, the borehole was supported as it's seen as having low cost and a lower environmental impact compared to other options. The pipeline also received strong support in the focus groups as a tried and tested solution which could create jobs in the region and profit if water was to be sold.

On the other hand, abstraction was only seen as a temporary solution because of its environmental impact and the fact that it will have to be reduced to sustainable levels in the future.

Non-Household customers are more supportive towards all supply side solutions – this is due to their higher level of concern (50% are very concerned about potential water stress in the future). On the other hand, future customers appear less supportive generally.

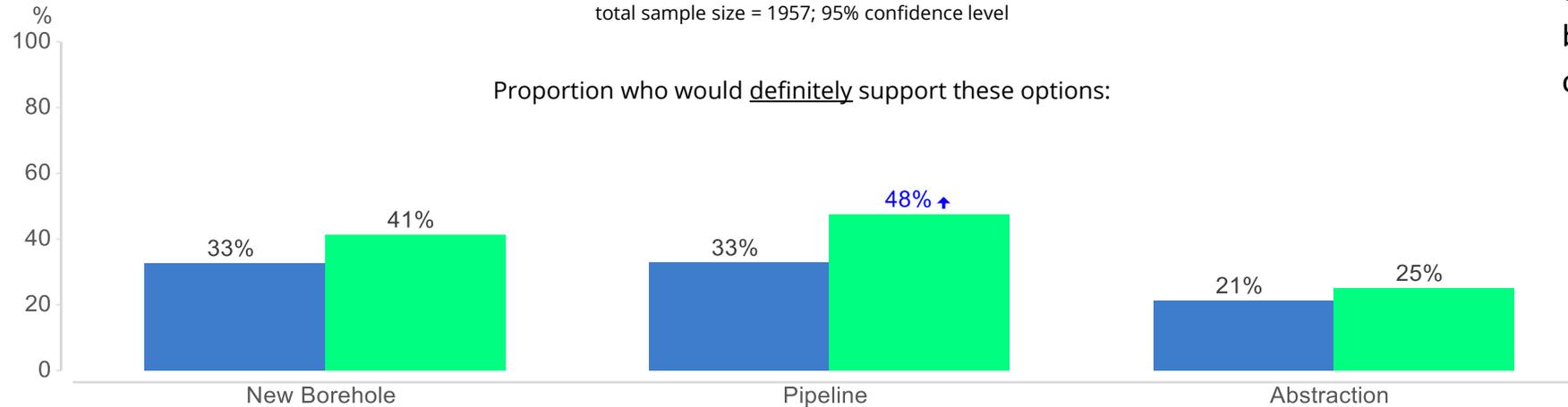
Levels of definite support show the same pattern, with a third overall choosing borehole and pipeline.

Here are some things Northumbrian Water can do to increase the amount of water available to customers – We would like you to select which options you would prefer your water company to implement.



Supply Side Measures - Possibly would support + Definitely would support

total sample size = 1957; 95% confidence level



Supply Side Measures - Definitely would support

total sample size = 1957; 95% confidence level

In the general question, the borehole and the pipeline solutions receive equal support while abstraction shows lower levels.

Berwick customers are much more likely to support the pipeline option in comparison with the overall sample (48% would definitely support it vs 33% overall). They also show strong support for a new borehole to be constructed (41% vs 33% overall).

As Berwick respondents are part of the customer base they have been included in the overall sample in the comparison charts. In line with the rest of the report, when comparisons by subgroups are supplied, the subgroups are compared with the overall sample. The number of respondents in Berwick is also comparatively small so their inclusion doesn't influence the overall results.

Abstraction

- Abstraction was regarded quite negatively amongst respondents. It received the least amount of support out of the three supply side solutions.
- However, some customers regarded the solution as a positive and would support it. This is due to the minimal cost and impact it has on the environment as well as being available now.



“I support abstraction as it has minimal effect on wildlife and habitats, it also has a low cost.”
 “Abstraction is using naturally available water, this is the reason I chose abstraction.”

- However, customers feel it is a short term fix and not a long-term solution. This view was also shared by focus group respondents.

“Abstraction may have lowest impact (including financial), but is not a long term solution.”

- Whilst some perceived abstraction as having a low impact on the environment, others were concerned for aquatic life at the cost of low yields of water generated.

“Abstraction is more likely to affect the amount of water in rivers and may have an adverse environmental impact.”
 “My concern over abstraction is that it can lead to lower water levels in rivers and damage the ecology.”

New Borehole

- Although the Borehole solution was the joint most supported by respondents in this supply side solutions question, customers still had mixed opinions on it.
- Some would definitely support this option as it appears to have the least environmental impact out of the three.



“Because it appears to do the least environmental damage.”
 “I support the borehole as it is low impact on environment and cost effective.”
 “Borehole has least impact to environment and road users.”

- However, those who expressed their opposition to this measure were concerned about other effects it could cause. In the focus groups respondents also raised concerns about drilling too many boreholes.

“Concerned about the effects on nature that a borehole could create.”
 “I am only not definitely sure as I am suspicious about other effects boreholes might have as I do not fully understand the extent of this process.”
 “I am concerned that boreholes can lower the water table, it depends on the aquifers involved and what risks of contamination.”
 “I don’t like the idea of digging holes in the earth”

Pipeline

- The Pipeline was the joint most supported supply side solution. However, similar to the idea of constructing a new borehole there were very mixed opinions amongst customers.
- Most respondents supported the idea of building a new pipeline due to its ability to transfer water to areas of drought. It enables flexibility and ensures areas of water stress are looked after.



“Pipeline offers maximum flexibility for the future, potentially allowing water to be pumped in either direction if ever required.”

“Pipeline secures water for future and Northumbrian Water can balance the whole area as demand increase or decrease.”

- However, some respondents are concerned about the possibilities of leaks arising from the pipeline and the disruption it will cause. Costs tended to be more of a concern for focus group respondents when it comes to this solution compared to survey respondents.

“The pipeline would be the least favoured because of the amount of disruption to localities along the line of the pipeline.”

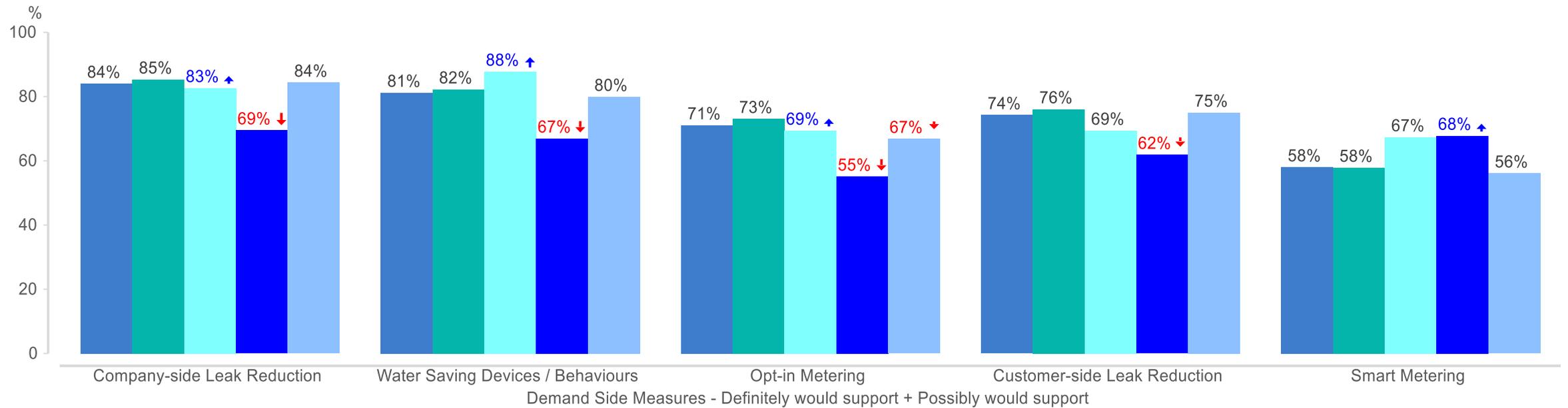
“Pipeline seems at risk of leaks and other problems which could interrupt supply and waste water.”

“Pipelines cause all manner of disruption to land and the habitat of animals while being put in the ground - sometimes this cannot be reversed.”

Here are some things Northumbrian Water can do to help customers and businesses reduce the amount of water they use – We would like you to select which options you would prefer your water company to implement:

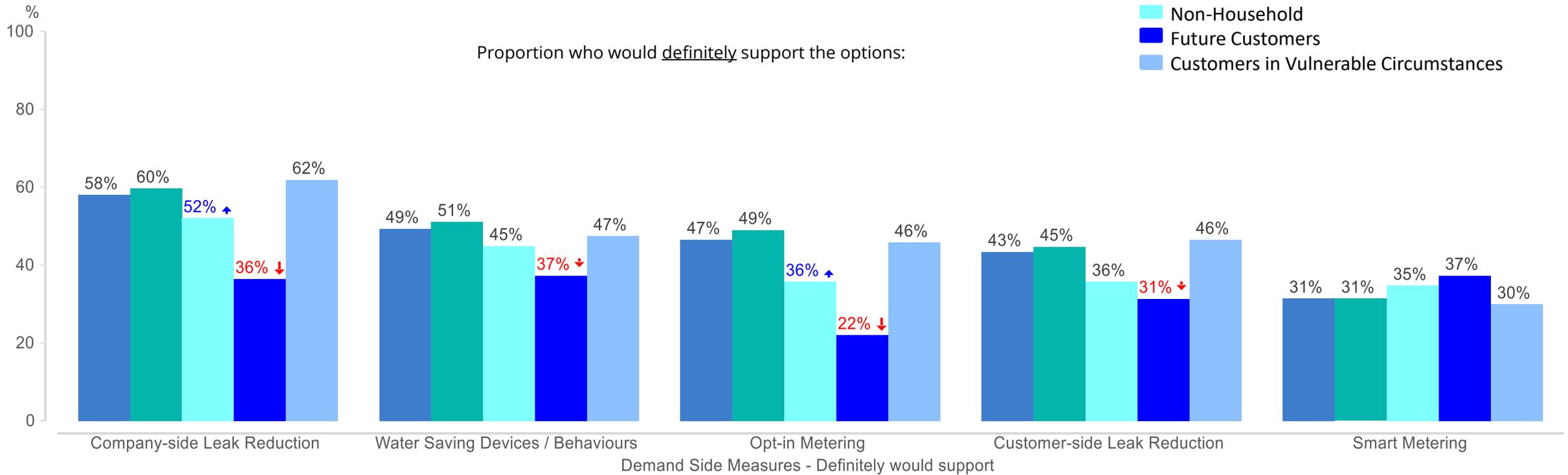
Proportion who would support the options (any level):

- Overall
- Household
- Non-Household
- Future Customers
- Customers in Vulnerable Circumstances



total sample size = 1957; 95% confidence level

Here are some things Northumbrian Water can do to help customers and businesses reduce the amount of water they use – We would like you to select which options you would prefer your water company to implement:



total sample size = 1957; 95% confidence level

Note: respondents were given five options to choose from; Definitely would support, Possibly would support, Undecided, Probably would not support and Definitely would not support. The chart on page 22 shows a combination of Definitely & Possibly would support. The one on page 23 only shows Definitely would support.

Company-side leak reduction and Water saving devices/behaviour are the top supported options, with 84% and 81% of the overall sample respectively supporting them, either possibly or definitely.

Company-side leak reduction was also supported in the focus groups as it fits with the idea of making the most of existing infrastructure and does not damage the environment. Water saving devices/behaviours were supported by focus group respondents due to their potential to educate consumers to save water in the long term.

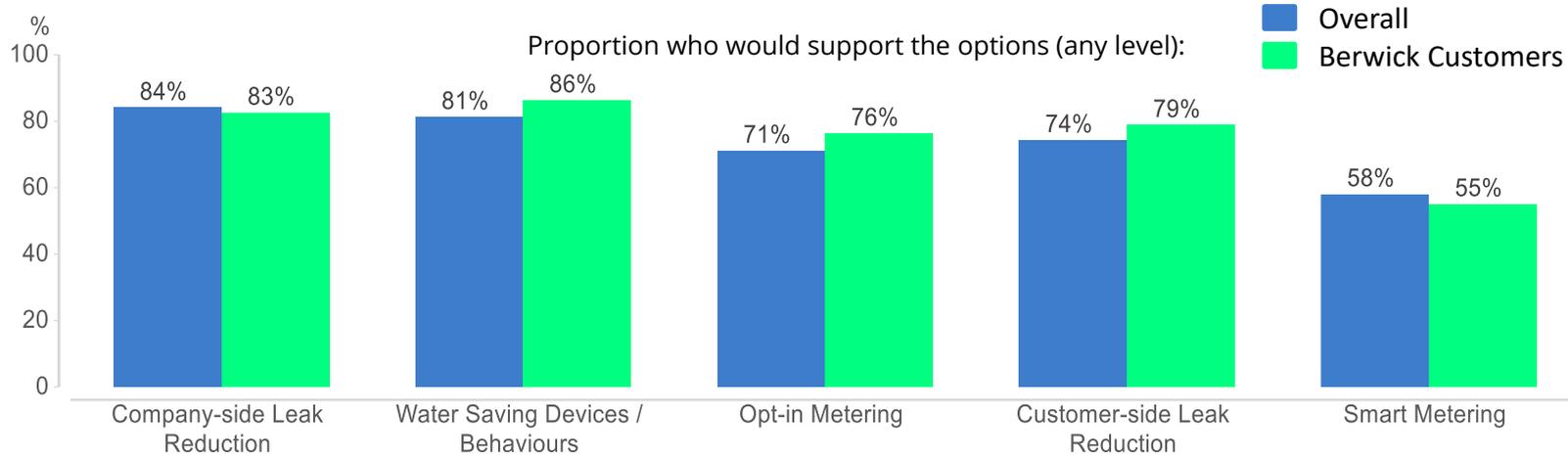
Opt-in metering and customer-side leak reduction also have support from over 70% overall. The former is liked because it gives customers the choice and helps them detect leaks, whereas the latter has the potential to reduce bills for customers and has low carbon impact.

Non-Household customers favour Water saving devices/behaviours and future customers are less supportive generally, especially towards opt-in metering.

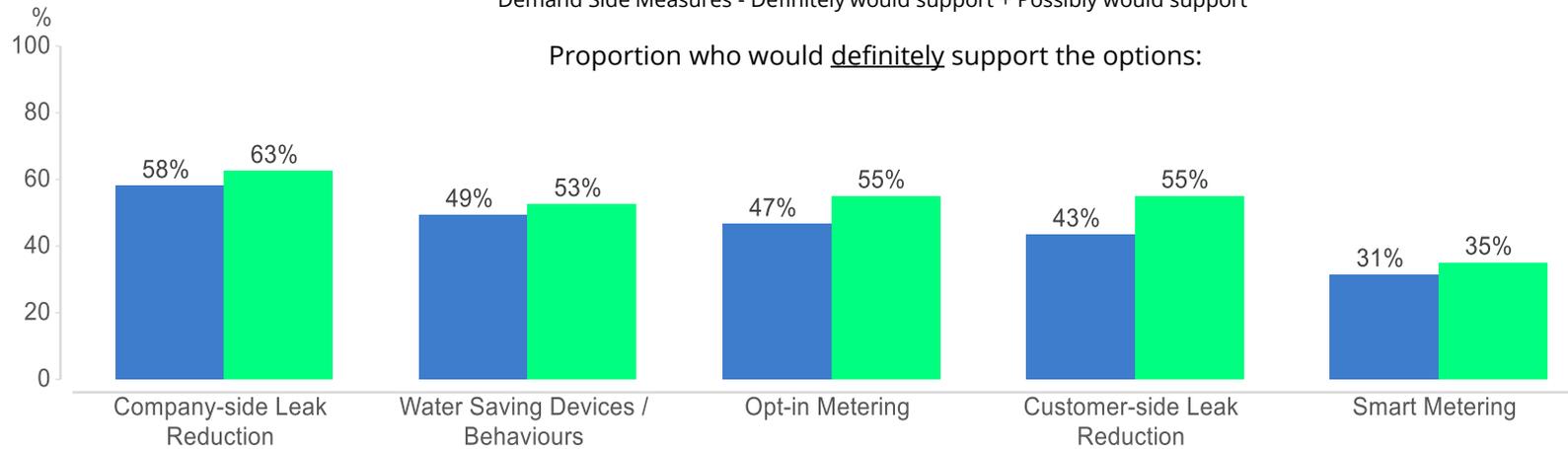
Levels of definite support show the same pattern.

Information on which options should be chosen for investment can be found on the combined analysis from slide 39

Here are some things Northumbrian Water can do to help customers and businesses reduce the amount of water they use – We would like you to select which options you would prefer your water company to implement:



Demand Side Measures - Definitely would support + Possibly would support



Demand Side Measures - Definitely would support

total sample size = 1957; 95% confidence level

Over half of Berwick customers would definitely support all of the demand side solutions presented, apart from smart metering.

Company-side leak reduction is their most supported option with 63% of definitely support responses, followed by opt-in metering and customer-side leak reduction (both 55%).

As Berwick respondents are part of the customer base they have been included in the overall sample in the comparison charts. In line with the rest of the report, when comparisons by subgroups are supplied, the subgroups are compared with the overall sample. The number of respondents in Berwick is also comparatively small so their inclusion doesn't influence the overall results.

Opt-in Metering

- Opt-in metering was the most supported metering option amongst respondents.
- In line with the view expressed in the focus groups, respondents preferred this metering option as it gave them more flexibility and puts them in control. It also enables people to save money and be conscious of their usage.

“I already have an opt-in-meter and it has worked very well, saving my family quite a lot of money and hopefully saving us using water too as we think about our usage more.”

“Opt-in metering is good as if people want to have a meter, which could possibly reduce their bills, they are more likely to do it”

- However, some respondents think this will not result in a high water saving because those who use more water than others will not opt-in.

“Opt-in metering works in theory but only influences those who chose to participate.”

Smart Metering

- Smart metering was the least supported option of the demand side solutions.
- Respondents liked the idea that smart metering can help spot any possible leaks in their property. Customers appreciated how progressive the measure is.

“Smart metering seems like the most progressive measure going forward, for saving customers money and the helping environment.”

“Smart metering would help me see what I’m using and where the water is being used. I’d also be able to see if I had a leak quickly.”

- However, smart metering would seem too high of a cost for such a low benefit compared to opt-in metering.

“Smart meter has high cost for low benefit so I don’t support it.”

“I think an opt in meter does everything a smart meter can do with a lower cost.”

- Other respondents also feel smart metering will not be reliable for the elderly or those with weak phone / WIFI signal.

“Smart meters are only really useful for those with internet access and devices.”

- Focus group respondents also shared the same views.



Company-Side Leak Reduction

- This was the most supported option by the respondents. However, the comments made by customers suggest they are not too happy with how the solution has been thought out.
- A few respondents are glad to see that Northumbrian Water is addressing this.



“Surely it is the duty of care from the company to repair all supply leaks as this would reduce water wastage and prevent the need to look for new supplies.”

- However, most comments were in regards to how leaks go easily undetected and are not fixed quick enough by their supplier.

“Can still see leaks that have not been stopped for many years.”

- Respondents across the survey and focus groups also voiced their opinions on having to pay for leaks outside of their homes.

“It is everyone's responsibility for water leaks to be addressed. As owners of Northumbrian Water, you should be fixing any and all leaks you encounter within your infrastructure and not passing these costs forward to your customers if/when your organisation is making profit.”

“The external repairs to the water distribution network should be covered by the water companies. The lack of investment and large profits by the companies have taken priority over customer satisfaction.”

Customer-Side Leak Reduction

- Respondents appreciate the idea of using this solution alongside metering to help detect possible leaks within their households.
- However, homeowners feel they need more support from Northumbrian Water if they can fully support this solution. This is due to the possible cost implications arising from detecting leaks and then fixing them. Some people may not be able to afford this – which is a worry voiced by focus group respondents too.



“As a company you should be fixing leaks in your infrastructure and this should not be a suggestion and an option that would increase prices. Customers already pay which includes maintenance. You have a moral position to prevent waste both for customer value and environmental concerns.

“Customer side leak reduction could be expensive and out of the budget of many customers. Internal leaks should be the customers responsibility, external leaks that are under ground of the garden/property boundary should be at least part responsible by NW.”

Water Saving Devices / Behaviours

- Water saving devices is the second most supported option amongst respondents. They feel this can be a positive solution as it will help save money and reduce their environmental impact.

“Very good and practicable ideas to save water for the whole population in the applicable area.”
“Saving water would hopefully reduce bills.”

”

- However, some mention that you could introduce other water saving devices such as saving water or recycling it which could help save even more water. In line with the focus groups, other customers also suggest education on how to save water:

“Saving water is good idea, collecting rainwater good start for garden.”
“I think everyone should be aware of how they can save water & implement when/where possible.”

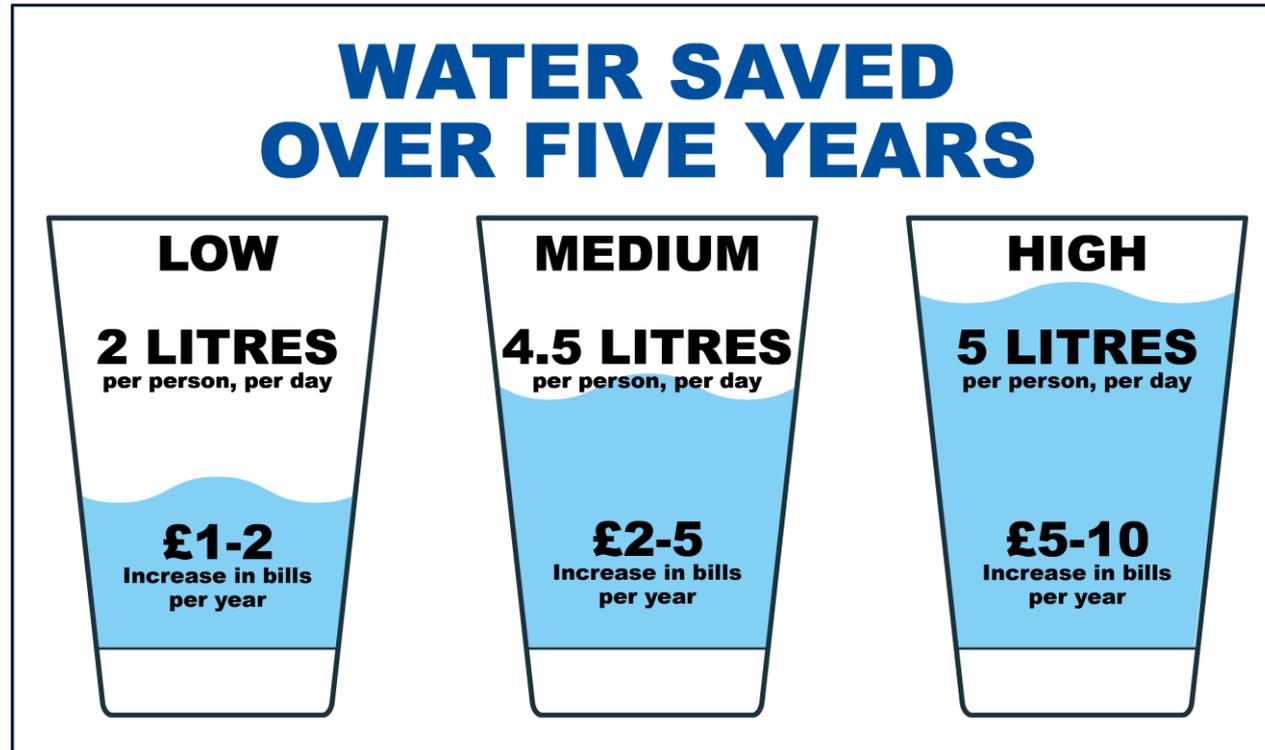
”

- Some respondents also suggested introducing incentives to buy water efficient appliances and possibly devices as well.

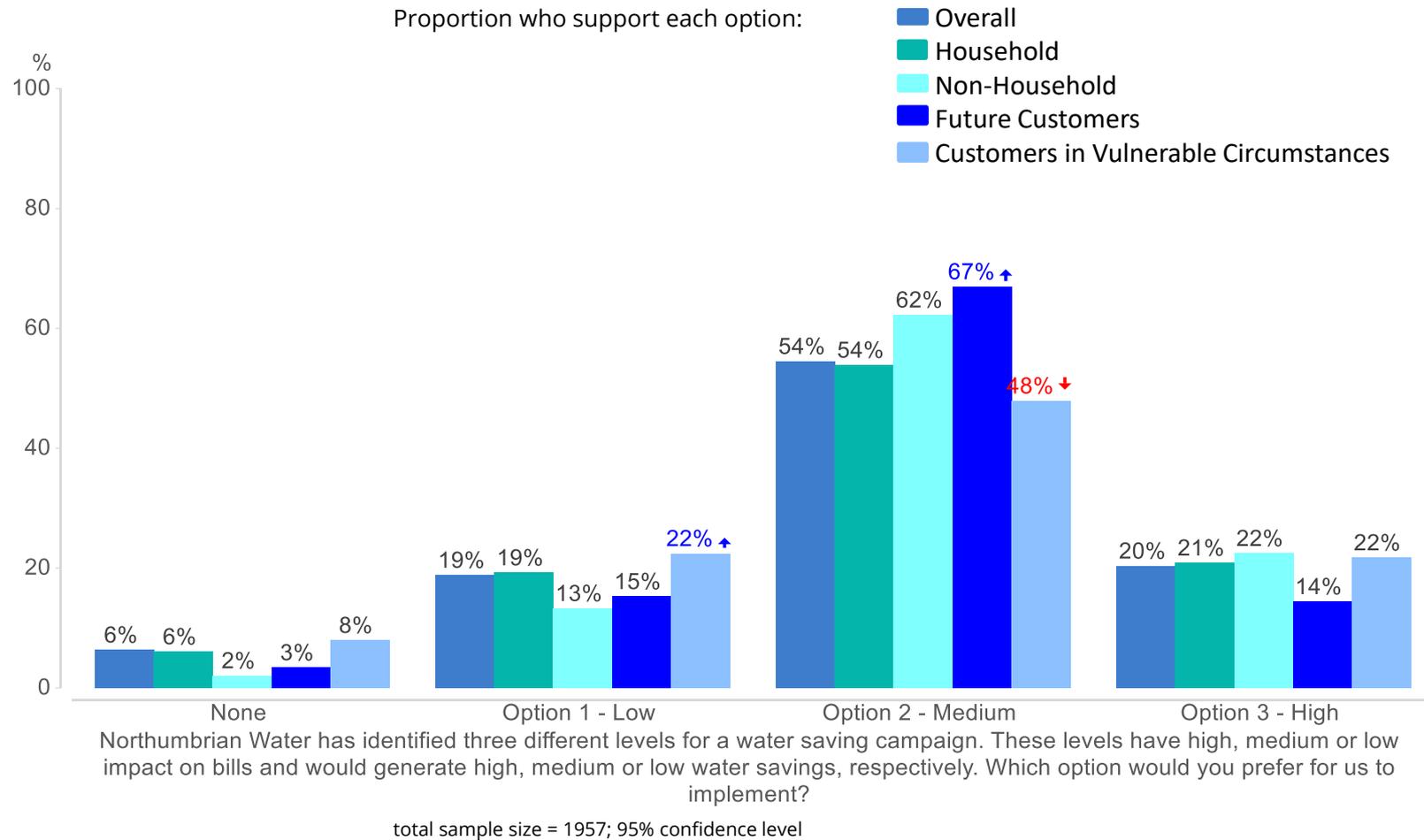
“Appliances are very costly and it would be difficult to replace washing machines etc. without obtaining credit and growing unsustainable debts. Government incentives should be in place to help homeowners access water saving appliances.”

”





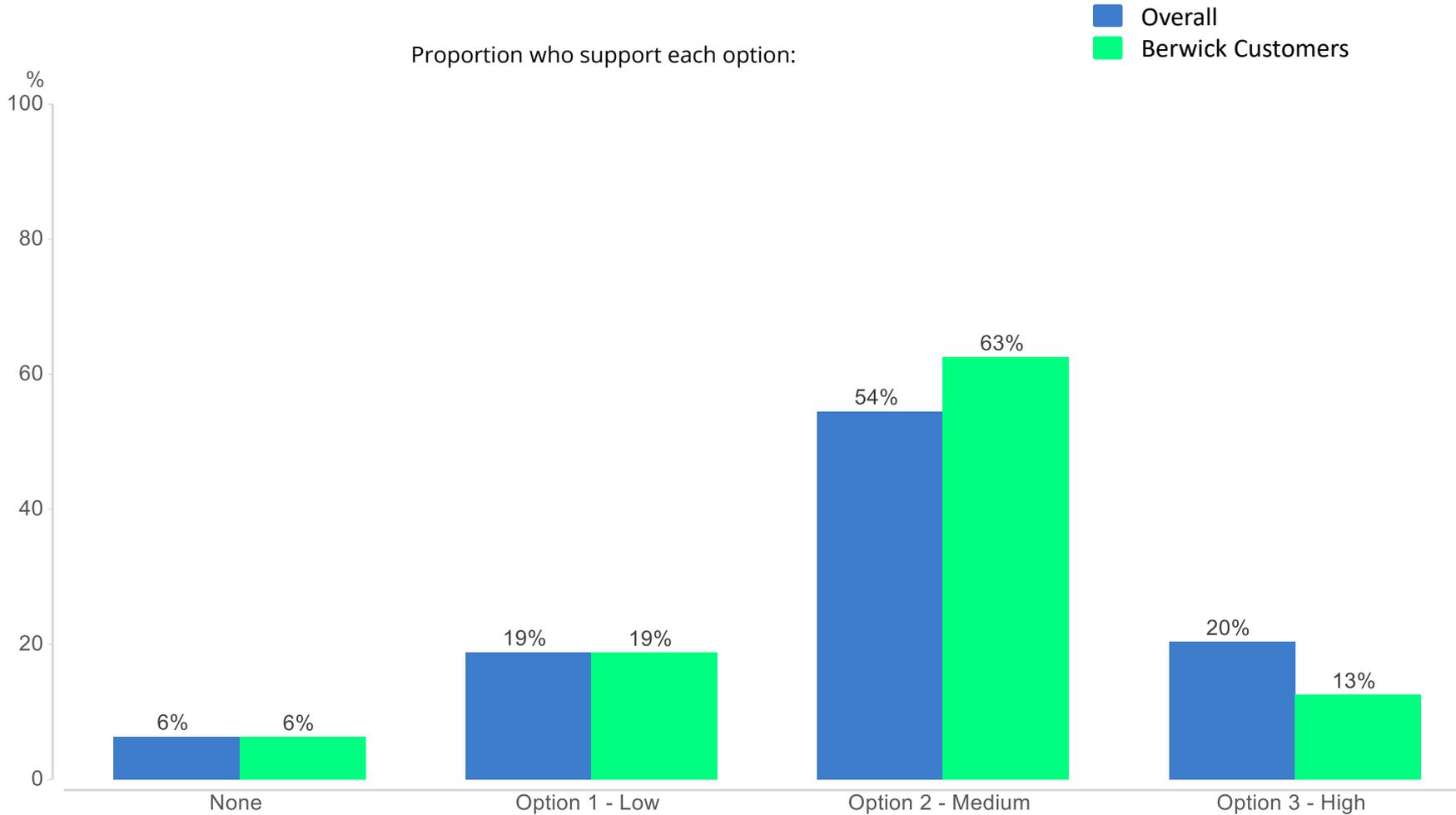
Respondents were shown an image with three different options in terms of level of water saved.



Option 2 (Medium water saved) of the water saving is favoured by the majority (54%) of the sample overall though 20% would prefer option 3 (High water saved) and 19% option 1 (low water saved). This is in line with the focus groups where the medium option was most popular.

Future customers favour option 2 more strongly than any other groups and customers in vulnerable circumstances are less in favour (48%), with 22% of them opting for option 1 (Low water saved) and 8% choosing none.

Proportion who support each option:



Berwick customers are much more likely to support option 2 (Medium water saved) the most (63%) compared to the overall sample and are less likely to support option 3 (High water saved) with 13% (vs 20% overall).

Northumbrian Water has identified three different levels for a water saving campaign. These levels have high, medium or low impact on bills and would generate high, medium or low water savings, respectively. Which option would you prefer for us to implement?

total sample size = 1957; 95% confidence level

As Berwick respondents are part of the customer base they have been included in the overall sample in the comparison charts. In line with the rest of the report, when comparisons by subgroups are supplied, the subgroups are compared with the overall sample. The number of respondents in Berwick is also comparatively small so their inclusion doesn't influence the overall results.

MaxDiff questioning helps overcome issues normally associated with other types of questions.

In particular, compared to rating questions:

- it makes it less likely that respondents will agree with everything
- it forces respondents to prioritise their answers
- it doesn't use scales, which can be problematic as some people tend to use only certain parts of the scales

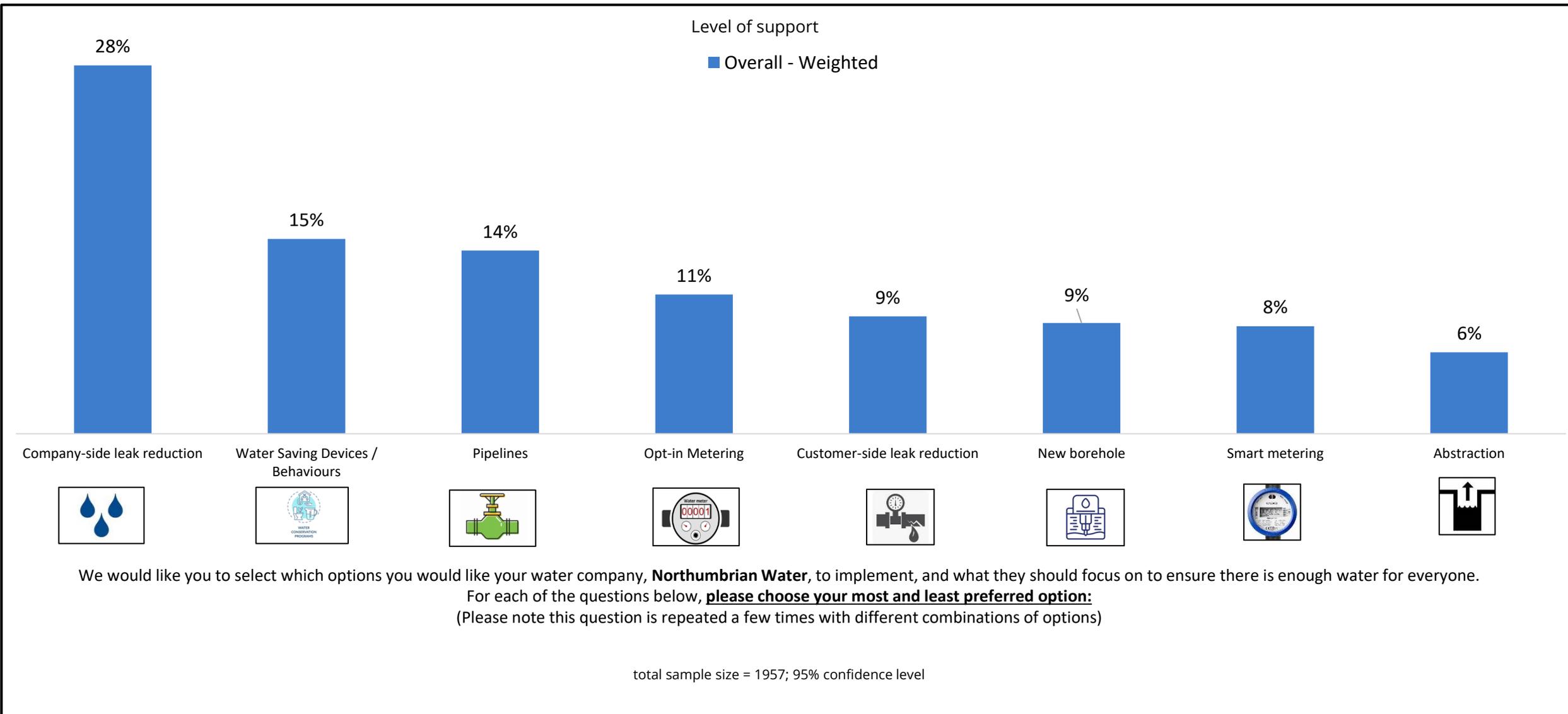
Compared to ranking questions:

- it allows us to test a large number of items without increasing cognitive load for the respondent
- it allows for ties between different items. This reflects real life scenarios where choices have to be weighed up on pros and cons
- It gives an idea of what distance there is between different items

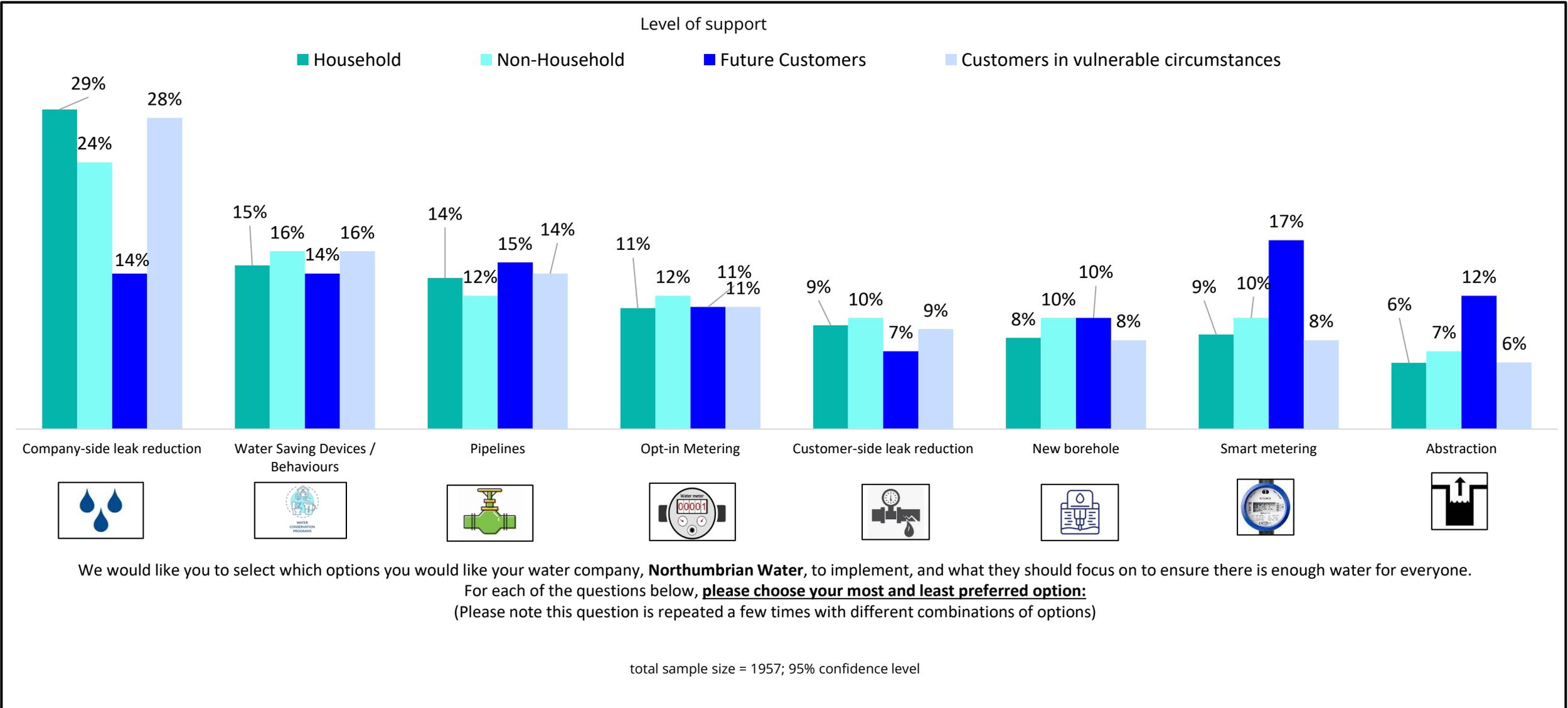


Respondents were shown a set of supply & demand side options and were asked to choose the option they preferred the most and the one they preferred the least. The question was repeated a total of 8 times with different options being shown each time.

This method allows us to establish priorities for respondents and shows the share of preference amongst customers for each solution.



- Scores of the MaxDiff are shares of preference – these are the percentages of times one solution is preferred over others by the respondents
- As in this question we had 8 solutions over a total of 8 repetitions, if all solutions were selected equally we would see a 12.5% share of preference for each
- In this question the top solution (company-side leak reduction) had a preference score of 28% - which is more than twice as high as its expected score if all things were equal, thus showing a strong respondent preference for this solution

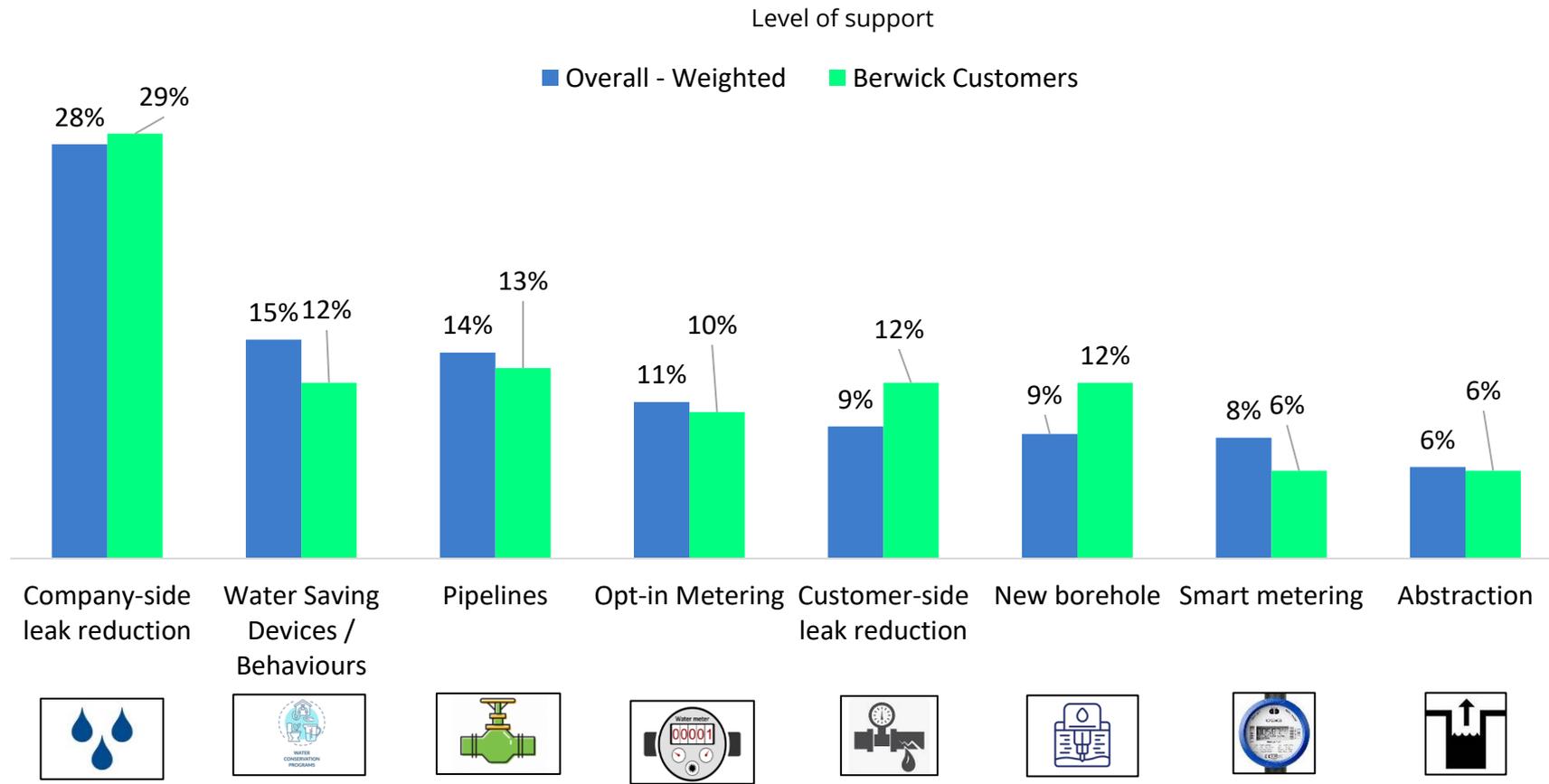


Company-side leak reduction receives by far the highest share of preference overall (28%) and from customers in vulnerable circumstances. In the focus groups respondents supported this solution as it makes the most of existing infrastructure and does not endanger the environment.

Among future customers smart metering is the most popular choice (17%). Smart meters split opinions in the focus groups but younger audiences tend to find 'smart' technology appealing.

Abstraction is the solution with the lowest support overall – environmental concerns, especially around wildlife, were cited in the focus groups and the fact that the amount of abstracted water will need to reduce in the future only makes it suitable as a temporary solution.

Information on which options should be chosen for investment can be found on the combined analysis from slide 39



Berwick customers also support company-side leak reduction the most with 29%.

Pipelines are their second most supported solution (13%).

Customer-side leak reduction and new borehole are supported more by Berwick customers compared with the overall sample.

We would like you to select which options you would like your water company, **Northumbrian Water**, to implement, and what they should focus on to ensure there is enough water for everyone.

For each of the questions below, **please choose your most and least preferred option:**
 (Please note this question is repeated a few times with different combinations of options)

total sample size = 1957; 95% confidence level

As Berwick respondents are part of the customer base they have been included in the overall sample in the comparison charts. In line with the rest of the report, when comparisons by subgroups are supplied, the subgroups are compared with the overall sample. The number of respondents in Berwick is also comparatively small so their inclusion doesn't influence the overall results.

Overall Analysis of Investment Options

- General support takes into account how many people support a solution. MaxDiff takes into account how many people support the solution and whether they prefer it to other solutions. For example a customer may generally support winter storage reservoirs and leak reduction company side. However, when asked to choose between the two would prefer the leak reduction customer side. MaxDiff takes this into account.
- Scores of the MaxDiff are shares of preference (i.e. the percentage of times one solution is preferred over others by the respondents) and therefore the best factors to use for any modelling that may be completed as they take into account customer preferences (priorities).

- Key for colours used on the next slide:

MaxDiff score:	General support ('definitely support'):	Focus group outcome:
Over 15%	Over 40%	Supported by the majority
Between 10 and 15%	Between 30 and 40%	Split opinions
Under 10%	Under 30%	Supported only by a minority or less

The colours have been applied **by column**. For example:

- if a solution was supported by the majority of respondents in the focus groups it was marked in green under the column 'Focus group outcome' in the table above
- If it achieved a 'definitely support' score of over 40% it was marked in green under the column 'General support'
- If it achieved a MaxDiff preference score of over 10% it was marked in green under the column 'MaxDiff score'

	MaxDiff score:	General support ('definitely support'):	Focus group outcome:
Company -side leak reduction	28%	58%	General support but for some it depends on the amount of water saved and how quickly it can be done.
Water saving devices/ behaviours	15%	49%	Generally supported with the medium option being most popular and one group opting for low due to the costs.
Pipeline	14%	33%	Majority support a within region pipeline, only very few are unsure.
Opt-in metering	11%	47%	Widely supported as it's opt in - a few people have concerns about changing circumstances. Customers who require support are opposed.
Customer -side leak reduction	9%	43%	Majority do not support this as it's a high cost and benefits are not clear.
New borehole	9%	33%	Majority of customers support this option, some reluctantly as the lesser evil. It is seen as low cost and less environmental impact.
Smart metering	8%	31%	Divided support – some would like to be more aware of their consumption whilst others don't or are against the costs.
Abstraction	6%	21%	Split opinions as some reject this on environmental grounds while others felt this could be used as a temporary solution until other infrastructure is built and due to low cost.

- There is **one clear** investment option preferred overall:
- **Company-side leak reduction** was supported at all stages of the research. The focus groups praised that it does not affect the environment and helps to make the most of what we already have. It's important to show that this can be delivered quickly and that the amount of water saved will be as large as possible
- The following three solutions have some support but also **some concerns**:
- **Water saving devices/behaviours** also had overall support from survey respondents and has a medium MaxDiff score. The focus groups highlighted that this lends itself well to educating consumers, making it a good long term solution. This should be applied across the board but the measures could be implemented starting from new builds and provisions for customers in vulnerable circumstances should be made to ensure maximum take-up and low costs (as focus group respondents fear devices might be expensive)
- **Pipelines** received the support of a third of survey respondents but came third in the priority list when assessed compared to other solutions. This is seen as a tried and tested solution but it may turn out to be expensive due to rising maintenance costs, as highlighted in the focus groups

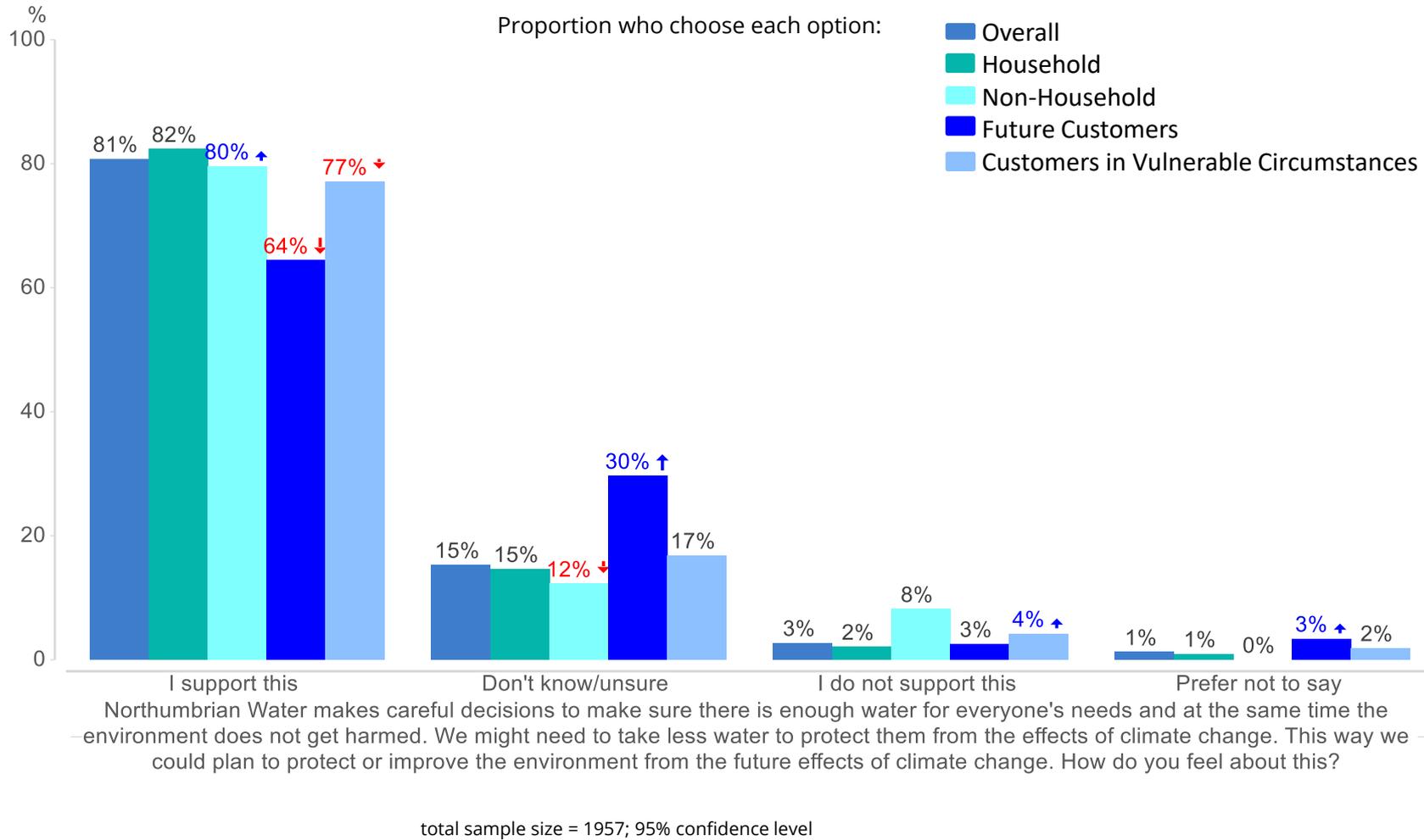
- **Opt-in metering:** this was supported by just under half of survey respondents and came fourth in the MaxDiff scores. It would be preferable to smart metering but in the focus groups concerns were raised about the fact it may put off customers in vulnerable circumstances and may not lead to a change in habits. So it is a solution that needs careful balancing.

There are two solutions with low appeal:

- **Customer-side leak reduction:** Although this was supported by 43% of survey respondents it moved lower down the priority list in the MaxDiff. The focus groups helped to highlight how consumers don't see the benefits of this solution and worry they would end up having to pay a high price for the repairs
- **New borehole:** Even though this solution is supported by a third of survey respondents it also moves down the priority list when assessed against other solutions. It may be seen as low cost and low environmental impact but the fact that it has been used before makes people worry it may not be a long-term solution

- Solutions that have low customer support are:
- **Smart metering:** This was the most divisive out of the metering options, with focus group respondents objecting to rollout costs and also to bills going up as a result of having one installed
- **Abstraction:** this solution is seen as problematic for the environment and therefore receives very low level of support throughout

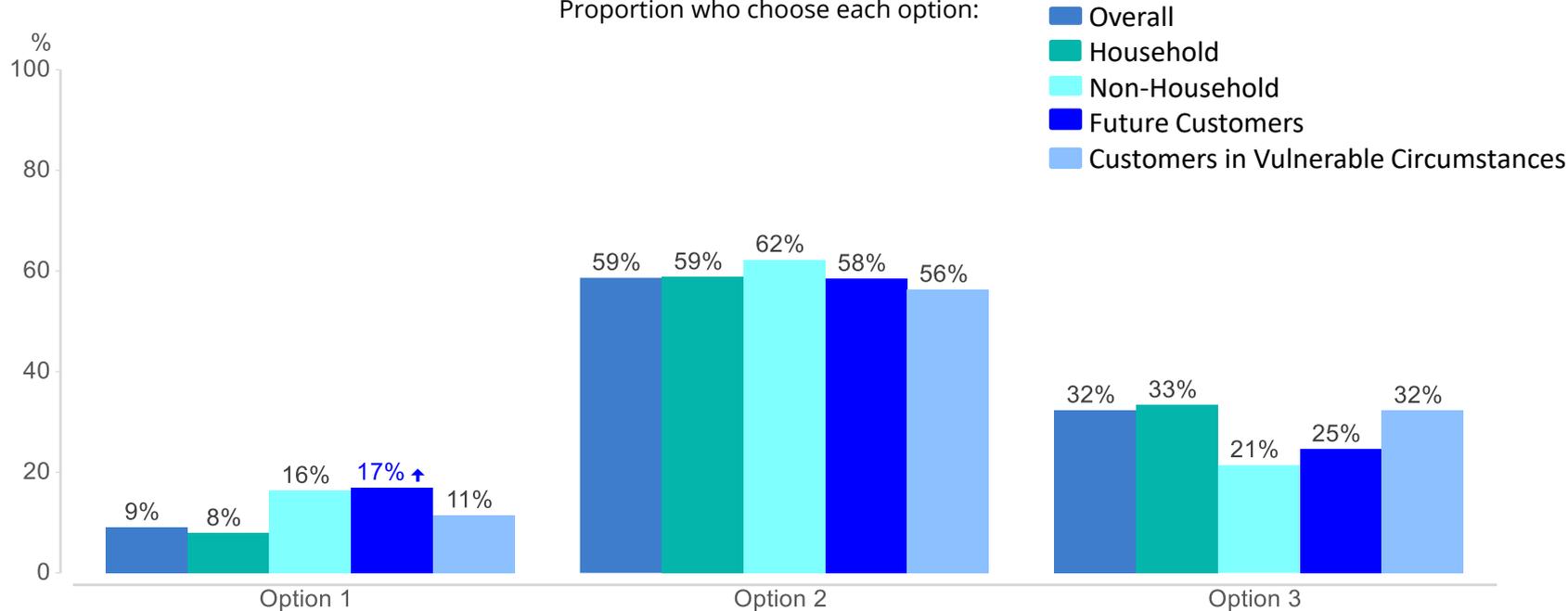
Environmental Ambition



Respondents overall are strongly supportive of the environmental ambition with Household customers supporting it the most (82%).

Future customers are slightly less supportive but the majority (64%) are still in favour compared to overall, with 30% of them unsure.

Proportion who choose each option:

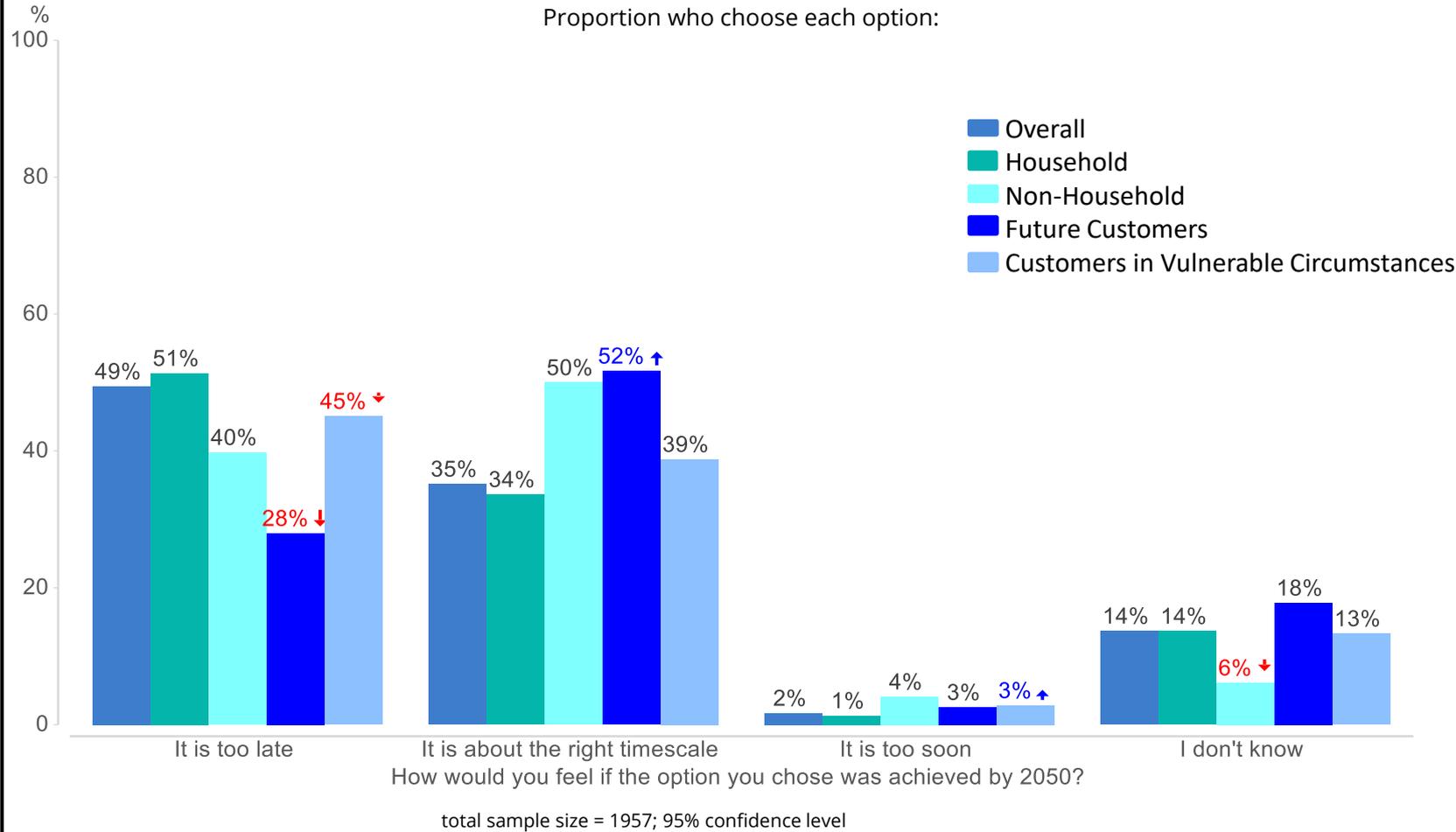


There are three options we can take to protect rivers, lakes and springs from the effects of climate change: Option 1: Continue to take the same amount of water from the environment, leaving it in a poorer state than it was before we took water from it. This option requires the lowest level of investment. Option 2: Reduce the amount of water we take from the environment, bringing it back to the same state it in was before we took water from it. This option requires some investment. Option 3: Further reduce the amount of water we take from the environment, making it better than it was before we took water from it. This option requires the most investment. Please select the option you think we should take:

total sample size = 1957; 95% confidence level

59% overall would like to see option 2 (reducing the amount of water taken from the environment) being implemented. This option has the highest level of support across all segments so it should be prioritised.

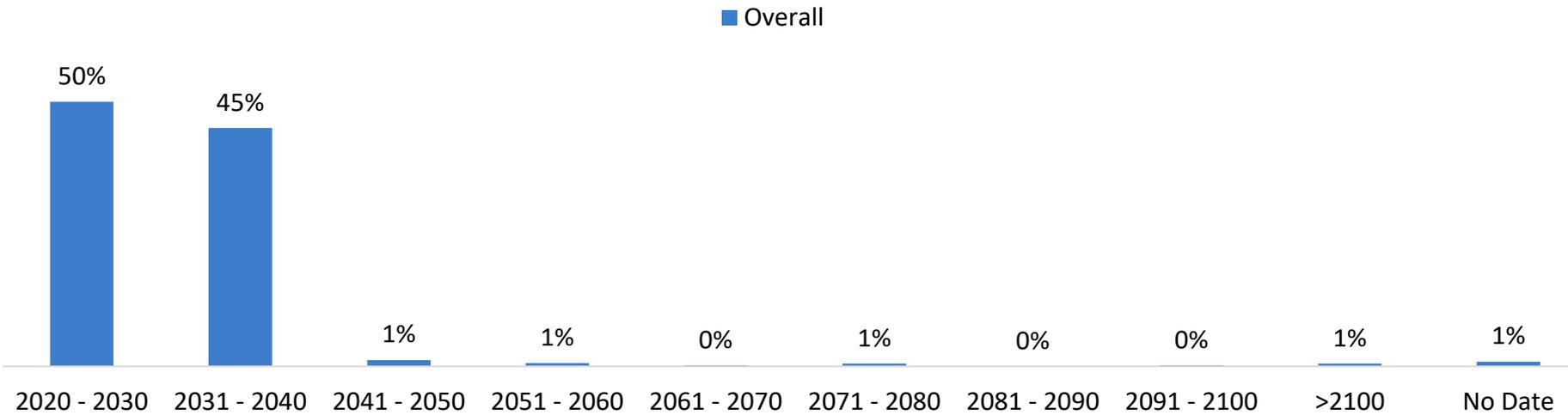
Though still a minority, a significant proportion of future customers and Non-Household customers are also in favour of option 1, in contrast to the other segments.



49% of the overall sample feel that achieving the target by 2050 is too late.

Future customers on the other hand feel it is about the right timescale.

Proportion who choose each option:



By which year would you like this environmental target to be achieved? Please enter the year.

Those who said it was either too soon or too late, Sample = 999

This chart is based on those who said the environmental target to be achieved by 2050 is either too soon or too late.

Most respondents who thought 2050 too soon or too late want this goal to either be achieved in this decade (50%) or the next (45%).

Out of the respondents who answered this question, 3% said it was too soon and 97% said it was too late.

Drought

Respondents were asked the following question:

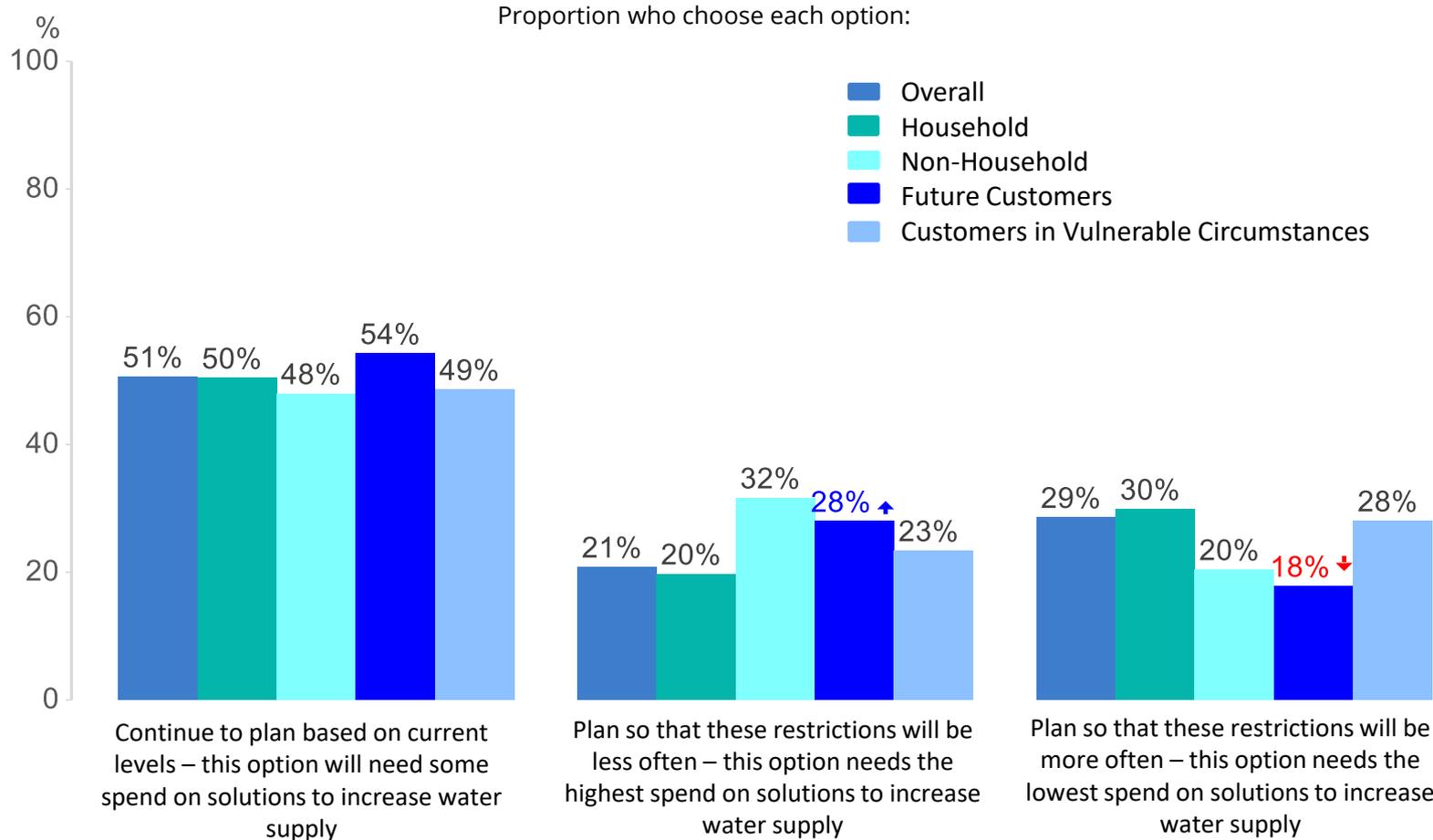
In times of drought we may need to put some restrictions on how much water customers use to make sure we have enough water if dry weather turns into an extreme drought. Without these restrictions we would need to increase the water supply.

There are three levels of actions we could take when it comes to drought:

- **Level 1:** we would use all of our communication channels (for example social media and press releases) to ask our customers to use water wisely. This happens once in 20 years on average.
- **Level 2:** if a drought happens we might restrict water use for some time (for example restrict the use of hosepipes to water gardens). This happens once every 150 years on average.
- **Level 3:** if there is a severe drought we may need to put wider restrictions on non-essential water use (for example, watering outdoor plants on business properties). This happens once every 200 years on average.

Even though the action for level 1 happens on average once in 20 years this does not mean that this action will be needed this regularly. For example, a 1 in 20 year drought might happen 3 times in 10 years and then not again for another 40 years.

What do you think we should do in the future?



51% of the overall sample would like to continue planning based on the current likelihood of restriction levels.

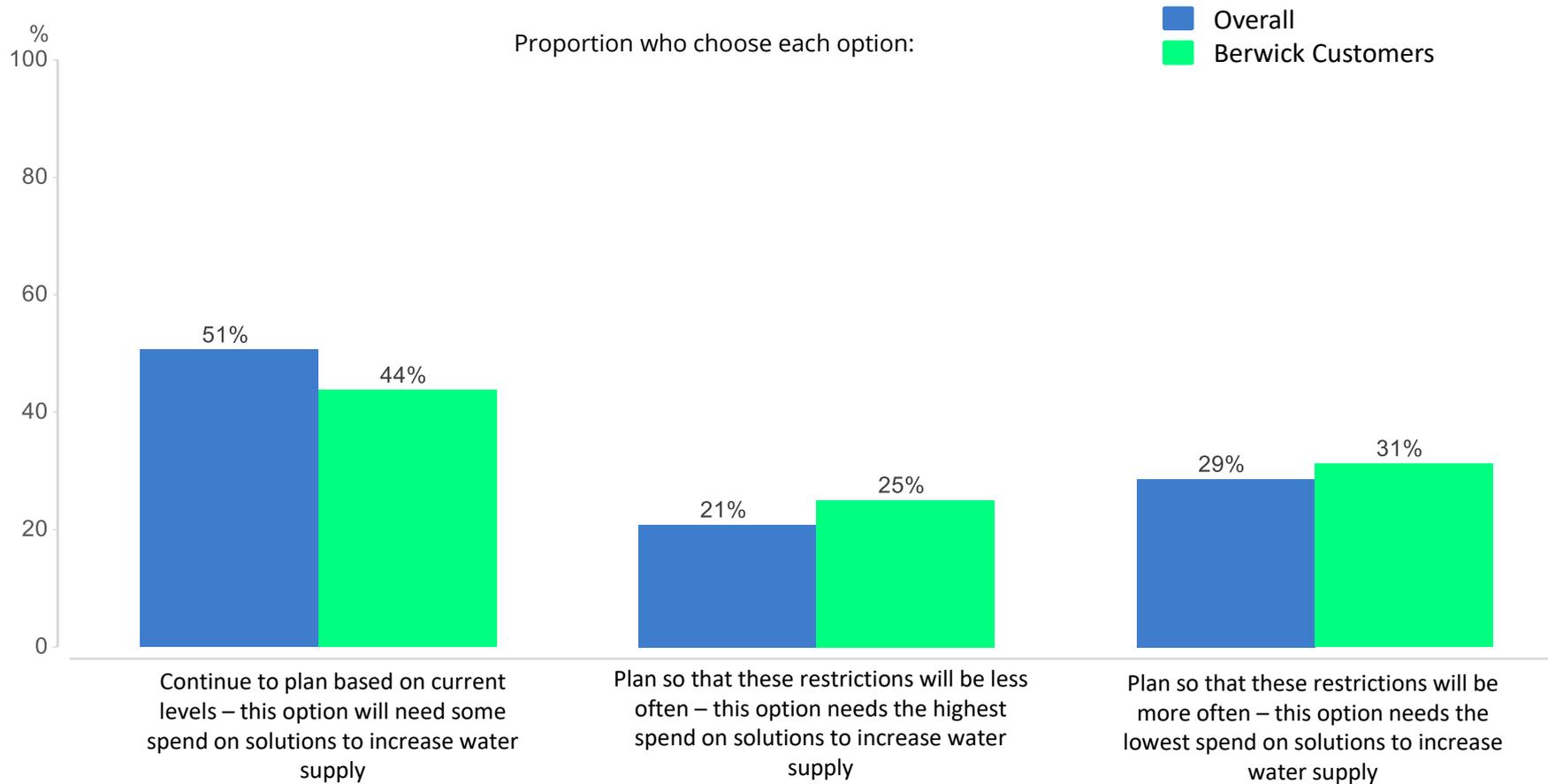
This is the most popular option across all segments.

In the focus groups the use of temporary restrictions was seen as common sense but concerns were raised that enforcing them might be difficult and people might not follow the guidance.

There are three options we can take to protect rivers, lakes and springs from the effects of climate change. Please select the option you think we should take:

total sample size = 1957; 95% confidence level

Proportion who choose each option:



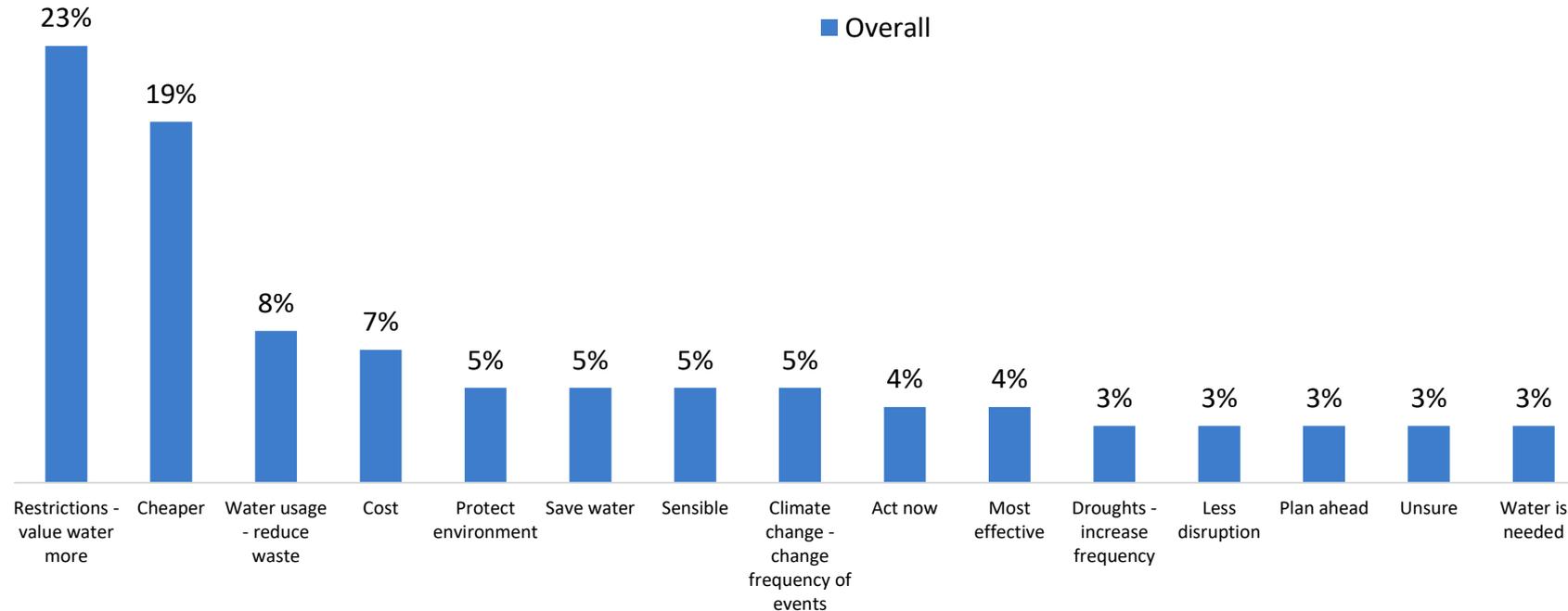
44% of Berwick customers also chose to continue planning based on current levels – but this is slightly lower than the overall sample at 51%.

In times of drought we may need to put some restrictions on how much water customers use to make sure we have enough water if dry weather turns into an extreme drought. Without these restrictions we would need to increase the water supply. There are three levels of actions we could take when it comes to drought: Level 1: we would use all of our communication channels (for example social media and press releases) to ask our customers to use water wisely. This happens once in 20 years on average. Level 2: if a drought happens we might restrict water use for some time (for example restrict the use of hosepipes to water gardens). This happens once every 150 years on average. Level 3: if there is a severe drought we may need to put wider restrictions on non-essential water use (for example, watering outdoor plants on business properties). This happens once every 200 years on average. Even though the action for level 1 happens on average once in 20 years this does not mean that this action will be needed this regularly. For example, a 1 in 20 year drought might happen 3 times in 10 years and then not again for another 40 years. What do you think we should do in the future?

total sample size = 1957; 95% confidence level

As Berwick respondents are part of the customer base they have been included in the overall sample in the comparison charts. In line with the rest of the report, when comparisons by subgroups are supplied, the subgroups are compared with the overall sample. The number of respondents in Berwick is also comparatively small so their inclusion doesn't influence the overall results.

Proportion who choose each option:



This chart is based on those who prefer to plan so that restrictions will be more often - this option needs the lowest spend on solutions to increase water supply.

23% of respondents feel that if Northumbrian Water opt for this plan this will make people value water more.

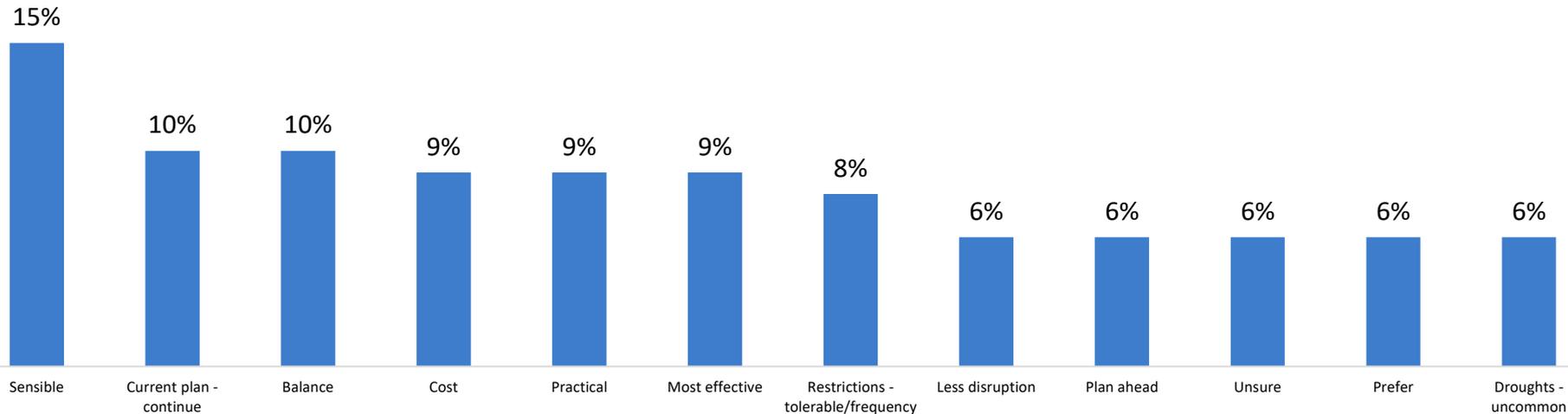
19% of respondents are concerned about rising bills so have opted for this option due to it being the cheapest.

In times of drought we may need to put some restrictions on how much water customers use to make sure we have enough water if dry weather turns into an extreme drought. Without these restrictions we would need to increase the water supply. There are three levels of actions we could take when it comes to drought: Level 1: we would use all of our communication channels (for example social media and press releases) to ask our customers to use water wisely. This happens once in 10 years on average. Level 2: if a drought happens we might restrict water use for some time (for example restrict the use of hosepipes to water gardens). This happens once every 20 years on average. Level 3: if there is a severe drought we may need to put wider restrictions on non-essential water use (for example, watering outdoor plants on business properties). This happens once every 50 years on average. Even though the action for level 1 happens on average once in 10 years this does not mean that this action will be needed this regularly. For example, a 1 in 10 year drought might happen 3 times in 10 years and then not again for another 20 years. What do you think we should do in the future?

Those who said: Plan so that these restrictions will be more often - this option needs the lowest spend on solutions to increase water supply, Sample = 303

Proportion who choose each option:

■ Overall



In times of drought we may need to put some restrictions on how much water customers use to make sure we have enough water if dry weather turns into an extreme drought. Without these restrictions we would need to increase the water supply. There are three levels of actions we could take when it comes to drought: Level 1: we would use all of our communication channels (for example social media and press releases) to ask our customers to use water wisely. This happens once in 10 years on average. Level 2: if a drought happens we might restrict water use for some time (for example restrict the use of hosepipes to water gardens). This happens once every 20 years on average. Level 3: if there is a severe drought we may need to put wider restrictions on non-essential water use (for example, watering outdoor plants on business properties). This happens once every 50 years on average. Even though the action for level 1 happens on average once in 10 years this does not mean that this action will be needed this regularly. For example, a 1 in 10 year drought might happen 3 times in 10 years and then not again for another 20 years. What do you think we should do in the future?

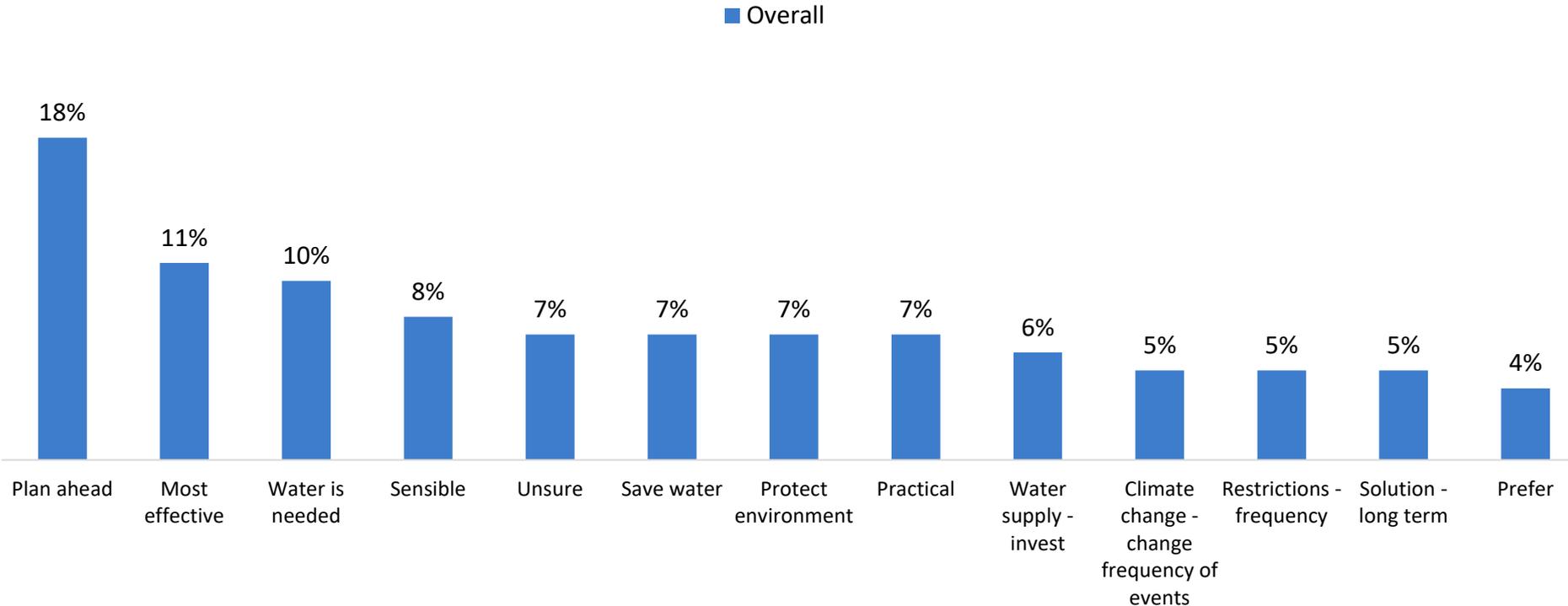
Those who said: Continue to plan based on the current levels - this option needs some spend on solutions to increase water supply , Sample = 504

This chart is based on those who prefer to continue to plan based on current levels- this option needs some spend on solutions to increase water supply.

15% of respondents feel that if Northumbrian Water opt for this plan it would be the most sensible option.

10% of respondents feel that it gives the best balance between the options shown to them.

Proportion who choose each option:



This chart is based on those who prefer the plan so that these restrictions will be less often - this option needs the highest spend on solutions to increase water supply.

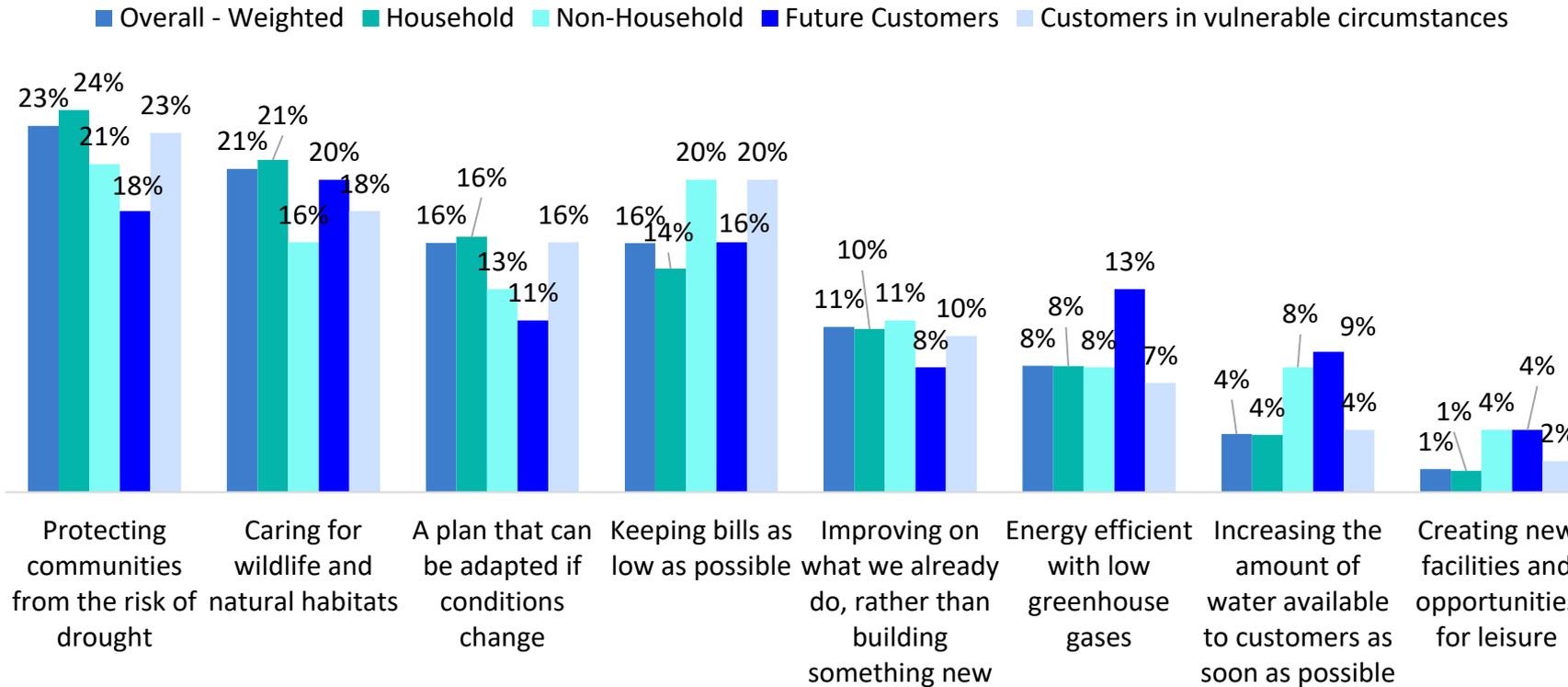
18% of respondents feel that if Northumbrian Water opted for this plan it would help them plan ahead for the worst case scenario.

11% of respondents feel that it gives them the most effective chance at preventing restrictions due to extreme drought.

In times of drought we may need to put some restrictions on how much water customers use to make sure we have enough water if dry weather turns into an extreme drought. Without these restrictions we would need to increase the water supply. There are three levels of actions we could take when it comes to drought: Level 1: we would use all of our communication channels (for example social media and press releases) to ask our customers to use water wisely. This happens once in 10 years on average. Level 2: if a drought happens we might restrict water use for some time (for example restrict the use of hosepipes to water gardens). This happens once every 20 years on average. Level 3: if there is a severe drought we may need to put wider restrictions on non-essential water use (for example, watering outdoor plants on business properties). This happens once every 50 years on average. Even though the action for level 1 happens on average once in 10 years this does not mean that this action will be needed this regularly. For example, a 1 in 10 year drought might happen 3 times in 10 years and then not again for another 20 years. What do you think we should do in the future?

Those who said: Plan so that these restrictions will be less often - this option needs the highest spend on solutions to increase water supply , Sample = 201

Level of support



Protecting communities from drought has the highest support overall, followed by caring for wildlife and natural habitats and an adaptable plan.

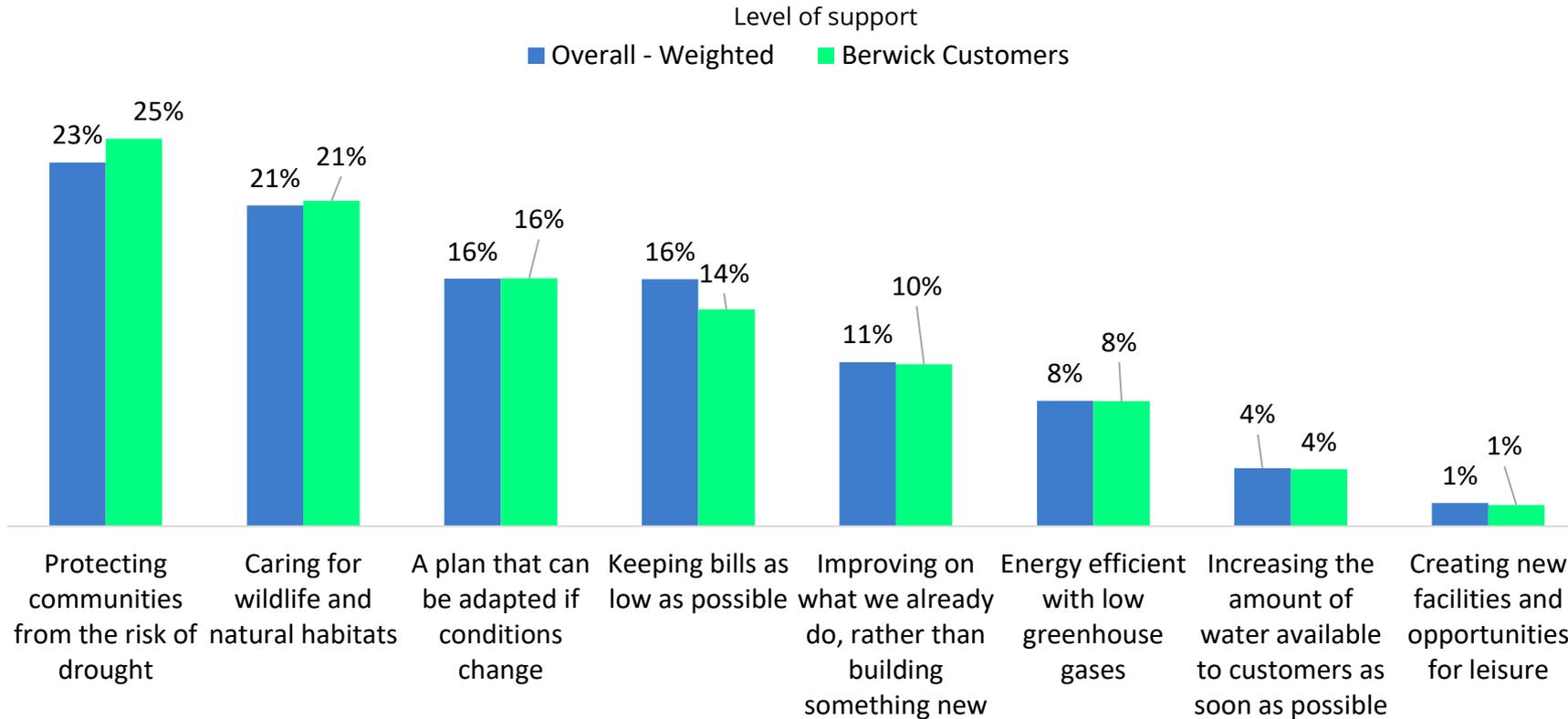
In the focus groups caring for wildlife had been the priority, followed by keeping bills low. In the survey protection from drought has been shown to be most important.

Having an adaptable plan is also proving to be key whereas in the focus groups it was less important. Keeping bills low has a high share of preference amongst customers in vulnerable circumstances and Non-Households.

All of the options you've looked at have their own pros and cons.

We'd like to know what are the most and least important factors to you when deciding whether or not you support an option. Out of the following, **please tell us what you think is the most important and the least important to you:** (Please note this question is repeated a few times with different combinations of options)

total sample size = 1957; 95% confidence level



Berwick customers follow the trend with the overall sample size in regards to what they find is the most important – they are slightly more likely than the overall sample to want to protect communities from drought and for them it is slightly less important to keep bills as low as possible.

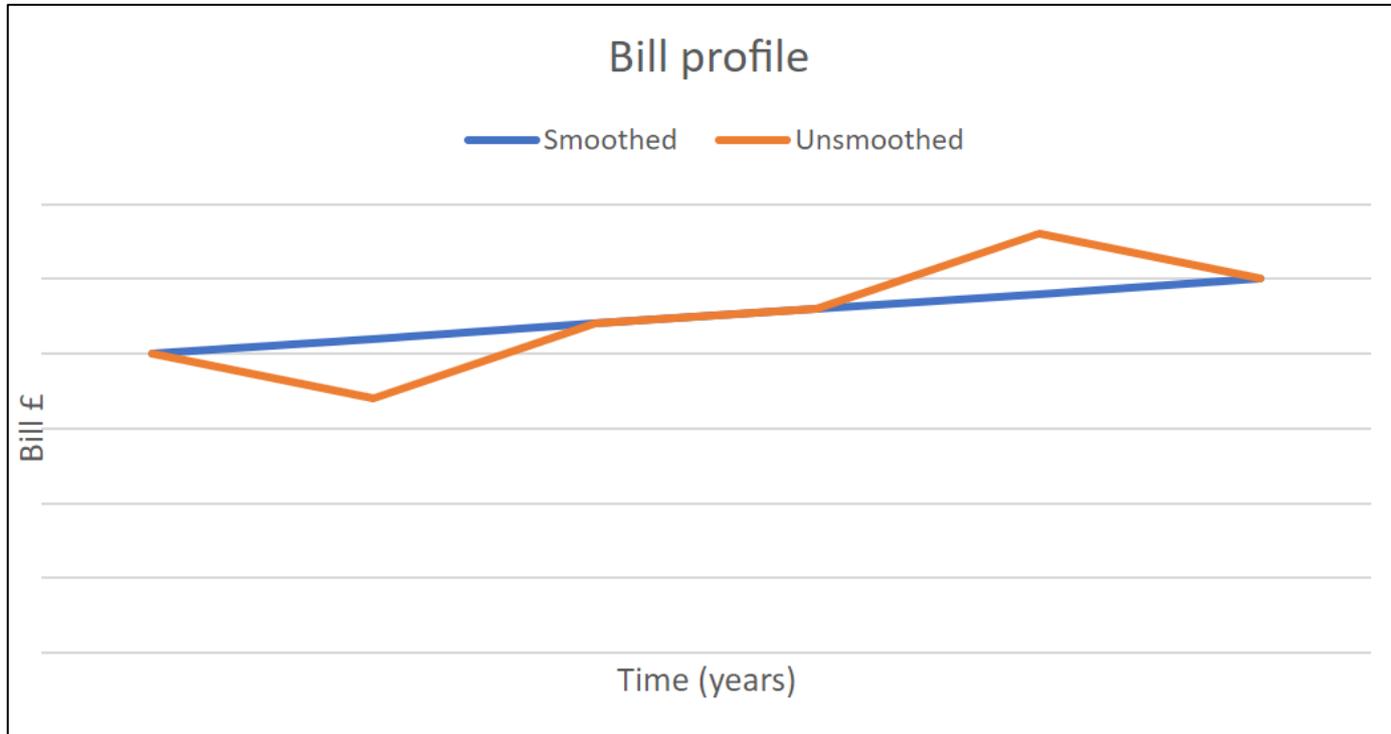
All of the options you've looked at have their own pros and cons.

We'd like to know what are the most and least important factors to you when deciding whether or not you support an option. Out of the following, **please tell us what you think is the most important and the least important to you:** (Please note this question is repeated a few times with different combinations of options)

total sample size = 1957; 95% confidence level

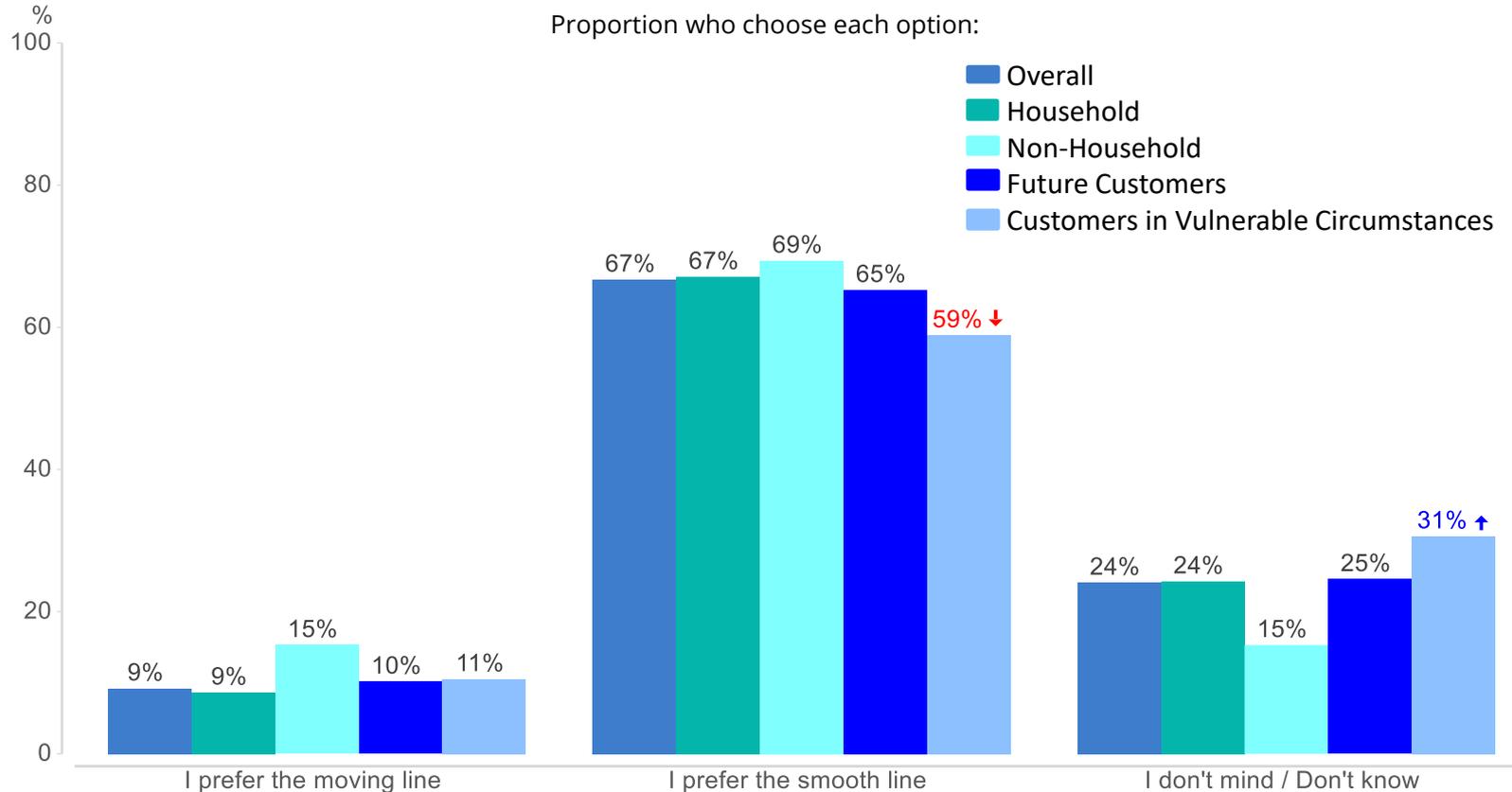
As Berwick respondents are part of the customer base they have been included in the overall sample in the comparison charts. In line with the rest of the report, when comparisons by subgroups are supplied, the subgroups are compared with the overall sample. The number of respondents in Berwick is also comparatively small so their inclusion doesn't influence the overall results.

Bill Profile



Respondents were shown the image to the left, featuring two different bill structures Northumbrian Water could choose from, and were asked to indicate which one they preferred and why.

Proportion who choose each option:



Northumbrian Water can take two approaches to billing customers. The first option is the flat line – the amount of money everyone pays would be smoothed over time. The second option is the unsmoothed line – everyone’s bills would go up and down over time. In both cases the total amount customers would pay would be the same. Which approach to billing do you prefer?

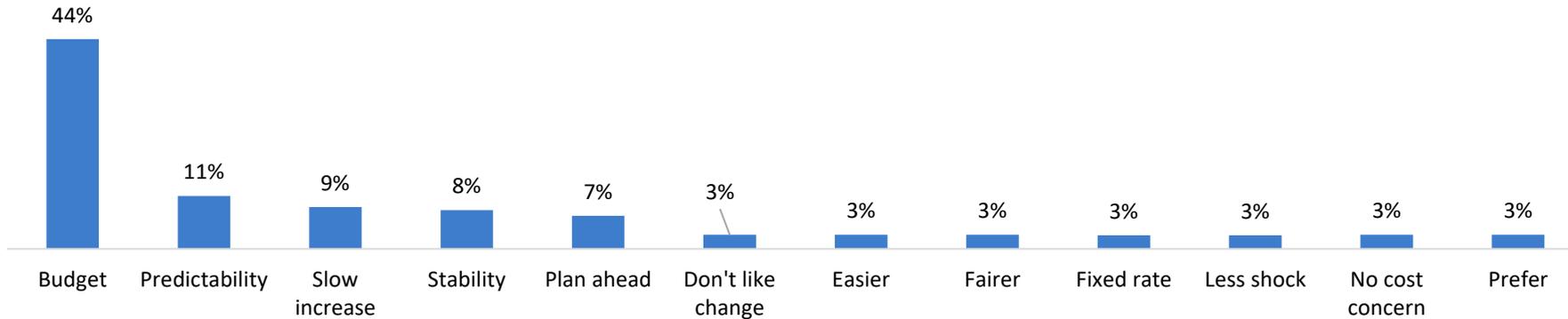
total sample size = 1957; 95% confidence level

Northumbrian Water can take two approaches to billing customers. The first option is the smoothed line and the second option is the moving line.

Smoothed bill profiles are the most popular across all segments. This confirms what we have seen in the focus groups, where respondents predominantly also chose the smoothed line.

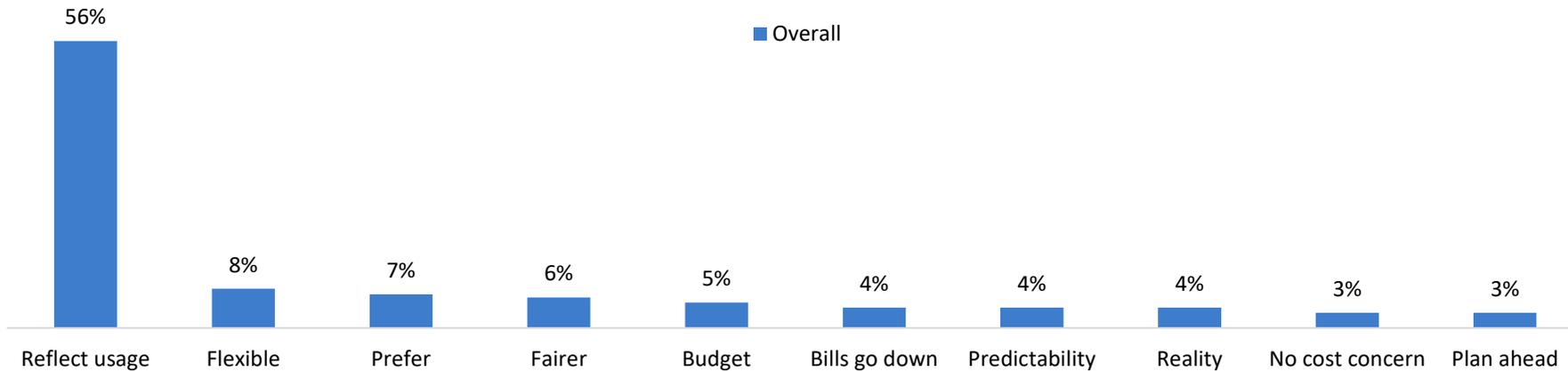
Those who said they preferred the smoothed line, Sample = 915

Overall



Those who said they preferred the moving line, Sample = 91

Overall



Northumbrian Water can take two approaches to billing customers. The first option is the flat line – the amount of money everyone pays would be smoothed over time. The second option is the unsmoothed line – everyone’s bills would go up and down over time. In both cases the total amount customers would pay would be the same. Which approach to billing do you prefer?

These charts are based on reasons behind choice for either a moving or smooth line.

In line with the view expressed in the focus groups, 44% of responses in support of the smoothed line choose it as it enables them to budget. 11% also say it makes bills more predictable. In the groups we found that stability is particularly important at times of rising costs.

For 56% of those who prefer the moving line the top reason is that they believe it more closely matches their usage of water.

Conclusions and recommendations

Based on the overview of respondent preferences there is **one** clear investment option which has the highest support overall:

- **Company-side leak reduction:** was supported at all stages of the research – it's key that this can be delivered quickly and that the amount of water saved is as large as possible
- Solutions that receive some support but also raise concerns are:
- **Water saving devices/behaviours:** This is a good long term solution which fits with the need for customers' education but respondents worry it may be expensive.
- **Pipelines:** these are supported by a third in isolation but are third in the priority list when assessed against other solutions. This is a tried and tested solution but it may turn out to be expensive due to rising maintenance costs
- **Opt-in metering:** was supported by about half but came fourth in the MaxDiff scores. It would be preferable to smart metering but could mean increased costs for customers in vulnerable circumstances and may not lead to a change in habits

Two solutions have low appeal:

- **Customer-side leak reduction:** Supported by under half in isolation, it moved lower down the priority list in the MaxDiff. Benefits of this solution are unclear and people worry they would end up having to pay a high price for the repairs

- **New borehole:** supported by a third in isolation, it also moves down the priority list when assessed against other solutions. Seen as low cost and low environmental impact, but the fact that it has been used before but did not actually solve the problem makes people worry it may not be suitable as a long-term solution

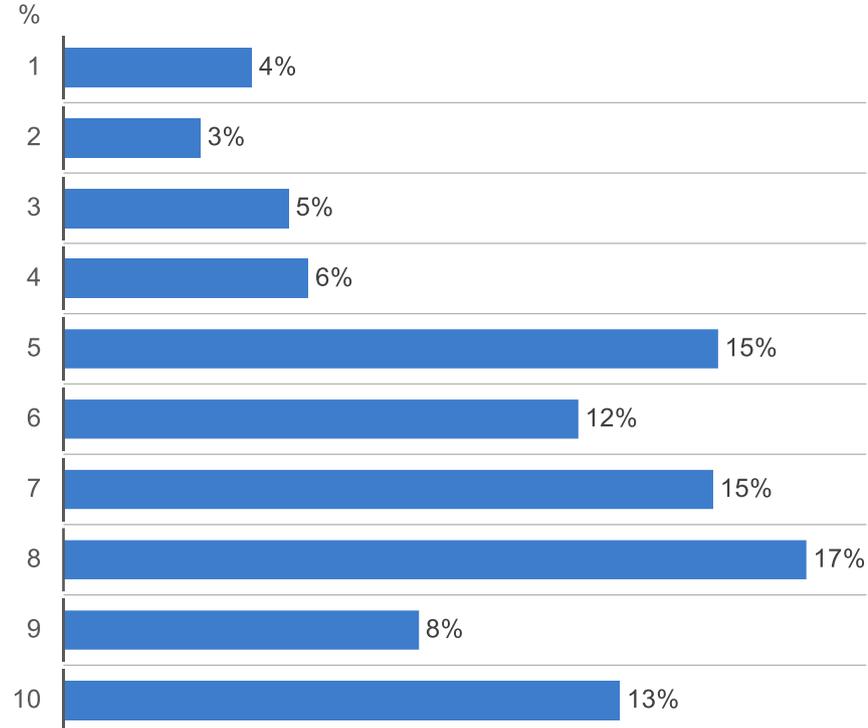
Solutions that have low overall appeal are:

- **Smart metering:** This was the most divisive out of the metering options, with concerns around costs
- **Abstraction:** this receives the lowest level of support because of environmental and sustainability concerns
- Awareness of water stressed areas in the North East is low but it is cause for **concern** for over half
- Two thirds of the sample **accept** that all will have to pay for measures aimed at increasing water supply in Berwick
- Non-Household customers are even more on board but future customers may need more **convincing** once they become billpayers
- **Protecting communities from the risk of drought** is a priority for respondents, followed by caring for wildlife and natural habitats

- In terms of drought measures, respondents' preference is to **continue to plan** based on the current levels of action
- Temporary restrictions were seen as common sense in the focus groups and would therefore be accepted
- However, there is a concern people might not follow the rules
- A third of respondents prefer a **smoothed** bill structure – this approach is preferred as it gives customers the opportunity to budget

Survey Scores

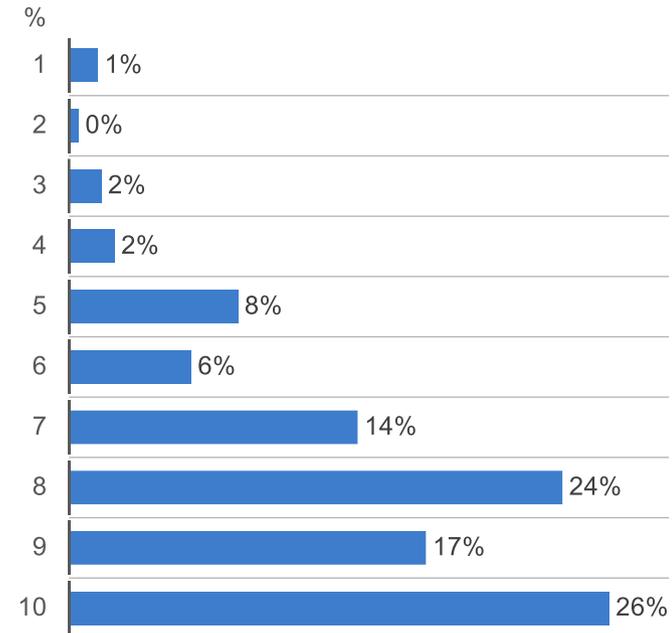
How enjoyable did you find the survey?



Average Score - Enjoyable

6.5

How easy or difficult was it to understand the information you were provided during this survey?



Average Score – Ease of understanding

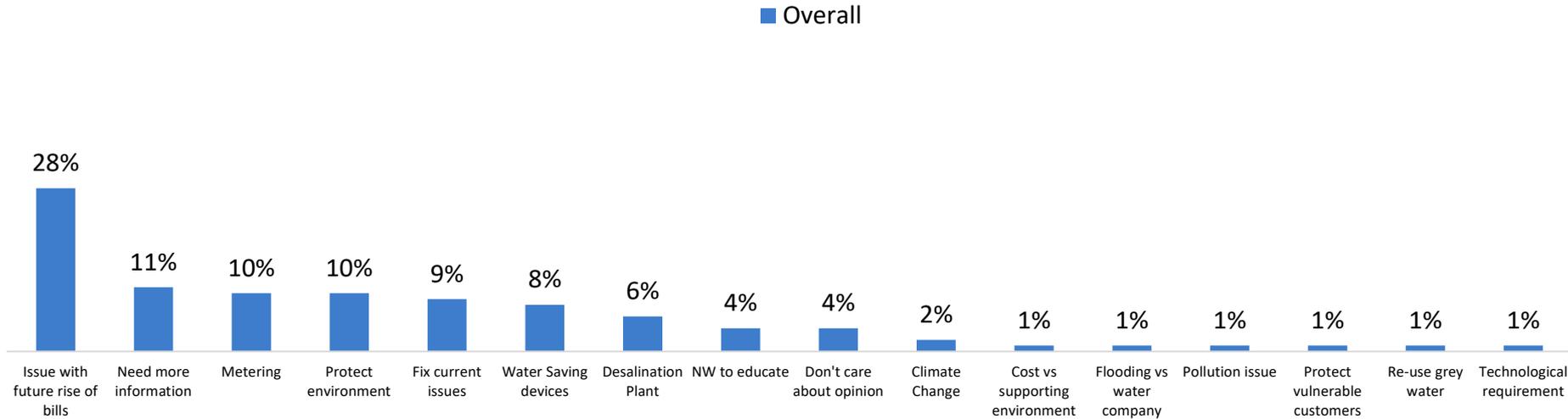
7.9

81% overall found the survey easy to understand with a score of 7+ out of 10, which indicates that the concepts were explained in a way that respondents found user-friendly.

However, only 53% found the survey enjoyable with the same score.

Some customers contacted us to report technical difficulties. Due to the length of the questionnaire the survey experienced drop outs and the overall completion rate was 32%.

Proportion who mention each comment:



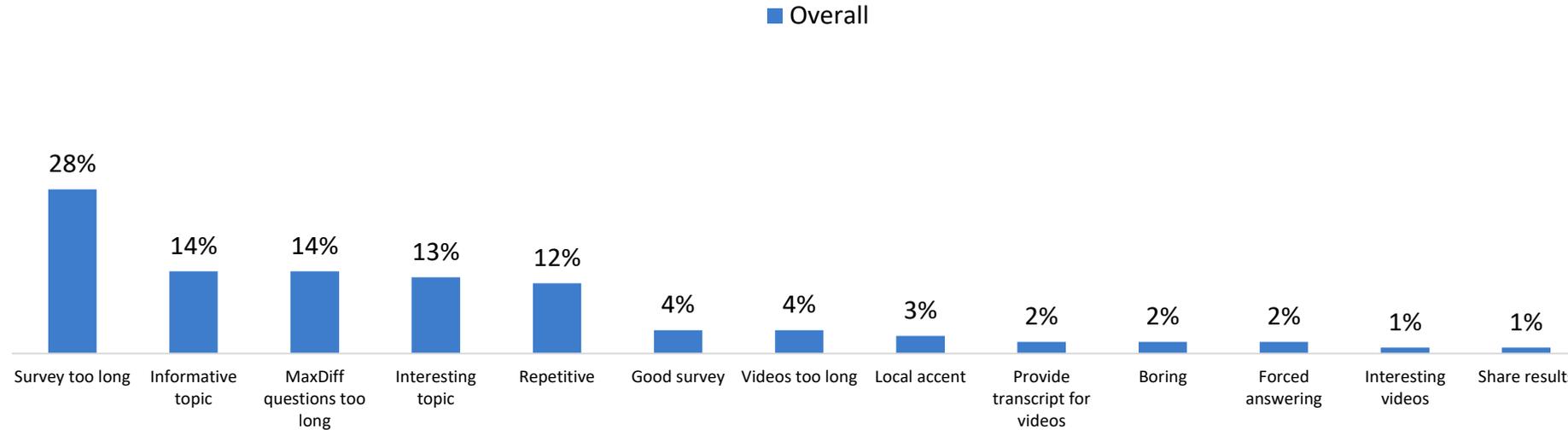
This chart is based on any additional comments left at the end of the survey relating to topics mentioned in the questionnaire, **excluding people who had no comment.**

28% of those who left a comment expressed concerns around increasing bills.

Do you have any other comments or suggestions about the topics in this survey? Comments about survey topics

Top topics mentioned when removing No Comment, Sample = 187

Proportion who mention each comment:



Do you have any other comments or suggestions about the topics in this survey? Comments about survey

Top topics mentioned when removing No Comment, Sample = 148

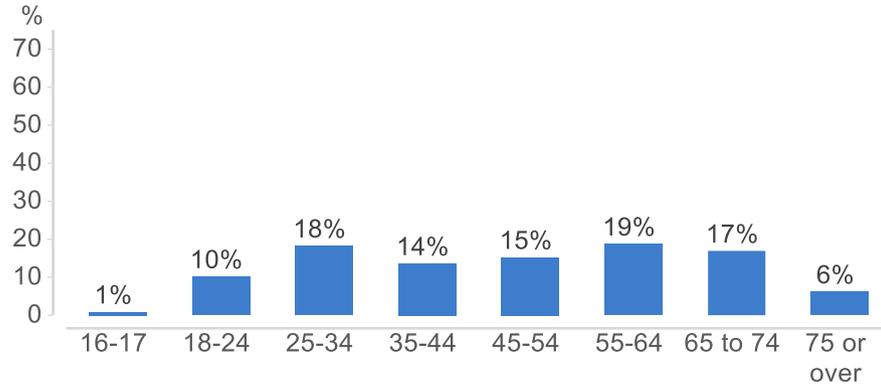
This chart is based on any additional comments left at the end of the survey relating to the survey itself, **excluding people who had no comment.**

28% of those who left a comment found the survey too long.

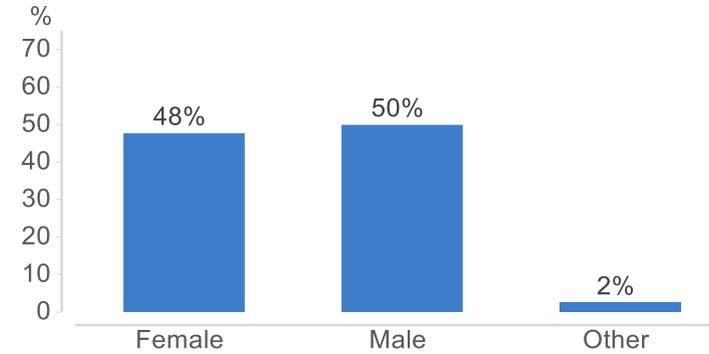
14% found the MaxDiff questions too long but an equivalent proportion thought the survey was informative and interesting.

Sample Profile

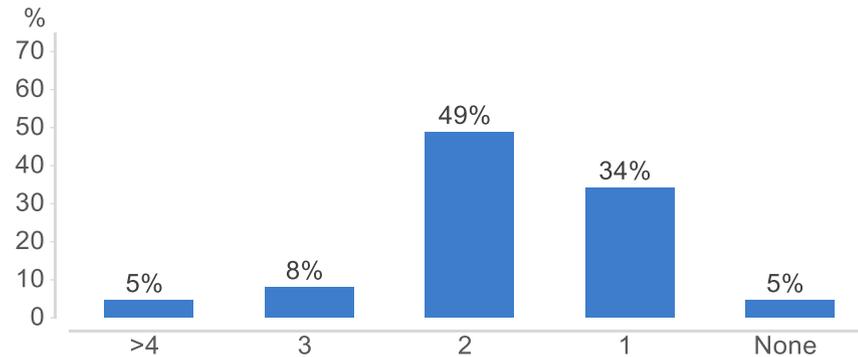
Which of the following Age Groups do you fit into?



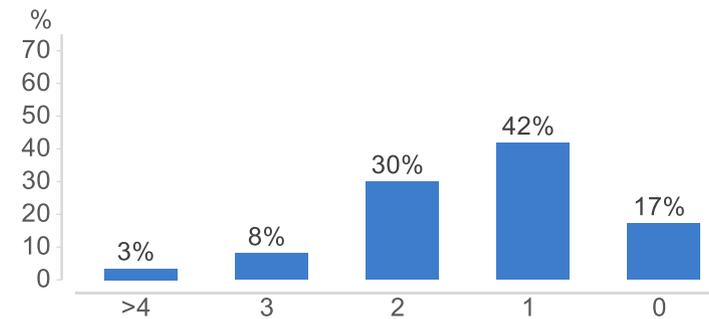
What is your Gender?



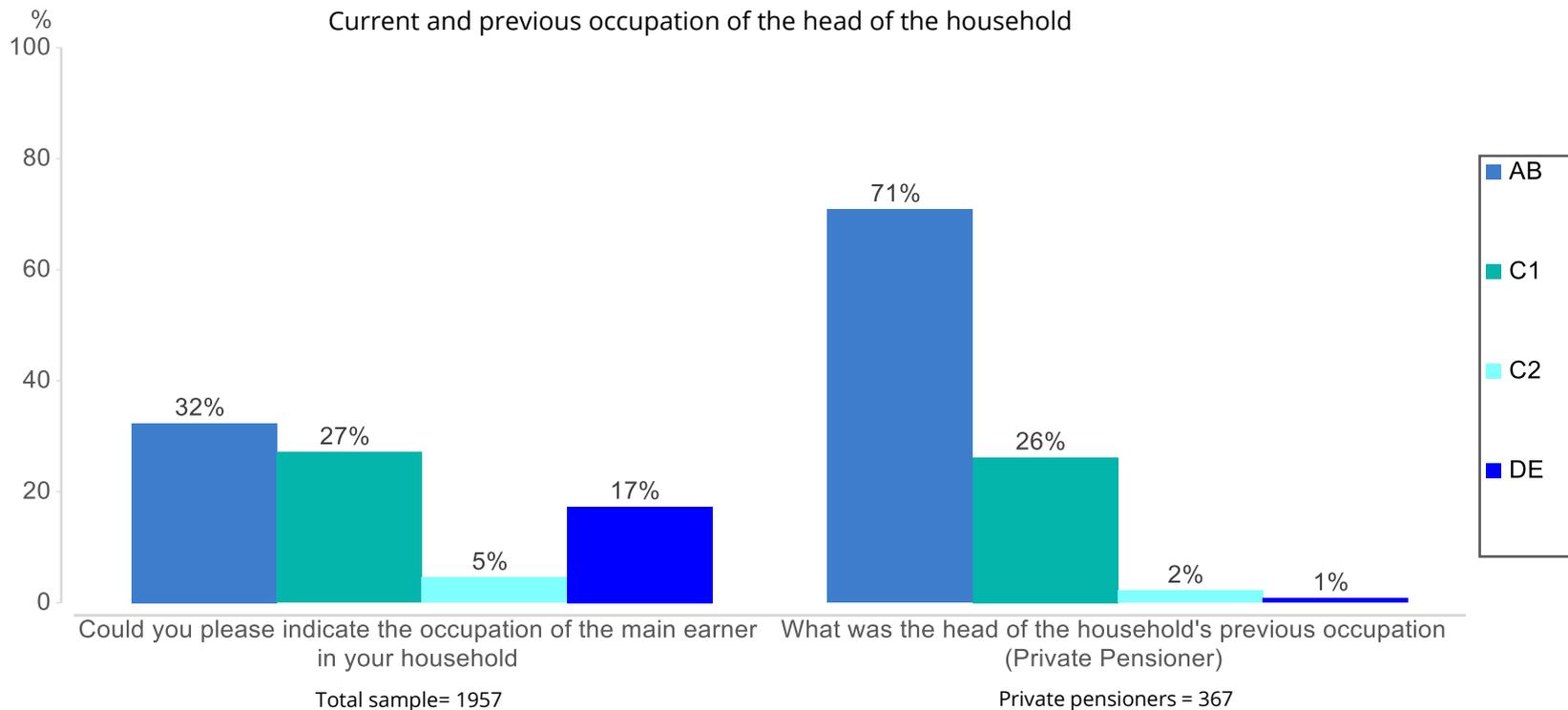
How many Adults live in your household?



How many Children aged 18 and under live in your household?



Total sample= 1957



AB= Higher and intermediate managerial, administrative and professional

C1=Supervisory, clerical and junior managerial, administrative and professional; students living away from home

C2=Skilled manual workers

DE=Semi-skilled and unskilled manual workers, state pensioners, casual and lowest grade workers, unemployed with state benefits only

Respondents were asked about their current occupation.

Only those who fell into the 'Private Pensioner' category were asked about their previous occupation. Responses given to the two questions were then codified into the 4 socioeconomic groups featured on the chart on page 73.

The sample size for this was 367.

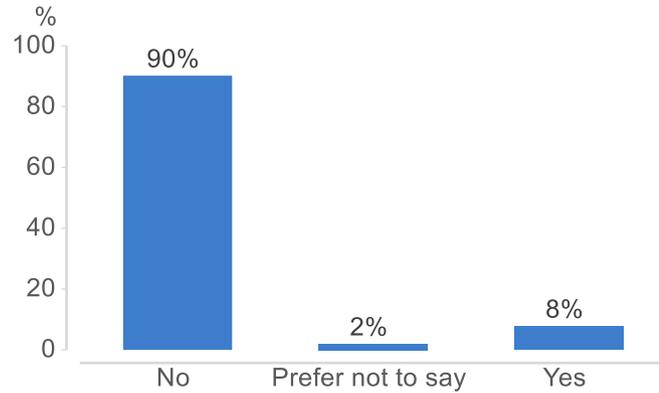
8% of respondents overall fell into the state pensioner category.

Our sample shows that more respondents fell into AB social grades compared to the customer base (where AB are 16%).

Conversely, the survey sample has fewer respondents from social grades C2 and DE. C2 made up 22% of the customer base and DE amounted to 32% but their proportions were lower in the sample.

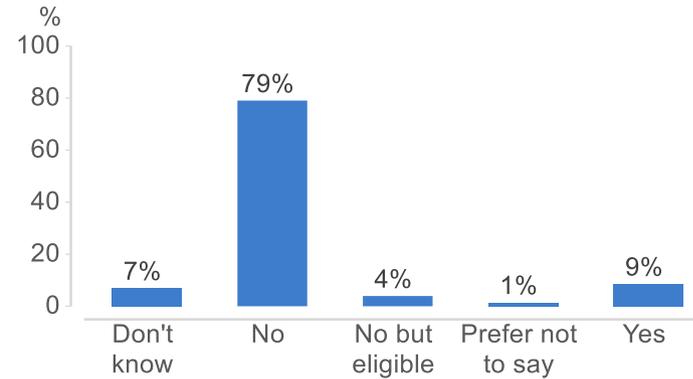
As a result, data for the MaxDiff question has been weighted to rebalance the proportions of socioeconomic groups in the sample, to reduce any influence having an overrepresentation of AB and an underrepresentation of C2DE might have had on responses.

Is English your second language?



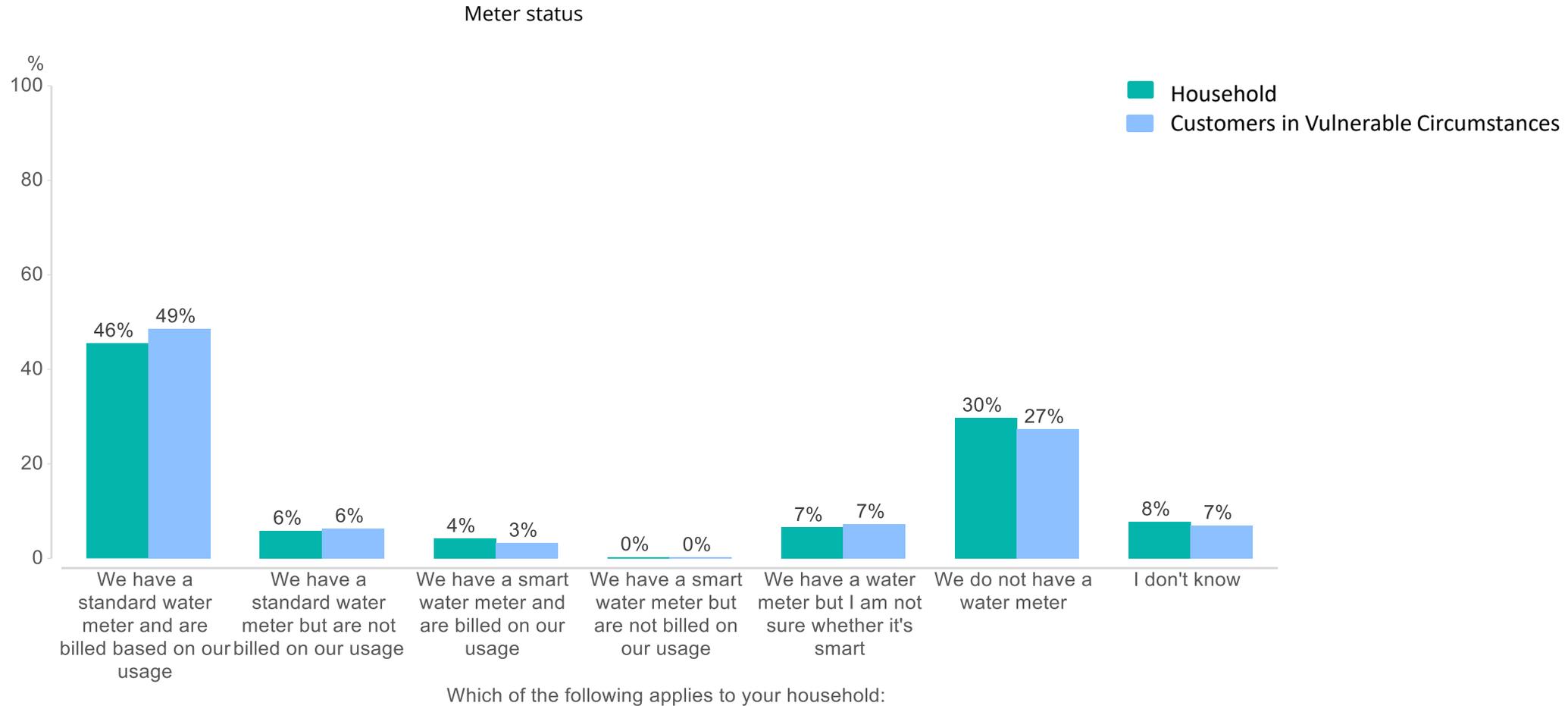
Total sample= 1957

Is anyone in your household registered on the Priority Services Register?



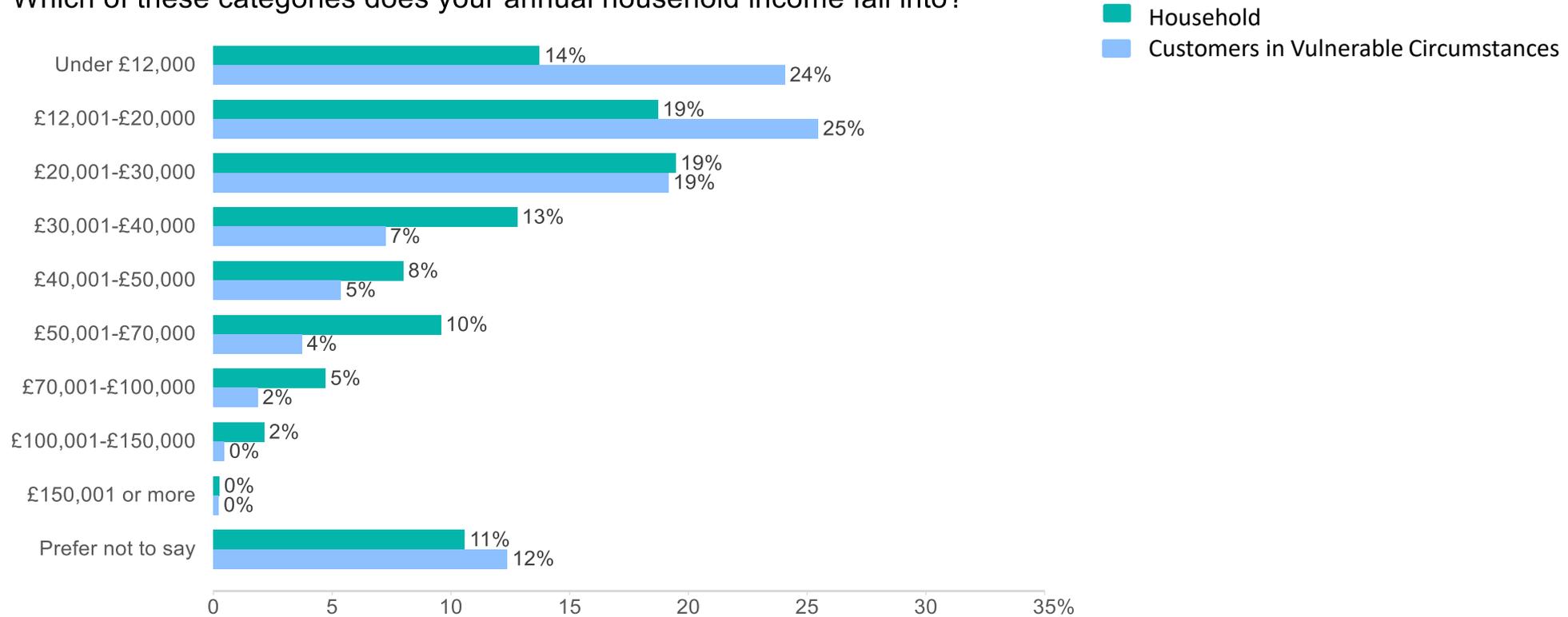
Total sample= 1957

The proportion of those who speak English as their second language and those who are on the PSR are broadly in line with the UK population.



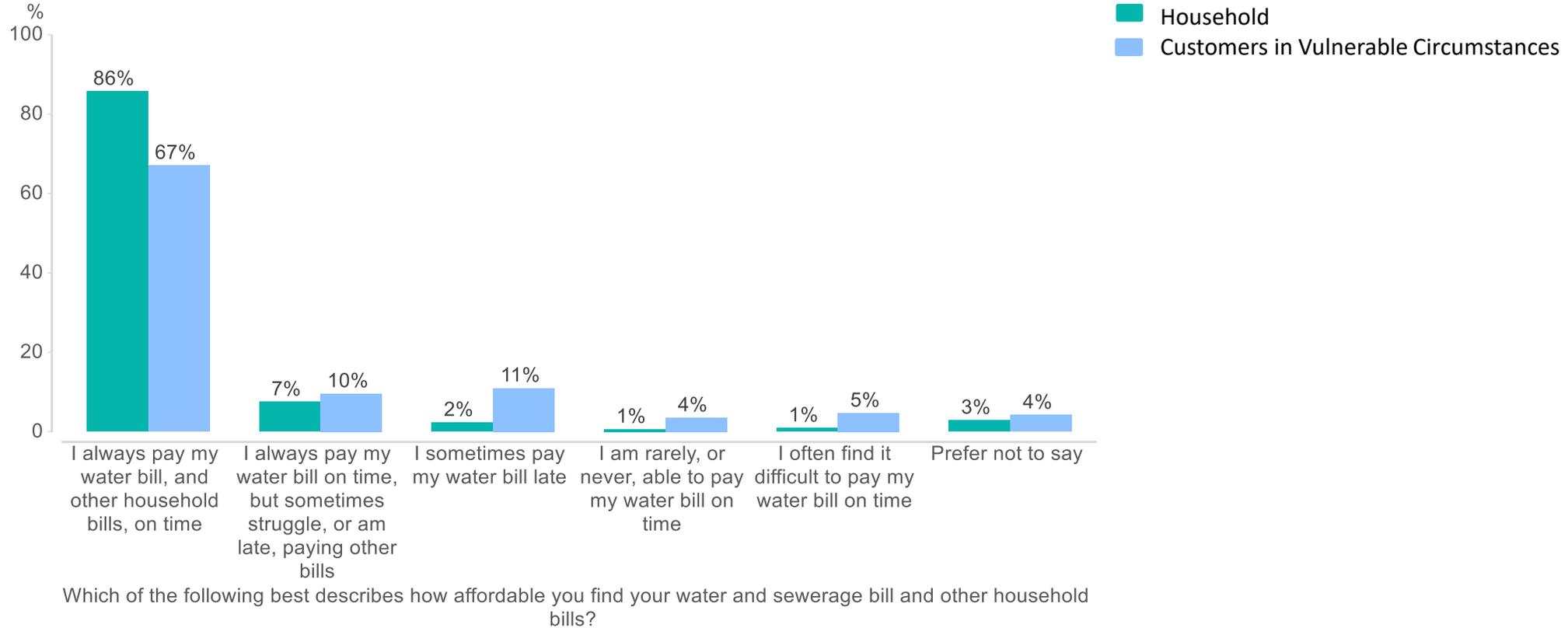
Total sample= 1957

Which of these categories does your annual household income fall into?



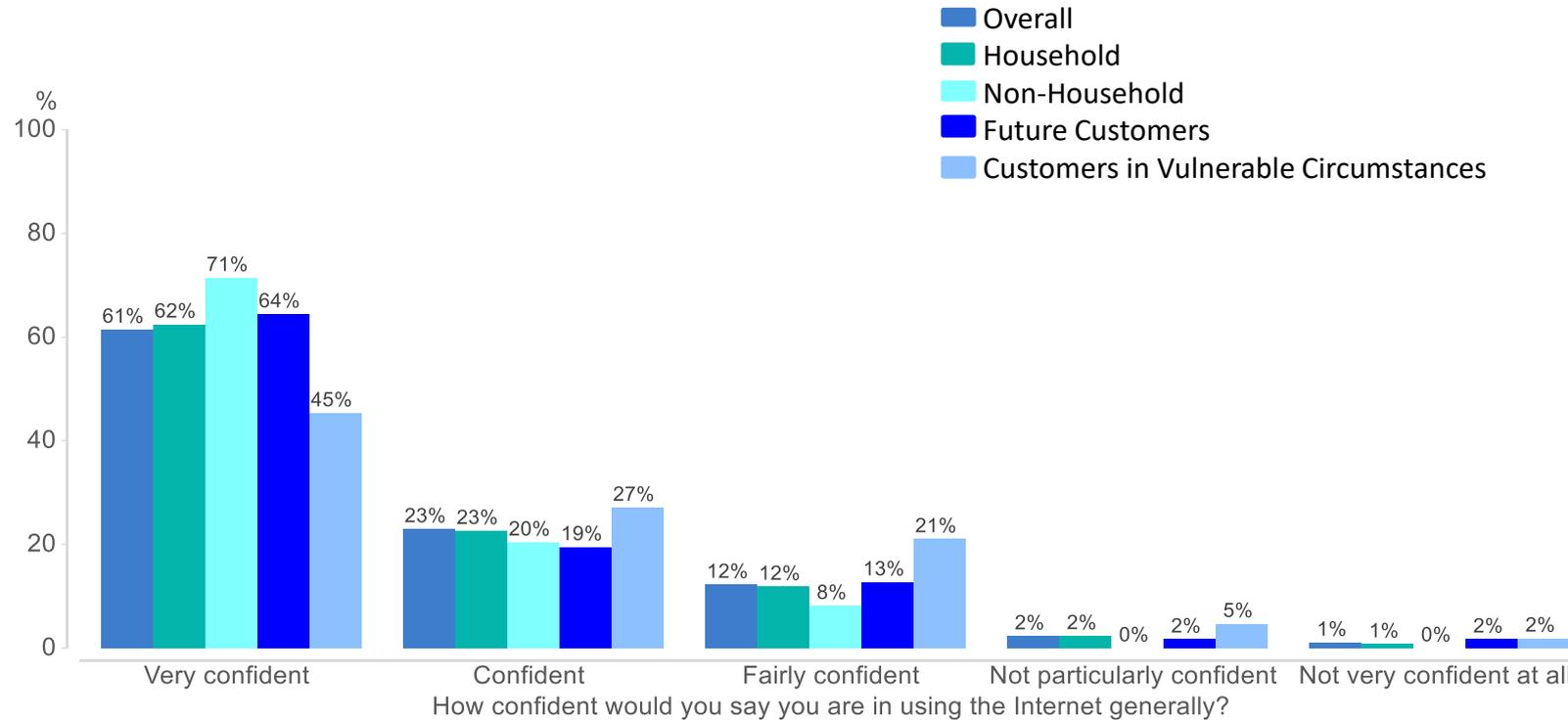
Total sample= 1957

Bill affordability



Total sample= 1957

Internet Confidence



92% of people in the UK are regular Internet users.
 Especially since the pandemic customers over 55 have increased their technical capabilities.

Total sample= 1957