





## **Contents**

- **03** Background, objectives and methodology
- **09** Recap of Wave 1 findings
- **12** Communications
- 23 Residents' attitudes
- Residents' self-reported behaviours
- **37** Summary & conclusion



# Background, objectives & methodology



## **Background**

United Utilities circulate regular communication campaigns to build awareness among customers of sewer safe and unsafe behaviour. Through doing this, it is hoped that households will change their behaviour and this will help to prevent blockages both within the home and wider sewer network, while also protecting the environment.

United Utilities have identified Glodwick, Oldham as a key problem area where sewer blockages are occurring and sewer litter is impacting the receiving environment. In an attempt to solve this, United Utilities have teamed up with Northern Roots to identify potential areas for cooperation for mutual added benefit. In particular, it is hoped that the Northern Roots' brand be can harnessed to develop and deliver an innovative behaviour change communication campaign.

In the first wave of this research, we established a baseline and shed light upon the underlying beliefs and behaviours which lead to sewer unsafe behaviour within the Glodwick area. Now in wave two, we will explore awareness of the 'keep the water flowing in Glodwick' campaign and examine if attitudes and reported behaviour have changed in light of this.



## **Objectives**

The overall purpose of the research is to inform communications and measure the effectiveness of the campaign in the target area of Glodwick

#### **Pre-campaign objectives:**

- 1. Understand the underlying beliefs and behaviours which result in sewer unsafe behaviour.
- 2. Understanding barriers to behaviour change.
- 3. Understand current levels of awareness of the impact of flushing and pouring sewer unsafe items.
- 4. Understand what messages and impacts have the most potential to change behaviour.
- 5. Understand the best mechanisms and platforms to convey the message.

#### **Post-campaign objectives:**

- 1. Understand the impact on awareness, attitudes and flushing/pouring behaviour.
- 2. Understand engagement with the communications and message recall.
- Understand which channels/ mechanisms have been most successful.



## Post wave methodology

We used a face-to-face CAPI (computer assisted personal interview) approach to interview residents within the Glodwick area. Quotas were set by age, gender and ethnicity to achieve a representative sample of residents. Where appropriate, interviews were carried out in residents' first language to ensure that residents with limited English were not excluded.

Fieldwork was carried out in October 2022

#### Residents were asked questions relating to:

- Their attitudes towards the local environment
- How and how often they dispose of certain items down the sink/drain or down the toilet
- Exposure to sewer safe comms
- Likelihood to change their current behaviour

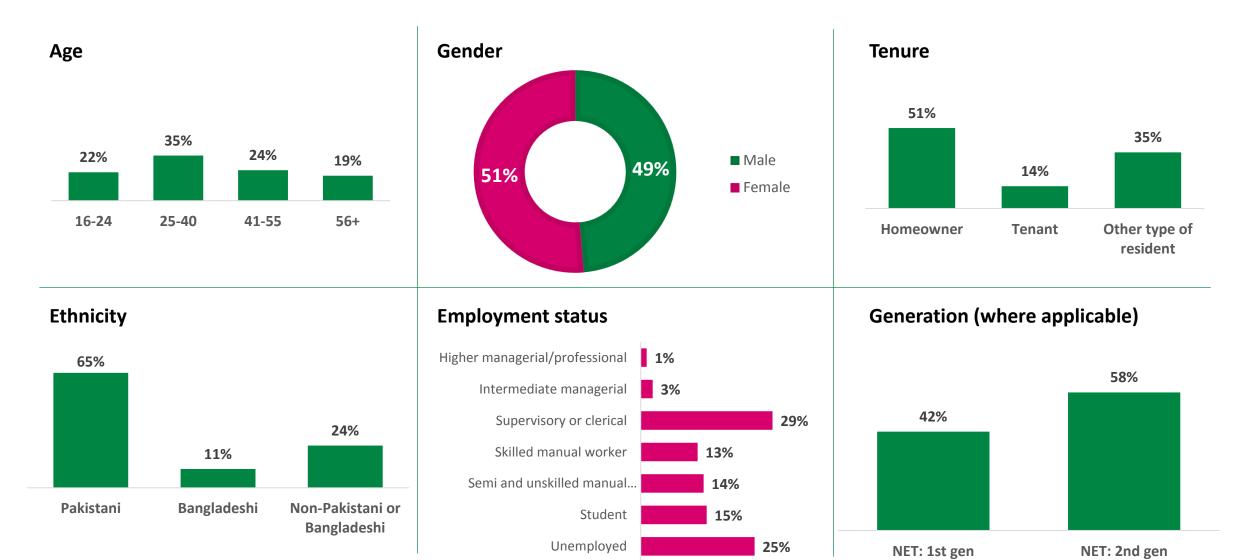
Household customer total sample: 150

Throughout the project, Northern Roots' Community Champions have been a valuable resource, providing a unique insight into the their community and area, reviewing materials and acting as a sounding board for ideas.





## Sample profile: quantitative



# Recap of the wave 1 findings

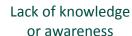


## Key reasons for sewer unsafe behaviour: a recap of wave 1 findings





Six in ten residents (59%) incorrectly identifying at least one of the sewer unsafe items listed as being okay to flush.



Convenience & force of habit

Not experiencing the consequences

**Resulted** in



Hygiene reasons



Social norms



"Oil is a liquid form. you wouldn't put it inside a bag, just in case it rips apart." Male, 25-40, 2<sup>nd</sup> generation

"If it goes down the sink with no trouble, I don't see what the issue is."

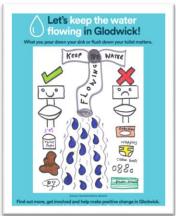
Female, 25-40, 2<sup>nd</sup> generation

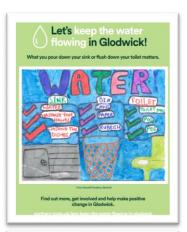
"Hair would be biodegradable wouldn't it?"

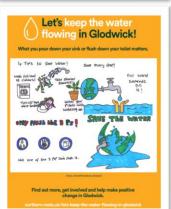
Male, 41-55,5 2<sup>nd</sup> generation

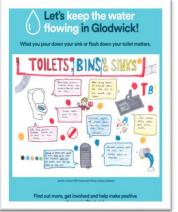
## **Northern Roots x United Utilities Campaign Materials**

#### Posters









#### Leaflets



#### 24 pictures film



#### **Community champions**



Other methods of engagement

Social media
Campaign website
Newspapers
Information/presentations at places of worship
Information/ presentations at community hubs
Community mosaic

# Communications

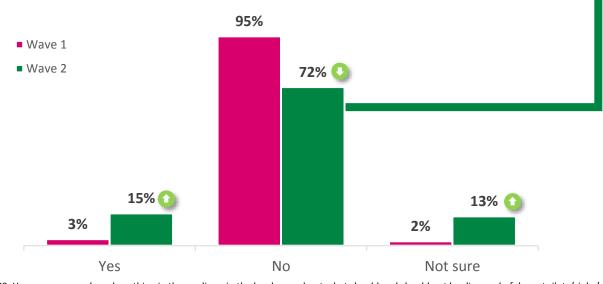


## Awareness of comms: unprompted

Unprompted awareness of relevant comms has significantly increased this wave (+12% points), but a large proportion of residents still report not seeing anything when unprompted...

Have you seen or heard anything in the media about what should/shouldn't be disposed of down the loo, sink or drain?

Unprompted awareness for seeing anything in the media or in the local area about what should and should not be disposed of down the loo, sink or drain has significantly increased this wave with more residents reporting that they have seen something compared to last wave (+12% points).



Respondents who are more likely to say that they have not seen anything (unprompted): Those aged 41-55 Male residents Homeowners 81% 75% 81% Bangladeshi residents 1<sup>st</sup> gen residents 79% 88% \*Caution low bas size

Q09. Have you seen or heard anything in the media or in the local area about what should and should not be disposed of down toilets/sinks/drains? (All residents 150)

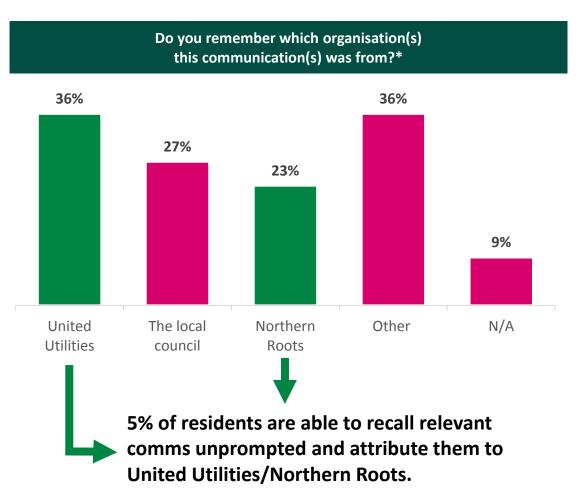
Copyright © United Utilities Water Limited 2019



13

## Awareness of comms: unprompted

Those who recall seeing/hearing something unprompted were asked for further details about this...



Those who recalled seeing or hearing something from United Utilities or Northern Roots unprompted often mentioned the campaigns strapline!

"Keep the water flowing." **Female, 25-30** 

"Something about water flowing and what to put where."

Female, 31-35

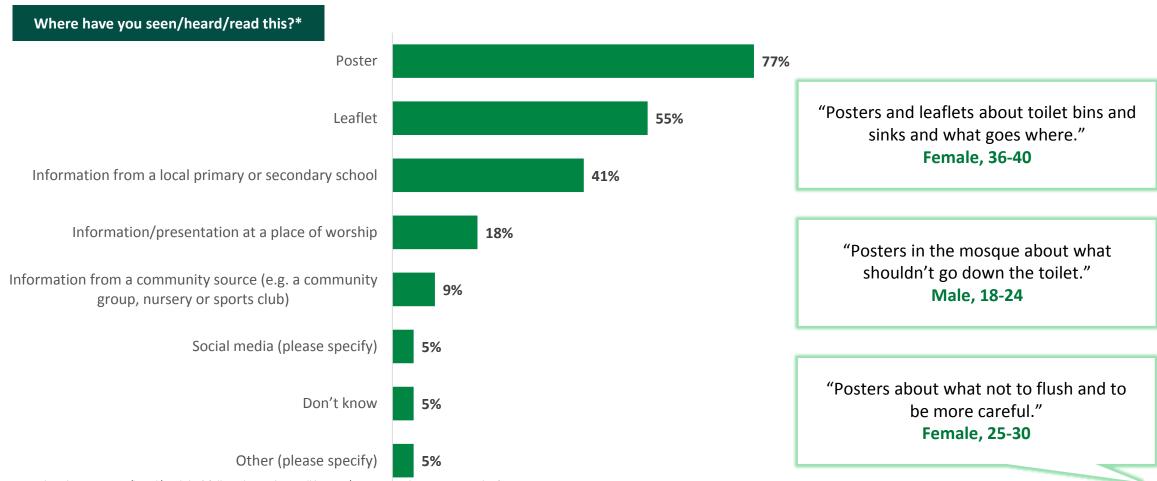
"About how we need to keep the water flowing in Glodwick."

Female, 18-24

Q010. Do you remember which organization this communication was from? (All residents who recall hearing/seeing something unprompted 22) \*Caution low base sizes (<30).

## Awareness of comms: unprompted

When unprompted, residents tend to remember seeing something on a poster or leaflet, with seeing information from local primary or secondary schools also being common...



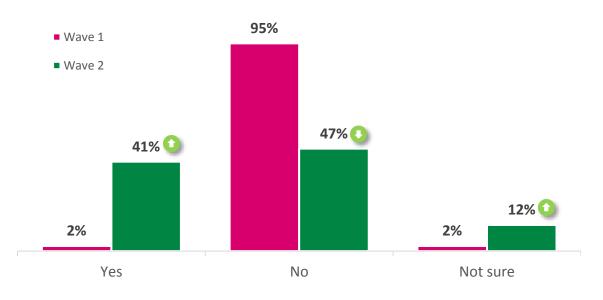
Q011. Where have you seen/heard/read this? (All residents who recall hearing/seeing something unprompted 22) \*Caution low base sizes (<30).

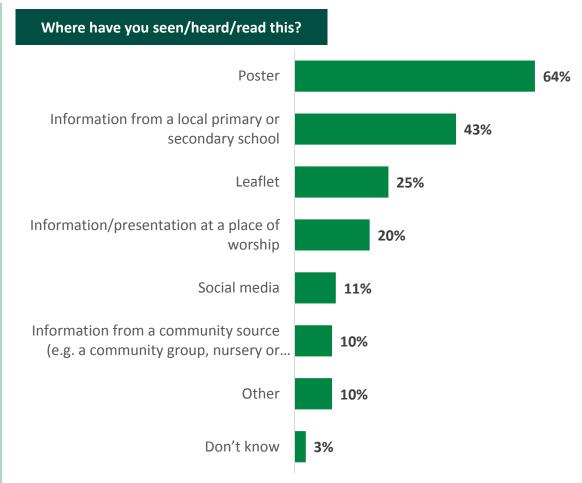
### Awareness of comms: overall

When prompted recall is included, awareness rises to 41%. Posters remain the most commonly reported place where residents have seen the campaign.

More specifically, do you recall seeing any communications about the 'Let's keep the water flowing in Glodwick' campaign?

Total awareness has also significantly increased this wave (+39% points), with only half of residents reporting that they have not seen any communications from the 'Let's keep the water in Glodwick flowing' campaign.





Q010. Do you remember which organization this communication was from? Q13. More specifically, do you recall seeing any communications about the "Let's keep the water flowing in Glodwick" campaign about what should and should not be disposed of down toilets/sinks/drains? (All residents 150). Q014. Where have you seen/heard/read this? (All residents who recall the campaign 61).

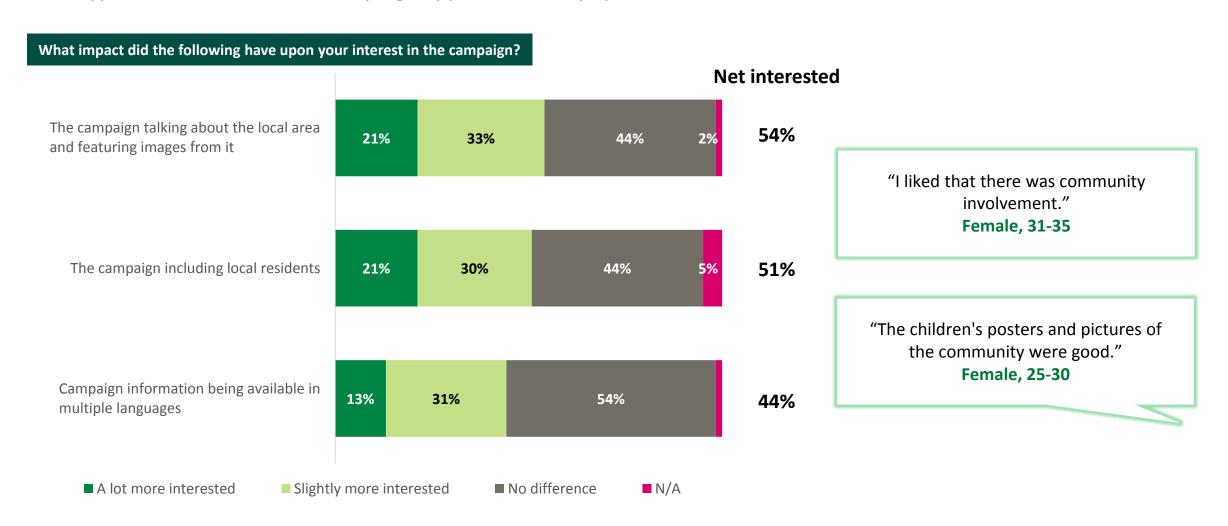
Copyright © United Utilities Water Limited 2019



16

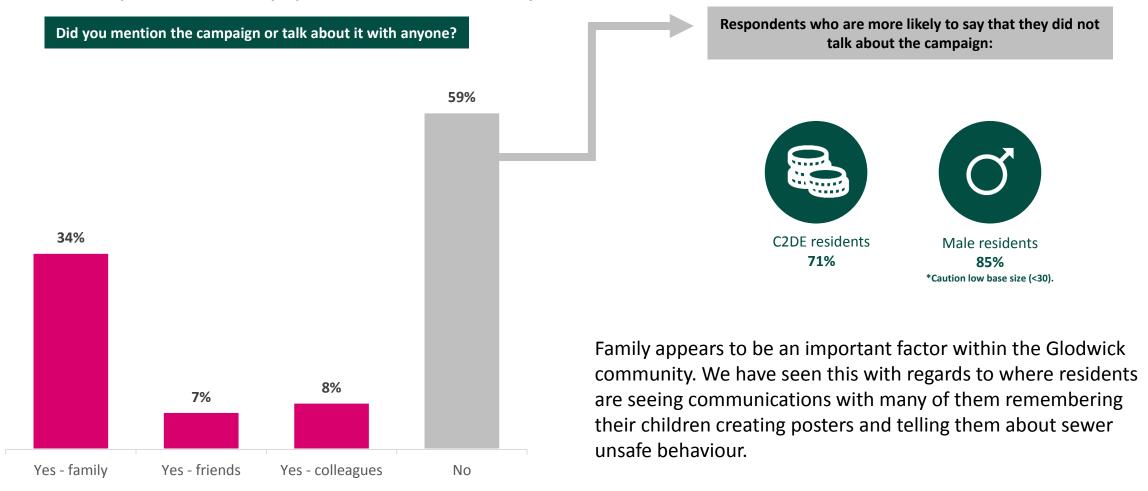
## Reported impact of comms (I)

The hyper-local nature of the campaign appeared to be popular with residents...



## Reported impact of comms (II)

Almost six in ten residents report that they did not discuss the campaign with anyone after seeing it, but just over three in ten reported that they spoke about it with family...

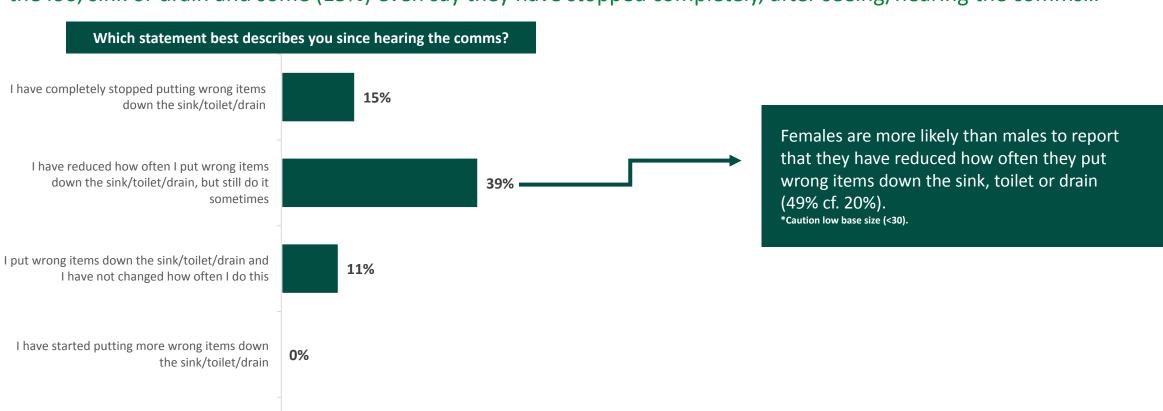


## Reported impact of comms (III)

Not applicable – I already did not do any of the

behaviours described in the campaign

A large proportion of residents (39%) reported that they have reduced how often they put the wrong things down the loo, sink or drain and some (15%) even say they have stopped completely, after seeing/hearing the comms...



31%

## Reported impact of comms (IV)

A lot of residents' report trying to make more sewer safe changes since seeing/hearing the communications...

How exactly has your behaviour changed since seeing/hearing the communication?

"I stopped putting oil down the sink, but it's the takeaways who do this. I don't think what I put makes a difference, it's the big business as they have more oil and food to waste."

Female, 25-30

"We used to get pipe blockages a lot and stopped putting panty liners and oil down pipes. Since I've seen this it made me more aware, and I teach my household too to be careful."

Female, 25-30

"The kids learn in school and tell me not to throw things in toilet or down the sink, so I listen to them and try not to do it as much anymore."

Female, 41-45

"I try to put all of my food waste into the bin now even if it is just a small amount. I try not to put it down the sink when I am washing the dishes."

Female, 51-55

"I have started to make sure that I put things in the bin rather than being lazy and putting them down the toilet."

Female, 46-50

"I try to be more mindful and put things in the bin rather than down the sink as I know it can cause blockages."

Male, 18-24

## Reported impact of comms (V)

The use of children's posters and the local community appear to be particularly powerful messengers providing encouragement for change, suggesting future communications could be effective in this format.

What about the campaign encouraged you to make this change?

"I enjoyed seeing the posters that my grand children had made and the pictures of the local community."

Female, 56-60

"The next generation. It was the kids who had drawn the pictures asking us to make changes that encouraged me to make some changes."

Female, 25-30

"I remember seeing the posters and pictures around when I was out and thinking that it must be quite a big problem."

Female, 25-30

"The drawings by the children, if we don't do something we are making their lives more difficult."

Female, 36-40

"The posters that I saw had pictures and made it easy to understand what should and shouldn't go down the toilet."

Female, 46-50

"That it will be better for the environment, and it was nice to see some community involvement."

Female, 31-35

QW2NEW4. What about the campaign encouraged you to make this change?

## Reported impact of comms (VI)

There are a variety of reasons as to why certain residents have not changed their behaviour with comments reflecting a lack of salience and impact from the comms which serves to highlight how there is no one size fits all solution.

Is there a reason why you have not changed your behaviours around disposing things down the sink/toilet/drain since seeing/hearing the communication?

"I don't think I am doing is wrong; I know what I should and shouldn't put down the loo, sink or drain."

Male, 51-55 "I didn't look at the poster properly; I will next time and will do it next time if I remember."

Female, 18-24

"I didn't really read it properly; I recognise it but at the time I didn't read it."

Male, 41-45

"I will from now on. I hadn't really thought about it but I will try to change."

Male, 31-35

"I didn't think the posters that I saw looked like a serious campaign."

Male, 18-24

"I don't think what I put down the toilet is wrong."

Female, 41-45

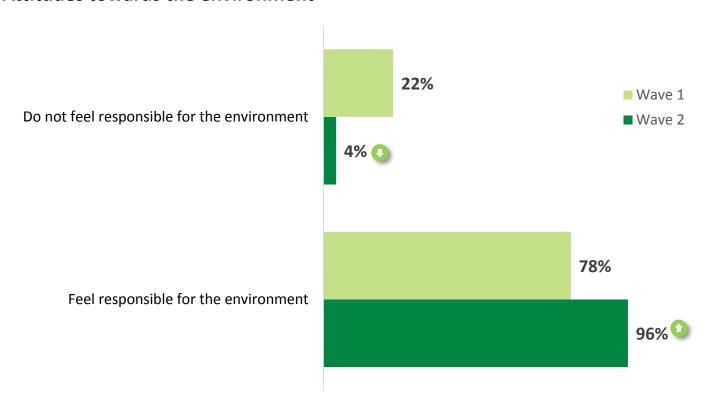
## Residents' attitudes



### Residents' attitudes towards the environment

Feelings of responsibility towards the environment have increased significantly this wave (+18% points).

#### Attitudes towards the environment



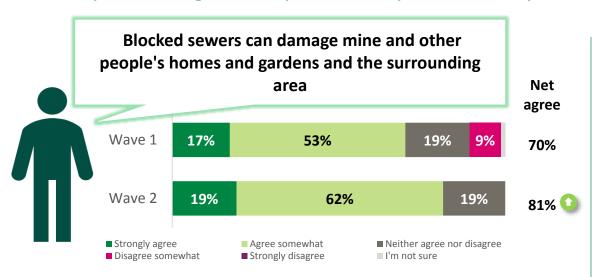
Residents aged 25-55 are significantly more likely to feel personally responsible for the environment compared to those aged 56+ (100% cf. 89%).

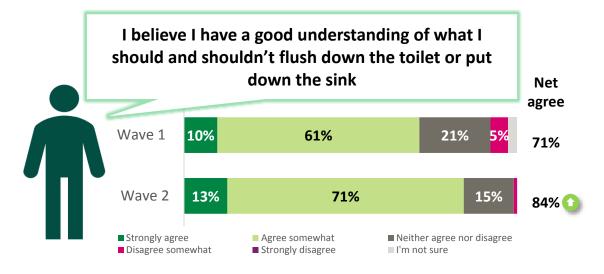


Those who agree that they never think about what happens to items they put down the loo, sink or drain are significantly less likely to feel responsible for the environment (97% cf. 88%).

## Lack of knowledge or awareness: attitudes

Residents this wave are significantly more likely to be aware of the potential damage that sewer blockages can cause and they're also significantly more likely to think they have a good understanding of sewer safe behaviour...





Agreement of the damage sewer blockages can cause has increased significantly this wave (+11% points).

However, there are still certain residents who don't agree so much. These include 1st generation residents (72%) and those who tend not to worry about what other people in their neighbourhood put down the loo, sink or drain (68%).

Perceived knowledge of what constitutes as sewer unsafe behaviour has also increase this wave (+13% points).

But again, a number of residents report lower levels of agreement. These include those aged 56+ (68%), those from the socioeconomic grade C2DE (74%), first generation residents (72%) and those without children in the household (78%).

\*Caution low base size for residents aged 56+ (<30).

Q07. To what extent do you agree or disagree with the following statements? (All residents 150)

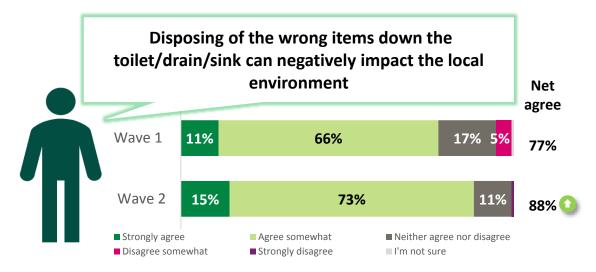
Significantly lower or higher than previous wave.



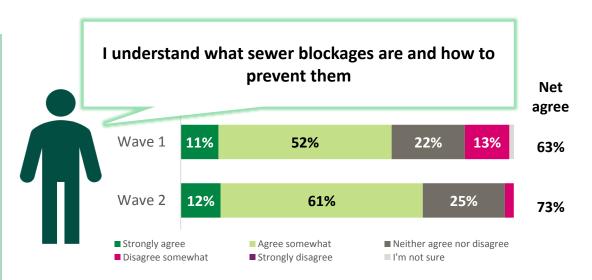
25

## Lack of knowledge or awareness: attitudes

Similarly, residents this wave also appear to be significantly more aware of the environmental impacts of sewer unsafe behaviour and whilst not significant understanding of how to prevent sewer blockages has also increased.



Residents also appear to be significantly more aware of the consequences that sewer unsafe behaviour can have upon the environment this wave (+11% points). Perhaps suggesting that the environmental elements of the campaign have been particularly memorable for residents.



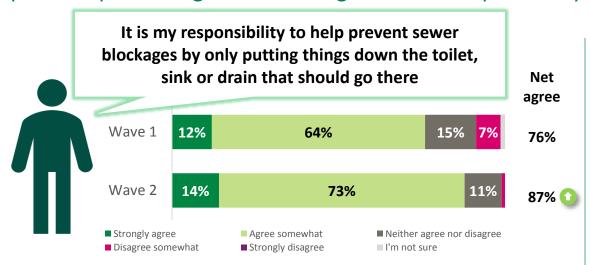
Awareness of what sewer blockages are and how to prevent them has also increased this wave (although not to a significant level). However, residents in the socioeconomic group C2DE tend to report lower levels of agreement with regards to their understanding (64%) as well as those who are engaging in sewer unsafe behaviour (68%).

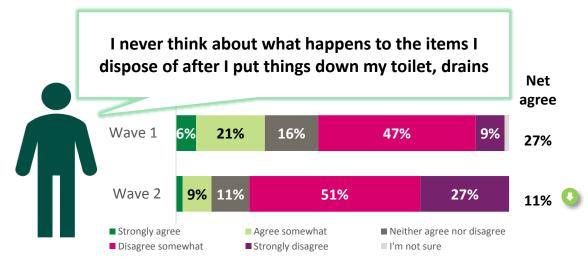


26

## Perceived responsibility: attitudes

We can also see key differences in perceived responsibility, with residents this wave being significantly more likely to perceive preventing sewer blockages as their responsibility...





Perceived personal responsibility for preventing sewer blockages has also increased significantly this wave (+11% points). However, those who are aged 41-55 (78%), those from the socioeconomic group C2DE (82%) and those practicing sewer unsafe behaviour (83%) are all less likely to agree with this statement.

Levels of agreement with regards to never thinking about what happens to items that have been disposed of incorrectly has significantly decreased this wave (-16% points). However, residents who are still engaging in sewer unsafe behaviour are significantly less likely to disagree with this statement (73%).

Q07. To what extent do you agree or disagree with the following statements? (All residents 150)

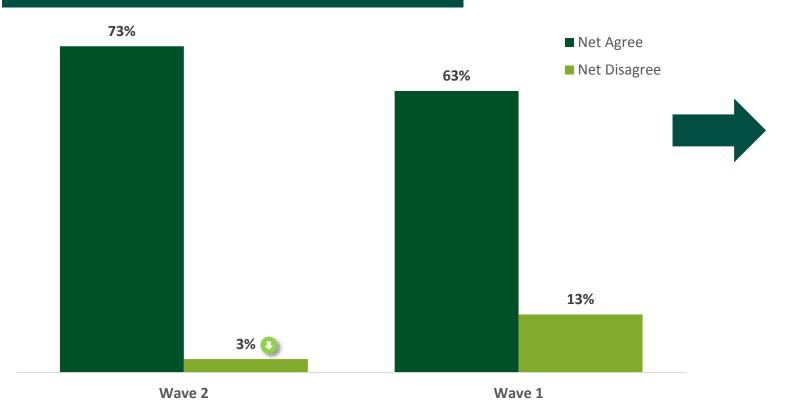
Significantly lower or higher than previous wave



## Lack of knowledge or awareness: the consequences of sewer unsafe behaviours

Whilst residents appear more conscious of the potential for sewer blockages this wave compared to last, a large proportion are still opting to engage in sewer unsafe behaviour illustrating just how hard behaviour change is.

I understand what sewer blockages are and how to prevent them



Despite increased levels of agreement with this statement, **68%** of residents who engage in sewer unsafe behaviour also agree with this statement!

73% of residents agree that they understand what sewer blockages are and how to prevent them, but a large proportion of these residents also engage in sewer unsafe behaviour. This suggests that whilst residents are aware they are not currently utilising their knowledge and actively changing their behaviour.

Q07. To what extent do you agree or disagree with the following statements? (All residents 150)

Significantly lower or higher than previous wave

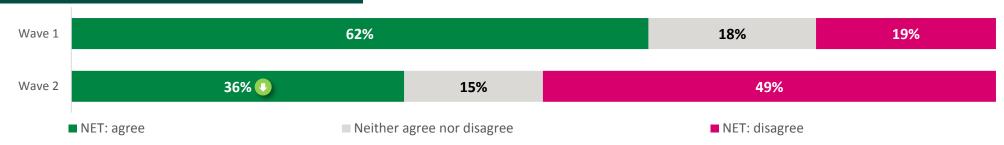


### The role of social norms

Interestingly, residents concern for what other people put down the loo, sink or drain has decreased this wave reflecting a greater level of concern with the self than with others.

Perceptions of own sewer sewer safe behaviours versus neighbours'





I understand what sewer blockages are and how to prevent them



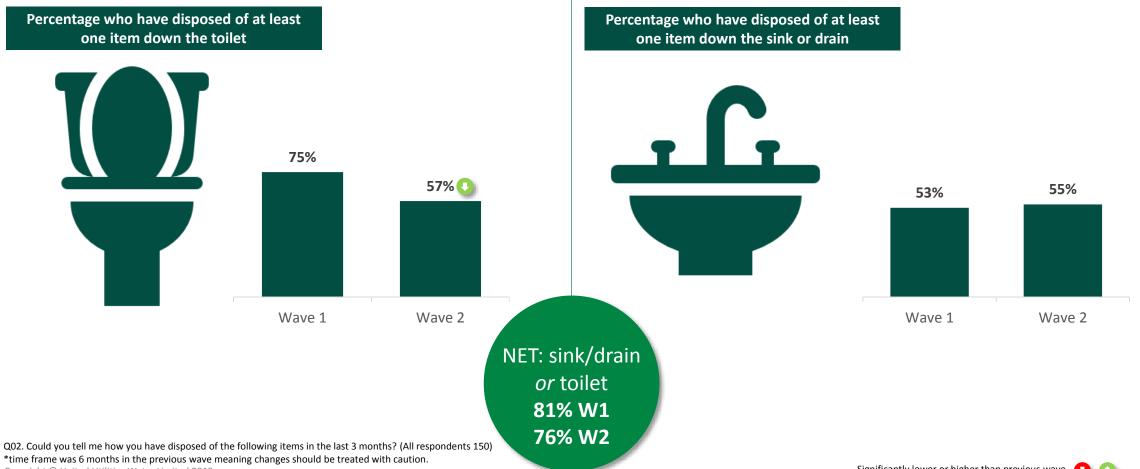
Q07. To what extent do you agree or disagree with the following statements? (All residents 150)

# Residents' self-reported behaviours



## Items being disposed of incorrectly

Reported disposal of sewer unsafe items down the toilet has decreased significantly this wave (-18% points), whilst misuse of sinks/drains has remained similar to the last wave (55% cf. 53%).



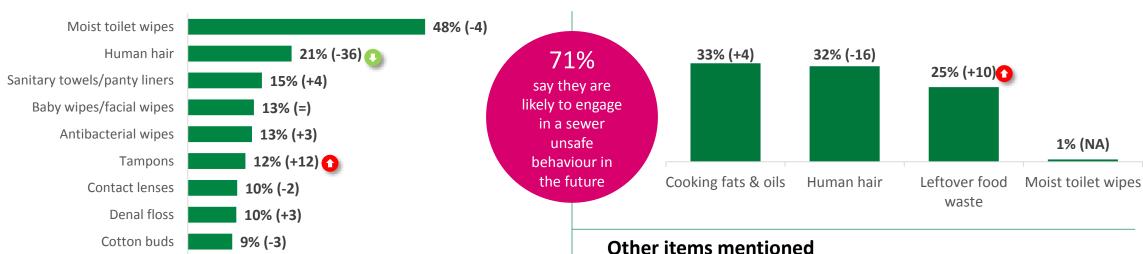


## Items being disposed of incorrectly (II)

Moist toilet wipes continue to be the most common item to be disposed of down the toilet, followed by human hair although both have declined this wave.

#### Items disposed of down the toilet (excluding N/As)

#### Items disposed of down the sink/drain (excluding N/As)



- Moist toilet wipes continue to be a common item residents dispose of incorrectly down the toilet.
- Cooking fats & oils is the most common item to be incorrectly disposed of down the sink this wave.



Toenail clippings

3%



Other drinks or liquids

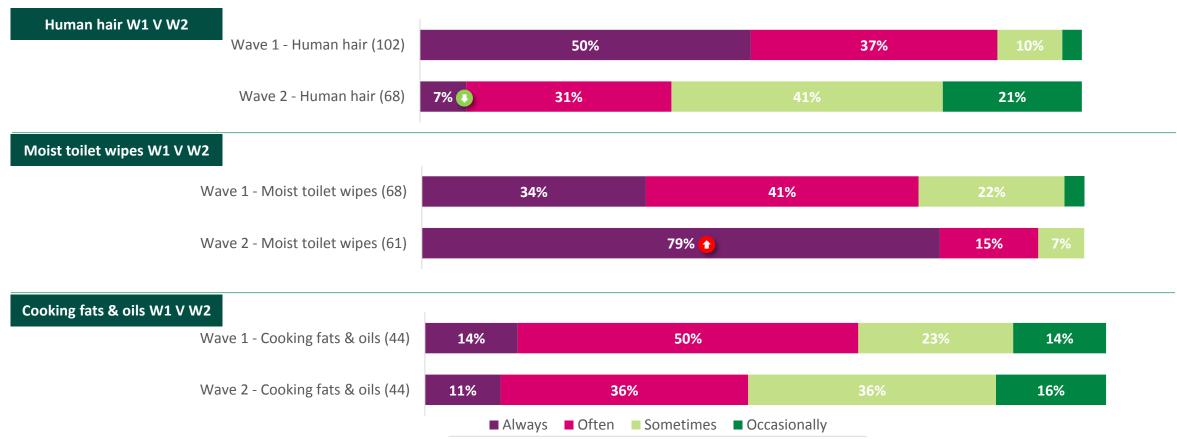
32

Q02. Could you tell me how you have disposed of the following items in the last 3 months\*\*? (All residents excluding N/A base varies). Is there anything else that you dispose of down your toilet, sink or drain? (All residents 150) Q16: How likely are you to dispose of the following items down your toilet, sink or drain in the future? (All residents 150) \*\*time frame was 6 months in the previous wave meaning changes should be treated with caution.

Leftover food waste

## Frequency of incorrect item disposal among those who engage in each sewer unsafe behaviour (I)

However, whilst the number of residents incorrectly disposing of moist toilet wipes has decreased, the frequency of incorrect disposal has increased for those who are still disposing of them incorrectly overall...



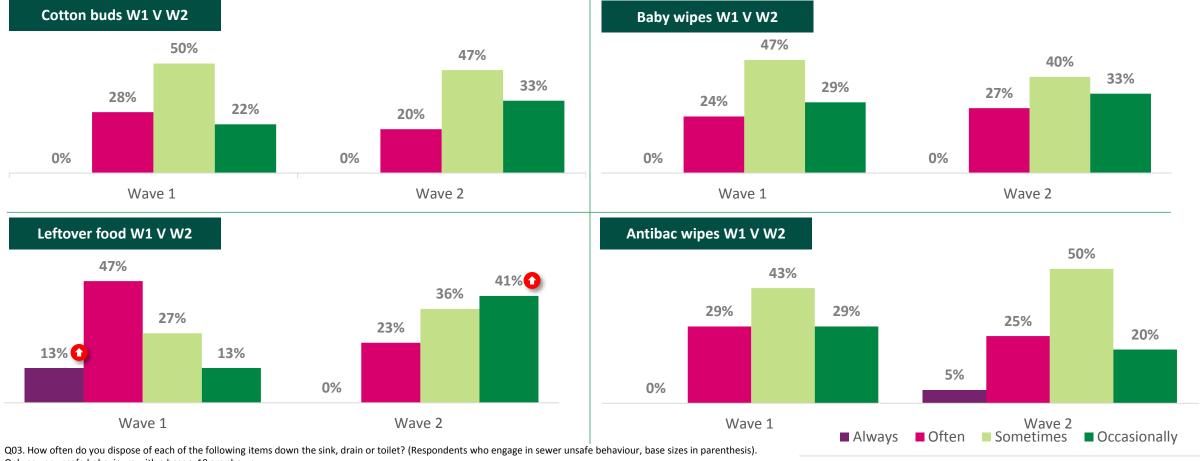
Q03. How often do you dispose of each of the following items down the sink, drain or toilet? (Respondents who engage in sewer unsafe behaviour, base sizes in parenthesis). Only sewer unsafe behaviours with a base > 10 are shown.



## Frequency of incorrect item disposal among those who engage in each sewer unsafe behaviour (II)

When looking at other more commonly flushed items, the frequency for only flushing items 'occasionally'

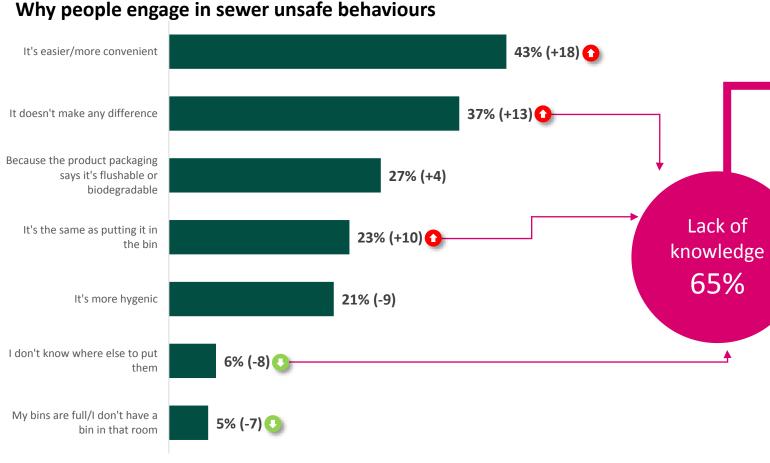
has increased for all aside from for antibacterial wipes...



Only sewer unsafe behaviours with a base > 10 are shown.

## Key reasons for sewer unsafe behaviour

Ease and a lack of knowledge continue to be the most prominent reasons for sewer unsafe behaviour, followed by poor packaging instructions.



Q05. There are a variety of reasons why people flush items down their toilet or put things down their sink/drain. Which of the following apply to you? (All residents 150) None of these apply = 21%



Those engaging in sewer unsafe behaviour 76%



Those with children in the household **72%** 



Those who are not worried about their neighbours' behaviour 77%



Those with a disability 75%

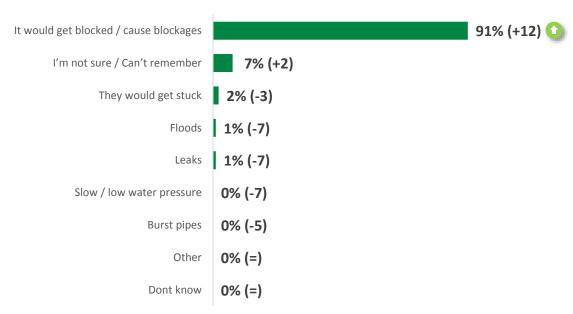
There is no significant difference by campaign awareness in the percentage who engage in sewer unsafe behaviour because 'it doesn't make any difference' (49% aware cf. 28% unaware)

Significantly lower or higher than previous wave.



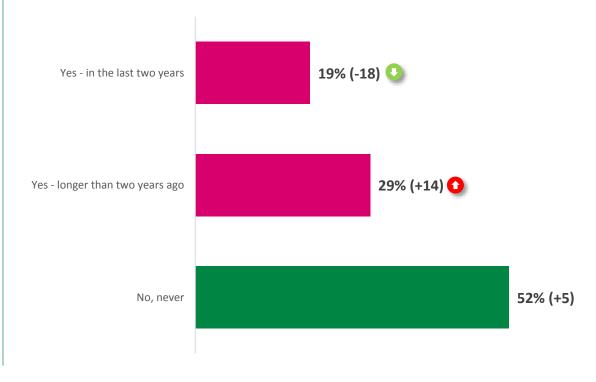
## Lack of knowledge or awareness: the consequences of sewer unsafe behaviours

#### The perceived consequences of sewer unsafe behaviour



Residents this wave appear to be more aware that sewer unsafe behaviour can result in blockages in comparison to last wave (+12% points), this could be as a direct result of the campaign materials as 98% of respondents who said 'it would get blocked' also reported seeing something from United Utilities. Percentage who have experienced sewer blockages/flooding

The majority of residents this wave have not experienced a blockage (52%) and the number of residents experiencing a blockage in the last 2 years is lower this wave at 19%.



Q06. What do you think could happen if the wrong items are disposed of down the toilet/sink/drain? (All residents 150) Q08. Have you experienced any of the following on your property? (All residents 150)



## Ideation Session

Residents' ideas from the qual pre-wave



## Top ideas from the qual pre-wave...

- 1. Create an oil milkman: give out oil pots to collect used oil at home and offer a weekly collection for it...just like with milk bottles. Could also have oil depositories at existing council recycling collections
- strong, leak proof and heat proof bin bags that oil can be poured into. This would help people feel more confident that they can pour liquid into the bin without it leaking

4. Extra strong bin bags: give out extra

7. Distribute fat and oil pots: these pots can sit in people's kitchens and can be used to collect any excess oil once they have finished cooking. This could deter people from disposing of the oils / fats down the sink

- **2. Virtual and augmented reality:** let people watch a VR experience via their phone which shows the consequences of sewer flooding to emotionally salient places i.e., their street, local park or mosque
- **5. Sewer detection devices:** deploy devices which detect things other than pee, poo or paper in sewers and issue warnings or eventually fines to households flushing anything except for the 3 Ps
- **8. Fosshape:** this can be used to soak up excess cooking oil. People can place a piece of Fosshape into their pan and any excess oil is absorbed. This again may encourage people to not dispose of oils down the sink

- **3. Oil hardening tablets:** make tablets that instantly harden oil, so people don't have to wait for it to solidify after cooking. It would also negate the worry of oil leaking and making a mess in peoples homes/bins
- **6. Hand out stickers:** these can be stuck onto the top of toilet seats to remind people of what not to flush down the toilet and the potential consequences that flushing these items down the toilet can have
- **9. Mapping the problem:** plotting sewers along the way to all meaningful aspects of people's lives i.e., their mosque, local school, GP etc. could help communicate the impact that blocked sewers can have upon places they value

# Summary & conclusions



## Summary & conclusions: comms

• Unprompted awareness of relevant campaigns rose this wave by **12% points** which suggests that the campaign messaging is resonating with some residents, with some able to recite the tagline **'Keep the water flowing in Glodwick'**.

It is important to keep in mind that a rise in unprompted awareness of +10% to +20% is deemed as a large increase for campaigns of this nature.

 Overall campaign awareness (prompted & unprompted) is 41%. This represents a 39% point increase from wave 1.

A rise in overall awareness of +30% points is considered a large increase for campaigns of this nature.

- A number of residents who have seen communications report that they have reduced how much they dispose of certain items down the loo, sink or drain (39%).
- The hyper-local nature of the campaign focussing on the local area and including local residents appears to have had the most impact upon those who recall seeing the communications. This suggests that communications which create a sense of community and familiarity are particularly salient.



## Summary & conclusions: attitudes

- Attitudes towards sewer safety and the environment have also altered this wave, again suggesting that the campaign has left an impact upon the attitudes and beliefs of local residents.
- Residents are more likely this wave to agree that they feel they have a good understanding of what causes sewer blockages and how to prevent them in the future (73%). This is a +10% point increase from the previous wave, again, suggesting the campaign is doing its job and educating residents about the importance of sewer safety in the form of what should and shouldn't be put down the loo, sink or drain.
- As well as this, residents are also significantly more likely to report that they
  feel personally responsible for the local environment (96%). This is a +18% point
  increase from the previous wave. The environment is clearly an important factor
  to local residents and further targeted communications highlighting the
  environmental impacts of sewer unsafe behaviour could
  be effective.



## Summary & conclusions: behaviours

- Despite awareness increasing and attitudes improving, residents are still engaging in sewer unsafe behaviour.
- Sewer misuse continues to be an issue in Glodwick, with three in four residents
  (76%) admitting to performing a sewer unsafe behaviour in the past three
  months, despite awareness of what constitutes as sewer unsafe behaviour being
  higher.
- Residents have demonstrated that they have an increased level of awareness compared to last wave, but the fact of the matter is that sewer safe behaviour tends to be more costly for residents (in terms of time, effort and psychologically) which makes acting in a sewer unsafe way more appealing.
- Habits are notoriously hard to break and therefore a continued dual approach of comms and interventions is recommended to break the cycle of sewer unsafe behaviour and bridge the motivation deficit.



## For more information

Alex McCluckie, Research Director amccluckie@djsresearch.com

Jamie Lawson, Research Manager jlawson@djsresearch.com

Olivia Holt, Senior Research Executive oholt@djsresearch.com

**Head office:** 3 Pavilion Lane, Strines, Stockport, Cheshire, SK6 7GH

**Leeds office:** 2 St. David's Court, David Street, Leeds, LS11 5QA

+44 (0)1663 767 857 djsresearch.co.uk



# Appendix



## Ofwat standards for high-quality research

Ofwat have set out requirements for High Quality Research in their <u>Customer Engagement Policy.</u> All water company research and engagement should follow best practice and lead to a meaningful understanding of what is important to customers and wider stakeholders.

#### Useful and contextualised

The research was conducted to understand the underlying beliefs and behaviours which result in sewer unsafe behaviour and look at the current levels of awareness of the impact of flushing and pouring sewer unsafe items.

#### Fit for purpose

This research will help understand underlying beliefs and behaviours which lead to sewer unsafe behaviour within the Glodwick area, before discussing ideas for comms and interventions to help achieve lasting behaviour change. Face to face interviews and focus groups will take place in Glodwick, with the information presented in a way which was as understandable and engaging as possible for respondents with language and cultural differences considered throughout. Workshops with Community Champions were also conducted to help with campaign ideation.

#### **Ethical**

This research was conducted by DJS Research who are a member of the Market Research Society. Participants were regularly reminded that they could be open and honest in their views due to anonymity and DJS and United Utilities were subject to strict data protection protocols.

#### **Continual**

The findings from this research were directly fed into future communication campaigns and will also help establish a baseline from which the impact of future campaigns in the area can be measured against.

#### **Neutrally designed**

Every effort has been made to ensure that the research is neutral and free from bias. Participants were encouraged to give their open and honest views and reassurances were given throughout the research that United Utilities were open to hearing their honest opinions and experiences

#### **Inclusive**

Face-to-face interviews and focus groups were conducted to ensure that the vulnerable and hard-to-reach customers were included in the research and materials were also translated. Quotas were set based on the known profile of the area.

#### Shared in full with others

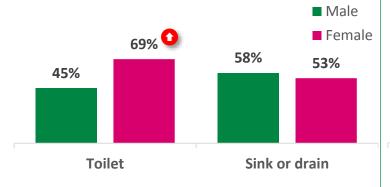
The full final report and research materials will be shared on the United Utilities' research library webpage.

#### **Independently assured**

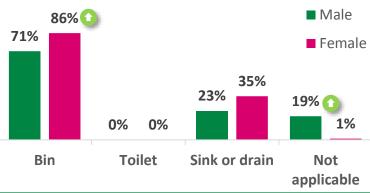
All research was conducted by DJS, an independent market research agency. United Utilities collaborated with Your Voice, the Independent Challenge Group, who reviewed all research materials and provided a check and challenge approach on the method and findings.

## Sewer unsafe behaviour: gender differences

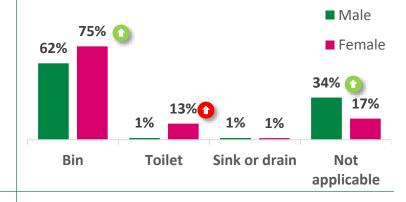
## Disposed of at least one item down the...



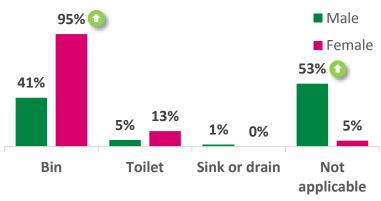
## Disposed of cooking fats and oils in the bin, down the toilet or sink/drain:



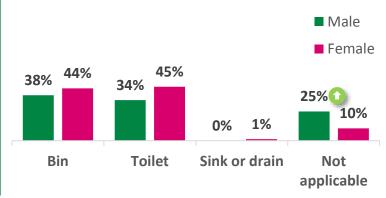
## Disposed of dental floss in the bin, down the toilet or sink/drain:



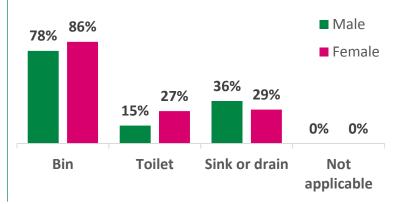
## Disposed of baby/facial wipes in the bin, down the toilet or sink/drain:



## Disposed of moist toilet wipes in the bin, down the toilet or sink/drain:



## Disposed of human hair in the bin, down the toilet or sink/drain:



46

Copyright © United Utilities Water Limited 2019

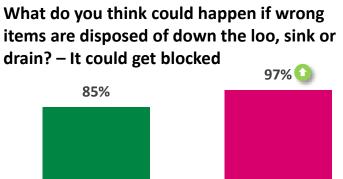
Significantly lower or higher. 

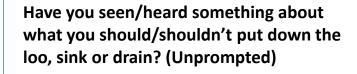
Output

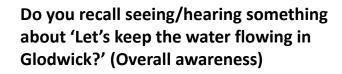
Description:

<sup>\*</sup>Females may be more likely to use this product than males

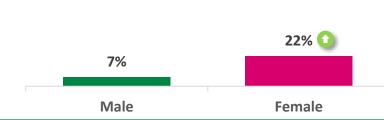
## Sewer unsafe behaviour: gender differences

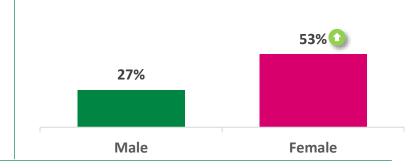




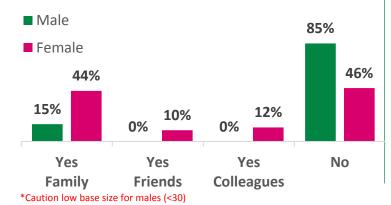




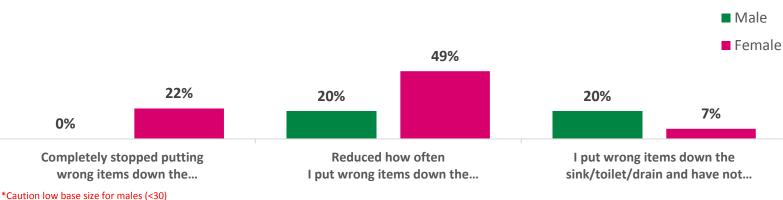




#### Did you talk about the campaign to anyone?

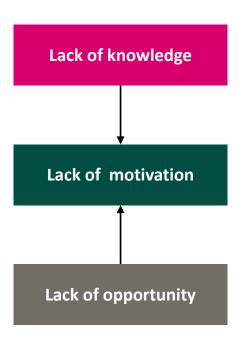


Which statement best describes you since seeing/hearing the communication?



47

### Interactions between reasons for sewer unsafe behaviour



The interaction of motivations for sewer unsafe behaviour can be simplified as per the diagram of the left. A lack of knowledge means that there is an absence of motivation to engage in sewer safe behaviour, while a lack of opportunity (i.e. easy ways to engage in sewer safe behaviour) means that sewer unsafe behaviours are more appealing because they are seen as more convenient and hygienic. Therefore, there is a **motivation deficit** which can only be overcome by increasing the desire for residents to engage in sewer safe beahviours via increasing knowledge while simultaneously lowering the motivation threshold for sewer safe behaviours by reducing the costs (i.e. emotional, physical and time).

