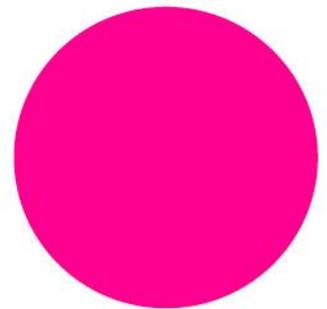
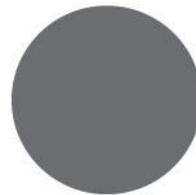
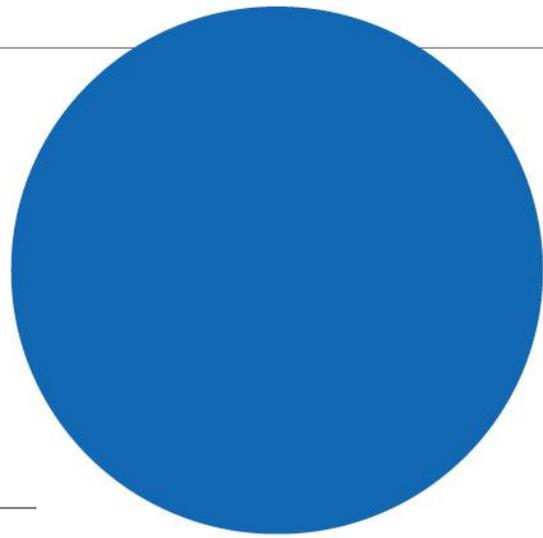


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Prepared for:

E014

**NORTHUMBRIAN  
WATER** *living water*



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# Drainage & wastewater management plan report: phase 1 customer research

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# Executive summary

DJS Research were commissioned by Northumbrian Water to undertake a piece of research to understand its customers' views about how it should develop its Drainage and Wastewater Management Plan (DWMP) for North East England.

Across September – October 2020, an innovative, deliberative and two-phased approach to the research was adopted. This involved current and future bill payers (n=60) completing tasks and activities via the Recollective research platform before eight in-depth group discussions took place. Additionally, to ensure the research was as inclusive as possible, five in-depth discussions were held with customers who possessed some form of vulnerability and who rarely or never used the internet. Eight in-depth discussions with non-household customers were also carried out.

## How customers would like NWG to go about prioritising the DWMP

Reducing the flooding of homes and infrastructure, and pollution are considered the most important aims for the Drainage and Wastewater Management Plan. The former can have a catastrophic impact on those impacted. There is concern about environmental damage through pollution, because of the longer-term impact this can have on health and the ecosystem. However, drainage issues tend to be a higher priority among those who have experienced them.

Perceptions towards what should be addressed first by Northumbrian Water are in large part driven by what is assumed to be within and outside of the company's control.

Sewer misuse is a top issue for Northumbrian Water to address. Other high priority issues including pollution from combined sewer overflows, misconnected sewers and urban creep are deemed so because they perceived to be areas that sit (at least in part) within Northumbrian Water's remit. In contrast, population growth and extreme weather are considered to be out of its control and therefore not as high up on the list of priorities. Increased water usage was one of the least important areas for Northumbrian Water to address.

Among the areas that are perceived by participants to sit within Northumbrian Water's remit is a duty to inform and educate the public on ways they can help to reduce the risk of flooding and pollution. However, given the choice of persuading people, building more capacity and slowing rainwater down, it becomes evident that persuasion alone may not address the problems at hand, and in fact integrating all three approaches may be the right way forward.

There is a discussion to be had about the issues that do sit with Northumbrian Water to address. One disputed area is the issue of chemicals and microplastics in wastewater, which is seen as a key issue that must be addressed. This problem



has the potential to cause a great deal of damage to the environment, which for many is a huge concern.

However, whether or not it should fall to Northumbrian Water to tackle is unclear, largely because participants feel the industries responsible for causing the problem should be the ones held accountable. Awareness of microplastics in rivers and the sea is particularly high and recent media attention around this issue may be prompting higher levels of concern than other serious issues.

### **How customers would prefer Northumbrian Water to improve wastewater services**

Customers would allocate three quarters of time and resources to proactive approaches, two thirds towards sustainable approaches and half of resources towards partnership working. One third of resources would each go towards influencing others, building more capacity and keeping out or slowing down rainwater.

Current and future customers offer a great deal of support for proactive approaches to flood prevention in the longer-term, simply because there is a belief that prevention is better than cure. This finding fits in with the broader view that proactively educating customers on what they can do to prevent flooding is, among other approaches, key to tackling the issue.

Similarly, sustainable approaches are largely deemed a preferred solution among participants, particularly among people who use rivers recreationally. This preference is mainly driven by a need to protect the environment. With climate change top of mind at present, it is felt that new, greener solutions should be incorporated into every decision affecting the public sphere. That said, it is recognised that in some instances, traditional approaches may be required, a view particularly prominent among those who have previously experienced wastewater issues first-hand.

The extent to which Northumbrian Water should work alone or in partnership with other organisations is largely dependent on the demands of each specific case. In the instances that Northumbrian Water is able to address a problem alone, either because it falls entirely within their remit or they own the infrastructure, they should adopt this approach to ensure quick problem solving. However, the Drainage and Wastewater Management Plan calls for forward thinking solutions and participants feel that working in partnership encourages new ideas and innovative approaches, especially to bigger, or even global problems.

### **What customers want the plan to aim for, and which aims are most important to them**

As they stand, the existing overall aims of the Drainage and Wastewater Management Plan are seen to be extensive and comprehensive. However, participants feel that the plan could benefit from the inclusion of a small number of additional aims, namely; the education of people, businesses and developers, the maintenance and updating of old sewers, research into removing chemicals and microplastics and increasing the conversion of sludge waste into renewable



energy. Among these, education should be a higher priority, as this is considered a cost-effective solution that can have a wider impact.

The views of current and future customers are driven by the severity and scale of flooding and pollution problems and ultimately the extent to which lives are impacted. These perceptions are reflected in the views of how Northumbrian Water should assess risks as part of their plans. The bigger impact a risk has on a large number of people and the higher the likelihood a problem will occur, the higher the priority.

### **How customers think they should be involved in developing the plan**

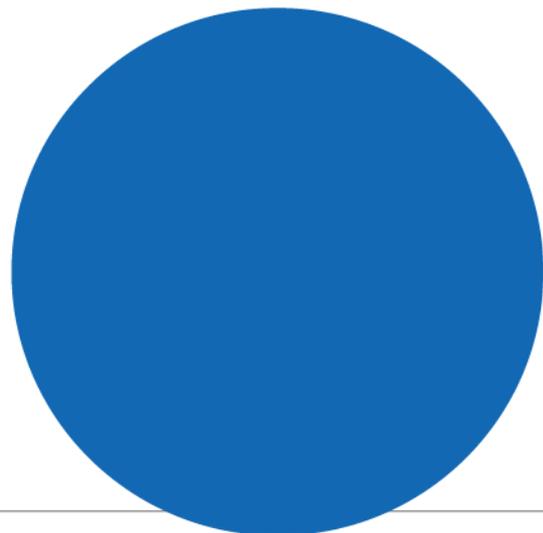
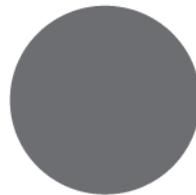
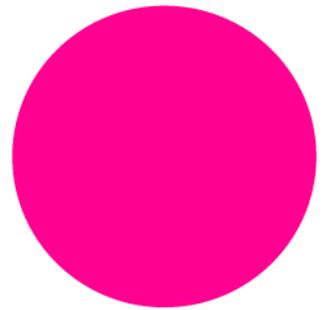
Moving forward, current and future customers wish to be consulted on the overall aims and priorities of the Drainage and Wastewater Management Plan. Throughout this research process participants frequently claimed to have gained a lot of knowledge and appreciation for the work Northumbrian Water does. The exercise itself has also engendered a lot of goodwill amongst those involved as it left them feeling as though they are being listened to and valued.

Consultation exercises in the future would be deemed even better exercises if they were carried out with a hyper-local focus (town or village-level) as participants feel that this will be even more relevant and interesting to those involved.

However, participants feel that certain aspects of the plan are best left to Northumbrian Water and the experts involved, with the primary example being the way in which Northumbrian Water is thinking of dividing up its operating area into strategic planning areas. Participants largely agreed with this approach. However, they also feel that such a decision needs to be made by people who have the expertise and evidence to support it. Customers do not feel they should be consulted on the performance targets for each aim or the full draft of the plan.



# Introduction





## Background and objectives

Drainage and Wastewater Management Plans (DWMPs) are the new way to plan for the future of drainage, wastewater and environmental water quality.

All Water and Sewerage Companies (WaSCs) are required to publish draft Drainage and Wastewater Management Plans in the summer of 2022, to support their business plans for the 2024 Price Review.

Northumbrian Water Group (NWG) wanted to undertake research to inform the development of its own DWMP.

### **Specifically, the four broad goals that NWG wanted to achieve through this research were to:**

- Understand what customers want the plan to aim for, and which aims are most important to them
- Understand how customers prefer Northumbrian Water to improve wastewater services
- Understand how customers would like us to go about prioritising the DWMP
- Understand how customers think they should be involved in developing the plan.

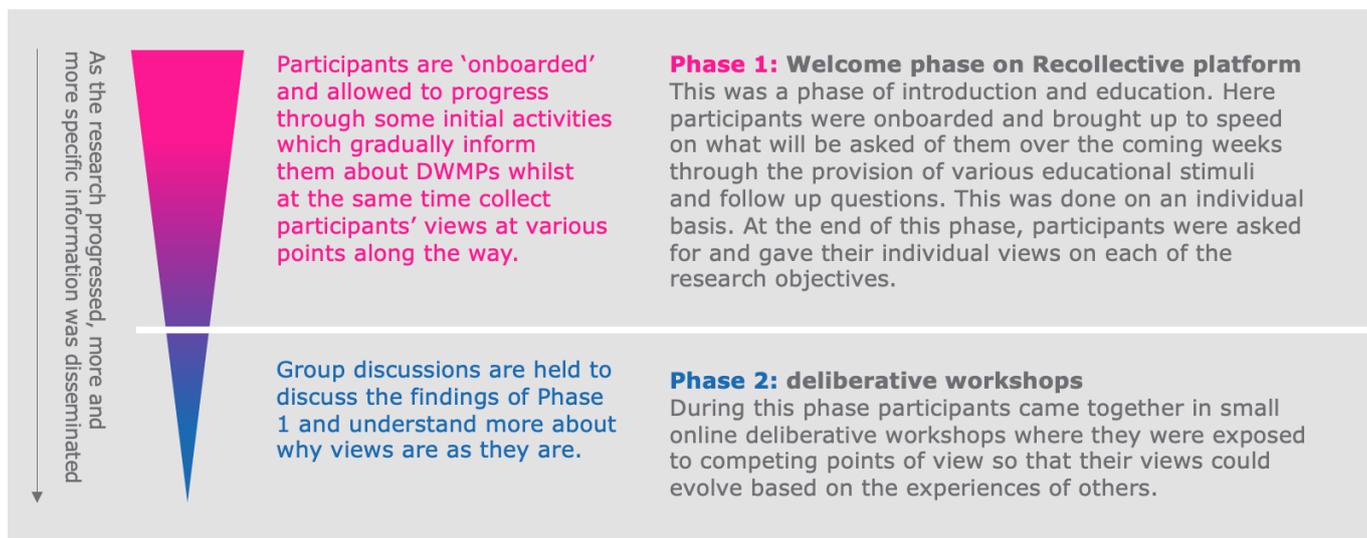
## Research approach, methodology and sample

The research was delivered by DJS Research Ltd between September and October 2020. It was taking place against a backdrop of the COVID-19 pandemic. As a result, an online methodology was opted for in order to ensure that no face to face contact between participants and researchers was required.

DWMPs are a new and complex area that WaSCs need to research with participants who are going to be unfamiliar with the topic. Recognising this, in consultation with NWG, DJS Research designed an innovative, deliberative and two-phased approach to the research.

The process involved current and future bill payers passing through two-phases; an initial piece of research using the Recollective online platform followed by online focus groups (see sample structure later in the document).

These stages are summarised overleaf.



This two-stage deliberative methodology was selected as an optimal approach to understand customers' informed views on how they want NWG to develop their DWMP and it has allowed us to gather in-depth insight into customers' views. Issues covered in deliberative research are often complex and unfamiliar to customers – as in the case of Northumbrian Water's DWMP – and therefore their exploration is better suited to such an approach.

### **We approached this research from the perspective of it having three key distinguishing features from other types of research. These are:**

- The process involved NWG providing information and interacting with customers directly to answer their questions and correct any misperceptions (through phase 1).
- The aim of the research is to reach people's informed and considered judgements in relation to DWMP, through a process of public reasoning (through phase 2).
- There is an expectation that the beliefs and values of participants may be transformed by involvement in the research (which contrasts to the usual efforts made in qualitative research where the researcher's role is minimised as much as possible).

In essence, by the end of the research we were able to arrive at an understanding of what the wider NWG customer base would think under the right (informed) conditions for thinking about the DWMP.

Whilst the above summarises the approach taken for the bulk of the domestic customers, in ensuring that this research was inclusive and as representative as possible of the NWG customer base, we also included some in-depth telephone and/or video interviews with non-household customers and with those living with conditions that may make them vulnerable and who either couldn't access the internet or who preferred to take part over the phone. A detailed sample structure is included overleaf.



## Sample structure

The below table provides a summary of the Welcome phase of the research, held on the Recollective platform and participated in by both current domestic and future bill payers.

### Phase 1: welcome phase (all domestic customers and future bill payers)

<b>Phase 1</b> (conducted in the Recollective platform)	
<b>TOTAL:</b> participants who completed all activities	<b>60</b>
ABC1	<b>46</b>
C2DE	<b>14</b>
18-25	<b>7</b>
26-59	<b>49</b>
60+	<b>11</b>
Experienced wastewater issues	<b>31</b>
Children living at home	<b>14</b>
Possess some form of vulnerability	<b>8</b>
Future bill payers	<b>5</b>

### Phase 2: time to chat phase (all domestic customers and future bill payers)

Eight deliberative workshops (conducted on Zoom) were conducted with a cross-section of NWG customers, as summarised below. At each session a mix of participants from different Strategic Planning Areas was achieved.

Group	1	2	3	4	5	6	7*	8	Total attendees
<b>Total attendees</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>28</b>
ABC 1	4	5	3	3	2	-	2	3	<b>22</b>
C2DE	-	-	-	-	3	3	-	-	<b>6</b>
26-59	4	5	-	2	5	1	2	-	<b>19</b>
60+	-	-	3	1	-	2	0	1	<b>7</b>
Experienced wastewater issues	4	0	2	3	3	2	0	1	<b>15</b>
Children living at home	3	2	0	0	1	1	0	0	<b>7</b>
Future bill payers	-	-	-	-	-	-	-	3	<b>3</b>



\*Following a poor turnout in some of the sessions, a further six in-depth interviews were conducted. Two of these were with ABC1s and 4 of these were with C2DEs.

It should be noted that research has shown that lower SEG groups internet usage can be lower than higher SEG groups<sup>1</sup> which may suggest that C2DEs may have been less likely to participate given this methodology. As is detailed in the report however, views across SEG groupings and across both stages of research were consistent suggesting that this shouldn't be cause for concern when interpreting the findings.

In addition to that mentioned above, five in-depth interviews with customers who possessed some form of disability and who rarely or never used the internet were achieved, as per the below:

	<b>Condition</b>
Participant 1	Mental health issues
Participant 2	Learning difficulties
Participant 3	Mental health issues
Participant 4	Hearing difficulties
Participant 5	Serious/chronic illness

Interviews were either conducted via the telephone, after the research materials had been received via the post or online, once a family member had set the technology up for them.

The non-household cohort was also represented with eight businesses being interviewed over Skype/Zoom, as per the below. All participants were those in charge of paying their businesses' utility bills:

<b>Group</b>	<b>Sector</b>	<b>Size</b>	<b>Experienced wastewater issue</b>
Depth 1	Public	Micro	No
Depth 2	Charity	Micro	Yes
Depth 3	Commercial	Micro	Yes
Depth 4	Commercial	Medium	No
Depth 5	Commercial	Small	Yes
Depth 6	Industrial	Small	No
Depth 7	Industrial	Micro	No
Depth 8	Commercial	Small	No

<sup>1</sup> <https://www.statista.com/statistics/546570/internet-usage-in-the-uk-by-socio-economic-group/>



## Recruitment of participants

For the current domestic customers, an online recruitment survey designed by DJS Research Ltd was distributed via an open link by NWG to a random sample of 3,500 of its general customers for whom it held email addresses and who had not been invited to take part in NWG research online in the last six months. A further 1,500 customers who had experienced a resolved issue with their wastewater services in 2019 were also invited.

From the results of the recruitment survey, DJS selected a balanced sample of customers to directly invite to take part in the research.

For the recruitment of domestic customers, quotas were set to ensure representation in terms of gender, socio-economic group, age, life stage and strategic planning area. We also ensured that we included those who had experienced a wastewater issue in the past along with those who use rivers, streams or the sea recreationally.

The non-household cohort proved particularly difficult to recruit during this research. This was mainly due to the impact of the pandemic and the lack of time that many people felt they had when the recruitment was being conducted.

All participants received a monetary incentive for taking part in fieldwork. Current and future bill payers received a total of £75 of Voucher Express vouchers for completing the research (£35 after the Recollective Welcome Phase and £40 after the group discussion). Those domestic customers taking part in a one-off telephone/video interview received £40 in vouchers whilst Business customers received £70 in vouchers for taking part in a depth telephone/video interview.

## Material, stimulus and content design

The content for the materials was designed internally by NWG staff members and prior to any fieldwork taking place, the materials were extensively piloted numerous times. At various stages, different iterations of the Recollective functionality and the materials in general were tested on:

- New starters at NWG
- 5 x members of the general population with average online skills
- 4 x Future bill payers
- 1 x person with sight difficulties
- 1 x person with mobility issues
- 2 x elderly people with poor online skills

Feedback from these cohorts led to numerous refinements before the final materials were decided on.



## Making the research meaningful

Throughout the planning and set up of this research, we were mindful of the Consumer Council for Water's latest guidance on customer engagement and the themes that make research 'meaningful' for participants.

Criteria	Threshold questions	Verdict	Illustration
<b>Ease</b>	<ul style="list-style-type: none"> <li>Am I able to answer the questions that I am being asked?</li> <li>Is what I'm being asked to do straightforward and reasonable?</li> </ul>	In addition to extensive piloting of materials, multiple checks were put in place at different places throughout this research to ensure that people understood what they were being asked to do.	<i>"I sat and did it in bed, took us an hour... It's been no bother for me, I've quite enjoyed it."</i>
<b>Relevance</b>	<ul style="list-style-type: none"> <li>Is the topic relevant/ of interest to me?</li> <li>Do I actually have a view on what I am being asked?</li> </ul>	It is clear from the comments detailed within this report that people found this topic relevant and of interest - arguably more so than they originally thought would be the case. That said, a more hyper-local approach (e.g. village/town level) would prove even more relevant.	<p><i>"This is really interesting content."</i></p> <p><i>"I think I would like to be consulted on a more local, personal level. If it's more personal to you you've got more of an interest in it."</i></p>
<b>Listening</b>	Do I feel like the organisation that has commissioned the research is paying attention to what I say?	Participants were clear, they felt as though NWG was listening and paying attention through this exercise. Furthermore, senior members of NWG and a water forum member took part in the deliberative workshops.	<i>"I feel I'm being included and Northumbrian Water actually does care about the voice of their customers so I feel like my thoughts and opinions have been heard."</i>
<b>Making a difference</b>	<ul style="list-style-type: none"> <li>Do I think anything will happen as a result of taking part?</li> <li>Will taking part benefit others/the wider community?</li> </ul>	Participants did feel as though their views were being heard for a reason, that being that they will be used for action. However, ultimately, they felt as though the proof will come later as the plan is actually developed and refined off the back of this research.	<i>"The proof of how effective this has been will come out. It's good to be listened to but I suppose then the key is does that feedback actually go on to effect what comes the other end and hopefully it will!"</i>
<b>Financial incentive</b>	Do I receive a financial incentive for taking part? Or the prospect of a prize?	All participants were offered a financial incentive.	N/A



## Interpreting the data

Unlike quantitative research, qualitative research's aim is not to produce a quantifiable summary of population views, but to explore the diverse topics and themes relating to the subject of the research. Using this approach, issues affecting participants are a reflection of issues in the wider population, but it does not aim to mirror the full range of views held by that population. Whilst the degree to which they apply to the wider population cannot be quantified, the value of this qualitative style of research is in identifying the variety of issues involved and in understanding how these impact on people.

Deliberative approaches where participants are slowly informed on a topic add value because they garner insight into what may lie behind people's views. They also unearth how people's views can evolve as they are provided with information or through deliberations with others. It should be noted, however, that as the deliberative process reveals participants' views, the understanding acquired enables us to understand participants' informed views, and cannot necessarily be taken to be representative of the views of the wider population who have not been through the same deliberative experience.

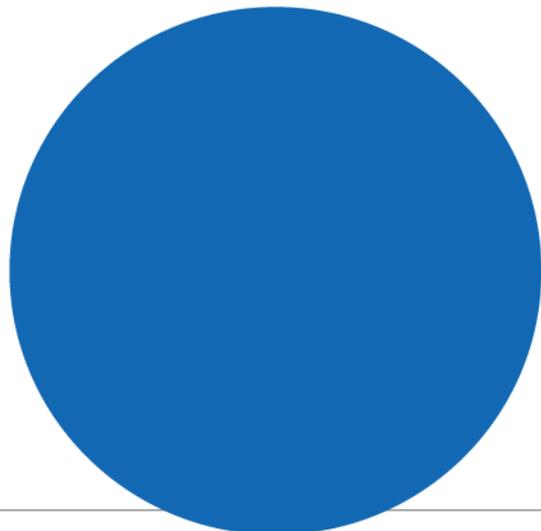
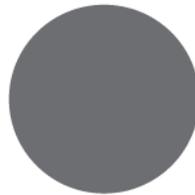
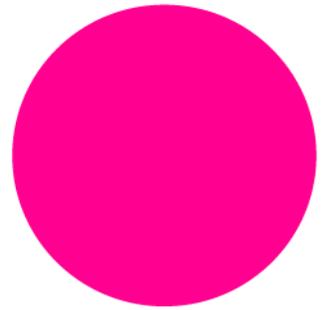
Throughout the report, we have included verbatim comments from both phases of the research to illustrate key perspectives presented.

Although various quantifiable techniques were used during phase 1, we have not treated this data in the way we would normally interpret quantitative findings. Because of the fairly small base size (n=60) the data is used to provide an indicative steer on customer sentiment with the aim of the polling being to help us get a feel for views and to check the priorities and themes emerging from the overall level findings.



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# Research findings



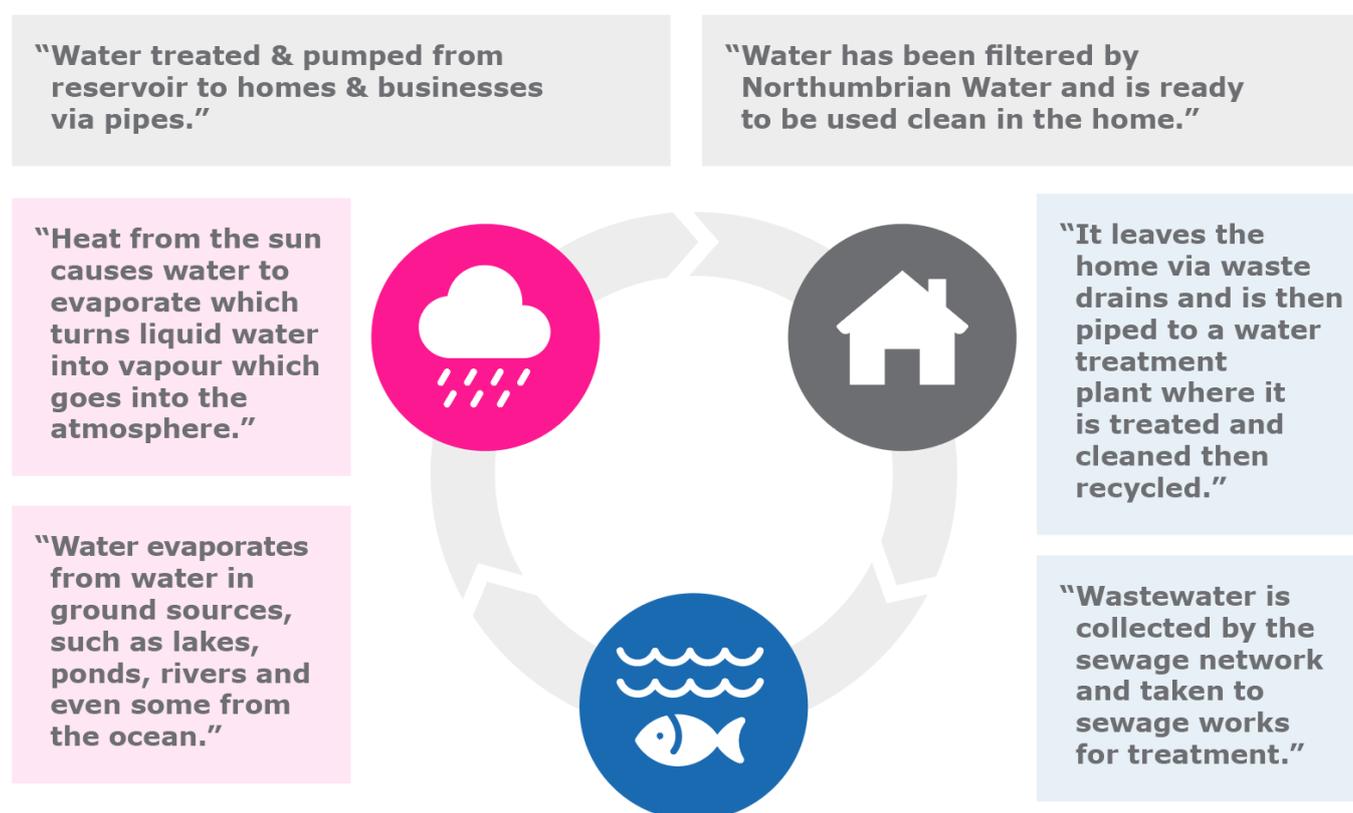


## Uninformed and informed understanding of wastewater issues

To begin stage one and to start to get participants thinking about the sector, participants' uninformed views about different topics were gained. These questions explored participant understanding of the water cycle (before being educated on Northumbrian Water's role in it), how to correctly dispose of waste and awareness of combined sewers.

### The water cycle

An examination of the comments made by all participants suggests that overall awareness of different facets of the water cycle is high. Most participants are able to talk about the water treatment process and some also describe Northumbrian Water's role in the cycle. Participants comment more on the treatment than they do the natural processes and even fewer mention the transportation or distribution processes.



### How to dispose of waste

Participants were shown a list of items and asked to sort them via a drag and drop exercise, into a number of groups they should be disposed of into. Those groups included a bin (of any kind), a toilet, an outside/road drain, a specialised waste removal service, a sink, shower or bath or a stream, river or sea.



Overall, the majority of participants correctly sort most items that should be disposed of in a bin (of any kind). However, almost one in four sort flushable wet wipes into the toilet and just over two thirds put soup or sauce into the sink, shower or bath option. A large proportion also state that fats, oils and grease from cooking requires a specialised waste removal service (although this would be the case for restaurants etc). At the same time, most participants know that items such as medicine, paints, solvents and cement should be disposed of via a specialised waste removal service.

After revealing the correct ways of disposing of each item, participants were then asked whether there was anything they were surprised about. The open text responses indicate that a degree of surprise is felt towards the fact that household cleaning products can go down the sink, shower, bath or toilet, with this receiving six mentions. A similar level of surprise is felt about the fact that fats, oils and greases from cooking should be disposed of in the bin, rather than the sink and that flushable wipes should not be disposed of in the toilet; these each received five mentions.

"I'm surprised household cleaning products go down the sink as I would have thought this would damage the environment."

**Female, 18-25, ABC1**

"Flushable wet wipes, I would have assumed they could be flushed down the toilet."

**Male, 26-59, C2DE**

Next, participants were shown a series of slides with information about combined sewers and what causes them to overflow. They were asked whether they were aware of combined sewer overflows prior to taking part in the research. Just under two thirds say they are not. Those who have experienced a wastewater issue possess higher levels of awareness than participants who have not experienced a wastewater issue.

### Clarity checkpoint

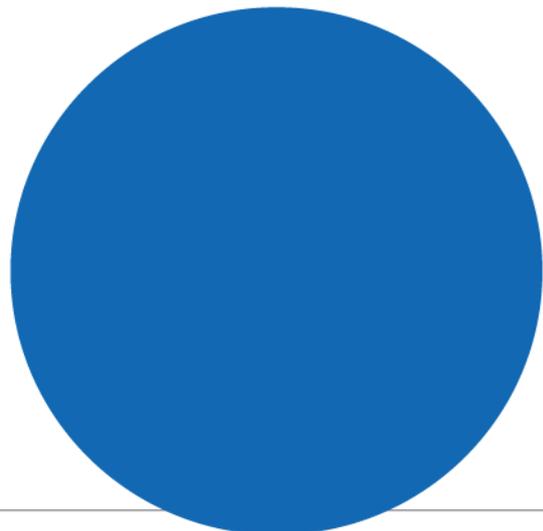
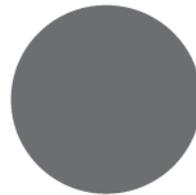
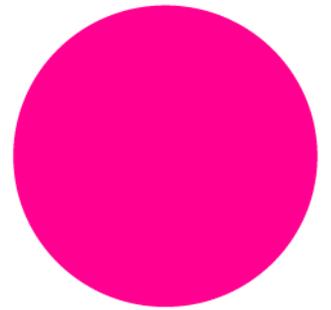
Knowing that we were trying to inform customers, slowly and methodically, we considered it prudent to insert a clarity checkpoint at this step where participants were asked on a 5-point scale, how clear they had found the information they had read in this section of tasks.

**55 out of 65 participants found the information clear**



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# Prioritising problems that may be faced in the future



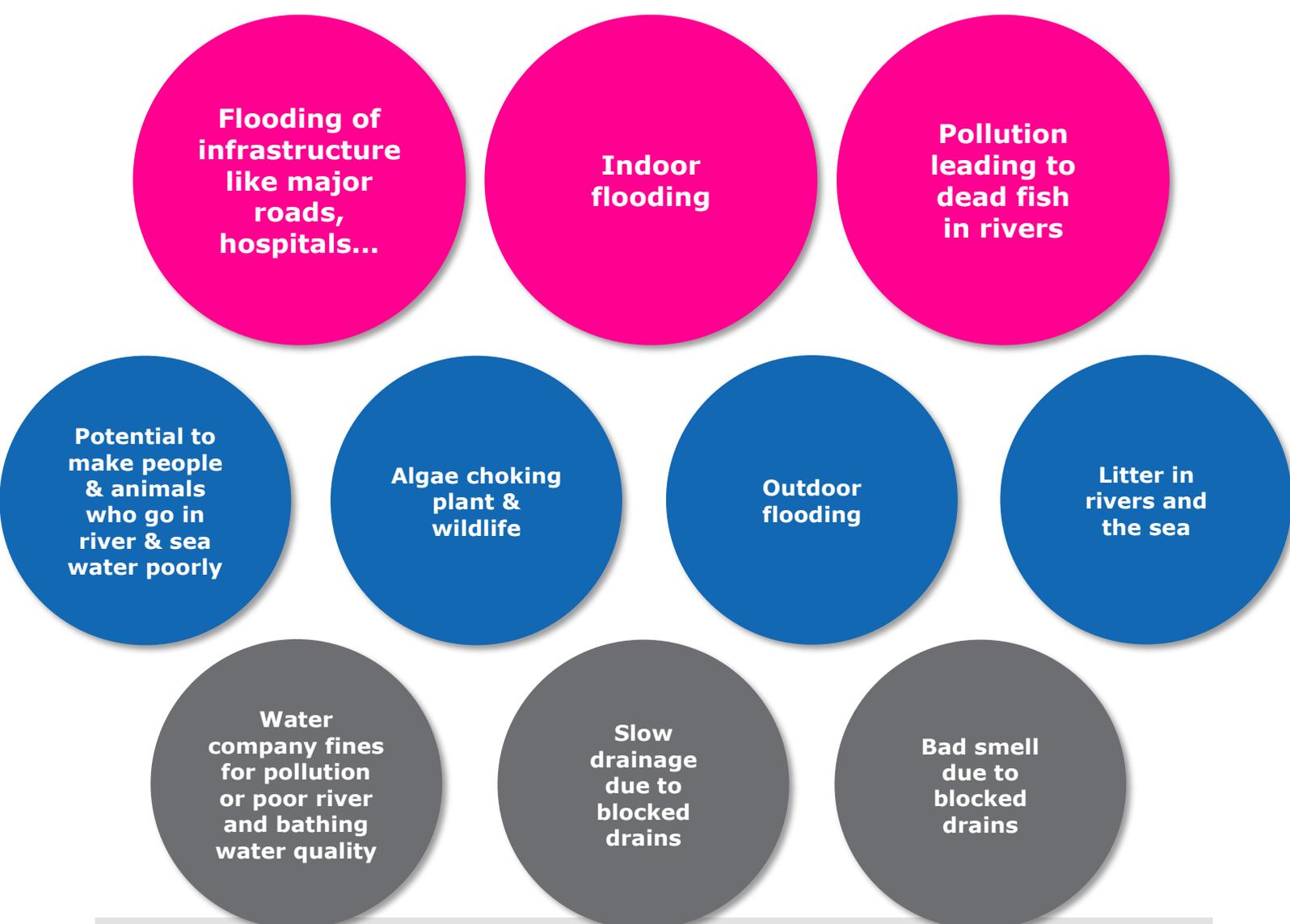


## Prioritising problems that may be faced in the future

During stage one, participants were provided with a list of eleven problems we may face in the future. They were asked to rank the problems according to how concerning they found them to be, from most (a score of 1) to least (a score of 11).

Overall, 'flooding of infrastructure like major roads, hospitals and schools' is ranked as the highest concern, followed by 'indoor flooding' and 'pollution leading to dead fish in rivers'. Participants find 'temporary loss of use of rivers and the sea for activities like swimming, surfing and paddling' the least concerning issue, with 'bad smells due to blocked drains', and 'slow drainage due to blocked drains' also receiving lower rankings.

### Graphical depiction of issues of most concern (in pink) to least (in grey)



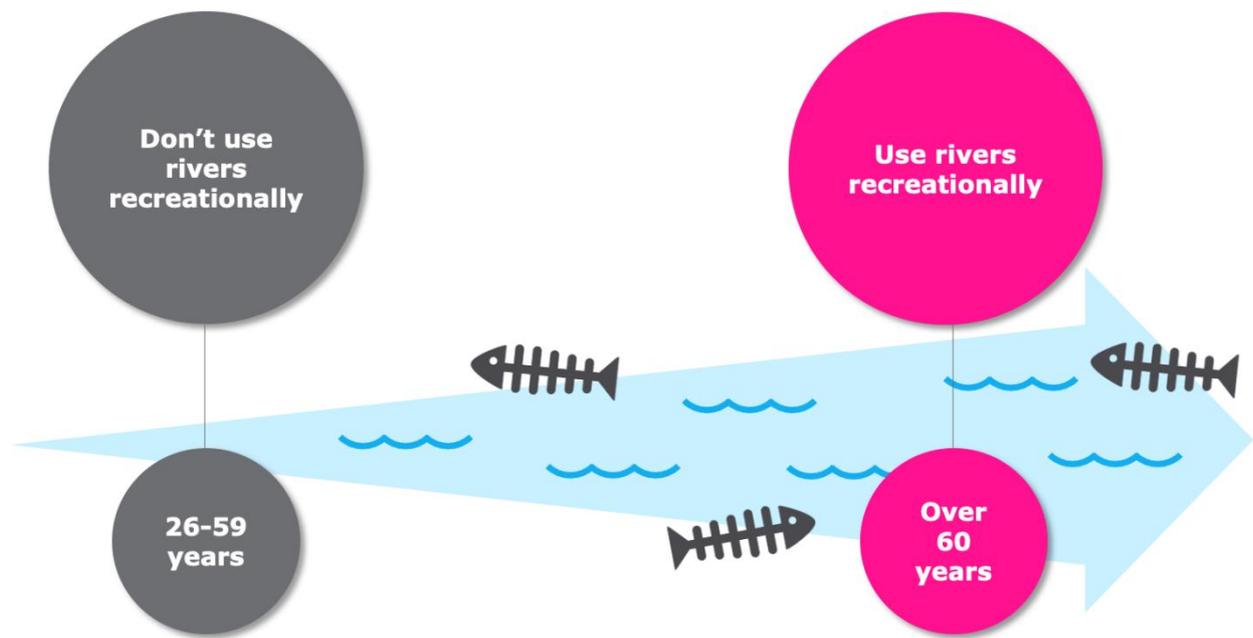
Temporary loss of use rivers and the sea for activities like swimming, surfing & paddling.

**Q:** on the cards below you will see some problems customers may face in future. We'd like you to read through each of the cards and then order them according to how important you think each issue is.



These views are generally shared across subgroups, with only a few notable differences:

**Pollution leading to dead fish in rivers is more of a concern to those who use rivers recreationally**



When participants were asked why they ranked the problems the way they did, reasons are mainly driven by a need to protect wildlife, humans and the environment, each of which impact the others. Any problems that cost human or animal lives are perceived to be more serious, with the flooding of infrastructure and the outdoors causing devastation to both. At the same time, damage to the environment from pollution is considered to be on an equal footing, because this also has a negative impact on biodiversity and future generations.

"I think the most important issue is the effect on infrastructure as the country would be in massive danger if hospitals etc were unable to function. After that I believe the effects on wildlife are very important."  
**Female, future bill payer**

"Since water comes from the natural environment, the environment must always come first in terms of removing pollution. Flooding can cost human lives, so is another important issue – given the choice I would place it equal 1st with pollution."  
**Female, 26-59, C2DE**

Interviews with vulnerable customers find similar views with regard to the prioritisation of problems, but with a particularly prominent concern for wildlife and the environment as well as the risk of hospitals being affected by flooding, which may impact on their own treatments.



"If anyone was poorly everything would come to a standstill. People wouldn't be able to get to work. I have a lot of hospital appointments myself, as I've got health issues so that would impact my life."

**Female, 47, C2DE, mental health issues/serious chronic illness**

During the stage two group discussions, participants were shown the overall results that came out of this ranking exercise and were then asked to expand on why they were ranked as they were. The main consensus is that the issues at the top are deemed catastrophic in nature and possess a much greater potential to negatively impact on people's lives. These issues stand in stark contrast to the issues at the bottom of the list, which are considered to be inconveniences more than anything else.

In most groups a small proportion of participants who were more environmentally conscious express further concern for issues related to pollution, although rarely do they prioritise this above flooding. Participants struggle to separate 'outdoor flooding' from 'flooding of infrastructure' and feel the two should sit together as the most important concern.

"An issue with the infrastructure could be the difference between life and death. Indoor flooding would be devastating...the ones at the bottom of the list are more superficial."

**Male, 60+, ABC1**

"The top ones are what would have an effect on us personally, on our health and wellbeing and on the economy as well."

**Male, 26-59, ABC1**

"It would have been nice if wildlife had been a bit higher on the list, but it's not too surprising."

**Male, 26-59, ABC1**

### Why things go wrong to begin with?

In stage one, after exploring views around the types of problems that customers may face in the future, participants were then informed about why these problems even occur to begin with. Each reason (which are shown below) was then provided as a list for participants to rank according to how important they feel each one is for Northumbrian Water to address.



## Issues that can threaten Northumbrian Water's ability to provide good wastewater services...

- Chemicals and microplastics in wastewater that can't yet be removed
- Sewer misuse by customers and businesses
- Pollution from combined sewer overflows
- Misconnected sewers
- Extreme weather
- Increased water usage
- Urban creep
- Population growth and development

Overall, the most important issues ranked by customers are 'chemicals and microplastics in wastewater that can't yet be removed', followed by 'sewer misuse by customers and businesses' and then 'pollution from combined sewer overflows'. The least important issue is 'increased water usage' followed by 'urban creep'.

"Plastic and chemical pollution is the next pandemic and it will affect us all when we finally realise it. Climate change, Covid-19, then Plastic and chemical pollution all have potential to change the world for the worse."

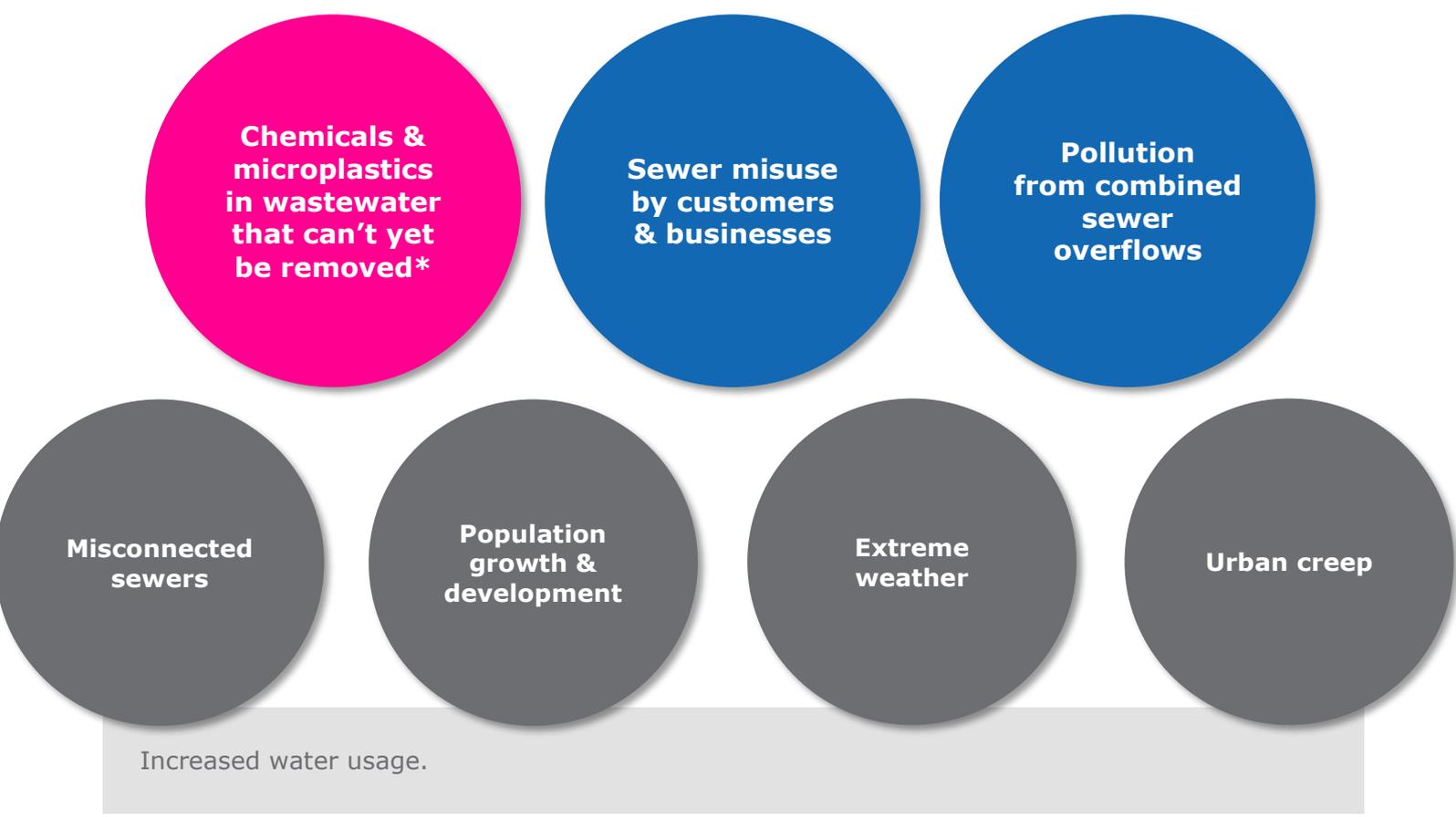
**Male, 26-59, ABC1**

"Sewer misuse is costly and idiotic, surely this can be dramatically reduced by educating people more on what can and can't be disposed of via the drainage system e.g. the Three-Ps."

**Male, 26-59, ABC1**



**Graphical depiction of issues of most importance (in pink) to least (in grey) for Northumbrian Water to address**



\* Ranking driven by current media coverage.

**Q:** you have just been reading about various issues that can threaten Northumbrian Water's ability to provide good wastewater services. We'd like you to read through each of the cards and then order them according to how important you think each one is for Northumbrian Water to address. (**Base:** 64).

Participants who haven't experienced a wastewater issue tend to place 'pollution from combined sewer overflows' lower down in the list compared to those who have experienced wastewater issues. This suggests prior experience of sewer flooding understandably weighs more heavily on people's minds once they've experienced it.

It is interesting to note that when these results are explored further during the stage two group discussions, there is agreement that the high level of concern about chemicals and microplastics in wastewater may be partly driven by recent media coverage about microplastics in the ocean. Participants feel that some of the other issues, such as sewer misuse, urban creep and population growth are potentially more problematic, but just haven't received the same degree of coverage.



"I wonder if its anything to do with things in the media recently...David Attenborough saying not to put microplastics into the seas...wonder if this is why people think this is the most important reason."

**Female, 26-59, ABC1**

"My main immediate concern is to keep sewers flowing but I agree they should spend money to understand microplastics as that is a big issue for the future."

**Male, 60+, ABC1**

"It seems that people abuse water...and that's the chemicals and microplastics, putting the wrong things down the toilet and contributing to the things that can't be removed, so ...I'm kind of swinging between the two top answers."

**Female, 26-59, C2DE**

Apparent during stage one as well as in every group discussion in stage two is a spontaneous comment on the role Northumbrian Water should play in each of these issues. Whilst certain issues, such as educating the public on the appropriate usage of drains leads to a general consensus that Northumbrian Water does have a responsibility to inform customers, it is clear that there are other issues which others need to take responsibility for too. Participants feel the industries responsible for producing chemicals and microplastics should be the ones to address this particular issue, whilst developers should assume ownership of misconnections and urban creep.

"...urban creep needs to be looked into and small changes be made. This wouldn't be at a household/ individual level but would need to look at companies building new properties."

**Male, 26-59, ABC1**

"If there's only one place that can supply something then that needs to have the responsibility to implement some change."

**Female, 26-59, ABC1**



Supporting this need to 'share the burden' is a feeling, mainly coming from the more cost-conscious participants, that Northumbrian Water shouldn't be responsible for addressing all wastewater-related issues if ultimately it would be customers who would be paying the associated costs.

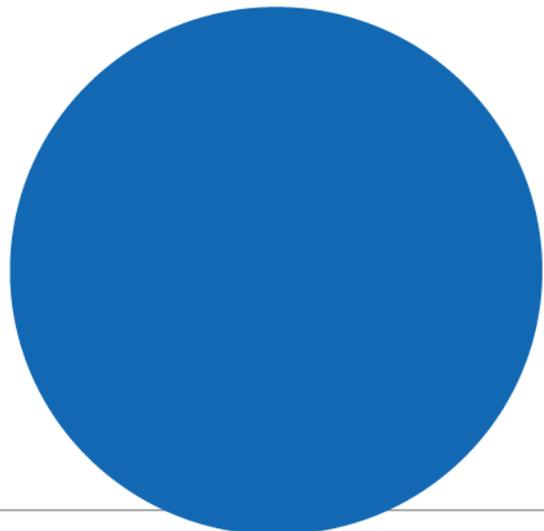
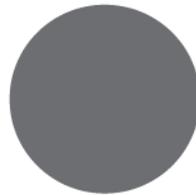
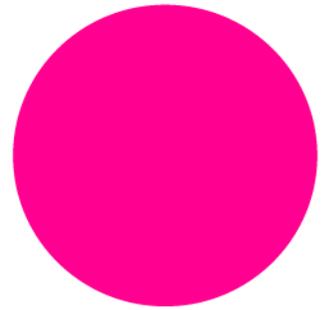
The conflict between long term/environmental issues versus more immediate/personal issues is apparent and customers sit along a spectrum, rather than it being a case of one or the other. Having said that, few participants are willing to sacrifice their home getting flooded in order to pay for research into microplastics.





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# Preventing flooding & pollution

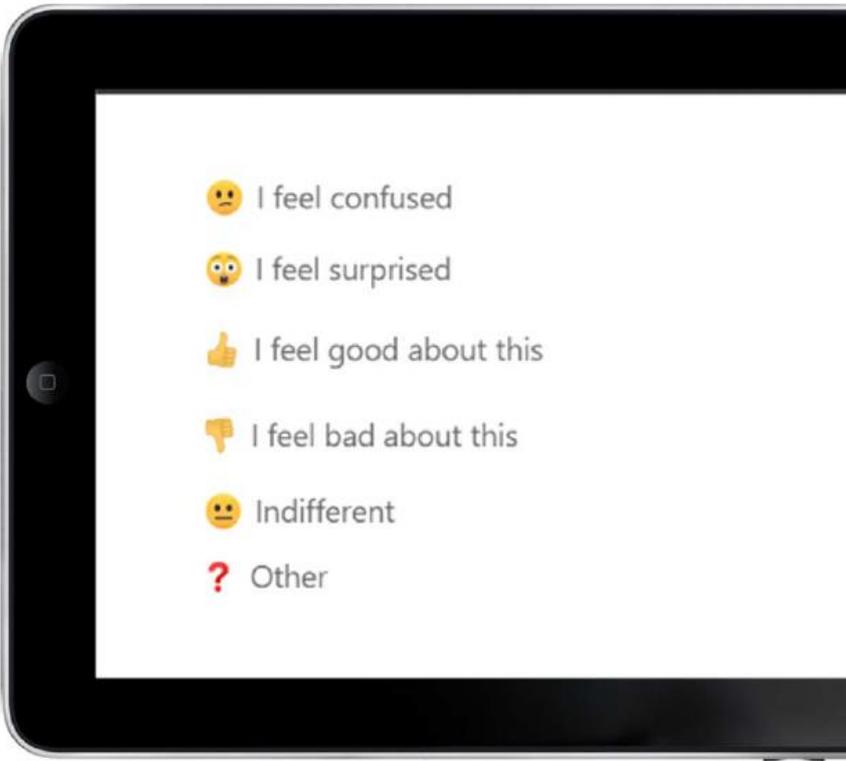




## Preventing flooding & pollution

During stage one, participants were provided with information about a series of potential solutions to the problems raised in the earlier stages of the research. Participants were then presented with the advantages and disadvantages of each set of solutions and were asked to allocate the percentage of time and resources they felt that Northumbrian Water should deploy on each.

Participants were also able to show how they felt about the solutions in the form of emojis, with those that they could choose from being displayed on the right.



## Reactive and proactive approaches to flood prevention

The first set of solutions participants were presented with involved a proactive and a reactive approach. A summary of these is displayed in the below table:

<b>Proactive approaches</b> Northumbrian Water can...	<b>Reactive approaches</b> After flooding, Northumbrian Water can...
Use information about things that affect sewers, like climate change and more surface water entering sewers, to predict which properties may flood.	Jet wash customers' drains.
Use their sewer level monitors warn them about which sewers are nearly full.	Install valves to prevent dirty water returning.
They can then tell people how to help reduce risk in their area, and build new infrastructure.	Put up flood gates at peoples' homes.



## Proactive approaches

Customers can also...

Look to use rainwater where possible, and recycle water.

Ensure you only put the right things into sewers.

Reduce the amount of paved surfaces.

Check and correct misconnected sewer pipes.

Participants were asked to select an emoji that best represented how they feel about the proactive solution specifically. Around three quarters say they feel good about the proactive approach, with only a handful saying they feel bad about this, surprised, confused or indifferent.

**Overall, participants suggest that around three quarters of Northumbrian Water's time and resources should be deployed on proactive approaches.**

This view is shared by most subgroups, with marginally fewer future bill payers opting for proactive approaches.

This sentiment is mirrored during the stage two group findings and it is evident that there is consensus that prevention is better than cure.

"The proactive approach comes with long-term solutions, so hopefully once you've put those mitigations in place you have a long-term strategy and a system that can cope in the future."

**Female, 26-59, ABC1**

"Prevention is better than a cure...if you know there's going to be a problem, you try and get on top of it, and sort it before it happens."

**Male, 60+, C2DE**

A minority question the costs of the proactive approach (which is assumed to be higher than the reactive approach). They also question the risk of planning for future events which may not happen. However, there is agreement that Northumbrian Water should be proactively taking action to prevent damage. That said, participants feel that if all resources are allocated to proactive approaches, there may not be enough resources when things do go wrong.



"Don't let the reactive element slide. We're paying for a service now... there must be resources available if there is an issue."

**Male, 60+, ABC1**

"To be proactive is better than reactive, but you can't always predict everything."

**Female, 26-59, C2DE**

### Traditional and sustainable approaches to flood prevention

The second set of solutions, which were presented to participants during stage one involved traditional and sustainable approaches. Once again, participants were asked to allocate a proportion of time and resources that Northumbrian Water should deploy on each and a summary of the approaches is displayed in the table below.

Traditional approaches	Sustainable approaches
<p>Northumbrian Water can build spaces for excess rainwater to flow into, rather than flooding homes, businesses and streets.</p>	<p>Sustainable drainage schemes create natural spaces to soak up rainwater, keep rainwater near the surface longer, and slow rainwater down before it enters sewers. Northumbrian Water built this detention basin in South Tyneside [an image was shown here]. There's normally a small stream. Heavy rain collects in the basin and slowly drains away.</p>

Overall, participants feel that around two thirds of Northumbrian Water's time and resources should be allocated to sustainable approaches and a third towards traditional approaches.

All things being equal, with regard to cost, time and impact, sustainable approaches remain the preferred approach across subgroups. However, a difference exists between those who have experience of wastewater issues and those who do not. The former allocates more time and resources towards traditional approaches than the latter.

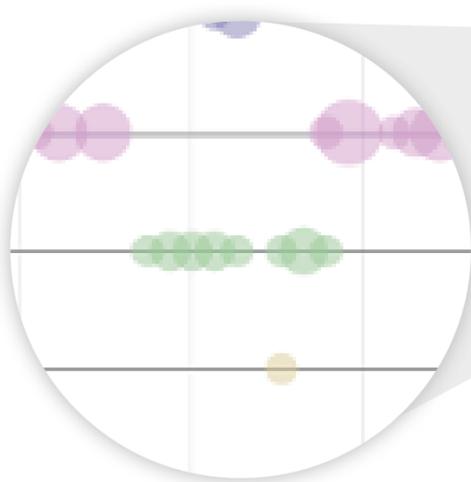
A difference is also found between those who use rivers recreationally and those who do not, with the former indicating more of a preference for sustainable approaches than the latter.



In order to educate participants on sustainable approaches to flood prevention, participants were also shown a video on how development changes the natural water cycle and where rain goes by increasing surface water runoff and picking up pollution. Reactions to the information provided about sustainable approaches are mostly positive, with six in ten saying they feel good about it. However, almost two in ten said they feel surprised at the information and a smaller proportion said they feel bad about it.

We can see from the below that when we timestamp the video according to where participants were saying they feel bad, it is interesting that this is actually relating to the negative consequences of development and not representative of a negative view towards sustainable solutions.

**A still of the video shown to participants at the point at which negative emojis were used...**





The results of the time and resources allocation task were shared with participants during the stage two group discussions and there is general agreement that sustainable approaches feel like the right way forward because they are important for the environment. Furthermore, big environmental issues, such as climate change, require new approaches instead of more of the same solutions.

“Sustainable sounds more preferable because it seems more natural and if less money can be spent on it, then that sounds good.”

**Female, future bill payer**

That said, participants agree that a small proportion of time and resources should be allocated towards traditional approaches, to ensure people can live the way they want to (such as building a driveway if desired). There is also the perception that traditional approaches may be necessary for older developments, whereas sustainable approaches are more suited to new developments.

“Green areas are nice but we still have to live our lives, build a driveway if we want one etc...”

**Male, 60+, ABC1**

### **Working alone and working in partnership to prevent flooding**

The final set of solutions provided to participants during stage one involved working alone and working in partnership with other organisations. A summary of the approaches is displayed in the table below.

<b>Working alone approaches</b>	<b>Working in partnership approaches</b>
Northumbrian Water often work on their own without involving other organisations. This suits many projects, such as sewage treatment works where they own all the infrastructure, or when the issue they are fixing is only about sewers.	However, sewers interact with rivers and road drains, so the company often has to coordinate its work with other organisations. It can be difficult for different organisations to secure funding and resources at the same time, which can create delays.



Overall, the amount of time and resources that participants would like Northumbrian Water to spend on each is split fairly evenly between working in partnership and working alone, with a small proportion stating no preference.

Participants involved in the stage two group discussions broadly agree with the customers' average allocation of time and resources, mainly because they feel that whether Northumbrian Water works alone or in partnership is entirely dependent on the circumstances of the project. On the one hand, participants feel that working alone would result in solving problems quickly. However, from the perspective of looking forward to the future, working in partnerships invites new ways of working and supports innovative thinking, which are especially important for new, large-scale projects which might sit outside of Northumbrian Water's ownership.

"Situation dependent; would make more sense to be in a partnership in one circumstance, and work by yourself in another."

**Female, 26-59, ABC1**

"More likely to get innovation and different ways of doing things, if you do things differently. Partnership could bring this."

**Female, 26-59, ABC1**

"Two heads are better than one (...) a small job you could do on your own, but a big job would be better with a partnership and involving someone."

**Female, 60+, C2DE**

### Perceptions about the allocation of time and resource

During stage one, having been informed about all the available solutions to flood prevention, participants were asked how much of Northumbrian Water's time and resources should be allocated towards three options: persuading people, building more capacity and keeping rainwater out or slowing it down. Overall, the results are equally distributed between the three solutions, with around a third allocated to each and a small proportion stating no preference.

**Persuading  
people**

**Building  
more  
capacity**

**Keeping  
rainwater  
out or  
slowing  
it down**



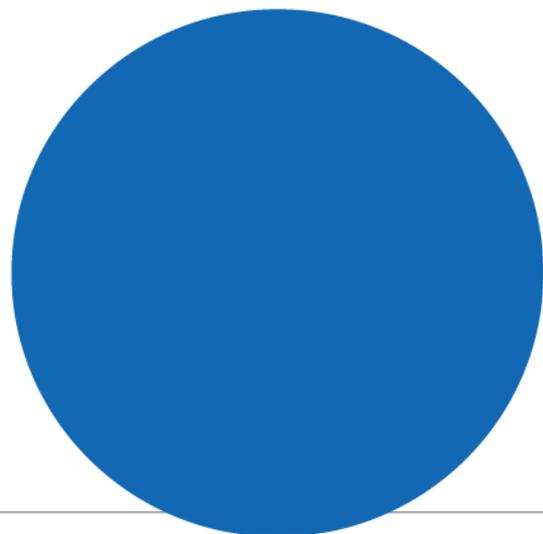
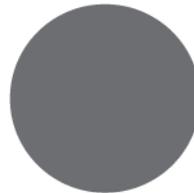
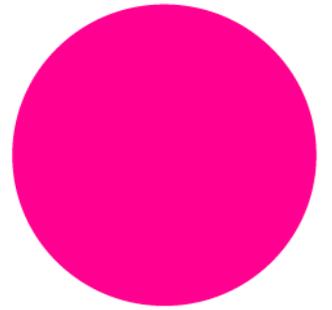
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Participants explained that all three approaches are important for different reasons. Persuading people is considered to be a good option because it is cost effective and the public have a responsibility to 'play their part' in addressing these issues. However, there is uncertainty around whether people will listen and change their behaviours, with the feeling that any changes will take a long time to take effect. Participants feel that Northumbrian Water would have more control over building and keeping rainwater out, with the former appearing to be required with population growth and the latter important for maintaining plenty of green spaces.



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# Building the plan





## Defining the aims of the Drainage and Wastewater Management Plan

The final part of both stages of the research involved getting participants' opinions on the overall aims and priorities of the Drainage and Wastewater Management Plan. The three broad aims and the specific aims that sit within these were shared with participants. They were then asked to state whether they wanted to add additional aims or whether they feel everything was covered. The aims are below:

### Reduce flooding from sewers

- Reduce indoor flooding from sewers
- Reduce outdoor flooding from sewers
- Reduce properties at risk of flooding from sewers in severe weather
- Reduce blocked sewers

### Reduce pollution to rivers & bathing waters

- Reduce sewage emitted by overflows during heavy rain
- Reduce risk of sewage escaping from sewers

### Improve sewage treatment works performance

- Reduce damage to river water quality from treatment works discharges
- Improve quality of water discharged from treatment works
- Reduce odour from sewage treatment works

Almost two thirds of participants feel the aims cover everything and provide a comprehensive foundation on which to proceed. That said, over a third state that more needs to be added. The latter group were asked for additional suggestions as to what else should be included in those aims.

### The additional aims participants suggested included:

- Seek to educate people, businesses and housing developers on how they can do more to help reduce flooding and pollution
- Update old sewers
- Ensure current sewers are adequately maintained
- Make metering compulsory to reduce water usage
- Research and development into how to remove chemicals and microplastics
- Increase the amount of sludge waste that is converted to renewable energy



During the stage two group discussions, participants were reminded of the original aims from stage one, then shown the list of additional aims suggested by others who took part and asked which, of the additional aims, they agreed with. The consensus is that all suggestions are sensible, with education being deemed particularly important as it is perceived to be a cost-effective way of ensuring people and developers know the role they play in preventing flooding and pollution. Participants see the additional aims as being integrated with the original aims, rather than displacing them.

"If people understand how the whole system works, and how they can help it or hinder it by their day to day activities, it's a fairly small investment in education which could lead to a massive saving in terms of managing the water system."

**Female, 26-59, ABC1**

"Because it will be educating people and developers on how to prevent it in the first place."

**Female, 60+,  
C2DE**

There is some dispute over the inclusion of water metering in the aims, with some feeling this is important to prevent people from wasting water. Others though, are unsure whether this would be fair to all customers.

Participants are unfamiliar with the process of converting sludge waste to renewable energy, so there is some ambiguity around this suggested aim.

"Making meters compulsory might not work - businesses can't have meters because they use too much water."

**Female, 60+,  
C2DE**

"If everyone was fitted with a meter, it would make them so much more aware of what they're doing and how they're using the water."

**Female, 26-59, C2DE**

"Yes that [metering] would be good, but I still think there are some areas where you can't do that; certain types of houses or flats where you can't do that, so I don't think that's something you can enforce. Personally, I'd like it for myself."

**Female, 26-59, ABC1**



## Participant agreement with approach for prioritisation

During stage one, participants were presented with an outline of Northumbrian Water's existing plans for flood prevention, which involves dividing up the regions within Northumbrian Water's operating area into seven strategic planning areas – largely based on river basins.

Participants were asked to state whether they agreed with this approach or whether they would go about it differently. Almost all participants agree with the approach, with only a handful saying they would go about it differently. Alternative suggestions for dividing up the planning areas included prioritising urban over rural areas, combining urban and rural areas where they cover the same river basin, prioritising areas which are earmarked for development and/or giving all areas equal attention.

The different suggestions were later explored in the stage two group discussions and it was here that the issue of expertise started to come to the fore. Participants largely feel they are not equipped with the required level of expertise needed to make an informed decision about how Northumbrian Water should plan and prioritise. This is the primary reason why the current plan by SPA received such high levels of agreement – it was taken on trust that NWG are the only people equipped enough to make such a decision.

"I've got no framework for thinking about how to do this any differently."  
**Male, 60+, ABC1**

"To be able to give an informed opinion is to know, within those seven areas what is the biggest problem and how much work would need to be done. If Northumberland have the biggest problem with sewers and Teasdale doesn't have any then it's not a hard decision to make, but we don't have that information in front of us."  
**Male, 26-59, ABC1**

Having said that, there is agreement that the key to planning effectively is fairness. Perceptions indicate that prioritising urban over rural areas, or areas which are going to be developed, are not fair approaches and often leave out a group of people who may still be at risk of flooding. A fair approach is deemed to use information about the size and scale of the issues in each region, both now and in the future, and to focus resources appropriately.



"They should prioritise the ones that need it most, first."  
**Female, 60+, C2DE**

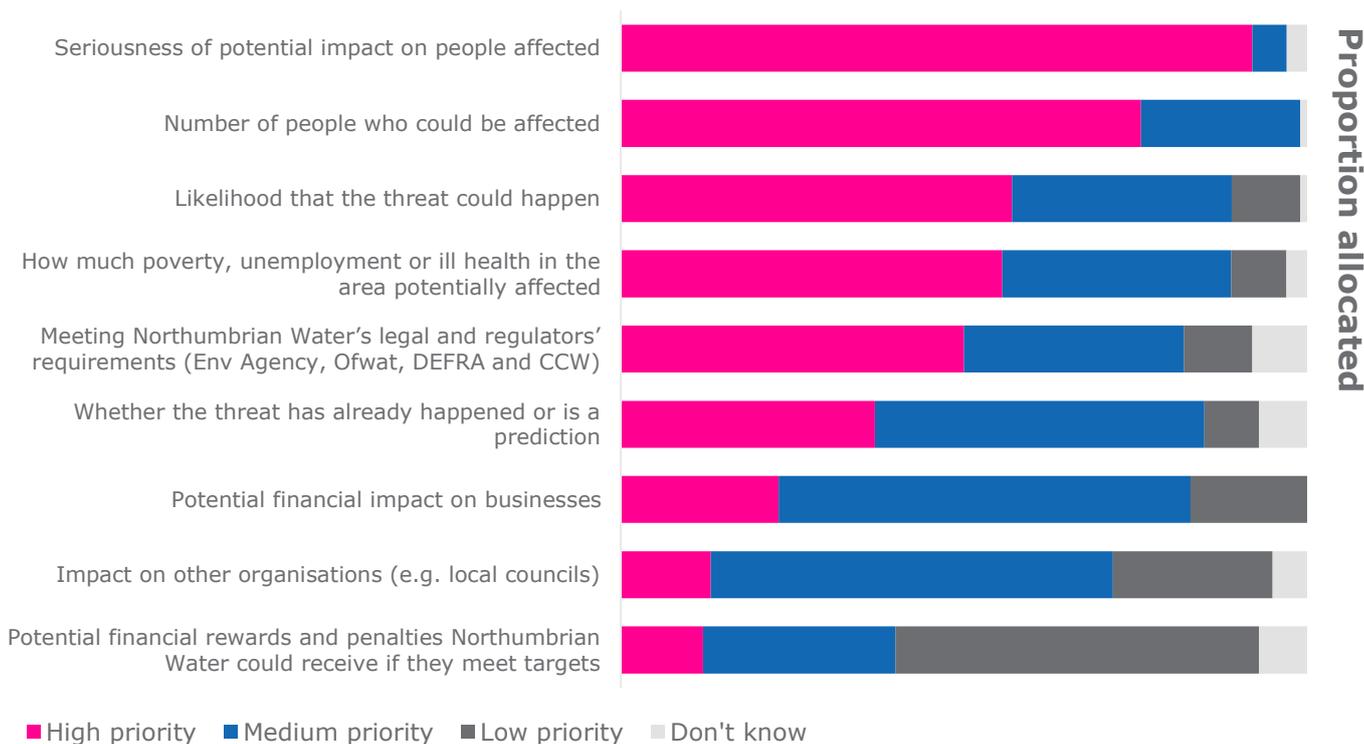
"To some extent it doesn't really matter how you divide it up. It does need prioritisation depending on the size and scale of the problems that whatever area is facing, and then needs to be drawn up into a list of actions."  
**Female, 26-59, ABC1**

### Views on where to reduce risk first

During stage one, participants were provided with a list of the various ways the Drainage and Wastewater Management Plan assesses risk. They were then asked to review and assign each method into either a high, medium or low priority depending on which mattered most to them.

Overall, the risk that came out as the highest priority is 'seriousness of potential impact on people affected', with nearly all participants assigning this as a high priority, followed by 'number of people who could be affected', with three quarters saying this was a high priority. The lowest priority overall is 'potential financial rewards and penalties Northumbrian Water could receive if they meet targets', with just over half of customers ranking this as a low priority.

### Prioritising risks

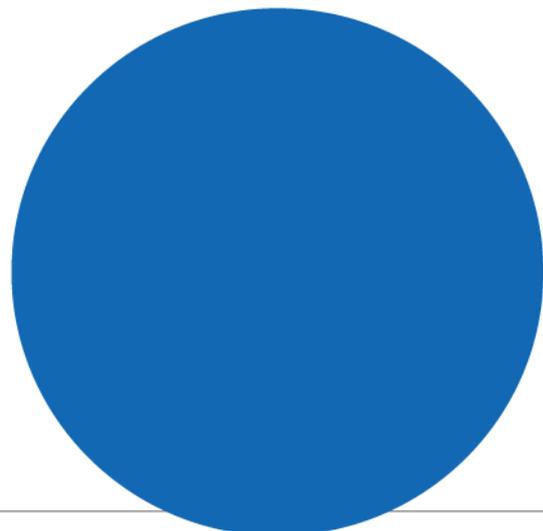
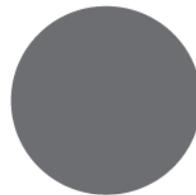
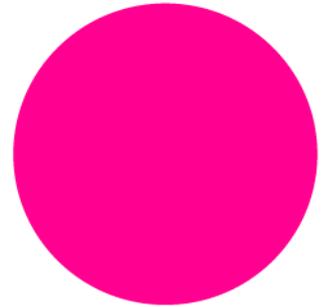


Q. Below are various ways that the plan assesses risk. Please review them all and assign them into either high, medium or low priority to show which matter most to you. (Base: 60).



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# Customer involvement in DWMP development





## Opinions on how customers should be involved in developing the plan

At the end of stage two, customers were informed about the Customer Challenge Group (CCG) and asked whether Northumbrian Water should consult general customers about the overall aims and priorities of its plans, performance targets for each aim and full draft of the plan, or whether this role should be delegated to the CCG.

Firstly, the importance of consultation cannot be understated. The very fact that NWG have chosen to consult its customers on this topic is received well by participants who feel as though it proves that the company cares about them and the people it serves.

"It makes us feel included, that Northumbrian Water really do care and value us as customers. I'll be interested to see how this research impacts on what Northumbrian Water does going forward"

**Female, 26-59, ABC1**

"I've thoroughly enjoyed it. I've learned a lot. I feel valued as a customer and included in discussions about things that may affect me"

**Female, 26-59, C2DE**

Customers comment on how much they enjoyed the process of learning about waste water issues.

"I think consultation is exceptionally important because it not only consults you but it also educates. There are bits through this consultation process that we weren't aware of and we can actually change our habits now as well as you giving my views."

**Female, 26-59, ABC1**

"I didn't realise what went on behind the scenes, so getting input from the general public is quite important - to remind us how important it is, and to remind the water board what is important to the customer."

**Female, 26-59, C2DE**



It also acts as a means of educating the customer base who take part, which participants welcome and reflect on fondly.

"Northumbrian Water should go direct, rather than have a middle man who can doctor those results to suit themselves maybe. At least if you go direct, you get the direct information."

**Female, 26-59, ABC1**

"It's given me more of an insight about what actually happens, what they do, how it all works. It's been really interesting, I've enjoyed it."

**Female, 60+, C2DE**

A note of caution should be applied here; those who volunteered to take part in this research were likely to have had a pre-existing interest in being educated, given that a large part of the research process involved learning about wastewater issues. Therefore, the finding that education is important to customers should not be taken to be representative of the entire customer base.

In terms of the specifics of the DWMP, the overall consensus is that customers do want to be consulted on the plan's aims and priorities, but mainly on local matters that will directly affect them.

Participants state that it is important for Northumbrian Water to take account of customer views. However, they feel they don't always have the right level of expertise to be consulted on every detail of the plan, including performance targets for each aim and the full draft of the plan for each individual area. This finding is supported by the CCW report, which found that overly complex research materials when presented to participants can lead to less credible results.<sup>2</sup>

"When you get into the finer detail, I would imagine you'd want someone who knew what they were talking about."

**Female, 26-59, ABC1**

"It's good to know they have proper scientists and specialists in the field. But I think as paying customers, it's really important our views are included too."

**Female, 26-59, C2DE**

<sup>2</sup> <https://www.ccwater.org.uk/wp-content/uploads/2020/10/Lessons-Learned-from-the-2019-Price-Review.pdf>



"It's good for general customers to know what the plan is, what's going on, what the aims are, and how they're going to resolve the problems (...) it creates that loyalty and confidence in Northumbrian Water that they are doing good things."

**Female, future bill payer**

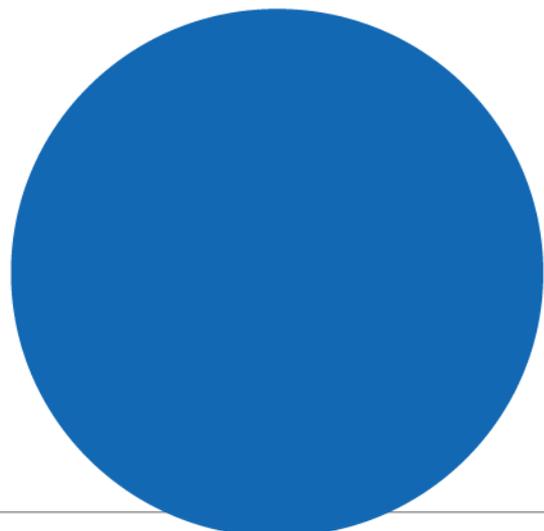
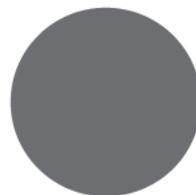
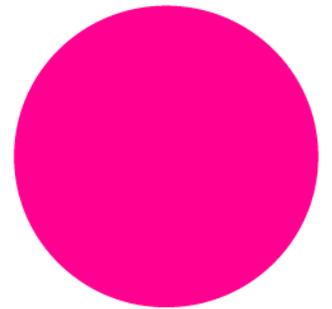
"It's something Northumbrian Water should have control of, but it's also important for them to discuss it with the customer."

**Male, 36, ABC1, mental health issues**



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# Business customers





## Informed understanding of wastewater issues

### Combined sewer overflows

Prior awareness of combined sewer overflows was low among business customers. However, after being informed about them, perceptions were mostly positive with some surprise that sewage and surface water can be combined into one pipe.

However, whether or not it should fall to Northumbrian Water to tackle is unclear, largely because participants felt the industry responsible for causing the problem should be the ones held accountable. Awareness of microplastics in rivers and the sea is particularly high and recent media attention around this issue may be prompting higher levels of concern than other serious issues.

"Sounds like a good system; you're not creating horrible stuff coming back up to the surfaces and into your premises, which is going to cause a lot of problems like diseases and all sorts, and vermin...it's a safety mechanism."

**Co-Director, commercial, micro business**

### Prioritising problems that may be faced in the future

When business customers prioritised the problems that may be faced, perceptions differed somewhat from domestic customers. Whilst flooding of infrastructure and indoor flooding were still highly important, with their business hats on, these customers tended to rank slow drains and bad smells due to blocked drains as much more important. This was mainly because business customers felt they needed to prioritise problems which may have an impact on business finances – whilst a bad odour isn't a matter of survival for domestic customers, it can starve a business of its revenues if customers don't want to enter a premises.

"The pollution wouldn't have a direct impact on us as a business whereas the flooding indoors and the bad smells would really cost us work."

**Finance manager, commercial, medium business**

"Anything that affects the business financially, either directly or indirectly, would go to the top of the list."

**Manager, commercial, small business**

"The bad smells and slow drains would be potentially hazardous for our business, especially people who work for us and use our bathroom and wash basins, so that would be essential on the list."

**Co-director, commercial, micro business**



Business customers shared similar views with domestic customers with regard to the reasons behind the problems and the way these should be prioritised.

Sewer misuse was seen as a frustration because certain individuals or businesses cause blockages for everyone else, particularly when you are part of a business that operates out of a retail park whose drainage systems are all intricately linked. Chemicals and microplastics was described as being a high priority, with many businesses currently trying to use less plastic where possible. Problems such as misconnected sewers, insufficient capacity of drainage and urban creep were also high on the list of priorities, because these were each seen as being easily preventable.

"It's [chemicals and microplastics in wastewater] very much on the business agenda at the moment, we're all trying to use less single-use plastic."

**Manager, commercial, small business**

"It would cause a lot of inconvenience if there were sewer pipes misconnected close to the business premises."

**Director, industrial, micro business**

"[Sewer misuse] It's common sense, but a lot of people don't use common sense (...) they don't realise that when that thing is away from your toilet system, it's blocking something else up, and then there's going to be a mishap and everyone else is going to suffer."

**Co-director, commercial, micro business**



## Reactive and proactive approaches to flood prevention

When given the choice of reactive or proactive approaches to flood prevention, business customers were very much in support of proactive approaches. This was mainly because there are simply more advantages than disadvantages to proactive solutions. Proactive approaches were considered to be worth the cost if this would prevent flooding and the distress associated with this in the future.

Business customers were keen to be provided with the tools and information needed to take responsibility for flood prevention; this included the provision of water butts to recycle rainwater and information about the impact of paved driveways on the wastewater system.

“It doesn't make sense to me to allow businesses to be flooded before you try and fix the issue. Try to be proactive to prevent them flooding in the first place.”

**Manager, commercial, small business**

“Why would you open the door after the horse has gone. Proactive is forward thinking and that's the way we need our brains to be trained in everything in life.”

**Finance manager, commercial, medium business**

“There are areas that are more prone to flooding and would require more investment in things like flood gates etc (...) but there are other areas that with climate change in time might become more vulnerable... so it's difficult for them to predict.”

**Director, industrial, micro business**



## Traditional and sustainable approaches to flood prevention

Business customers indicated slightly more of a preference for traditional rather than sustainable approaches to flood prevention, although the advantages of both were understood. Traditional approaches were deemed to be easier to monitor and control and potentially more efficient. Sustainable approaches on the other hand were perceived to be less easy to control, especially when multiple organisations are involved, with the potential to cause further flooding if not able to be monitored.

"I'm leaning more towards the traditional approach simply because you let the experts deal with it. Northumbrian Water are specialists in the area, they know what they are doing. One organisation owns, maintains and is responsible for it."

**Minister, charity,  
micro business**

"I think probably the traditional approach, simply because it works, it's easier to manage. I think on the sustainable approach, it's great that everyone wants to be greener but the amount of space you have to have with that and it's difficult to control."

**Co-director, industrial,  
small business**

"I'm surprised that [sustainable approach] increases property value. That to me could be a possibility of causing the flooding if the water doesn't drain away."

**Finance manager, commercial, medium business**

Having said that, a minority did mention the advantages to sustainable approaches; they felt this would create nice outdoor spaces with lots of wildlife. One business customer who mentioned this had a retention basin built near his business and preferred this to concrete storage containers.

"That's a way of actually tending to the problem while creating quite a nice space."

**Manager, commercial, small business**



## Working alone and working in partnership to prevent flooding

Business customers share similar views with domestic customers when it comes to opting to work alone or in partnership with other organisations to prevent flooding. Both options are considered necessary depending on the circumstance. This audience largely felt that a coordinated response between organisations is needed when addressing major flooding incidents, while in the meantime resources must be available for flooding incidents that need a quick response. There was also the view that Northumbrian Water should be the one to organise the coordinated response.

"Northumbrian Water are experts in what they do, and the other organisations are experts in what they do, and when something major happens, they should get together and do it together as one body."

**Co-director, commercial, micro business**

"You can do things in the meantime to mitigate against major flooding, but I would suggest that they get things in place to work on a co-ordinated plan."

**Manager, commercial, small business**

"I was brought up there [Gosforth Estate] and there was severe flooding (...) Northumbrian Water might have said we can fix it but we're not going to front all the costs and Newcastle County Council might have then been involved if they we didn't want this occurring to the county residents... so there could be situations where more than one body are going to get called in."

**Co-director, industrial, small business**



Having said that, a lot of advantages to working alone were mentioned, including the ability to work quickly, to achieve more in a shorter space of time and to have more control over the process.

"Working alone will be better because you can get more done, and there are only two risks there so that's what I would go for."

**Minister, charity,  
micro business**

"Working alone seems to have more benefits and will get a quicker result and it's clearer who's maintaining it and who's going to look after it."

**Co-director, industrial,  
small business**

### Perceptions about the allocation of time and resource

When given the choice of persuading people, building more capacity and keeping rainwater out or slowing it down, business customers were largely torn between the first two options. Persuading people was a preferred choice for its low cost and the logic that by informing people to do the right thing to begin with, you are reducing the need for the other two approaches. Building more capacity on the other hand was thought to be more within Northumbrian Water's control than the other options, because not everyone can be persuaded to change their behaviours.

"Northumbrian Water can be in control of building more capacity so this is more reliable. They are not in control of persuading people."

**Finance manager, commercial,  
medium business**

"It's a bit selfish but as a business I would choose building more capacity, which is the most expensive but I think it would get the results you would need and would get them instantly."

**Co-director, industrial,  
small business**

"Persuading people I think is important as well, but it's really a very long-term solution, its persuading to do things differently so worth educating younger generations and builders of new developments."

**Co-director, industrial,  
small business**

"Persuading people is the one I would do first, if you get people to buy into what you are doing, this makes the other two easier."

**Minister, charity, micro  
business**



## Defining the aims of the Drainage and Wastewater Management Plan

Business customers were in agreement with the aims of the Drainage and Wastewater Management Plan and felt that they covered what they would want to see covered. The two additional aims suggested by business customers were:

- Increasing wetland areas to retain rainwater or provide a space for rainwater to naturally go into
- Inform businesses about wastewater issues in the interests of benefitting both Northumbrian Water and businesses

## Participant agreement with approach for prioritisation

There was general agreement among business customers that dividing up the region into the seven strategic planning areas is the best approach. They felt that a large region such as this needs some form of division for planning purposes and that doing this around river basins makes sense. All of this is based on the assumption that Northumbrian Water will also prioritise and take proactive measures for the high-risk areas.

"Each area poses its own challenges so I guess you need a separate plan for each area, to deal with the challenges that each area provides. Also, you will be able to work on seven different areas, if you have seven plans... divide and conquer."

**Minister, charity,  
micro business**

"As long as they've got a plan to cover the high-risk areas...I think, yeah. Higher risk areas probably need a bit more investment, a bit more preventative action, proactive measures to be taking place, in the high-risk places."

**Director, industrial,  
micro business**

"Basing it around river basins makes sense; some rivers cause more issues up here...you're splitting it quite nicely. It needs to be done on a case by case basis depending on who's going to be most affected... this is as good as any [plan]."

**Manager, commercial, small business**



## Perceptions around whether customers should be involved in developing the plan

The general consensus on whether customers should be consulted on drainage and wastewater plans was that, yes, they should. Findings are similar to those of domestic customers; consulting customers in the way they have been doing was seen to be educational and informative. Customers felt that the benefits of consulting customers should outweigh the costs, but also that if an issue would directly impact a customer they should be consulted.

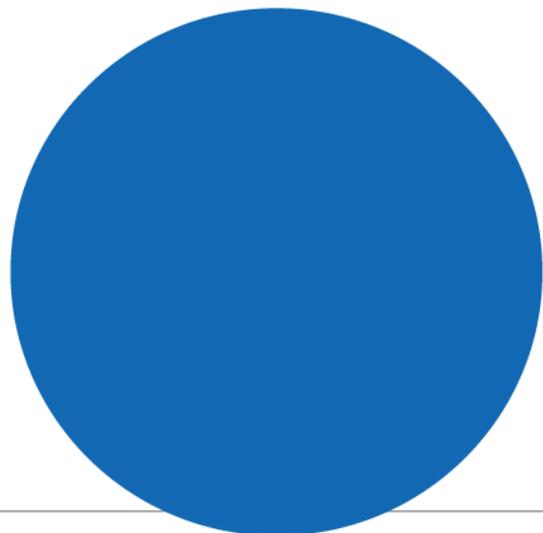
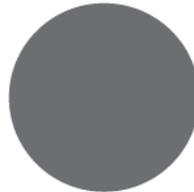
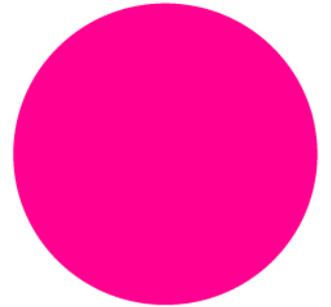
“Businesses that it affects need to probably know about it, I just think for me, there's a lot of stuff in the presentation [from this research] that changed my mindset. I think it's important to be inclusive. It will cost a lot of money but hopefully the money provides a lot of benefits and the benefits are outweighed.”

**Minister, charity,  
micro business**



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# Recommendations





## **Educate customers**

- Educate the general public on how to dispose of waste correctly, recycle water, check for misconnected sewer pipes, and the impact of paving over driveways and gardens.
- This process could also include educating developers and businesses on what they can do to prevent flooding and pollution too as the businesses or industries most responsible for contributing to flooding and pollution problems are a key concern, and Northumbrian Water may want to consider how they can educate this audience on what they could do differently.

## **Utilise a range of approaches according to which is most appropriate**

- A blended approach should characterise Northumbrian Water's planning moving forwards.
- Proactive solutions should be pursued and promoted so that flooding and pollution incidents are prevented, however plans for the aftermath of such events should still be made.
- Northumbrian Water should continue to adopt 'greener' environmentally-friendly approaches when planning flood prevention measures. These solutions protect natural spaces and ecosystems, which in turn protect against further environmental damage and associated issues.
- At the same time, traditional approaches should be utilised if it is the only option. This may include a lack of space in certain areas. However, further evidence should be gathered on a case by case basis for the need for traditional approaches.
- Northumbrian Water may need to work both independently and in partnership with others, depending on the circumstance of the incident or problem to be addressed. It will be important to prepare for new and larger projects as part of the forward-looking approach the Drainage and Wastewater Management Plan encourages. Working with partners on such projects, and developing innovative approaches together may be what is needed as new problems arise in the future. However, there will need to be resource available for independently managed, small-scale, quick turnaround incidents.

## **Consult customers for local knowledge and experts for the rest**

- Customer consultation should focus on the broad aims and objectives of the Drainage and Wastewater Management Plan, rather than specific performance targets or full details of the plan.
- Customers should be consulted on local matters as they are able to provide local experience and knowledge on flooding and pollution issues and it is important, they are consulted on matters which may directly affect them.
- Experts should be looked to for information on which areas are at the highest risk of flooding and the size and seriousness of the potential impact. This information should then guide decision making with regard to developing a strategy around how to prioritise certain areas over others.



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## Explore further Northumbrian Water's role in tackling flooding and pollution issues

- This research indicates some disparate views with regard to Northumbrian Water's role in addressing some of the issues discussed.
- Further research may be needed to understand how Northumbrian Water should educate and work with the relevant industry, businesses and housing developers to address flood and pollution problems, with a particular focus on reducing chemicals and microplastics in wastewater.
- Separate to this, the evidence suggests the general public are willing to play their part in proactively preventing these issues. Further exploration of how Northumbrian Water can educate the public on matters, such as sewer misuse, recycling rainwater and reducing paved surfaces may help to target communications in the most effective way.
- Finally, lower socioeconomic groups are underrepresented in this primarily online-based research. Further research targeting this cohort to understand the specific concerns and experiences of lower socioeconomic groups may be warranted, incorporating telephone or face-to-face methods.

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# For more information

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