

Northumbrian Water Group

Long-Term Delivery Strategy

– Young People Panel and
Innovation Festival

Research report

August 2023



Executive summary

Background

The Long-Term Delivery Strategy (LTDS) has been developed by Northumbrian Water Group (NWG) to enable their PR24 business plan to be set in the context of their long-term ambitions to 2050. The LTDS includes a number of targets and NWG were keen to explore a subset of these with customers. To ensure independence, NWG commissioned Explain to undertake this research.

Methodology

This research was conducted via two deliberative discussions. The first discussion took place at the Innovation Festival on Tuesday 11th July with members of the customer Fanzone. The Fanzone consisted of nine attendees, five from People Panels (three from the Northumbrian People Panel and two from the Young People Panel) and four from previous attendees of the FanZone. The discussion lasted approximately 90 minutes. The second discussion took place with the Young People Panel via Zoom on the 26th July. There were six attendees and again the session lasted approximately 90 minutes.

Within the sessions respondents were introduced to NWG's LTDS and seven of the long-term targets that the business was looking to achieve within it. These targets, summarised below, were selected as they had not yet featured in customer engagement or a different level of ambition was being proposed compared to what customers had previously asked for.

POLLUTION INCIDENTS	Zero levels of pollution now and always, reduce the number of category one to three pollution incidents by 50% by 2040 (from 2022 baseline).
SEWER FLOODING	Reduce both internal and external sewer flooding by 60% from 2025 performance commitment levels.
BIODIVERSITY	A net gain in biodiversity that is 5% above the legal requirement.
NET ZERO AND RENEWABLE ENERGY	Achieve Net Zero in scope 1, 2 and 3 emissions. 100% of electricity to come from additional renewable energy generation by 2040.
BATHING WATERS	All bathing waters at good or excellent status by 2030 and 100% at excellent by 2050.
INTERRUPTIONS TO SUPPLY	Reduce interruptions to supply that last more than 3 hours to less than 2 minutes per customer per year on average.
CUSTOMER SIDE LEAD PIPE REPLACEMENT	Eliminate the impact of lead on customers by replacing lead in customer supply pipes.



Summary of results

Affordability of bill increases associated with the LTDS

It was clear that the affordability of forecasted bills was a concern for respondents, particularly Young People Panellists who found the prospect of water bills being 8% of income intimidating. Ways to balance affordability with long term ambitions were particularly encouraged by this group. That said, all targets, with the exception of biodiversity and bathing waters amongst the Young People Panel, were important to all respondents. The Young People Panel were willing to make trade offs with the targets within biodiversity and bathing waters in order to balance a gold standard and budget approach within the LTDS.

Thoughts on the phasing options of the bill increases associated with the LTDS

Respondents were presented with three phasing options for the bill increases associated with the LTDS and were asked to vote on their preference. The options presented were: a steady increase over time (younger and older customers would contribute equally); push spending back (younger customers would contribute more); or bring spending forward (older customers would contribute more).

A steady increase over time was preferred by the majority of respondents, as demonstrated in the table below.

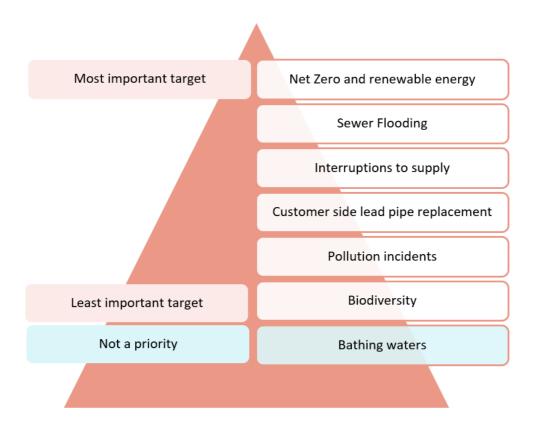
	A steady increase	Push spending back	Bring spending forward
Young PP (6)	4	1	1
Innovation Fest (7)	7	0	0

Two attendees at the Innovation Festival made an alternative suggestion and therefore did not participate in the vote. The suggestion was to make all improvements now but pay for the improvements at a later date.



Thoughts on the individual targets within the LTDS

Young People Panellists ranked the targets in the following order of priority:



Overall, the following views emerged in relation to each of the targets.

Net zero and renewable energy

- This was a higher priority for both groups with agreement that moving in line with government targets was appropriate.
- Young People Panellists were particularly cognisant of the need to tackle climate change.

Sewer flooding

 This target was seen as important by both groups given the high personal impact of experiencing an internal or external sewer flooding incident.

Interruptions to supply

- This target was prioritised in both groups as it was seen to be NWG's core business.
- Interruptions to supply were felt to be particularly unacceptable in the context of increasing bills.



Lead pipe replacement

- This target was also seen as important in both groups.
- Young People Panellists were surprised to learn of lead in the system and felt that this was an issue that needed to be addressed.

Pollution incidents

- Young People Panellists considered this target to be a lesser priority, feeling that it was difficult to isolate pollution incidents that are solely caused by NWG operations.

Biodiversity

 This was a lower priority for both groups. It was recognised as an important societal issue, but was not felt to be a responsibility of NWG.

Bathing waters

- Innovation Festival respondents were supportive of the inclusion of this target and the level of ambition that had been presented.
- Conversely, Young People Panellists suggested this target was removed from the LTDS to help balance affordability of the strategy as a whole

Conclusions

Respondents were supportive of the LTDS and the targets within it. However, bill affordability was important and Young People Panellists were particularly willing to make trade offs in some of the target areas (biodiversity and bathing waters) to balance ambition with affordability.



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"Quality is never an accident it is always the result of intelligent effort"

Introduction

An overview of the project background, objectives and methodology.



Introduction

Background

The Long-Term Delivery Strategy (LTDS) has been developed by Northumbrian Water Group (NWG) to enable their PR24 business plan to be set in the context of their long-term ambitions to 2050. The LTDS includes a number of targets and NWG were keen to explore a subset of these with customers. To ensure independence, NWG commissioned Explain to undertake this research.

Methodology

This research was conducted via two deliberative discussions.

The first discussion took place at the Innovation Festival on Tuesday 11th July with members of the customer Fanzone. The Fanzone consisted of nine attendees, five from People Panels (Northumbrian and Young) and four from previous attendees of the FanZone. The discussion lasted approximately 90 minutes. The second discussion took place with the Young People Panel via Zoom on the 26th July. There were six attendees and again the session lasted approximately 90 minutes.

Attendance at each session is summarised in the table below.

Group	Previous Fanzone Attendee	Northumbrian People Panellist	Young People Panellist
Innovation Festival	4	3	2
Young People Panel	N/A	N/A	6

Both sessions consisted of a series of presentations and discussion segments. Presentations were delivered by the Explain chair who also acted as the facilitator for all discussions.

Within the sessions respondents were introduced to NWG's LTDS up to 2050 and the long-term targets that the business was looking to achieve. This was set in the context of the five year business planning process. It was explained that between now and 2050 NWG will deliver five of these business plans, each taking the business one step closer to achieving the long-term goals.

The sessions focussed specifically on seven of the long-term targets. These targets were selected as they had not yet featured in customer engagement or a different level of ambition was being proposed





compared to what customers had previously asked for. The targets included in the discussions are described below.

POLLUTION INCIDENTS	Zero levels of pollution now and always, reduce the number of category one to three pollution incidents by 50% by 2040 (from 2022 baseline).
SEWER FLOODING	Reduce both internal and external sewer flooding by 60% from 2025 performance commitment levels.
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Session content

Respondents at both session were introduced to the LTDS, and the range of potential bill impacts to customers was explained.

Each target was then explained to all respondents, however in order to ensure that the session with the Young People Panel ran to time the content of this discussion was modified slightly.

Innovation Festival respondents were provided with the following information in relation to each target:

- The level of ambition that had been tested with customers previously (where available).
- Customers' view in relation to the level of ambition that had been tested (where available).
- The long-term target to 2050, i.e. what will be achieved by this date.
- The indicative investment between 2025 and 2050.
- The 2050 bill impact.

In contrast, the Young People Panellists were only presented with the long-term target to 2050.

The format of deliberations in relations to the targets also differed in the two sessions. The Innovation Festival session ran as an open discussion, with respondents given opportunity to debate each target



People Panel #11 and Innovation Festival LTDS Northumbrian Water Group August 2023



and its bill impact. Conversely, the Young People Panellists prioritised and discussed each target in a Miro board activity. During the activity the targets were ordered with most important at the top of the screen and least at the bottom, with those seen as unnecessary removed completely.

Finally, satisfaction polls were undertaken at the closure of the Young People Panel and the results are shared in Appendix one.





"The goal is to transform data into information, and information into insight"

Results

An in-depth review of the findings of the research programme.



Results

The findings from the discussions held in both sessions have been organised as follows:

Perceptions of the affordability of the bill increases associated with the LTDS

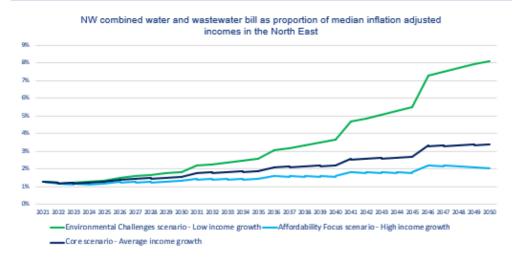
Thoughts on the phasing options of the bill increase associated with the LTDS

Consideration of the importance of each target

Affordability of bill increases associated with the LTDS

All respondents were provided with background information relating to the LTDS and its context, as well as predicted bill increases associated with the investment necessary to achieve the long-term targets. They were then encouraged to discuss their opinions on the future bill profiles that had been presented to them. Focus was particularly on graph shown below, which showed three bill increase scenarios demonstrating future bills as a proportion of inflation adjusted incomes.

LONG-TERM DELIVERY STRATEGY THE IMPACT ON CUSTOMERS DEPENDS NOT JUST ON BILLS BUT ON WAGES





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Overall, the environmental challenges scenario (which saw bills rise to 8% of incomes) caused the most concern.

- "...it fills me with a bit of fear, and anxiety, because at the end of the day, with the way that the economy is...with people's jobs and things like that going, like you don't know how it's going be. I suppose it's like the uncertainty of it all." (Young)
- "The 8% figure that it could go up to by 2050 is quite scary. And like, it's almost like, like, you just don't understand, like how that would be possible to pay that much." (Young)
- "I think it's so overwhelming. I don't know how anyone can afford to live in the UK at all. I know, they've got like the schemes to help and they're thinking of introducing more. But at that rate, like 8% is such a large chunk of income, I feel like so many people are going to be on that scheme. Is it really going to be sustainable?" (Young)
- "If you had asked me five years ago, it would have been it'll go up with the wage's kind of thing, now going up as a percentage of nothing. If I haven't got anything left anyway then that is quite a scary thing for it to go up again." (Innovation Festival)
- "You can put your bills up as much as you want, but if I haven't got the money, I haven't got the money. I'm going to work, what more do you want?" (Innovation Festival)

Despite the concerns highlighted, respondents at the Innovation Festival largely agreed that the price increases were necessary to enable NWG to undertake necessary and important work.

"[if we don't invest in the work now] In 25 years, nothing is really going to improve."
 (Innovation Festival)

However, one respondent suggested changes to enable a more equitable price rise system by introducing a tiered social tariff system that tracked individual water use and penalised the highest users with increased bills, therefore supporting those most in need.

• "But why not... roll out these meters with smart capability... So, people can directly link to the utilities their usage...So, you can engineer a social tariff for those people knowing their meters and knowing their usage, then you have a normal tariff for the people in the middle who can afford pay, and then you have the outliers... And in that context, you have a situation where you are penalizing the people that are using more." (Innovation Festival)

In response to this suggestion, there was unanimous agreement from other respondents.

• "It's a brilliant idea." (Innovation Festival)





• "I like that." (Innovation Festival)

Respondents were then asked to give their opinions on the approach they thought that NWG should take to tackle the big issues, taking a budget approach or gold standard, resilient approach. The gold-standard, resilient approach would cost more on customer bills, whereas the budget approach would see a lower increase.

There was consensus at the Innovation Festival that NWG should take a gold-standard approach to investment in order to tackle issues. Young People Panellists were also more in favour of the gold standard approach, however in order to find a balance with affordability suggested removing some of the targets.

- "Yeah, I think the gold standard...but not if it's then going to affect everyone else's budget.
 Because...if everyone's struggling to pay then... it's all going to be like cost-of-living crisis forever..." (Young)
- "If you're paying that much that you'd want a good service. But I get the same time that you might have to reprioritize things like for the water company in order to lower that price down." (Young)
- "I guess they could scrap some of other stuff like the biodiversity schemes and like, and we spoke about, like-I know they spoke about doing nice things for the environment in the past and stuff, maybe, like cut those things just to support people a bit more, because I feel like 8% isn't, like very reasonable." (Young)



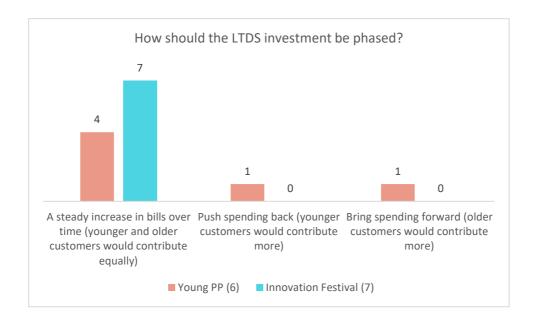


Thoughts on the phasing options of the bill increases associated with the LTDS

In light of the discussion around price increases, respondents were asked to vote on how investment for the LTDS should be phased. The three options presented to them were:

- A steady increase in bills over time (younger and older customers would contribute equally).
- Bring spending forward (older customers would contribute more).
- Push spending back (younger customers would contribute more).

Results of the voting are displayed below. Please note, two respondents from the Innovation Festival did not participate in the vote. They instead offered alternative solutions to phasing, suggesting that the investments should be made now, but paid for by future generations.



Overall, the majority of respondents believed that a steady increase in bills was the best approach as it balanced short term affordability, particularly in light of the current cost-of-living crisis, and fairness for all generations.

• "I think it should be shared over the time between us and future generations and I understand the technology improvement but that's always going to be the case isn't it, you could say in five years' time we could wait another five years and see what happens or ..."

(Innovation Festival)





- "I don't think that people really need that extra price increase right now because like the state of the UK, people aren't affording the things they need." (Young)
- "It's not going to, sort of, help people out in the current cost of living crisis by bringing it forward. I'm thinking about the now and the future. So, I think, if you were to bring spending forward, it would have sort of a car crash effect." (Young)





Consideration of the importance of each target

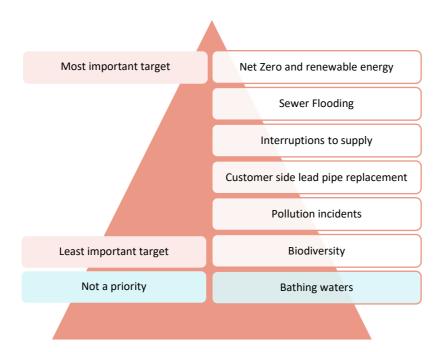
This section of concerns respondents thoughts on each target, beginning with the findings of the prioritisation exercise held with the Young People Panel and following with thematic analysis of the conversations held.

Results of the prioritisation exercise held with Young People Panellists

Young People Panellists debated each target within the prioritisation exercise, which took place as a Miro board activity. During the activity the targets were ordered with most important at the top of the screen and least at the bottom, with those seen as unnecessary removed completely. The full results of the Miro board are shown in Appendix four.

The exercise revealed that net zero and renewable energy was the most important target to Young People Panellists, followed by sewer flooding and interruptions to supply. The least important was biodiversity, with pollution incidents slightly higher, and customer side lead pipe replacement in the middle. The only target that respondents thought was unnecessary was bathing waters, which was removed from the activity.

The results are shown summarised below.







Biodiversity

The information presented in relation to biodiversity to Innovation Festival respondents is shown below. Young People Panellists were only provided with the information related to the long-term target itself.

LONG-TERM DELIVERY STRATEGY BIODIVERSITY

Level of ambition tested with customers	Customers' view	Long-term target to 2050
		Enhance biodiversity - by 2050 all our activities result in a net gain in biodiversity 5% above legal requirement.

Indicative investment 2025-	2050 bill impact		
50 (£ million)	£ / year	% of 2023 bill	% of 2050 bill
65 – 129	3 – 5	0.8% - 1.4%	0.25% - 0.45%

The biodiversity target was not particularly well supported by attendees at the festival, with several suggesting it as something that could be removed and that other targets could be prioritised instead. Similarly, in the Young People Panel biodiversity placed second-to-last in terms of importance. It was suggested that biodiversity was a necessary consideration in the wider context of society, but a lower priority to NWG specifically compared to other targets.

- "I guess they could scrap some of other stuff like the biodiversity schemes and like.... maybe, like cut those things just to support people a bit more." (Young)
- "I admire your plan on biodiversity] and there are a lot of companies that have people in your role... but at the end of the day it comes down to the end word, money." (Innovation Festival)





Bathing waters

The following information was presented to Innovation Festival respondents regarding bathing waters. Young People Panellists were provided with the long-term target only.

LONG-TERM DELIVERY STRATEGY

BATHING WATERS

Level of ambition tested with customers	Customers' view	Long-term target to 2050
		Excellent bathing waters – all bathing waters at good or excellent status by 2030 and 100% at excellent by 2050.

Costs not separable from delivery of related improvements (storm overflow reductions).

Indicative investment 2025-	2050 bill impact			
50 (£ million)	£ / year	% of 2023 bill	% of 2050 bill	
666	26	7.1%	2.3%	

This target received a negative response at the Young People Panel session, being seen as of lesser importance compared to others, and as a result was dismissed by the Young People Panellists.

- "I mean, if you've got to mean it's different, like going to I suppose the beach and like having a paddle as opposed to bathing in the water...So, for me that that would be the one that goes in the sort of the bucket, so to speak." (Young)
- "For me, I think bathing water is it is not like something that is a complete priority to me."

 (Young)



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Sewer flooding

The following information was presented to attendees at the Innovation Festival in relation to sewer flooding. The Young People Panel viewed the long-term target information only.

LONG-TERM DELIVERY STRATEGY SEWER FLOODING

Level of ambition tested with customers				Long- 2050	term target to	
No flooding incidents in the home by 2035 and maintain to 2050		to see a more ambitious floatinget floatinget		floodii 2025	Reduce internal sewer looding by 60% from our 2025 performance commitment levels.	
		Reduce external sew flooding by 60% from 2025 performance commitment levels.		ng by 60% from our performance		
Indicative 2050 investment 2025-		bill impact				
50 (£ million)	£/ye	ar % of 2023 bi		ill	% of 2050 bill	
862 - 984		32 - 33 8.7% - 8.9		9%	2.8% - 2.9%	

The Young People Panel placed this target as the second most important, with comments revealing that they were particularly concerned about the impact that sewer flooding can have on an individual's day-to-day life, through being forced to leave their homes, or through waste spilling into the garden and outside their property.

- "It [sewer flooding] definitely causes some significant disruption to lives." (Young)
- "If you get sort of sewer flooding... you can't obviously stay there, you're taking somebody out of their safe place." (Young)





Pollution incidents

Respondents at the Innovation Festival were presented with the following information regarding pollution incidents. Young People Panellists viewed the long-term target only.

LONG-TERM DELIVERY STRATEGY

POLLUTION INCIDENTS

Level of ambition tested with customers	Customers' view	Long-term target to 2050
Zero pollution incidents by 2035 and maintain to 2050	50% of customers want to see a more ambitious target	Leading levels of pollution incidents - zero serious pollution now and always and reduce the number of category 1 - 3 pollutions by 50% by 2040 (from 2022 baseline)

Costs still under consideration.

1

During the Young People Panel discussion, pollution incidents was seen as the fifth most important target, with panellists mentioning the complexity of measuring pollution incidents solely based on NWG's operations. For example, one panellist mentioned that pollution incidents were also affected by customer behaviour.

- "Yeah, if we're not, if we're not putting the pollutants down the drain in the first place, then it solves the problem. And other companies need to step up as well, not just Essex and Suffolk Water, Northumbrian Water, but more global" (Young)
- "I think pollutants is a hard one because that comes down to customer behaviour as well" (Young)





Net zero and renewable energy

Respondents at the Innovation Festival were provided with the following information regarding the net zero and renewable energy long-term target. Young People Panellists were presented with the long-term targets only.

LONG-TERM DELIVERY STRATEGY NET ZERO AND RENEWABLE ENERGY

Level of ambition tested with customers				Long- 2050	ng-term target to 50	
Net zero in out operations by 2027. 'Embodied' net zero by 2045.		53% of customers want to see a more ambitious target		Achieve Net Zero Scope 1, 2 and 3 emissions by 2050.		
		100% of our electricit will come from addition renewable generation 2040.		me from additional		
Indicative	2050	bill impact				
50 (£ million)	£/ye	ar % of 2023 bi		ill	% of 2050 bill	
2,067		59	16.2%		5.2%	

This was ranked as the most important target in the LTDS by Young People Panellists, underpinned by a sense of urgency surrounding the importance of climate change

- "You've just got to go net zero. Everything has got to go net zero" (Young)
- "Net zero and renewable energy [should be top priority]" (Young)
- "But we will need to kind of wake up to the fact that climate change is the most important issue for 2023" (Young)

This sense of importance was mirrored by Innovation Festival respondents. However, one attendee had some concerns about the reality of achieving net zero carbon emissions but conceded that it was an important target to aim for within the LTDS.





• "If the companies using electric vehicles it's still not completely net zero because how do they get that lithium. So, until something comes out like a completely renewable source it's still not technically 100% net zero." (Innovation Festival)

Interruptions to supply

The following information was presented to respondents at the Innovation Festival in relation to long-term targets in the reduction of interruptions to supply. Young People Panellists viewed the long-term target information only.

LONG-TERM DELIVERY STRATEGY INTERRUPTIONS TO SUPPLY

Level of ambition tested with customers	Customers' view	Long-term target to 2050
		Reduce interruptions to supply greater than 3 hours to less than 2 minutes/customer/year on average by 2050.

Improvements largely delivered through increased mains replacement and leakage investment.

Indicative investment 2025-	2050 bill impact			
50 (£ million)	£ / year	% of 2023 bill	% of 2050 bill	
40	1	0.3%	0.1%	

Interruptions to supply was identified as another of the most important targets to respondents across both groups, with Young People Panel ranking it as the third most important target. Within conversations, there was a particular emphasis that any interruption is unacceptable, especially in the context of increasing bills.

- "I feel quite similar in that if you're paying for a service, like a water service, and you're not receiving supply, like, what's the point then? So, the purpose of a water company is to provide you with water" (Young)
- "I just think interruptions to supply should go down more. Because obviously, having a good supply of water is important, I think it's more of a convenience thing. Like, they, they want to make it so much better" (Young)





At the Innovation Festival, attendees echoed similar sentiments, describing water supply without interruption as 'core business' to NWG.

• "Interruption to supply is short term... people feel it instantly" (Innovation Festival)

Customer side lead replacement

Innovation Festival respondents were presented with the following information in relation to lead pipe replacement. Young Panel Panellists were presented with the information relating to the long-term target only.

LONG-TERM DELIVERY STRATEGY CUSTOMER-SIDE LEAD PIPE REPLACEMENT

Level of ambition tested with customers	Customers' view	Long-term target to 2050
		Eliminate the impact of lead on customers by replacing lead in customer supply pipes by 2050.

Indicative investment 2025-	2050 bill impact			
50 (£ million)	£ / year	% of 2023 bill	% of 2050 bill	
200	9	2.4%	0.8%	

The importance of customer side lead pipe replacement was accepted across both groups, with the ambition to replace pipes by 2050 seen as an appropriate timescale.

Young People Panellists ranked this as the fourth most important target. They were surprised that there are still lead pipes in the system, perceiving lead pipes as an issue that needed to be addressed.

- "People are worried about that, because it definitely shouldn't be any lead in pipes, or anything like that anymore. I mean, it's 2023. Like, what are we doing?" (Young)
- "I agree with lead pipe replacement should be a bit higher as well" (Young)





The Innovation Festival respondents were particularly in favour of the cooperative approach between NWG and its customers to replace pipes on customer land. However, respondents wanted more information about who would be responsible for funding the project in the long run.

- "For someone who's budget is tighter they might be sat worrying about the levels and it's just giving that peace of mind." (Innovation Festival)
- "It's a more cooperative approach if you only focus on what you've got you know at the moment, it comes back to the point earlier about who is funding long-term aims isn't it. Northumbrian Water need to have some social conscience." (Innovation Festival)







Summary of results

Affordability of bill increases associated with the LTDS

It was clear that the affordability of forecasted bills was a concern for respondents, particularly Young People Panellists who found the prospect of water bills being 8% of income intimidating. Ways to balance affordability with long term ambitions were particularly encouraged by this group. That said, all targets, with the exception of biodiversity and bathing waters amongst the Young People Panel, were important to all respondents. The Young People Panel were willing to make trade offs in these targets in order to balance a gold standard and budget approach within the LTDS.

Thoughts on the phasing options of the bill increases associated with the LTDS

There was a clear preference for phasing options that resulted in steady bill increases over time in order to balance short term and long term affordability as well as intergenerational fairness.

Thoughts on the individual targets within the LTDS

Young People Panellists ranked the targets in the following order of priority:

- 1. Net zero and renewable energy
- 2. Sewer flooding
- 3. Interruptions to supply
- 4. Customer side lead pipe replacement
- 5. Pollution incidents
- 6. Biodiversity
- 7. Bathing waters (it was thought that this should not be a priority within the LTDS)





Overall, the following views emerged in relation to each of the targets.

Net zero and renewable energy

- This was a higher priority for both groups with agreement that moving in line with government targets was appropriate.
- Young People Panellists were particularly cognisant of the need to tackle climate change.

Sewer flooding

 This target was seen as important by both groups given the high personal impact of experiencing an internal or external sewer flooding incident.

Interruptions to supply

- This target was prioritised in both groups as it was seen to be NWG's core business.
- Interruptions to supply were felt to be particularly unacceptable in the context of increasing bills.

Lead pipe replacement

- This target was also seen as important in both groups.
- Young People Panellists were surprised to learn of lead in the system and felt that this was an issue that needed to be addressed.

Pollution incidents

 Young People Panellists considered this target to be a lesser priority, feeling that it was difficult to isolate pollution incidents that are solely caused by NWG operations.

Biodiversity

 This was a lower priority for both groups. It was recognised as an important societal issue, but was not felt to be a responsibility of NWG.

Bathing waters

- Innovation Festival respondents were supportive of the inclusion of this target and the level of ambition that had been presented.
- Conversely, Young People Panellists suggested this target was removed from the LTDS to help balance affordability of the strategy as a whole

Conclusions

Respondents were supportive of the LTDS and the targets within it. However, bill affordability was important and Young People Panellists were particularly willing to make trade offs in some of the target areas (biodiversity and bathing waters) to balance ambition with affordability.





"Quality is not an act; it is a habit"

Appendices

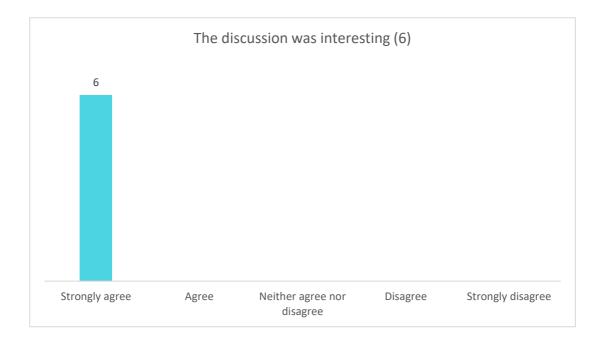
Supporting documentation can be found in this section.

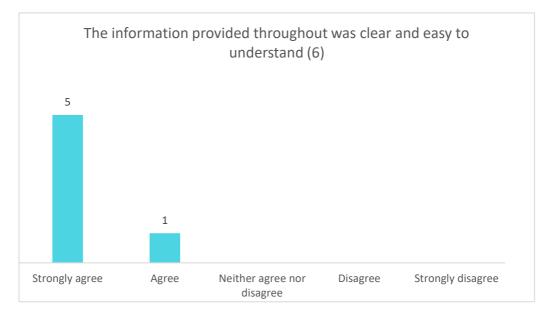


Appendices

Appendix One - Satisfaction poll results

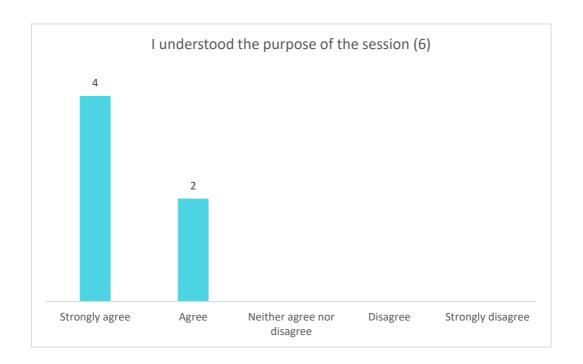
There was positive feedback evidenced in each of the closing satisfaction polls from the Young People Panel, with all respondents 'agreeing' that the session was clear and easy to understand, they understood the purpose, the discussion was interesting and that they were overall satisfied with the session.

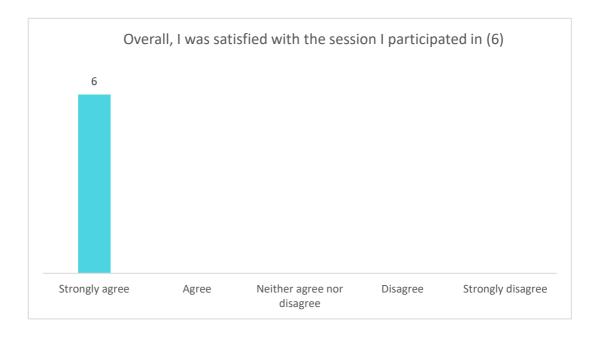
















Appendix Two - Slides used at the Innovation Festival







LONG TERM DELIVERY STRATEGY

WHAT IS THE LONG-TERM DELIVERY STRATEGY?

2025-2030	2030-2035	2035-2040	2040-2045	2050-2055
business	business	business	business	business
plan	plan	plan	plan	plan

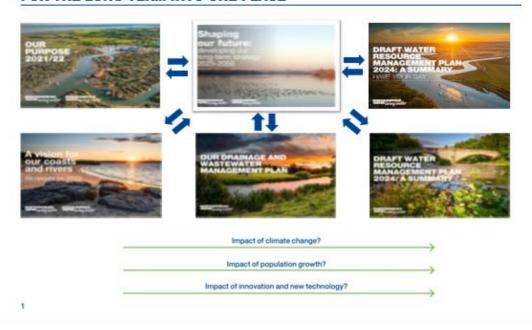
NORTHUMBRIAN WATER GROUP'S LONG TERM DELIVERY STRATEGY (LTDS)





LONG-TERM DELIVERY STRATEGY

OUR LONG TERM DELIVERY STRATEGY BRINGS TOGETHER OUR PLANS FOR THE LONG-TERM INTO ONE PLACE



LONG-TERM DELIVERY STRATEGY

OUR 25-YEAR STRATEGY WILL DELIVER OUR VISION AND OUR LONG-TERM GOALS

Our vision is to be the national leader in the provision of sustainable water and wastewater services





Caring for the long-term needs of the environment Restore and enhance our local and global environment



Sustainability and resilience
Be the national leader in the provision of sustainable and resilient water and resilient water and changing world



Affordable and inclusive services Provide affordable water and wastewater services for all of our customers, always



Efficiency and prudent investment Lead in efficiency and innovation in the water sector



Caring for our communities Support communities and economies in our regions

1





LONG-TERM DELIVERY STRATEGY

WE HAVE TESTED OUR STRATEGY AGAINST A RANGE OF POTENTIAL FUTURES

-	Sustainable future scenario
	Climate failure scenario
<u></u>	Affordability focus scenario
<u></u>	Regional growth scenario
\$	Environmental challenges scenario

LONG-TERM DELIVERY STRATEGY THE AIM

To assess how NWG can deliver its long-term goals in the range of potential futures







LONG-TERM DELIVERY STRATEGY

WE HAVE IDENTIFIED FOUR KEY AREAS OF INVESTMENT TO DELIVER THE GOALS

Delivering in the most effective way for customers

Ensuring sustainable water supplies

We must provide reliable and sufficient supplies of water to meet customer demand, now and in the future, while protecting and enhancing the environment.

We have high confidence in our analysis of this area as it is underpinned by the Water Resource Management Plan (WRMP) process.

Restoring and enhancing the local environment

We have high confidence in our analysis of this area as it is underpinned principally by the Drainage and Wastewate Management Plan (DWMP) process



















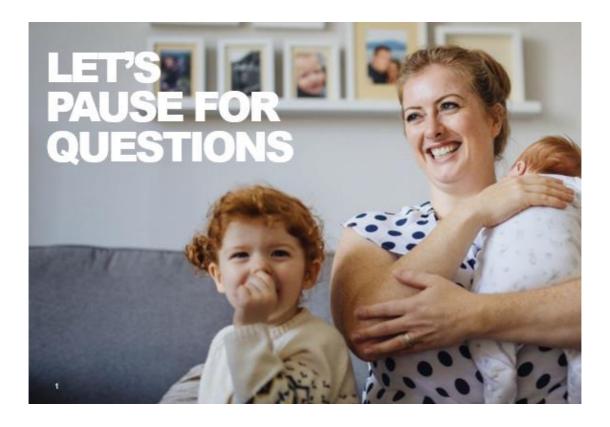
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or customars appear as he posted a survey as which is selected to shocks, such as the extreme weather events that all become increasingly prevalent due to climate change. We sed to ensure that we invest in maintaining our asset health over the long-term and make use of markets to increase our resisence.

Our analysis in this area is maturing as we continue to develop our approach to understanding resilience in a changing world:

Maintaining resilience

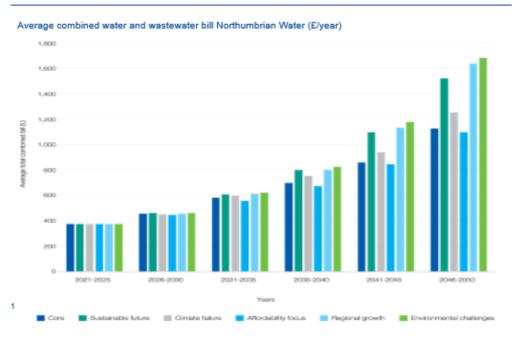
Delivering Net Zero





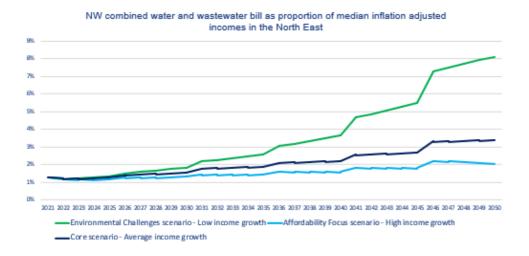


WE EXPECT THE SIGNIFICANT INVESTMENT TO RESULT IN LONG-TERM BILL RISES UNDER ALL POTENTIAL FUTURES



LONG-TERM DELIVERY STRATEGY

THE IMPACT ON CUSTOMERS DEPENDS NOT JUST ON BILLS BUT ON WAGES



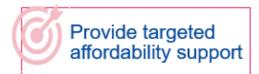




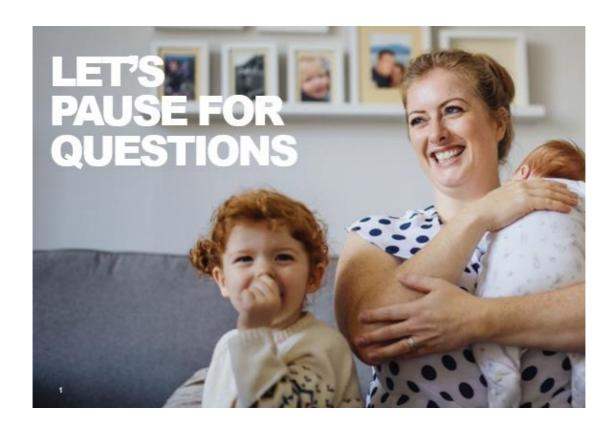
NWG'S RESPONSES TO THE AFFORDABILITY CHALLENGE













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LET'S CHAT

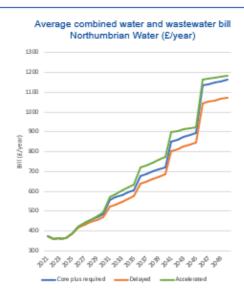
Tell us...

Water services look set to increase in price considerably. How do you feel about that?

In the light of these potential bill increases, do you want a budget service or a gold standard (more resilient and sustainable) service?

1

LONG-TERM DELIVERY STRATEGY INTERGENERATIONAL FAIRNESS – 2030 AND BEYOND



- We have flexibility to do more sooner or push back:
 - Storm overflow discharge reduction
 - Net Zero
 - Lead replacement









HAVING LOOKED AT THE BIG PICTURE WE NOW WANT TO EXPLORE LONG-TERM TARGETS FOR SPECIFIC OUTCOMES WITH YOU

-	Pollution incidents
•	Sewer flooding
*	Biodiversity
*	Net Zero and renewable energy
Æ	Bathing waters
Ŏ	Interruptions to supply
~	Lead replacement







POLLUTION INCIDENTS

Level of ambition tested with customers	Customers' view	Long-term target to 2050
Zero pollution incidents by 2035 and maintain to 2050	50% of customers want to see a more ambitious target	Leading levels of pollution incidents - zero serious pollution now and always and reduce the number of category 1 - 3 pollutions by 50% by 2040 (from 2022 baseline)

Costs still under consideration.

1

LONG-TERM DELIVERY STRATEGY

SEWER FLOODING

Level of ambition tested with customers		Customers'	view	Long- 2050	term target to
No flooding incidents in the home by 2035 and maintain to 2050		to see a more ambitious farget		floodii 2025	ce internal sewering by 60% from our performance litment levels.
				floodii 2025	ce external sewer ng by 60% from our performance itment levels.
Indicative 2050		bill impact			
50 (£ million)	£/ye	ar	% of 2023 b	ill	% of 2050 bill
862 - 984		32 - 33	8.7% - 8.	9%	2.8% - 2.9%

1





BIODIVERSITY

Level of ambition tested with customers	Customers' view	Long-term target to 2050
		Enhance biodiversity - by 2050 all our activities result in a net gain in biodiversity 5% above legal requirement.

Indicative investment 2025-	2050 bill impact	2050 bill impact		
50 (£ million)	£ / year	% of 2023 bill	% of 2050 bill	
65 – 129	3 – 5	0.8% - 1.4%	0.25% - 0.45%	

1

LONG-TERM DELIVERY STRATEGY NET ZERO AND RENEWABLE ENERGY

Level of ambition tested with custon	ners	Customers'	view	Long- 2050	term target to
Net zero in out operations by 2027 'Embodied' net zero 2045.		53% of custo to see a more target			ve Net Zero Scope nd 3 emissions by
				will co	of our electricity me from additional able generation by
Indicative	2050	bill impact			
50 (£ million)	£/ye	ar	% of 2023 b	ill	% of 2050 bill

16.2%

59

1

2,067



5.2%



BATHING WATERS

Level of ambition tested with customers	Customers' view	Long-term target to 2050
		Excellent bathing waters – all bathing waters at good or excellent status by 2030 and 100% at excellent by 2050.

Costs not separable from delivery of related improvements (storm overflow reductions).

Indicative investment 2025-	2050 bill impact		
50 (£ million)	£ / year	% of 2023 bill	% of 2050 bill
666	26	7.1%	2.3%

LONG-TERM DELIVERY STRATEGY

INTERRUPTIONS TO SUPPLY

Level of ambition tested with customers	Customers' view	Long-term target to 2050
		Reduce interruptions to supply greater than 3 hours to less than 2 minutes/customer/year on average by 2050.

Improvements largely delivered through increased mains replacement and leakage investment.

Indicative investment 2025-	2050 bill impact		
50 (£ million)	£ / year	% of 2023 bill	% of 2050 bill
40	1	0.3%	0.1%





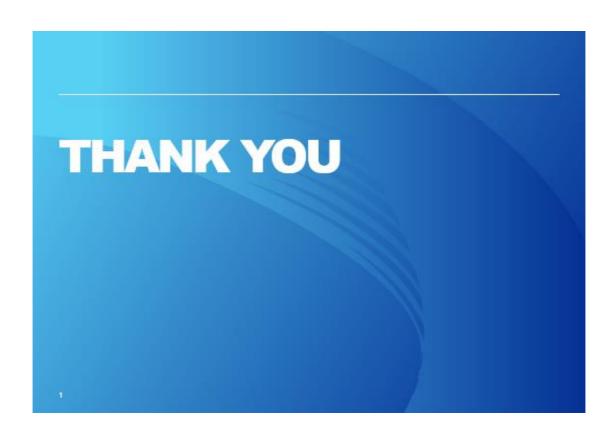


LONG-TERM DELIVERY STRATEGY CUSTOMER-SIDE LEAD PIPE REPLACEMENT

Level of ambition tested with customers	Customers' view	Long-term target to 2050
		Eliminate the impact of lead on customers by replacing lead in customer supply pipes by 2050.

Indicative investment 2025-	2050 bill impact		
50 (£ million)	£ / year	% of 2023 bill	% of 2050 bill
200	9	2.4%	0.8%

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Appendix Three - Slides used for Young People Panel









WHAT IS THE LONG-TERM DELIVERY STRATEGY?

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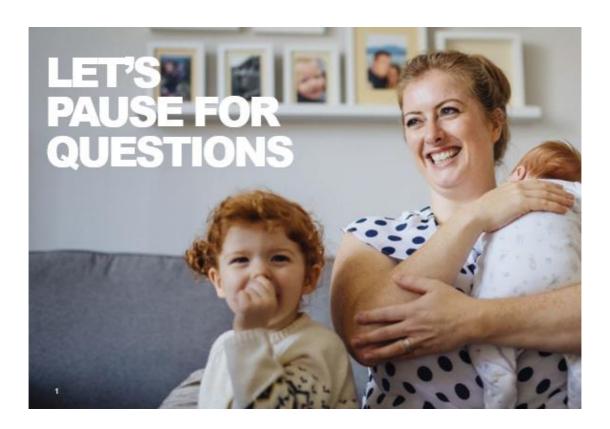
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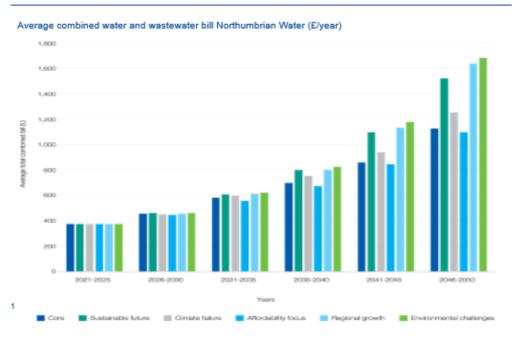
Delivering Net Zero





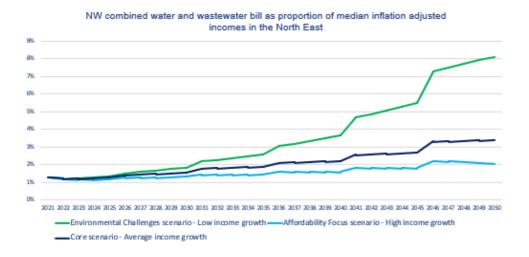


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THE IMPACT ON CUSTOMERS DEPENDS NOT JUST ON BILLS BUT ON WAGES



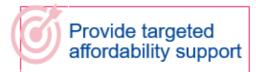




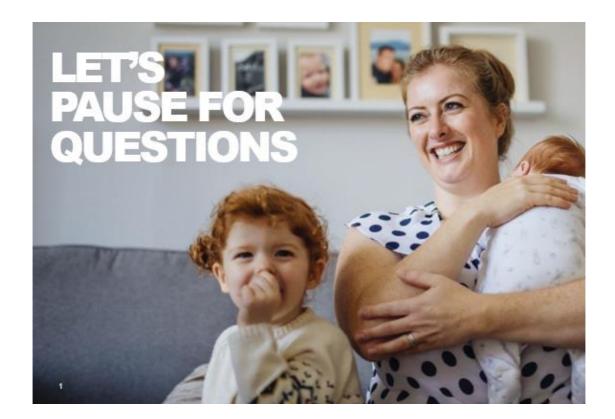
NWG'S RESPONSES TO THE AFFORDABILITY CHALLENGE













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LET'S CHAT

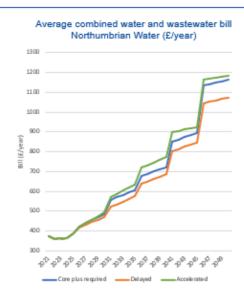
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•	Pollution incidents
٨	Sewer flooding
*	Biodiversity
*	Net Zero and renewable energy
Æ	Bathing waters
Ō	Interruptions to supply
~	Lead replacement







SEWER FLOODING

Long-term target to 2050

Reduce internal sewer flooding by 60% from our 2025 performance commitment levels by 2050.

Reduce external sewer flooding by 60% from our 2025 performance commitment levels by 2050.



1

LONG-TERM DELIVERY STRATEGY

POLLUTION INCIDENTS

Long-term target to 2050

Leading levels of pollution incidents zero serious pollution now and always and reduce the number of category 1 - 3 pollutions by 50% by 2040 (from 2022 baseline).



1





BIODIVERSITY

Long-term target to 2050

Enhance biodiversity - by 2050 all our activities result in a net gain in biodiversity 5% above legal requirement.



1

LONG-TERM DELIVERY STRATEGY NET ZERO AND RENEWABLE ENERGY

Long-term target to 2050

Achieve Net Zero Scope 1, 2 and 3 emissions by 2050.

100% of our electricity will come from additional renewable generation by 2040.



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BATHING WATERS

Long-term target to 2050

Excellent bathing waters – all bathing waters at good or excellent status by 2030 and 100% at excellent by 2050.



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LONG-TERM DELIVERY STRATEGY

INTERRUPTIONS TO SUPPLY

Long-term target to 2050

Reduce interruptions to supply greater than 3 hours to less than 2 minutes/customer/year on average by 2050.



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CUSTOMER-SIDE LEAD PIPE REPLACEMENT

Long-term target to 2050

Eliminate the impact of lead on customers by replacing lead in customer supply pipes by 2050.



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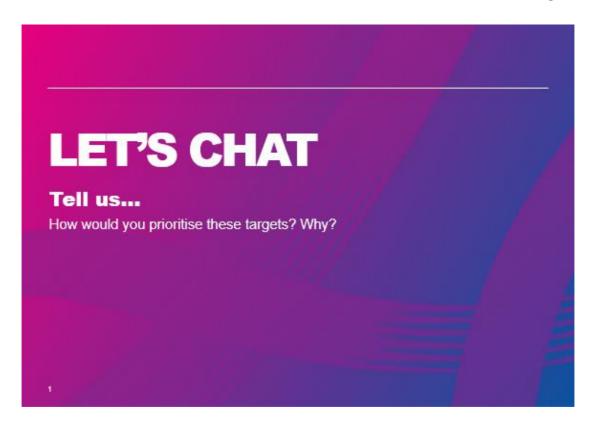
LONG TERM DELIVERY STRATEGY

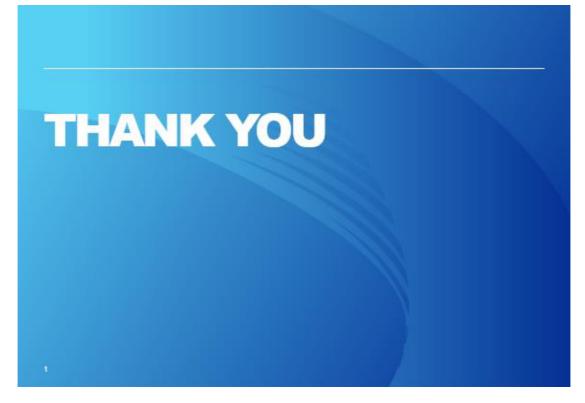
TARGETS SUMMARY

Target	
Customer-side lead pipe replacement	Eliminate the impact of lead on customers by replacing lead in customer supply pipes by 2050.
Interruptions to supply	Reduce interruptions to supply greater than 3 hours to less than 2 minutes/customer/year on average by 2050.
Biodiversity	Enhance biodiversity - by 2050 all our activities result in a net gain in biodiversity 5% above legal requirement.
Net zero and renewable energy	 Achieve Net Zero Scope 1, 2 and 3 emissions by 2050. 100% of our electricity will come from additional renewable generation by 2040.
Bathing waters	Excellent bathing waters – all bathing waters at good or excellent status by 2030 and 100% at excellent by 2050.
Sewer Flooding	Reduce internal sewer flooding by 60% from our 2025 performance commitment levels. - Reduce external sewer flooding by 60% from our 2025 performance commitment levels.
Pollution incidents	Leading levels of pollution incidents - zero serious pollution now and always and reduce the number of category 1 - 3 pollutions by 50% by 2040 (from 2022 baseline).





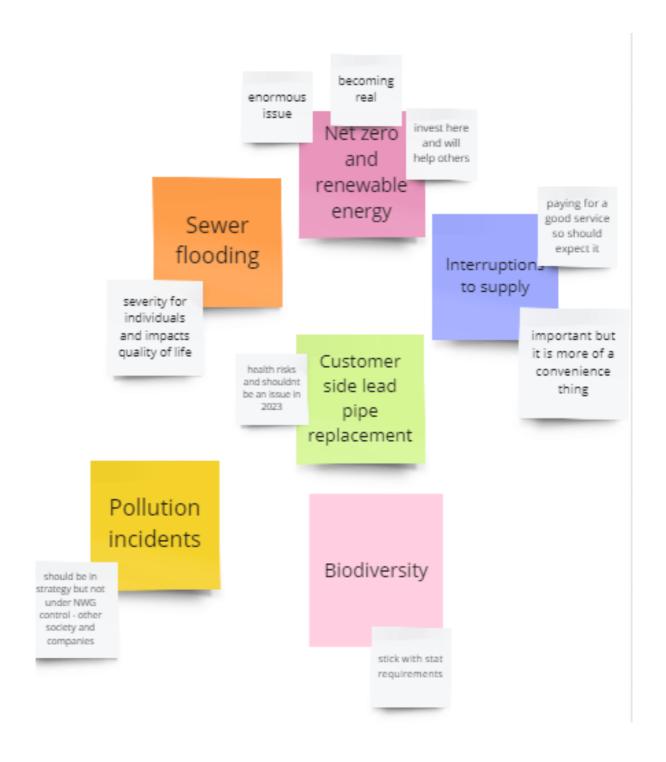








Appendix Four: Results of the Miro board activity







Author: Ross Palmer

Report check: Kirsty Laing

Final sign off: Rebecca Crinson