# Water efficiency and smart metering – reports

**Phase 1 & 2 combined report**

**Phase 3 report**

Business plan 2025-2030

Wessex Water
YTL GROUP

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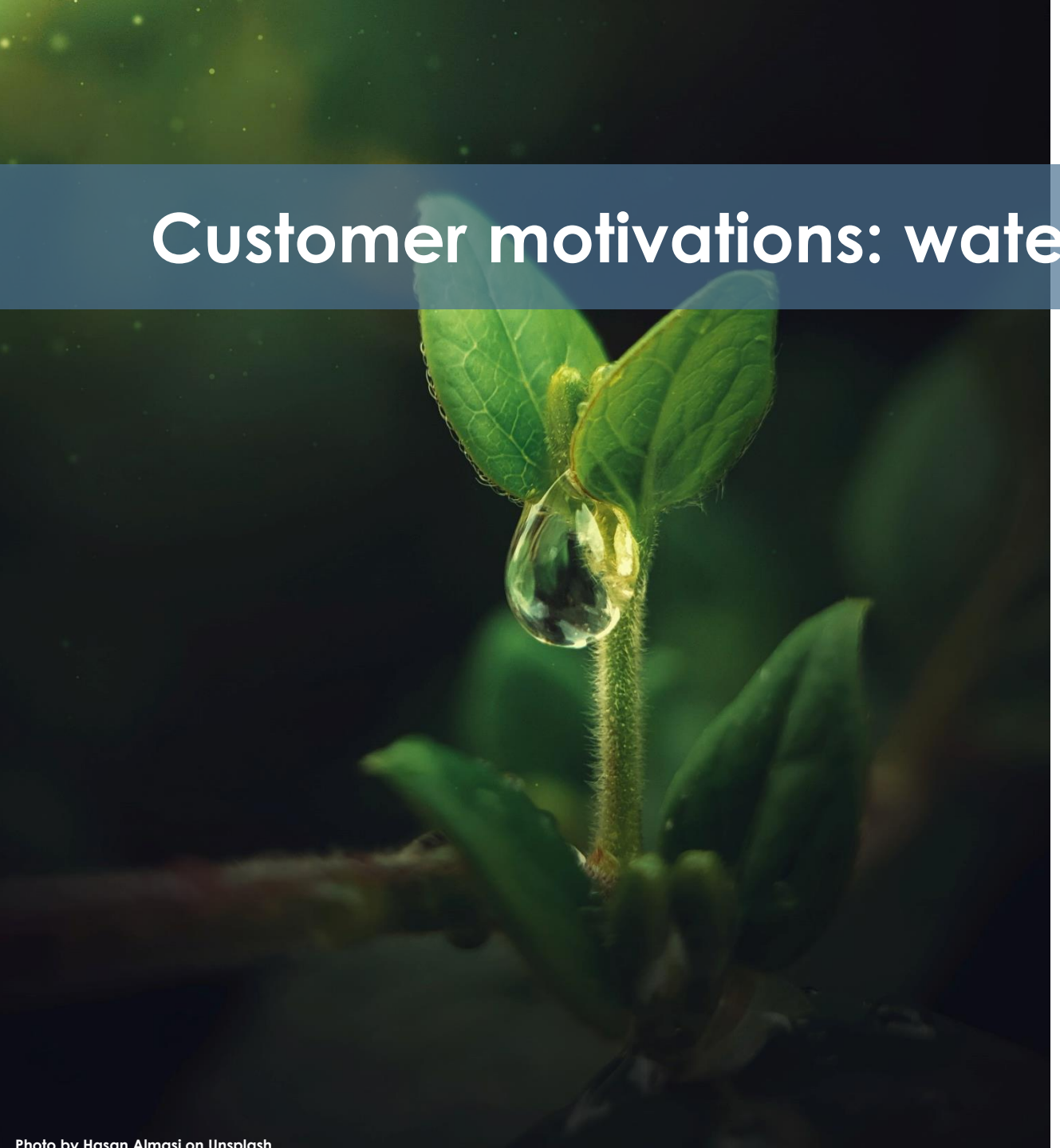

Photo by Hasan Almasi on Unsplash

# Customer motivations: water saving & smart meters

## Combined report: qualitative & quantitative research

17th May 2022

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Wessex Water
YTL GROUP

# Overall Project Objectives



**To provide an in-depth understanding on two separate but linked issues: what customers want in terms of water efficiency services and smart metering.**

## Supporting WRMP and longer term strategy

To identify fundamental consumer barriers to water saving – and identify ways to overcome these. As well as explore the motivations and customer benefits for water efficiency.

GetWaterFit

## Refine current & future water efficiency programmes

To explore how services (such as Get Water Fit) are performing with customers – and where new or improved services could be developed

## Inform potential smart meter roll out from 2025

To inform smart meter implementation: approaches to engaging customers; features that could drive behaviour change; and communication needs

# Methodology: overview



*February 2022*

1

**Rapid evidence review of 25 sources**

- Summary of what is known and where there are gaps
- COM-B analysis of barriers to water efficient behaviours
- Informing the following stages

*March – April 2022*

2

**Qualitative behaviour change trial**

- 20 households participated in a month-long process
- 2 x 45-60 minute in-depth interviews with a series of interim tasks involving water use reduction
- 10 respondents participated in 2 x 90 minute follow-up workshops, including Wessex Water

*April 2022*

3

**Quantitative survey using Wessex Water's 'Have your say' panel**

- 12 minute survey
- 824 respondents

*May-Aug 2022*

4

**Qualitative behaviour change trial – extension of 3 months**

- 8 households will continue as participants in the trial
- Primarily to understand how new behaviours are maintained

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# Current water use and attitudes

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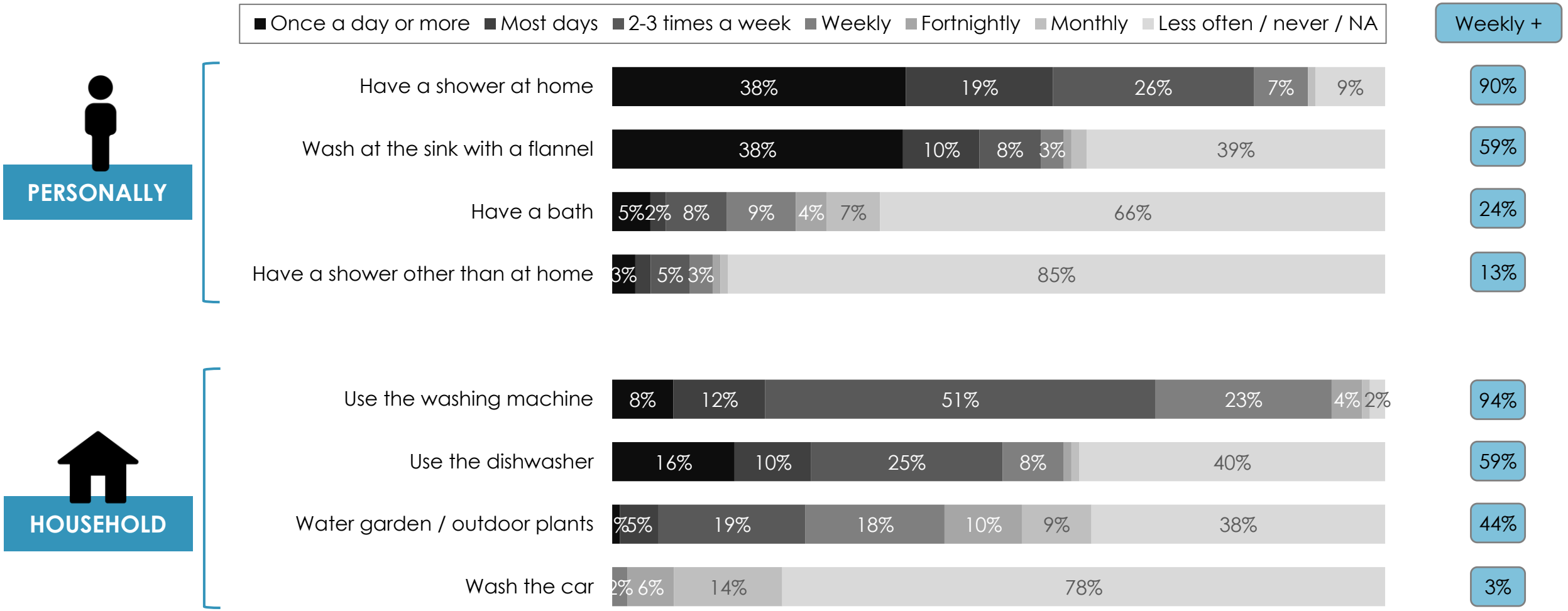
# Frequency of water-using activities



**Nearly all panel members shower at home weekly or more, with c.4 in 10 doing so every day. Washing with a flannel is also widely evident amongst our (older) panelists, but having a bath is now a rare event. Washing machines are used more widely than dishwashers, although dishwashers more frequently.**




**Q4a.** About how often do you personally do each of the following? **Q4b.** About how often does your household (you or anyone else in your home) do the following?
Base: All panelists (824)

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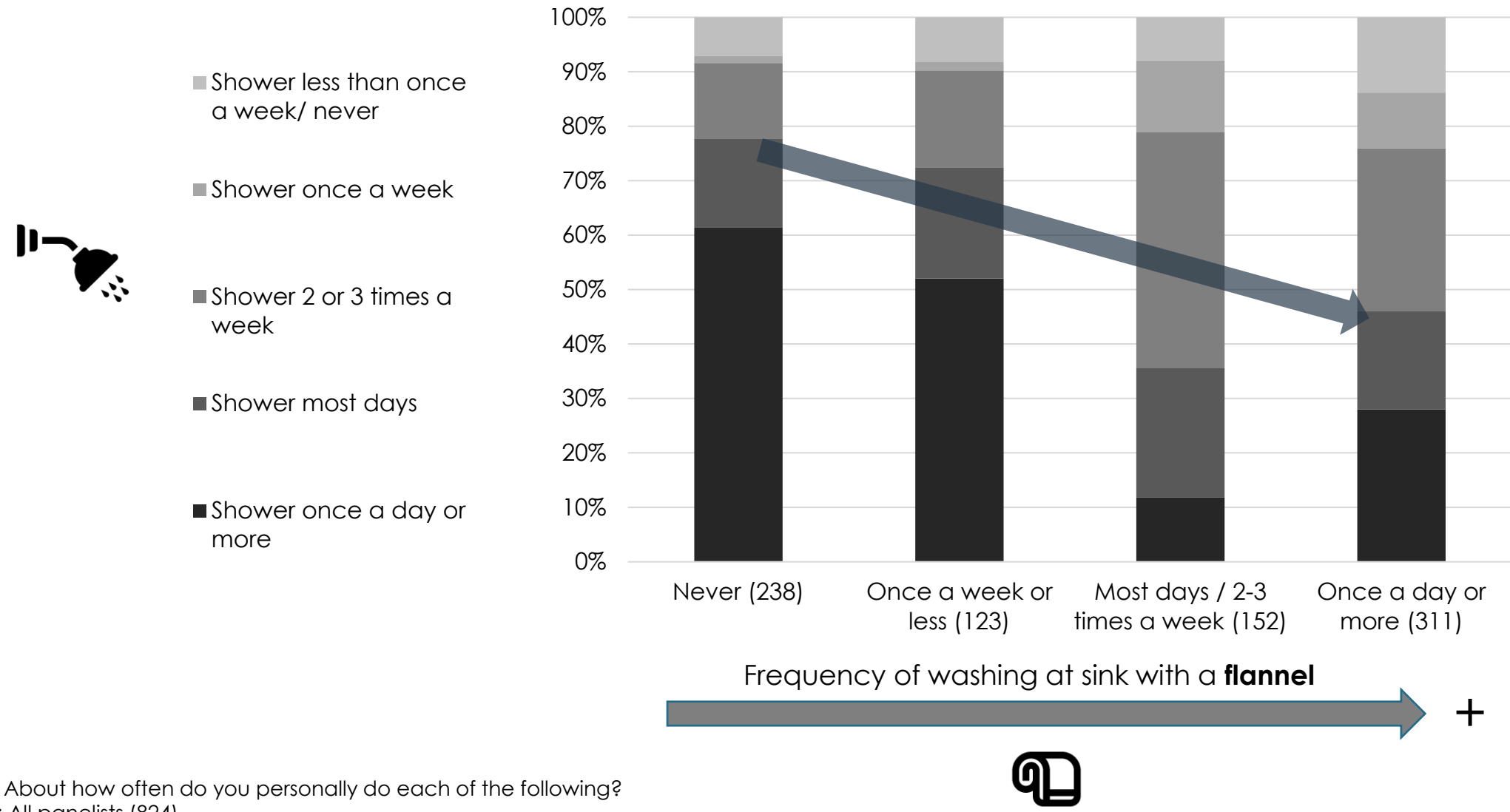
# Showering versus washing with a flannel



**Those who wash with a flannel tend to shower less often – although regular flannel washers do use the shower periodically – at least once a week; they are not mutually exclusive modes of washing.**




**Q4a.** About how often do you personally do each of the following?
Base: All panelists (824)

# Who practices water use behaviours more often?



**Having daily showers is similarly common amongst most groups. Larger (busier) households are notably more likely to use water-intensive appliances more often, along with those who make less conscious effort to save water.**

**Daily showers at home**

**Who?**
- *Indicatively* youngest people BUT we don't have a robust sample of 18-34s

**Wash at the sink with a flannel daily**

**Who?**
- Older i.e. >55
- Perceive water resources are limited

**Have a bath weekly or more**

**Who?**
*Indicatively*
- Female
- Stretched and Struggling
- No water meter

**Showers out of home (work, gym) weekly or more**

**Who?**
*Indicatively*
- AB social grade
- Have a water meter

**Washing machine used often (most days or more)**

**Who?**
- **Larger households**
- Younger i.e. <55
- No water meter
- Those who make less effort to save water

**Dishwasher used often (most days or more)**

**Who?**
- **Larger households**
- Younger i.e. <55
- AB social grade
- No water meter
- Those who make less effort to save water
- Family Focus segment

**Wash the car monthly or more**

**Who?**
- Older i.e. >55
- AB social grade
- Those not worried about water bill
- Those who make less effort to save water
- Family Focus segment

**Water garden / outdoor plants weekly or more**

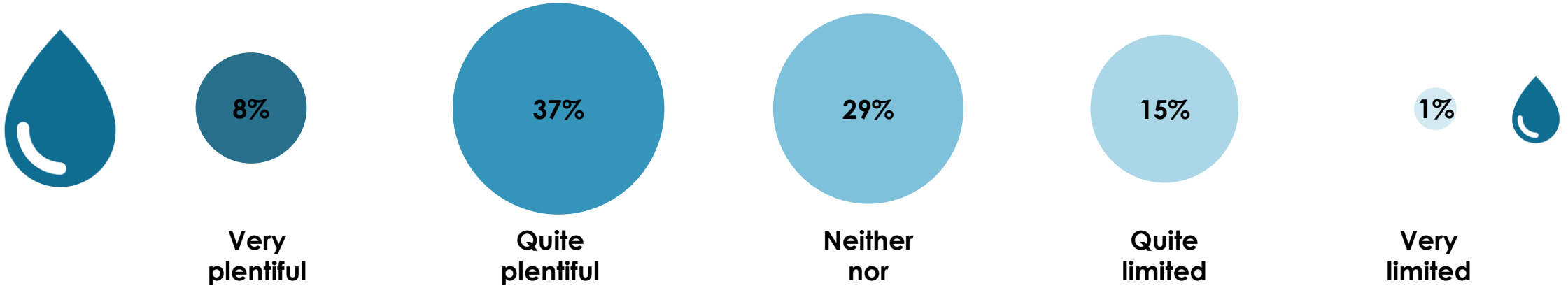
**Who?**
- Those with vegetable patch

# Impressions of water resources in region



**A large proportion of the panel (4 in 10) don't really know or have a firm view about the water resources situation in the Wessex region. Of those who give a view, the balance is towards thinking water resource is plentiful. Only c. 1 in 6 think water resource is limited. Does this general lack of concern about water resources lead to complacency in water use?**

*Q: The water supplied to homes and businesses comes from the rainwater in natural underground stores, reservoirs and rivers. These water sources are also essential for wildlife and the local environment. How plentiful or limited do you think these sources of water are in your region?*




**Similarly, qualitative respondents unaware of water resource challenges**

- No spontaneous reference to supply security during the trial
- General information about population growth and climate impacts shown in workshops: participants know about the general challenges but few have linked to personal water efficient behaviours

**Q7**. How plentiful or limited do you think these sources of water are in your region?
Base: All panelists (824)

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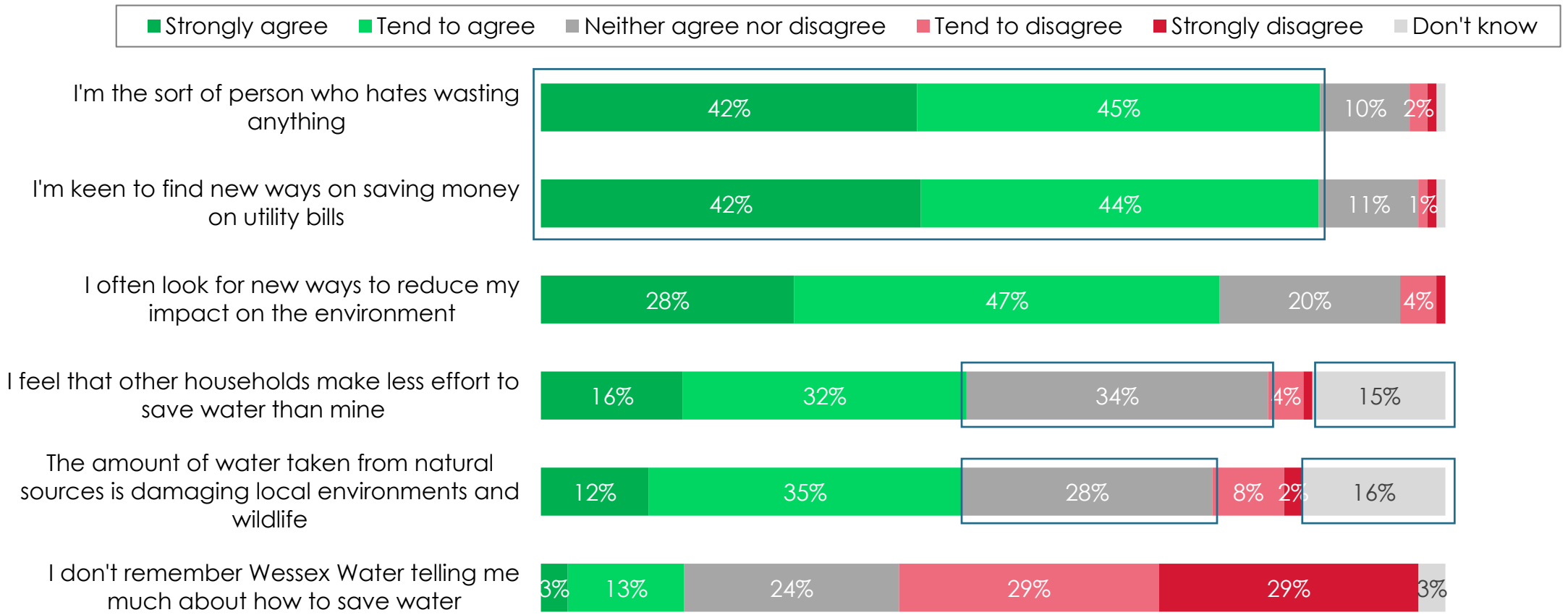
# Underlying motives



**A dislike of waste and a desire to save money are more strongly held motivations than actively looking for new ways to reduce environmental impact. Many don't have any strong impressions about their water use relative to other people, or the environmental damage of water abstraction.**




**Q8.** How much would you agree or disagree with the following statements?
Base: All panelists (824)

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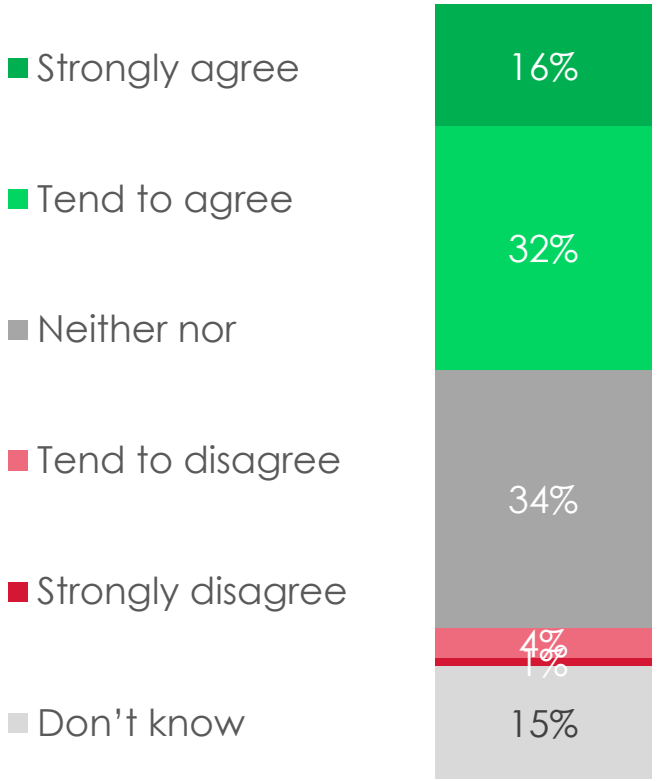
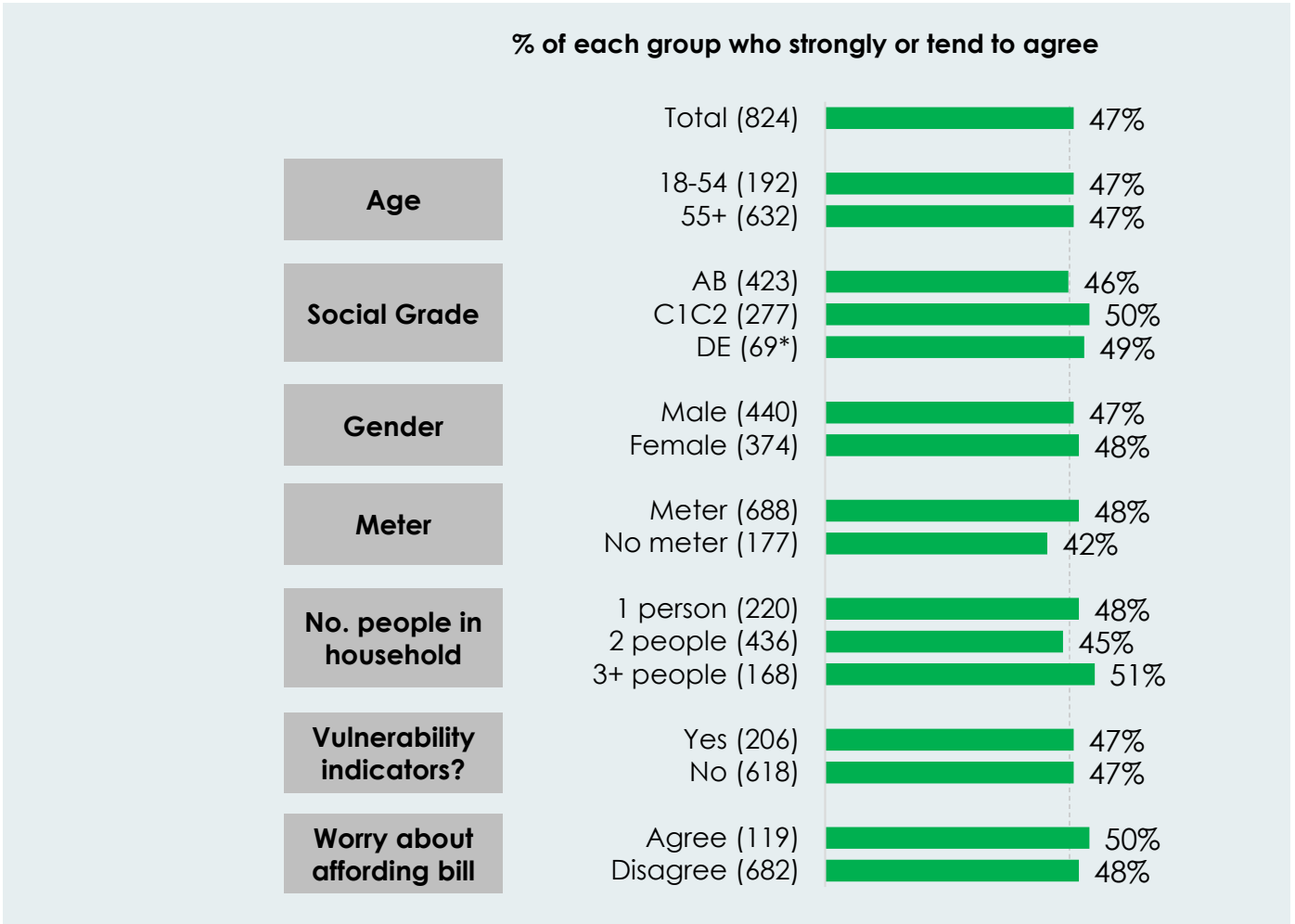
# I feel other households make less effort to save water than mine



## A fairly similar level of belief that 'others are more to blame' across all demographics.




**Q8.** I feel that other households make less effort to save water than mine.
Base: All panelists (824)

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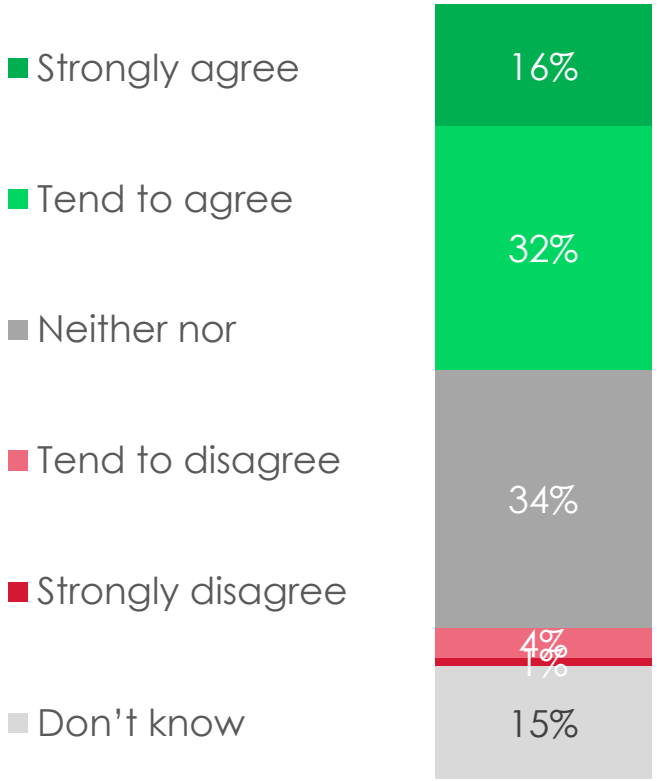
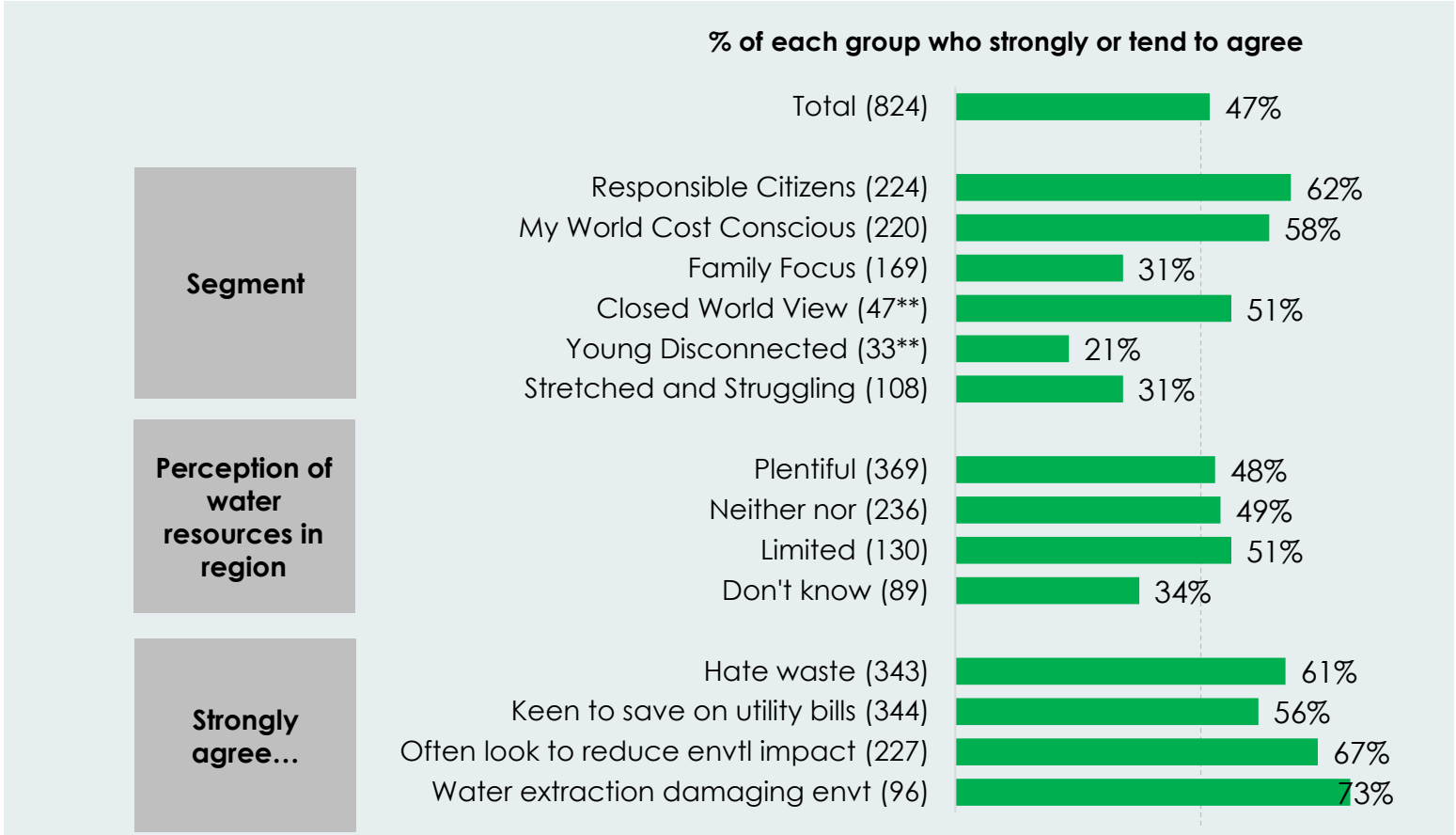
# I feel other households make less effort to save water than mine



**There are notable differences by segments on belief that they are 'better than others' when it comes to water use. (Although indications 'Responsible Citizens' are more likely to be watering their vegetable patches than most others!)**




**Q8.** I feel that other households make less effort to save water than mine.
Base: All panelists (824)

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# Water efficiency: barriers & motivations

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# Household dynamics vary: a spectrum of household behaviours across the sample



## Consciously water efficient

Those who exhibit a number of water saving behaviours for a variety of reasons

- ✓ Not keeping tap running when brushing teeth
- ✓ Not always flushing the loo
- ✓ Only filling up kettle the amount you need
- ✓ Only putting on dishwasher/washing machine if full
- ✓ Quick wash settings on dishwasher/washing machine
- ✓ Not wanting to be wasteful in general
- ✓ Encouraging others in household to adopt these behaviours
- ✓ Watering the garden with water butts
- ✓ Showering instead of having regular baths

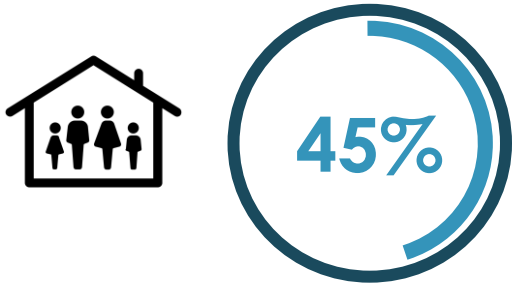
## Not consciously water efficient

Those who are often not thinking about their water usage behaviours for a variety of reasons

- Flushing the loo each time - habitual
- Lots of washing (both clothes and dishes) due to busy households with kids
- Swimming pool/paddling pool/hot tub refilled frequently
- Aware others in household using lots but not thinking of personal usage
- Washing cars/motorhomes habitually
- Regularly watering garden with hose

NB they don't see themselves as wasteful

## Behaviour also varies <u>within</u> households




…of panelists in household of 2+ people say that others in the home either use more or less water than them personally

- Primarily they say others in the household are using more water than them (36%)
- This suggests that our panelists (bill payers) may be more conscious of saving water than partners / children who are not paying bills
- Others in the home may be even more difficult to reach and influence in terms of motivating and reminding to save water

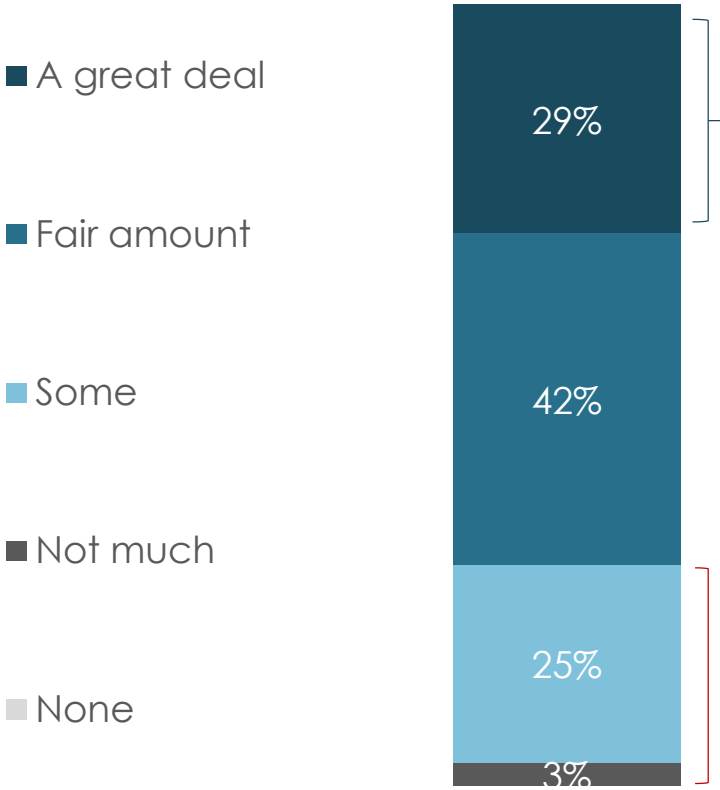
**Q8.** How much would you agree or disagree with the following statements? * Base: more than one person in household (604)

# Most panelists already think they are being 'good' with water



**71% of the panel claim to make either 'a great deal' or 'a fair amount' of effort to save water (identical to the proportion in the 2021-2 tracker). This suggests most don't feel there is a pressing need to do more. Those who tell us they make less effort are often hostage to habits, and less likely to have a meter (or be interested in one).**

## How much effort do you personally make to save water?




**More likely to be making a great deal of effort:**

- Those strongly agreeing they are: Environmentally proactive (57%); they hate wasting anything (48%); keen to save on utility bills (45%).
- My World Cost Conscious segment – 45%
- DE social grade – 41%
- Those worried about affording water bill – 40%
- Single person households – 40%
- More older than younger - 31% of 55+ vs. 20% of under 55s

**More likely to make some / not much / no effort:**

- Those who 'try to save water but end up going back to normal habits' – 54%
- Those who **do not** already have a meter – 44%
- Those who are not interested in a smart meter – 46%

**Q5.** How much effort do you personally make to save water
Base: All panelists (824)

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# Why are those who make an effort to save water doing so?

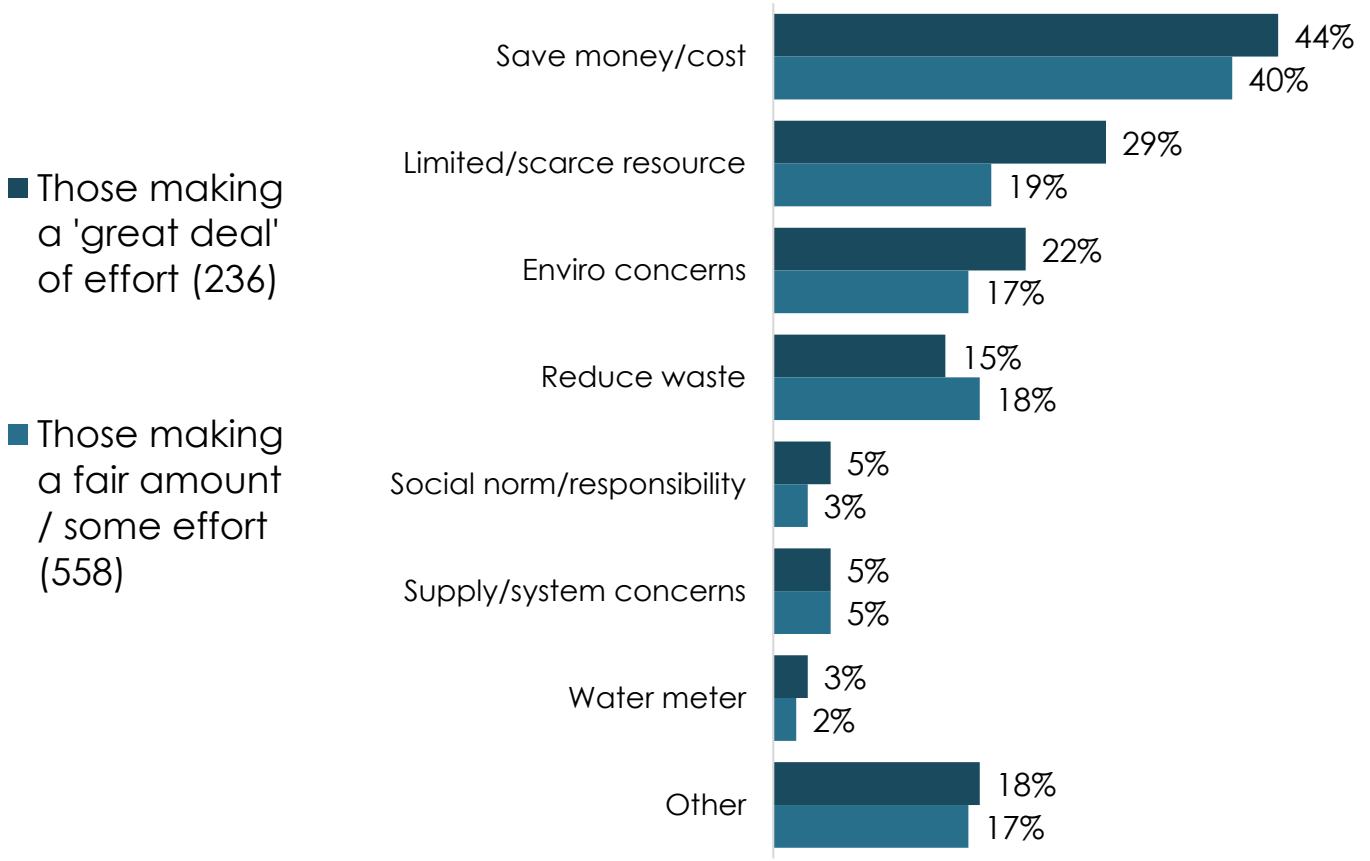


The top theme spontaneously given by members of the panel for making effort to save water is **saving money**.

After this, 'scarce resources', 'environmental concerns' and 'reducing waste' are all similarly widely mentioned.

Of the few who said they made 'not much or no effort' the dominant reason was that they don't use much water anyway.

## Why do you make that amount of effort to save water? OPEN QUESTION




*"Keep bills down, conserve water as it is a finite resource."* (Panelist)

*"Mainly to save money especially as bills are all increasing."* (Panelist)

*"Water is a precious resource, and I hate to waste it. I'm also conscious of its cost.."* (Panelist)

30 respondents said they made **'not much or no effort'** to save water, the main reason being that their water use is already low

**Q6a/b/c**. Why do you make <amount of> effort to save water? OPEN QUESTION. CODES ABOVE ARE NETS OF CODED ANSWERS
Base: Those making a great deal of effort (236). Those making a fair amount or some effort (558)

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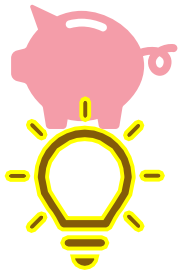
# Cost of living crisis is already impacting day to day behaviour… but not water saving behaviours





## Many already adapting their behaviours in light of the cost of living crisis to keep costs down:

- Generally being more conscious of energy and fuel usage
  - Turning off lights when they leave the room
  - Turning off radiators in little used rooms
  - Walking (if possible) instead of driving
- Turning down thermostat, being more frugal with heating
- Wearing more layers or using hot water bottles
- Evaluating income and outgoings looking for savings

*"We're not having the heating on as much as we could or should. We now have to think about what is a necessary trip in the car due to fuel costs."*
(Family, older children)

## However, focus of the cost of living crisis is around energy, petrol and food costs – <u>water does not come into this</u>

- People have a better understanding of the reason for price hikes around these costs as they're linked to immediate factors such a Brexit, the pandemic and the war in Ukraine
- There is also better knowledge of what households can do to alleviate price shocks in these areas
- Water saving does not naturally come to mind as it's not associated with an inflating expense and most aren't used to cutting down on water to save money

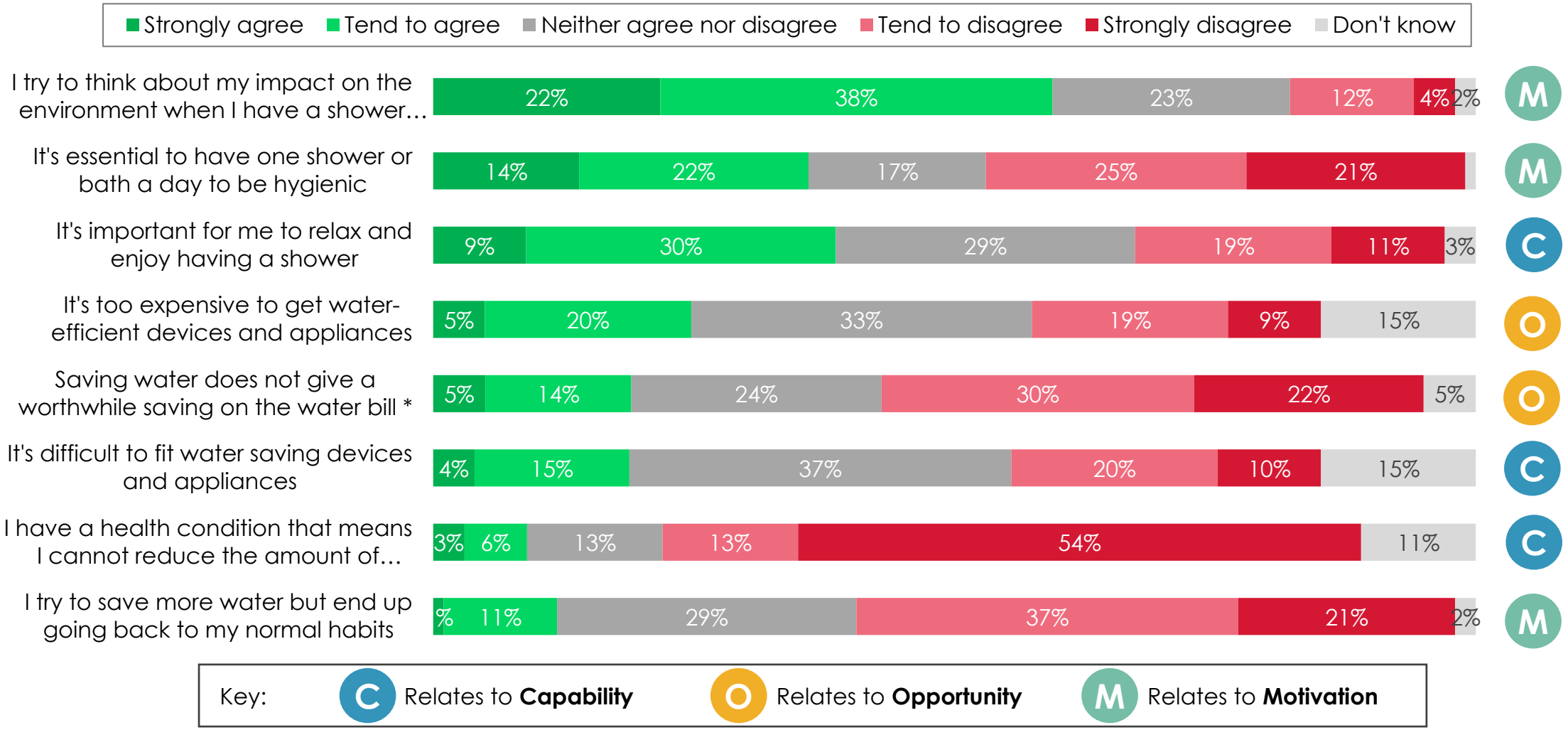
**This data reflects the recent Ofwat report: *Cost of living: Water customers' experiences* May 2022**

- 20% of bill payers are concerned about the cost of water compared to 58% concerned about electricity costs and 61% concerned about gas/heating costs.

**Knowing how much you can save if you make small changes over the course of a year helps combat the underwhelming low day to day savings. This is especially true when combined with energy saving statistics, where applicable.**

# Attitudes to water use and water saving

**The biggest potential attitudinal barriers to using less water are that it is seen as essential to either shower or bathe daily to be hygienic and that it's important to relax / enjoy the shower. Encouragingly, the majority disagree that saving water doesn't give a worthwhile saving on the water bill, underpinning that financial savings are motivating.**




**Q12.** How much would you agree or disagree with the following statements?
Base: All panelists (824) * 'Saving water does not give a worthwhile saving on the water bill' Base: those with a water meter (688)

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# Capability barriers



**The biggest potential capability barriers to using less water is the reluctance (inability?) to go without the wellbeing benefits of relaxing in the shower - with 4 in 10 agreeing.**

| Capability barriers (skills, ability) | Supporting evidence from Quantitative survey | |
|---|---|---|
| Mental or psychological barriers: e.g. the desire to use lots of water for mental wellbeing |  | ***Agree: It's important for me to relax and enjoy having a shower*** |
| Too difficult for some e.g. fitting a water butt; fitting water limiting devices |  | ***Agree: It's difficult to fit water saving devices and appliances*** |
| 'I'm doing all I can'/'only use what I need' |  <br>  | ***Agree: I have a health condition that means I cannot reduce the amount of water I use***<br><br>***Of those who say they make not much or no effort to use water, 13 say that water use is already low.*** |
| Don't know what can do to save water | ***Not specifically evidenced; of those making less conscious effort, none mentioned that they 'didn't know what they could do'*** | |

# Opportunity barriers



**The biggest potential opportunity barrier to using less water is the cost of installing water efficient devices. We also see that larger, busy households lack the time to put their energy into reducing water use.**

| Opportunity barriers (time, money, context) | Supporting evidence from Quantitative survey |
|---|---|
| Lack of free water efficiency aids |   ***Agree: It's too expensive to get water-efficient devices and appliances*** |
| Lack of concern about water cost |   ***Agree: Saving water does not give a worthwhile saving on the water bill (based on those on a meter)*** |
| Lack of practical help/ideas/tips |   ***Agree: Don't remember Wessex telling me much about how to save water*** |
| Busy, erratic home life (lacking routines) | ***Larger households and Family Focus segment use washing machine and dishwasher more frequently; these groups are also less likely to make high conscious water saving effort*** |
| Practical barriers to installing water saving devices e.g. space for water butts or their cost; disruption or the thought of lower pressure or less attractive fittings | • ***7% unlikely to install water efficient washing machine***<br>• ***10% unlikely to fit water butt***<br>• ***18% unlikely to fit Eco showerhead with low flow***<br>• ***42% unlikely to install rainwater harvesting*** |

# Motivation barriers



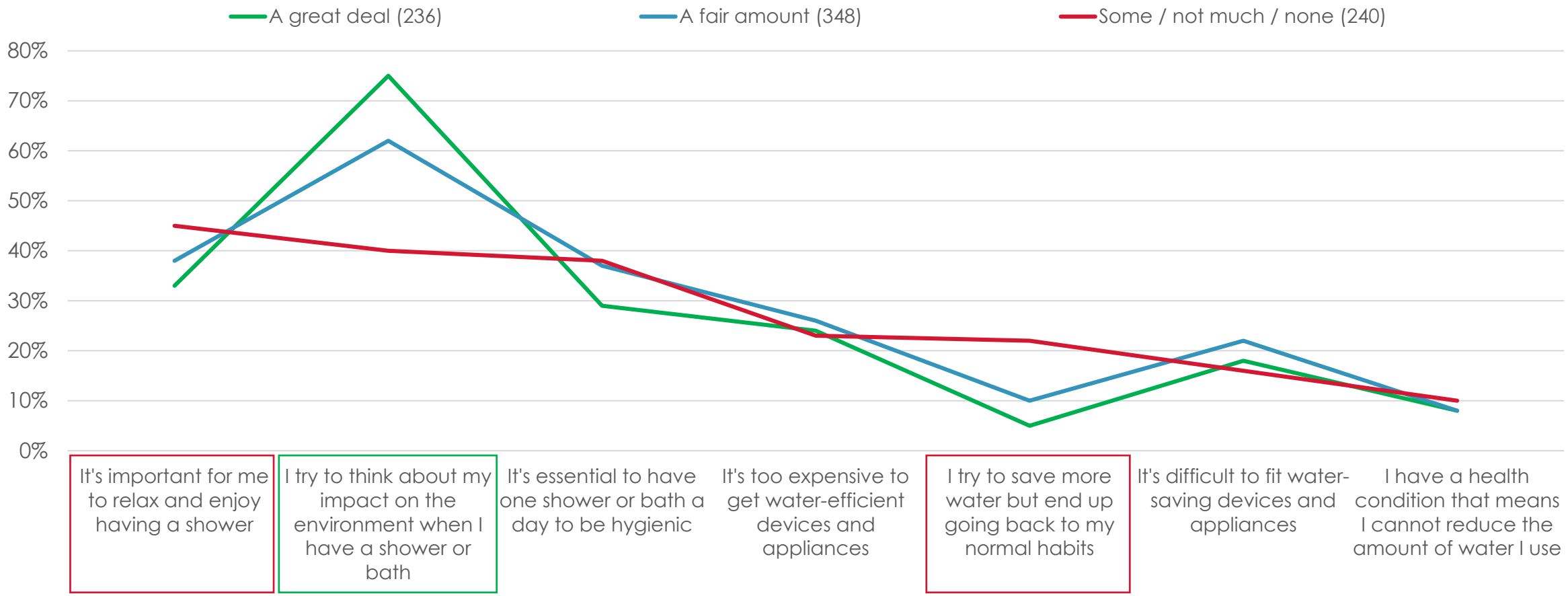
**Motivation barriers dominate: while hygiene is often seen as an essential driver for water use, understanding the drivers to use less water – saving money, helping the environment, aspiring to 'good' or even 'typical' behaviours and being sparing with a finite resource are not strong drivers.**

| Motivation barriers (desire, obligation) | Supporting evidence from Quantitative survey | |
|---|---|---|
| Lack of knowledge about how much water used/whether this is typical or not;<br><br>People don't know what 'normal' behaviour is |  | ***Neutral or don't know 'I feel other households make less of an effort to save water than mine'*** |
| People don't know why it is important to save water |  <br>  | ***Neutral / don't know 'The amount of water taken from natural sources is damaging local environments and wildlife'***<br><br>***Neutral / don't know 'How plentiful or limited do you think these sources of water are in your region'*** |
| Lack understanding of enviro benefits |  | ***Disagree / neutral / don't know: 'I think about my impact on the environment when I have a shower / bath'*** |
| Need for hygiene and cleanliness |  | ***Agree 'It's essential to have daily shower/bath to be hygienic'*** |
| Lack understanding of possible £ savings |  | ***Neutral / Don't know 'saving water does not give a worthwhile saving' (based on those on a meter)*** |

# Underlying motivations and barriers to water saving efforts.



**Those who make less effort to save water are a little more likely to agree that it's important for them to relax & enjoy showers, and that they tend to fall back into normal habits of water use. Those who make greatest effort are more mindful of environmental impact, and less likely to think that daily showers/baths are a necessity to be hygienic.**




**Q12.** How much would you agree or disagree with the following statements? % who agree
Base: All panelists (824)

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# Behaviour change trial: identifying behaviours to promote

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# Mixed response to the idea of adopting water saving behaviours

## Positives

- Opportunity to do something positive e.g. save money, save resources
- Appeal of free devices to help as many are unsure where to start
- Very positive about the idea of 'fit and forget' devices that allow them to change behaviour with minimal effort

## Concerns

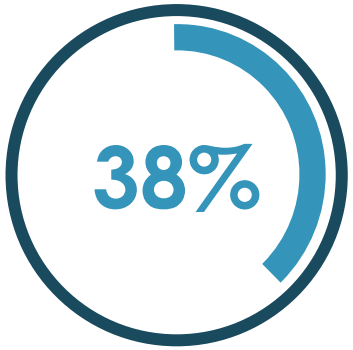
- Feel like there's nothing to save as they don't waste water
- Will the family join in?
- Don't want to make compromises for limited benefit to yourself
- Concerns about hygiene esp. fewer showers, not flushing loo
- Worry about giving confusing or contradictory instructions to their children
- Don't want to burden their children with too much info on saving – don't want to give them eco anxiety

## Negatives

- General dislike for the yellow mellow idea
- Having to sacrifice specific things e.g. water pressure, cleanliness/hygiene
- Having to rush through things can be stressful e.g. showers
- For those who have medical conditions it may be difficult to cut down water usage – helps with their ailment e.g. arthritis
- Some water usage behaviours contribute to wellbeing e.g. long showers or regular baths

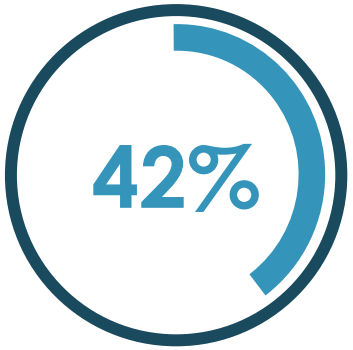
# The quant revealed that the majority of the panel are not taking a daily bath or shower





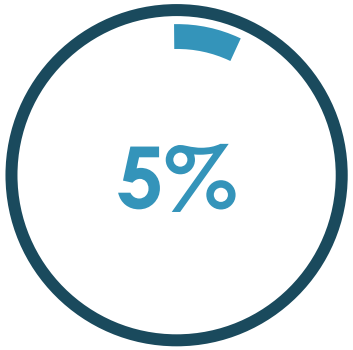

Have a shower at home

once a day or more




Have a shower at home

2-3 times a week or less



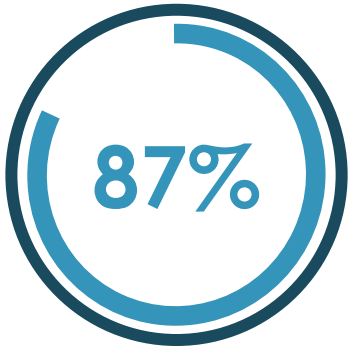

Have a bath at home

once a day or more

We predict that in the qualitative fieldwork people were reluctant to admit to not showering/bathing every day

# Attitudes towards waste don't necessarily ring true when it comes to water behaviour






**Agree that they're the sort of person who hates wasting anything**

**However, we heard in the qualitative fieldwork that many regularly carry out seemingly 'wasteful' water usage behaviours without thinking about how much they're wasting**

**Once made aware, they're often more willing to change that behaviour for the sake of being less wasteful (alongside other stronger motivations such as financial)**

**However, if a water saving behaviour requires a high level of effort or sacrifice the desire to be less wasteful is overruled**

# Once behaviour change was trialed, it was felt to be less daunting than expected



**Initial reaction to adopting new water usage behaviours was met with trepidation:**

- **Concerns that sacrifices would have to be made**
  - In terms of **hygiene** e.g. skipping showers or flushing the loo less
  - In terms of **time** e.g. collecting water to use elsewhere
  - In terms of **effort** e.g. collecting water to use elsewhere, actively thinking about water use generally
- **Change in routine can be disruptive** to the household esp. for those with children or guests
- For some, behaviours such as reducing loo flushing felt so alien that they were reluctant to even attempt them; in these scenarios, customers may need a bit more guidance and help to overcome the barriers

**However, in reality most were pleasantly surprised at how easy it was to adapt to these new behaviours and incorporate them into their day to day lives**

**Often the anticipated 'sacrifices' didn't feel as such, and people found it's possible to get the same result as before with less water e.g. a relaxing shower being cut down from 10 minutes to 4 minutes**

*"It has been a bit of an eye opener, especially how quickly our behaviour changed and how quickly we adapted."*
(Couple, no kids)

# Assessment of behaviour change trial: in summary

## We asked participants to…

### …reduce the amount of water they use washing themselves

| | Key barriers | Ways to overcome |
|---|---|---|
| Capability barriers | • 'Only use what I need'<br>• The desire to use lots of water for mental wellbeing<br>• Unaware what to do to save water | • Need specific instructions so customers aware of how to reduce water use when washing<br>• Messaging to build awareness and 'norms' |
| Opportunity barriers | • Lack of practical help/ideas/tips | |
| Motivation barriers | • Need for hygiene and cleanliness<br>• Need a rationale: cost, environment etc | |

### …try and collect water that would normally get wasted and reuse it elsewhere

| | Key barriers | Ways to overcome |
|---|---|---|
| Capability barriers | • 'I'm doing all I can'<br>• Unaware what to do to save water | • Better understanding of water wasted when tap is left running<br>• Better understanding of reasons not to waste water<br>• Potential for (branded) jug or watering can as practical means for reuse<br>• Specific guidance: only so much people can do on their own |
| Opportunity barriers | • Lack of concern re water cost<br>• Lack of practical help/ideas/tips<br>• Busy, erratic home life | |
| Motivation barriers | • Lack idea of possible cost savings<br>• Lack idea of how much water used/whether typical or not<br>• Need for rationale: cost, environment etc | |

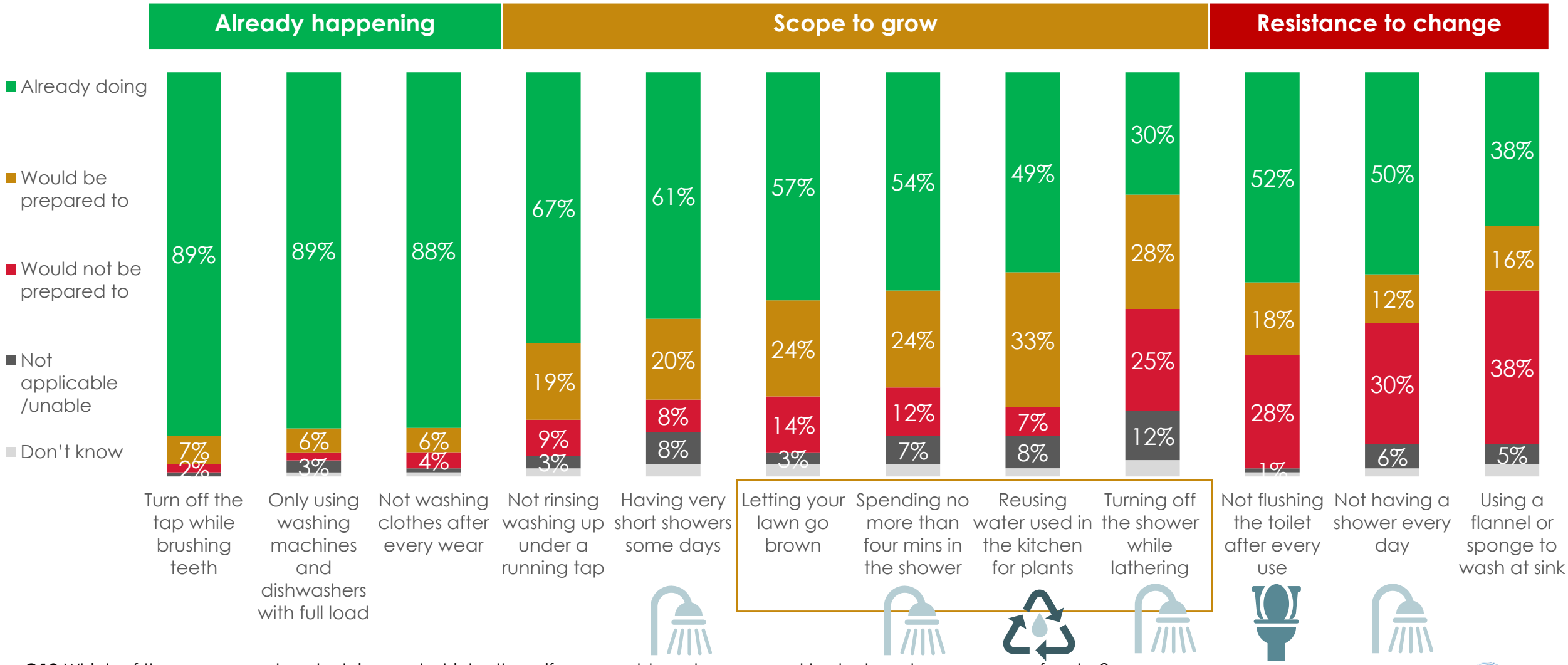
### …to reduce the amount of times they flushed the toilet

| | Key barriers | Ways to overcome |
|---|---|---|
| Capability barriers | • 'I'm doing all I can'<br>• Unaware what to do to save water | • Familiarise with 'new' behaviour<br>• Better idea of how much water flushes use<br>• Explain why saving via less flushing is worth the drawbacks<br>• Cistern bag a good option for those unwilling to adopt 'mellow yellow'<br>• Educating that 'mellow yellow' is adopted by others and therefore not unhygienic or 'impolite' |
| Opportunity barriers | • Lack of concern re water cost<br>• Lack of practical help/ideas/tips | |
| Motivation barriers | • Lack idea of possible cost savings<br>• Lack idea of how much water used<br>• Need for rationale: cost, environment etc | |

# Water use behaviours



**The widest scope to promote and convert behaviour are reusing water used in the kitchen (e.g. for plants); turning off the shower while lathering (although 1 in 4 are against this); 4 minute showers; and letting lawn go brown.**




**Q10** Which of these are you already doing and which others, if any, would you be prepared to do, to reduce your use of water?
Base: All panellists (824) *Base all those with a lawn (614)

blue marble

# Education around water volume has potential to encourage people to reassess their water usage behaviours

## Understanding volumes of water is generally very difficult

- **Some choose to compare volumes with something they can imagine** e.g. 20 litres = 20 litre bottles of water
- **Awareness of how much water is used for day to day behaviours is very limited** – most hadn't really thought about it
- Visible volumes (such as a full bath) are easier to fathom vs. flowing water (e.g. a toilet flush)
- **However, some generalisations are well-embedded:**
  - Running the tap when brushing your teeth uses 'a lot' of water
  - A bath uses a lot more water than a shower
  - Using a dishwasher can use less water than doing the washing up by hand

*"Being able to compare different activities like bath vs. a shower puts water usage into perspective. But it's still difficult to relate to how much this would cost."*
(Student/shared house)

## When presented with statistics around water volumes, many were shocked by the figures

- Learning that a 10-minute shower uses 148 litres (vs. 80 litres for a full bath) was impactful in encouraging behaviour change and valuing each minute of time in the shower
- 5 litres to flush the toilet was divisive – for one flush doesn't feel like a lot but when thinking about how many flushes happen per day it adds up to a huge amount

**Simple comparisons are the best way to help customers wrap their head around water volumes and be more conscious of how much water they use day to day**

**There is also a desire to see water volumes alongside cost**

*"It doesn't sound that much when you think of the size of a bath but 80 litres is a lot for just one person.=!"*
(Younger couple)

blue marble

# Assessment of the behaviour change trial – Reduce personal washing time/amount

**We asked participants to reduce the amount of water they use washing themselves – either by reducing time spent washing or number of washes**

## Effort or sacrifice required

- Showers are habitual, so this feels like a sacrifice and big change for some
  - Especially as it's related to hygiene
  - Used as a way to wake yourself up, feel fresh (or in winter, to warm up)
  - If baths are taken for physical or mental health, cutting them out feels like a sacrifice; however reducing amount of water feels doable
- Hard to know what 'shorter' is without a way to measure
- Ongoing effort – need to keep remembering to do it and easy to slip back to old ways
- In reality, many felt it would be harder/more effort than it actually was
- **Harder for:** sporty types; jobs with physical labour; long hair; shaving etc.

## Gain

- Opened eyes up to flannel washing – some for selves, some for kids
- Many realising they can easily cut down shower time if they tried – most showers can be done in 4 minutes
- Less time in the shower means time in bed! Saves a bit more time in your life/morning
- Lathering, washing hair, shaved their legs with the shower off is a low effort change

## Reduce personal washing time/amount

| | Key barriers | Ways to overcome |
|---|---|---|
| **Capability barriers (skills, ability)** | • 'Only use what I need' mentality<br>• The desire to use lots of water for mental wellbeing<br>• Don't know what can do to save water | • Need clear and specific instructions (hacks?) so customers aware of what they can do to reduce water consumption when washing<br>• Messaging to build awareness and 'norms' |
| **Opportunity barriers (time, money, context)** | • Lack of practical help/ideas/tips | |
| **Motivation barriers (desire, obligation)** | • Need for hygiene and cleanliness<br>• Need for rationale: cost, environment etc | |

**Specific behaviour recommendations work best here – if you're not sure exactly what to do it's much easier to ignore/avoid. More rewarding to know you've achieved a specific goal.**

# Assessment of the behaviour change trial – Reusing water

**We asked participants to try and collect water that would normally get wasted (e.g. when waiting for tap to get hot/cold or from tumble dryer) and reuse it elsewhere**

## Effort or sacrifice required

- Ongoing effort – need to consciously think about doing this
- Physical element which is quite difficult to overcome; as water collection builds up it becomes heavy and difficult to move around and store, and large vessels often don't fit under tap
- A lot of people were unsure what to use it for
  - House plants don't need much water
  - Not that helpful in rainy weather
  - Need specific examples to help
- Often remember when tap is already running, by the time you've found a vessel it's too late

## Gain

- Good to keep kettle topped up
  - BUT end up always boiling a full kettle
- Some found it easy to have a jug/watering can/bottle on hand to fill
- Some using tumble dryer water – felt like a lot of water coming out of this: an easy win
- Reusing cooking water from pasta or vegetables – can be nutritious/has health benefits

## Reusing water

| | Key barriers | Ways to overcome |
|---|---|---|
| **Capability barriers (skills, ability)** | • 'I'm doing all I can' mentality<br>• Don't know what can do to save water | • Better understanding of how much water can be wasted when tap is left running<br>• Better understanding of the reasons why it's important not to waste water<br>• Might need some sort of branded jug or watering can to help encourage this behaviour<br>• There is only so much people can do on their own – need specific guidance |
| **Opportunity barriers (time, money, context)** | • Lack of concern about water cost<br>• Lack of practical help/ideas/tips<br>• Busy, erratic home life | |
| **Motivation barriers (desire, obligation)** | • Lack of understanding of possible cost savings<br>• Lack of understanding about how much water used/whether this is typical or not<br>• Need for rationale: cost, environment etc | |

# Assessment of the behaviour change trial – Reducing flushing

**We asked participants to reduce the amount of times they flushed the toilet – "If it's yellow let it mellow, if it's brown flush it down"**

## Effort or sacrifice required

- Divisive – a few were on board with trying this, but many were reluctant
- 'Yuck factor' – for some this felt unpleasant/unhygienic
- Concerns about it looking unsightly and making your toilet smell
- Some faced a dilemma in that in contradicted what they were teaching their young children when it comes to toilet etiquette
- Feels socially unacceptable if you have guests coming round – don't want them to have to use an 'unclean' toilet
- Worry about staining the toilet esp. those with limescale or hard water – compensating with more bleach
- Little effort for those who are already doing it – those at home a lot alone, those who have kids who can't reach flush yet, those who don't flush at night to avoid waking up others

## Gain

- Quite a revelation for some – once they were doing it, wasn't as bad as they thought
- Some found workarounds: doing it when they were home alone, communicating with others who would use the toilet just after or keeping the toilet lid closed
- Seeing or thinking about how much water you're saving every day (would be useful to inform customers on how much water is used with each flush)
- Made people more strict on using small flush on dual flush toilets
- For some, gain (in terms of water saving) outweighed the effort/sacrifice required

## Reducing flushing

| | Key barriers | Ways to overcome |
|---|---|---|
| **Capability barriers (skills, ability)** | • 'I'm doing all I can' mentality<br>• Don't know what can do to save water | • Introduction to behaviour they hadn't necessarily though of before<br>• Better understanding of how much water used when flushing<br>• Explain why saving water when flushing is worth the drawbacks<br>• Cistern bag a good option for those who are unwilling to adopt 'mellow yellow' idea<br>• Educating that this is a behaviour adopted by others and therefore not unhygienic or 'impolite' |
| **Opportunity barriers (time, money, context)** | • Lack of concern about water cost<br>• Lack of practical help/ideas/tips | |
| **Motivation barriers (desire, obligation)** | • Lack of understanding of possible cost savings<br>• Lack of understanding about how much water used<br>• Need for rationale: cost, environment etc | |

Photo by Hasan Almasi on Unsplash

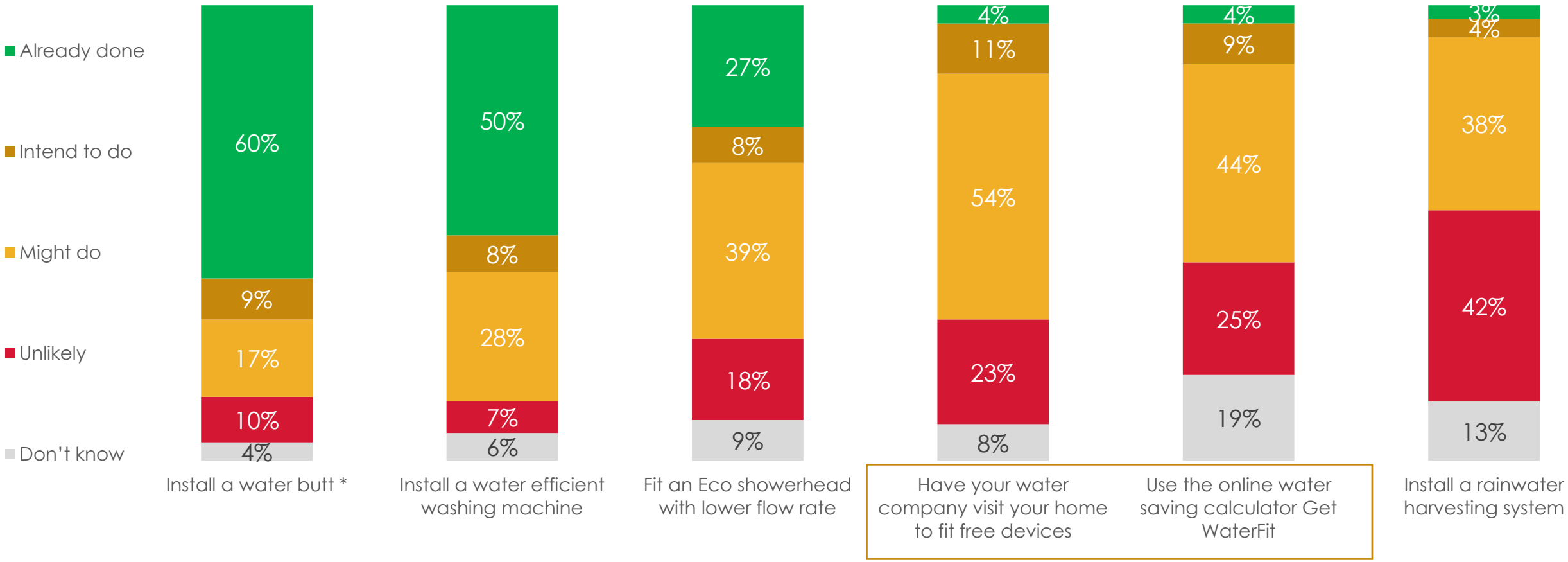
# Water saving interventions

blue marble

# Water saving actions



**Greatest scope for the future is with having a visit from Wessex Water to fit free devices and advise on water saving, along with using 'Get Water Fit'. These will need to be promoted to build awareness and wider interest.**




**Q11.** Which of these have you already done, and which if any are you intending to do or might do in the future?
Base: All panellists (824). *Base: those with an outdoor space (786)

blue marble

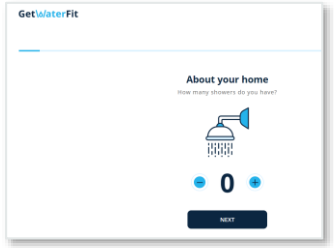
# Overall response to Get Water Fit process was positive, but some elements caused confusion



**NB: no existing awareness of Get Water Fit or ability to order free water saving devices**

## Application process

Generally felt to be a straightforward process, but a few questions were hard to answer




**Overall, most found it easy to go through the questionnaire**

However some questions were harder to answer…

- In terms of behaviours:
  - If fluctuating numbers in HH e.g. kids coming back in holidays, not sure how to answer
  - No mention of pet showers or water usage for pet
- 'About your home' section:
  - 'How many showers do you have' – confusion as to whether this meant physical showers or showers taken
  - When asked about type of shower, not sure how to answer if they have more than one shower at home
  - Shower types not obvious – not everyone aware of what 'mains pressure' shower means

## Data output

Overall this was found to be difficult to interpret


**Data output was not easy to interpret**

- Key areas of confusion
  - Units unclear (not obvious number refers to litres)
  - Confusion as to what it's trying to tell you
  - Below and above average – very ambiguous
  - Too many charts

**Implications:**

- Reassessment of question wording to ensure that questions are clear and not ambiguous
- Refresh data page to be simpler and clearer – fewer charts and more direct conclusions for what the data is showing

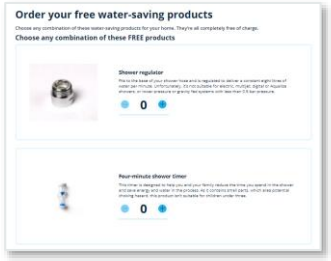
# In terms of Get Water Fit content, most were delighted with what they received



**Customers were pleased to get something for free, but were unsure who the kit was coming from**

## Ordering items

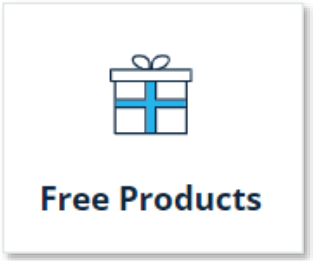
Easy enough to do but we noticed some inconsistencies




- Unclear where to click to order kit – different parts you can click on to get to the water saving devices
  - Likely people will miss the link to get the gadgets
- Sometimes customers were not offered items that we knew they could use e.g. shower timer
- Customers wanted the ability to order extra items e.g. if they have multiple showers, they would like to order a shower head or regulator for each shower; or a cistern bag for all toilets
- Hose gun was offered to those without an outdoor tap

## First impressions

Generally positive feedback on the box contents




- Generally delighted: exciting when it arrives and customers were keen to get started
- Some items completely unfamiliar (to some) e.g. cistern bag (but instructions were clear enough)
- Some feedback that the wait time for delivery was quite long (1 week+)
- Some had items arrive at different times, but were not informed
  - E.g. shower timer coming in a box on its own, which felt a bit wasteful from a packaging perspective
- One mention of kit arriving in split jiffy bag which caused a mess

# Assessment of Get Water Fit devices – shower devices

## Shower head

- ✓ No complaints about look or aesthetic
- ✓ For most, reduction in pressure was minimal and still a decent showerhead
- ✓ For those with an old showerhead or a showerhead covered in limescale, this was an improvement!
- × However for some, esp. those with power shower, the reduced pressure was noticeable and made it tricky to do certain things
- × Not ideal for those with long/thick hair when washing
- × Difficult to wash dog/pets with lower pressure

## Shower regulator

- ✓ Once installed, was a great device
- ✓ Change in pressure wasn't noticeable and a good 'fit and forget' product
- × Bit tricky to install for some, especially if pipework is hidden behind tiles

*"This was a bit tricky to install, had to get my wife's dad to do it (he's a plumber) but once it was in I didn't notice a difference."* (Couple, younger)

## Shower timer

- ✓ Easy to use and an easy win
- ✓ Helps people keep shower down to 4 minutes or failing that reminds people to be more conscious of the amount of time taken in the shower
- ✓ Holds you accountable for the amount of time you spend showering
- × Some feedback that the timer was poor quality/cheap and didn't stick properly
- × No alert for when 4 minutes was up and difficult to monitor how much you've gone over time

# Assessment of Get Water Fit devices – toilet devices



## Leaky loo strips

- ✓ For some, this was easy to use and install
- ✓ Ability to order multiple is good – one for each toilet in your house
- ✓ A few participants found that their toilets were leaking and were pleased that the strips enable to identify this
- × Some were confused and weren't sure how they worked – need clearer instructions to explain that you're meant to leave the strip without flushing
  - × A few claimed the strip disappeared


## Cistern bag

- ✓ 'Fit and forget' no effort to continue use once it's installed
- ✓ For most, didn't reduce flush too much to the point where you'd need to flush twice
- ✓ Relatively easy to install
- × Some have used other types of cistern bags before and felt this was a little clunkier to put in place
- × For some, flush reduction was noticeable and double flushing was required which defeats the point
- × Should be sent one for each toilet, similar to the leaky loo strips

NB: one person flushed needlessly to check it was working…

# Assessment of Get Water Fit devices – miscellaneous



## Tap insert

- ✓ Some managed to fit this relatively easily and didn't notice much difference - which was positive
- × Others struggled with installation, and found it a little fiddly
- × Some were unable to fit it at all as either the type of tap wasn't compatible or the scale build up on their tap prevented the device from fitting properly

## Hose gun

- ✓ Many were delighted at being offered this and thought it would be a welcome improvement to just using the hose or an old attachment
- × A few complained of poor quality, having difficulty fitting on hose properly
- × One was sent the hose gun even though they didn't have an outdoor tap – triggered them to purchase a hosepipe to connect to kitchen sink and therefore encourage water usage!

NB: weather during fieldwork was rainy/cold so use of this device was limited

## Cornflower grow kit

- ✓ Generally, very positive feedback on this
- ✓ Lots of feedback that grandkids enjoyed using the kit and now they were seeing the seeds sprouting
- ✓ Positive feedback on the watering head attachment for water bottles
- × One HH found the soil discs difficult to use and reverted to her own pots - then found the seeds never germinated
- × Slightly unclear as to why this was included in water saving kit?

Photo by Hasan Almasi on Unsplash

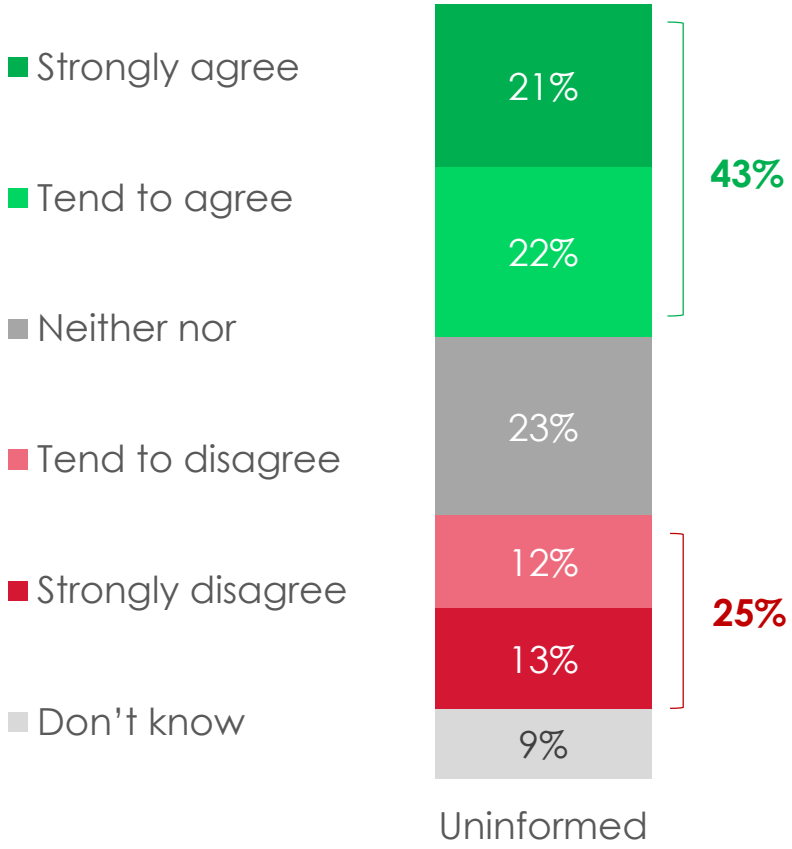
# Smart meters

blue marble

# Uninformed interest in a smart water meter



**Uninformed interest in smart water meters is reasonable amongst the panel – 4 in 10 are interested. There's more enthusiasm amongst those keen to save on utility bills, the environmentally conscious, and younger customers. However, half of those who do not already have a meter are <u>not</u> interested in a smart meter – resistance to be overcome.**




**More enthusiastic about smart meters:**

- Those who **look to reduce their environmental impact** – 57%
- Those **keen to save on utility bills** – 54%
- **18-54s** – 50%
- Those who **already have a meter** – 47%

**Not enthusiastic about smart meters**

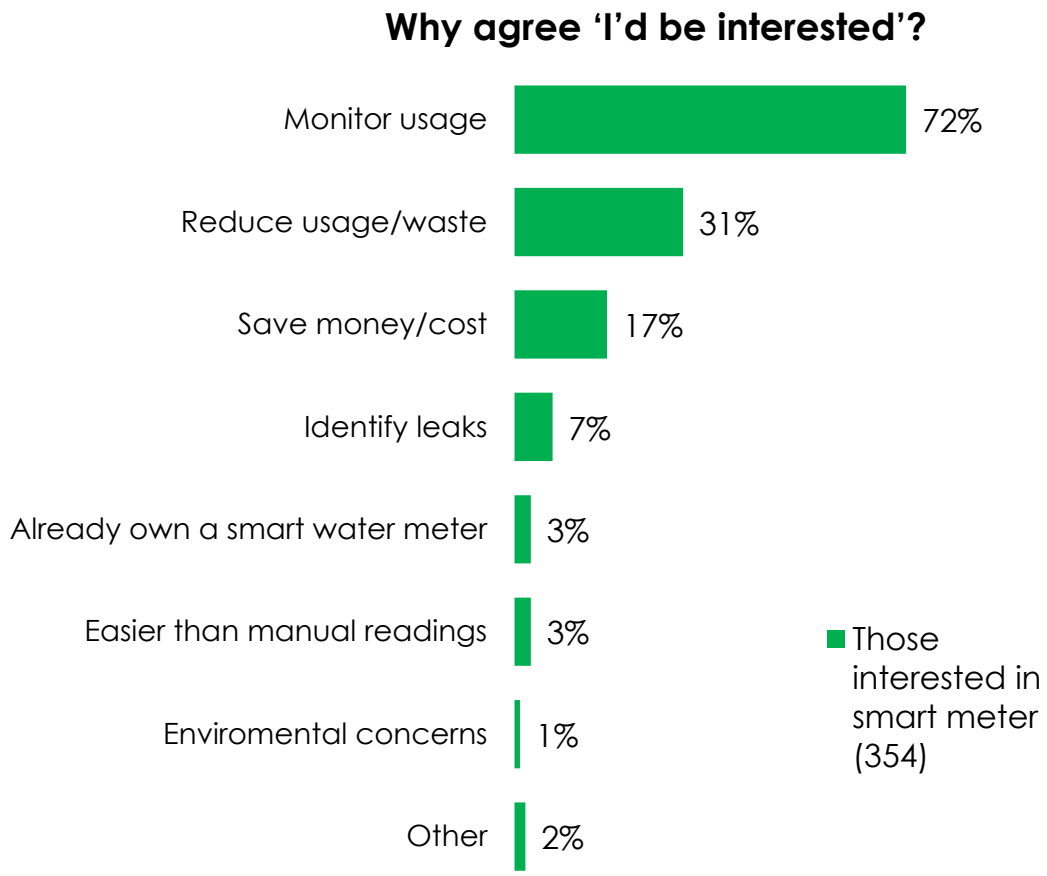
- Those who **do not** already have a meter – 50%
- Those who shower less than once a week – 40%
- Those who make less effort to save water – 39%
- Family Focus segment – 37%

**Q8.** How much would you agree or disagree with the following statements? I'd be interested in having a smart water meter (a meter that lets you see your household's water use on a regular basis). Base: All panelists (824)

# Why they are interested in a smart water meter - spontaneous



**Of those interested in a smart water meter, aside from the functional benefit of being able to monitor water use, the main themes mentioned were to reduce use / waste, save money, and (for a smaller minority) to identify leaks.**




*"Better insight to usage patterns - understand how much water activities use, e.g. I have no idea how much water my washing machine uses.."* (Panelist)

*"Lowering usage and keeping water bill lower."* (Panelist)

*"I'd certainly be interested in using a smart meter and being able to know my daily average and see what I've done differently to increase or decrease usage."* (Student/shared house)

*"Interesting to see how much water is being used and when and also potentially flag up any leaks."* (Panelist)

*"I could see how much water different appliances use and try to encourage my partner to save water!"* (Panelist)

*"If you can see how much you're using and see it going up visually, you're more likely to be conscious and act upon that information."* (Older family)

**Q9a** What would the benefits be [of having a smart meter]? Base: All those interested in having a smart meter(354)
**Q9b/c** Why [are you not interested/neutral about having a smart meter]? Base: All those not interested (204)/ neutral (193)

blue marble

# Why they are not interested in a smart water meter - spontaneous



**Those less interested often felt it would bring no benefit in water saving, or that they simply would not use a smart meter.**

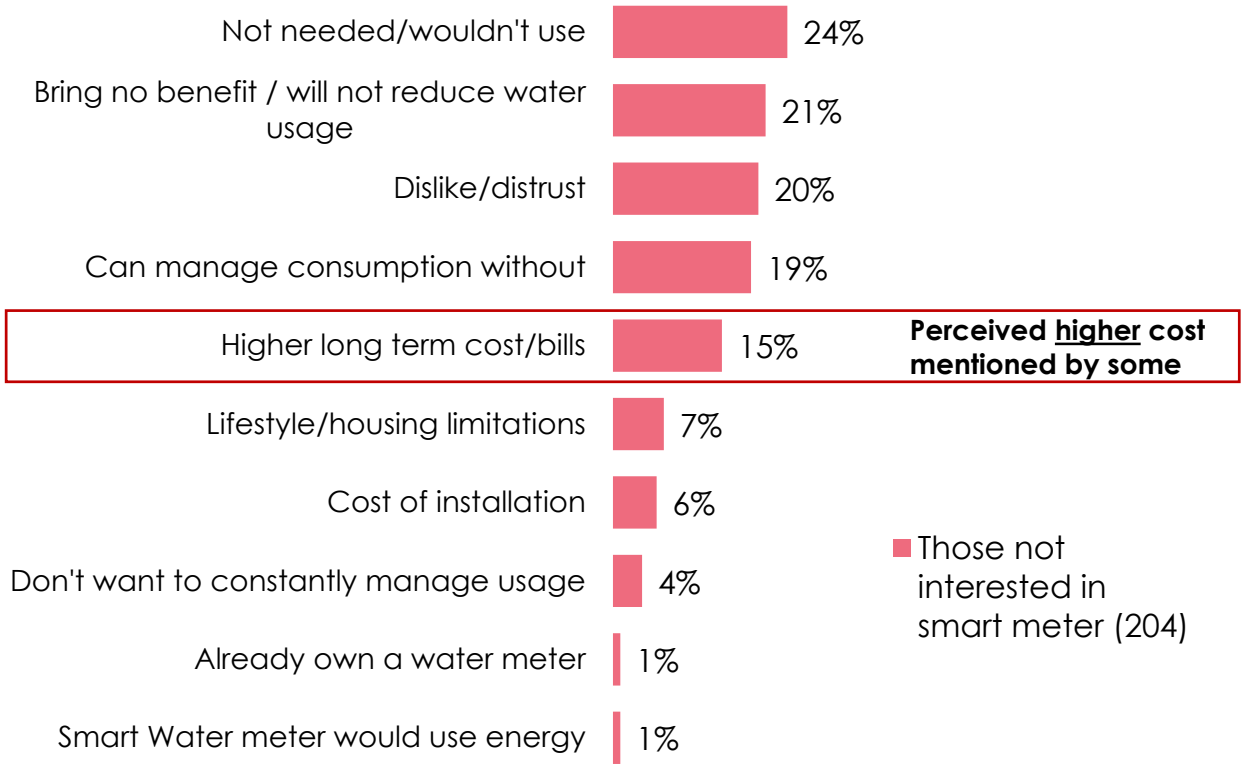
*"Do you really need one? You're going to have a cup of tea or coffee if you want it anyway. Can have a detrimental effect watching it ticking up. With everything that's going on you've got to get on with life as well."*
(Younger couple)

*"I wouldn't take any notice of it (I don't in the case of my gas/electricity meter) as I'm confident I know which activities use most water anyway."*
(Panelist)

*"I use the bare minimum as it is, and feel like I couldn't save any more water if I tried. Having a smart water meter that uses electricity is just one more thing I will have to pay for. If I had a larger household and thought I wasn't saving enough water from being wasted I may feel differently... "*
(Panelist)

*"Call me old school, but we have an Alexa and when we're on our phones and we talk about something an ad comes up. People are listening into our private conversations… I'm not used to that."*
(Older couple)

**Why disagree 'I'd be interested'**




**Q9a** What would the benefits be [of having a smart meter]? Base: All those interested in having a smart meter(354)
**Q9b/c** Why [are you not interested/neutral about having a smart meter]? Base: All those not interested (204)/ neutral (193)

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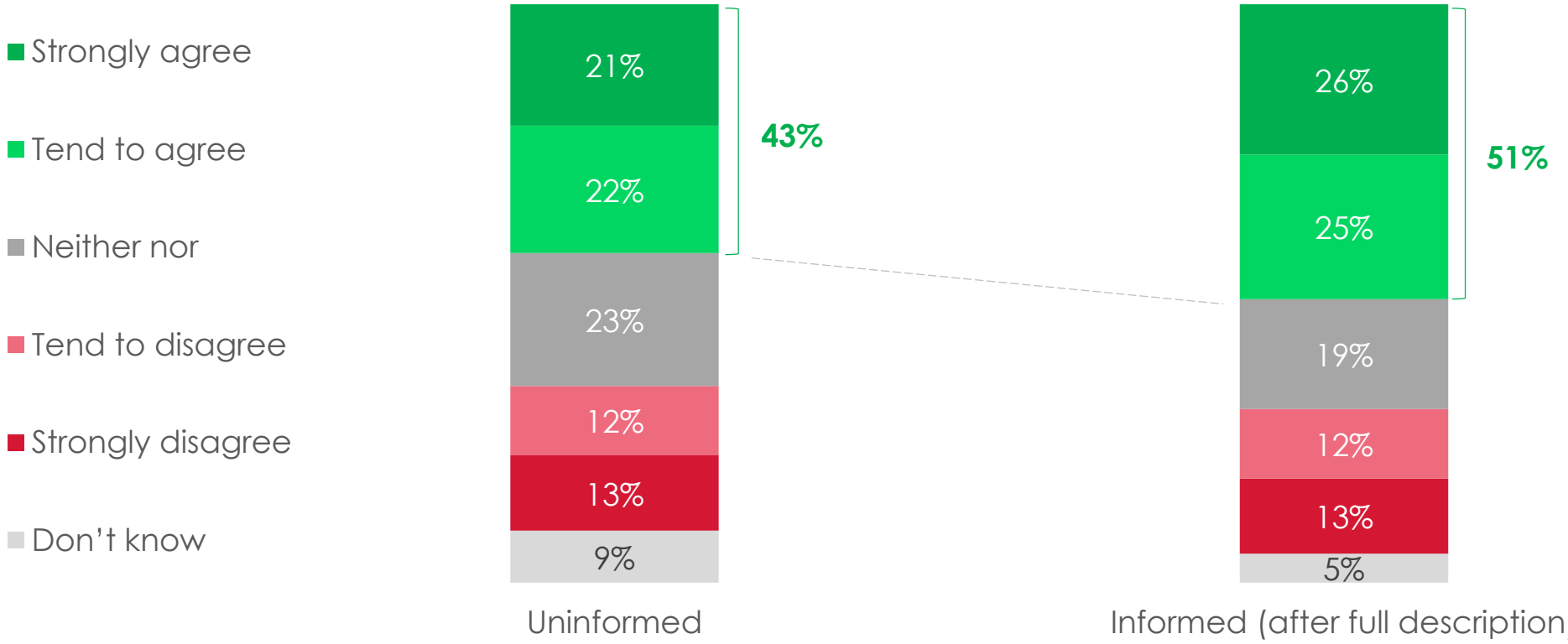
# More informed interest in having a smart water meter



**After being more informed about a smart water meter, the proportion of the panel interested rises slightly to just over half. 1 in 4 actively disagree they would be interested, even after seeing more info – clear resistance amongst some.**

A smart water meter (a meter that lets you see your household's water use on a regular basis)

Smart water meters collect water usage information for households regularly (hourly, daily, weekly, or monthly). The information is visible to customers through an app, website or an in-home device so they can see how much water they are using and any changes in the usage. This can help to find ways to save water, manage bills more accurately and spot leaks.



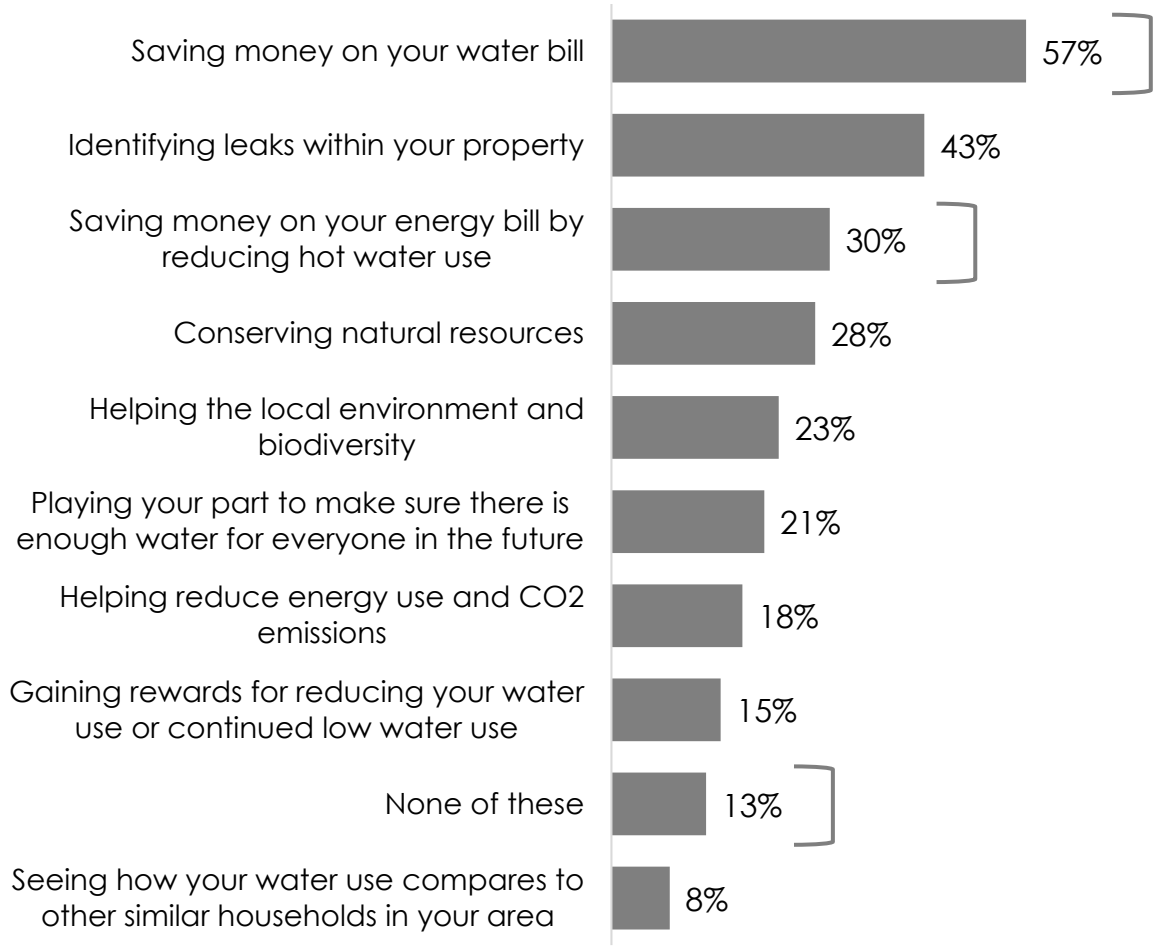

**Q8.** How much would you agree or disagree I'd be interested in having a smart water meter (a meter that lets you see your household's water use on a regular basis); **Q13**. [AFTER SEEING FULL DESCRIPTION] How much would you agree or disagree with the statement 'I'd be interested in having a smart water meter'? Base: All panelists (824)

blue marble

# Top motivations to read a smart meter display (after being more informed)



**When prompted with a list of reasons, saving money is number one for reading a smart meter. This is followed by identifying leaks - not a top-of-mind benefit, but becoming important when people learn more about them. Saving money on associated energy bills is also high on the list, above environmental benefits.**




Higher for:

- DE social grade – 72%
- Worry about affording bill – 70%
- 'My World Cost Conscious' segment – 68%

- Worry about affording bill – 40%
- Stretched and Struggling' – 40%

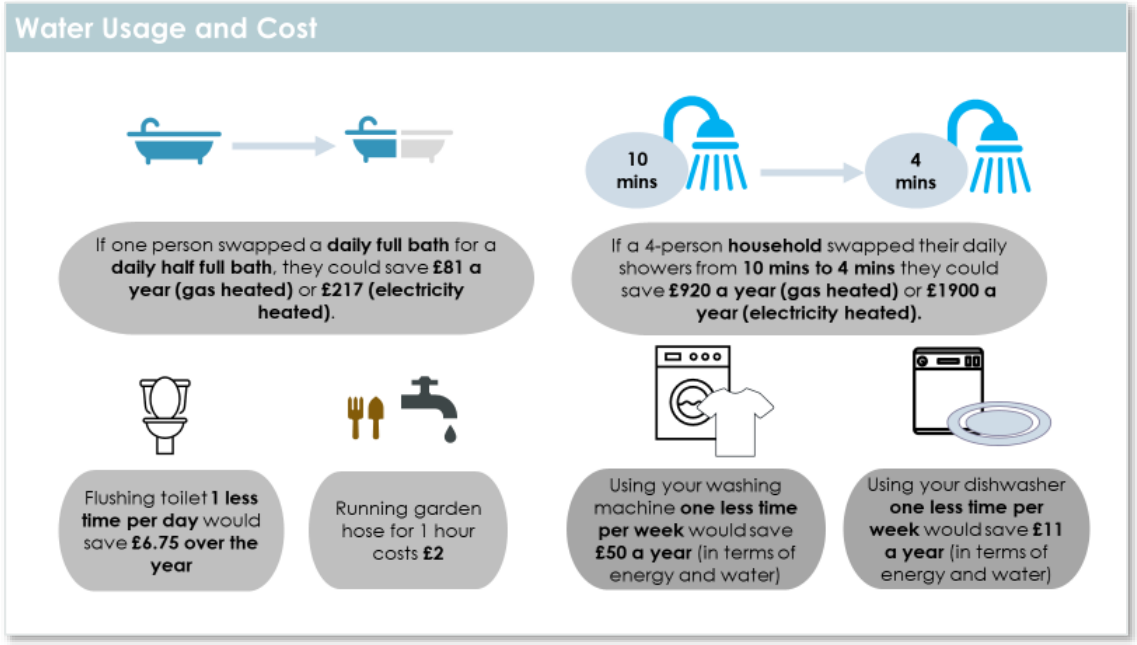
- Those not interested in smart water meter – 34%

**Q16** Which if any, of the above, would motivate you to read a smart meter display to help you manage your water use? Please choose up to three.
Base: All panelists (824)

blue marble

# Combining possible energy savings and water savings has the potential to be highly impactful

**In the qualitative workshops, we presented customers with potential savings they could make on their energy and water bills over the course of a year if they were to change their behaviours**




**Seeing the potential cost saving that could be made by making relatively small changes was met with surprise and shock**

**Statistics that highlight how quickly cost savings add up are successful in motivating and encouraging small but impactful behaviour change**


**Of panellists would be motivated to read a smart meter display if it would help them to save money on their energy bill by reducing hot water use (the third strongest motivation)**

NB: specific statistics shown in the stimulus have been revised and reviewed since fieldwork (statistics for reducing shower time are: £650 a year (gas heated) and £1450 a year (electricity heated)

# Attitudes towards smart meters are generally positive

## Pros

- Can save you money as you only pay for exactly what you use and readings are more accurate
- Saves you having to regularly read a meter/submit readings to your supplier
- Motivates you to save (energy/water)
- Those who are keen on saving are keen to understand where they can cut costs
- Interesting to learn more about your usage and how much you use doing certain activities; this is unfamiliar territory and even basic information is useful
- Customers don't think about how this could help with leakage without being prompted – but when understood this can be motivating

## Cons

- For some, smart meters can feel a bit invasive and 'big brother'
- Others think having so much data on their usage would lead them to over-analyse and be stressed about their usage
- Concerns about safety of smart meters – microwaves/harmful/carcinogenic
- Concerns that vulnerable people may feel forced to reduce their usage e.g. keep heating off or use less water if they can see the money they're spending
    - Especially pertinent for water as it's a matter of hygiene and wellbeing

# Meter data could be helpful in educating customers about their usage

## Customers are very interested to know more about how much water they're using:

- It's unfamiliar territory for most; even for those who exhibited some water saving behaviours, water usage in volumes isn't well understood
- Most were unable to make an approximate guess as to how much their household uses on average each day

## We presented average daily usage per household to participants, based on historic meter reads:

- Most were shocked to hear how much they used each day and said that it seemed like a lot of water
- However, customers were still unsure how their usage might compare to average usage; even though it sounds like a lot they're unsure if it's more or less than other people

## We found that revealing PCC was very powerful

- Many asked what average usage was so that they could compare it to their usage… specifically comparing with similar HHs is helpful
- When we explained that average PCC was around 140-150L per day, customers calculated how that compared to their household
- **Knowing it was below average immediately provided a sense of relief, knowing it was above fuelled motivation**
- For those whose average usage went down during the fieldwork period, seeing the drop in litres was very motivating

NB: not everyone saw a reduction in their average use despite best efforts (this could be due to the method of data collection in this project)

- This has potential to demoralise customers who have worked hard but are not seeing any benefit – we will explore this further in the next wave

# What do customers want from smart meters – in practice



## Data frequency

- Not something customers would need to monitor regularly
- Would like to have data on daily costs and how they fluctuate to look at when they get a chance
- Useful to see a comparison with average use across the region (esp. comparing similar household setups)
- Would be interesting to see how usage changes over time too – perhaps stored on an account somewhere for you to look at when convenient

## Data details

- Having detailed data on usage down to day and hour is appealing
- Ability to set caps and usage alerts appeals, specifically for those who are serious about saving (both water and cost)
- Not only is it interesting to see, but also helps customers pinpoint exactly what they were doing during spikes in usage
- 'Smart' data that shows percentage water use on specific activities sparks interest; but important for customers to know that this is vaguely accurate

*"Would want to be able to check it online and see monthly usage and when you use the most water – which days and which months etc."*
(Family, older children)

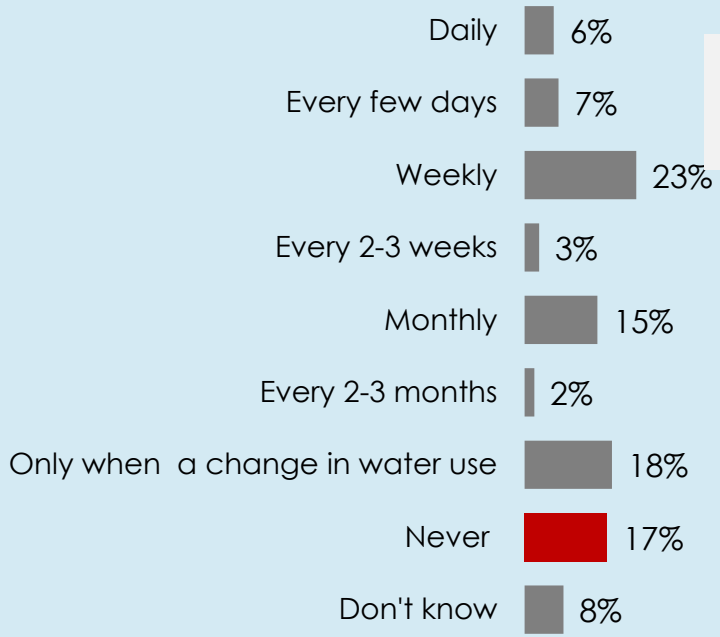
# Smart meters – alerts and comms

## Alerts and comms

- Thought this was really good idea that would be helpful
- Can help to alert people if their usage has gone up – may not notice or think about it
- Great if it could help detect leaks as these are difficult to find yourself
- For those who are worried about security/privacy this feels a bit too much still
- Makes sense for these alerts to come via text in case it's an emergency – need to hear about it instantly
- Phone call seems unnecessary and would likely not answer

*"Interesting.. It could be something you look at when you sign up, like 'turn on smart detection for leaks' and then it asks for how you'd prefer to be contacted?"*
(Student house)

- The majority would want alerts with some regularity – especially those already interested in smart meters
- Those who would 'never' want alerts are those who are less interested in smart metering; a core of c. 1 in 5 customers who will not engage with smart meter data.




- Those interested in smart meter – 61%
- Those who perceive water resources are limited – 48%
- Those who often look to reduce environmental impact – 47%

- Those not interested in smart meter – 46%
- Those who do not have a meter – 27%

**Q15** With a smart water meter you could have texts or notifications on your mobile phone to prompt you to have a look at your water use information. How often would you want to be prompted? Base: All panelists (824)

**The qualitative fieldwork revealed that customers would like the flexibility to adjust their preferred settings**

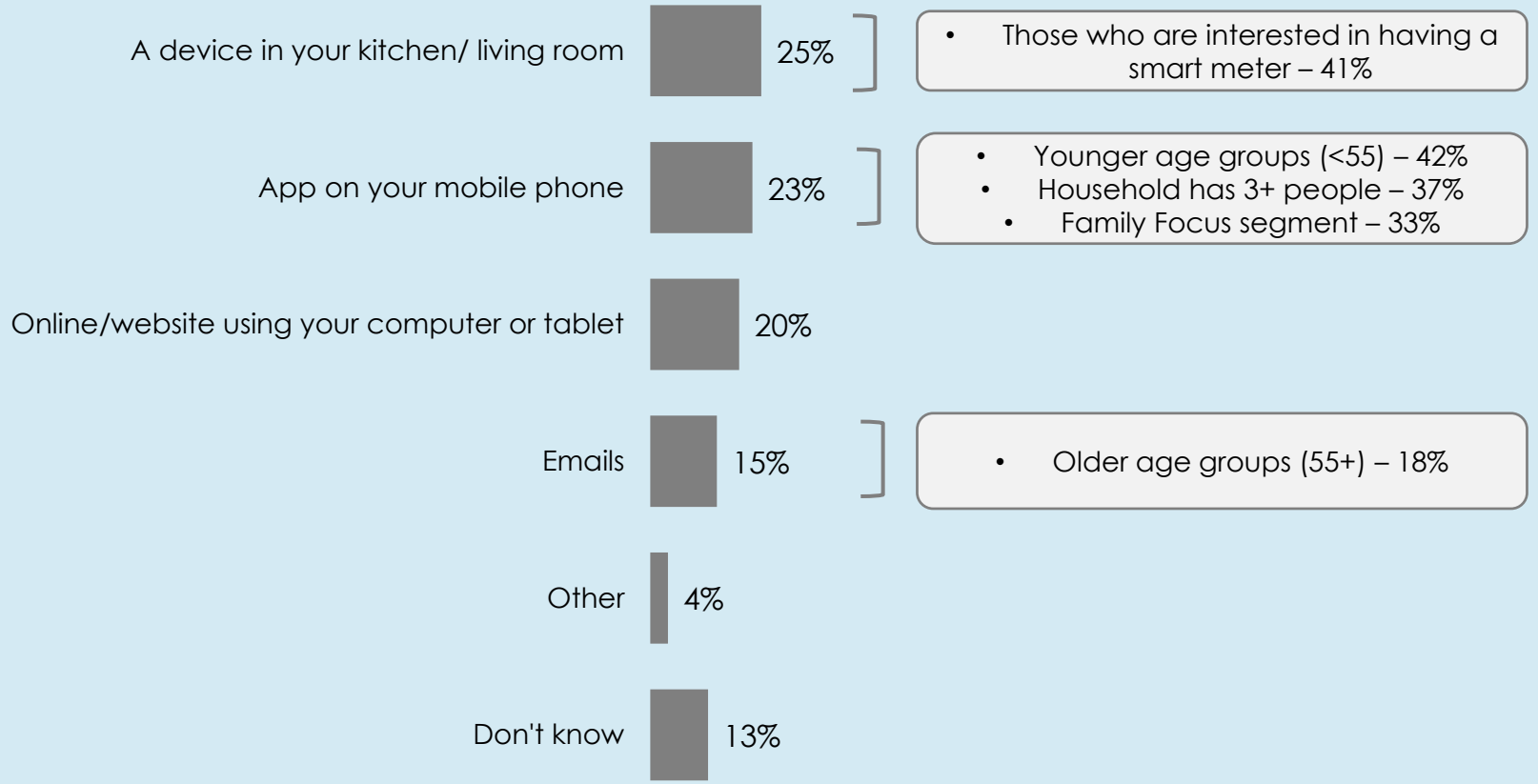
# Smart meters – preferred data channel

## Data channel

- Makes sense to have this information stored on your online account if you have one
- A few would like to avoid a plug in device as it's just another piece of clutter in the house that will likely be ignored
- Most would be comfortable having info through an app
- BUT want to have a choice of channel – app, email, plug in, letter

*"Would be good to see your usage on a table or graph or something, like they have on the health apps."* (Family, younger children)

- When asked which **one** would be their preferred channel, there's a mix of answers: It depends on demographics and their interest in having a smart meter

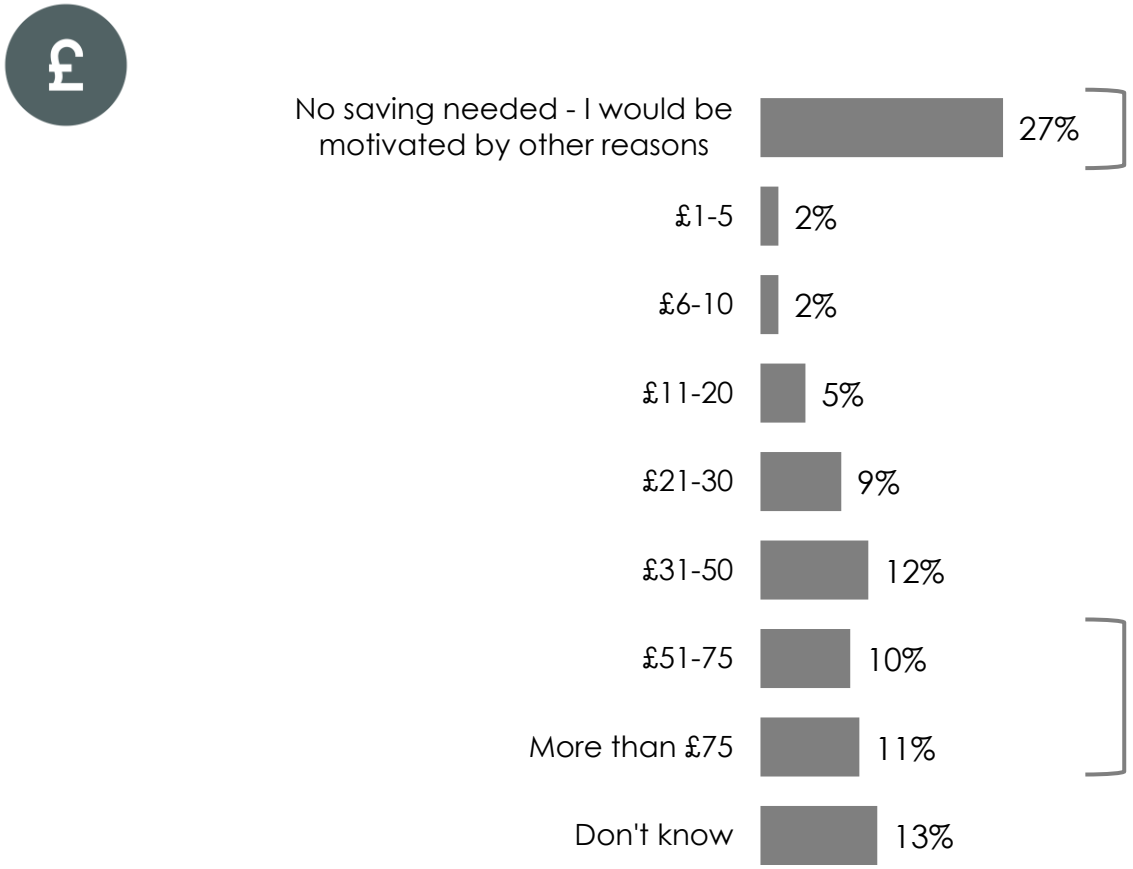



**Q14** Which one of the following would be your preferred way of seeing information about your household's water use? Base: All panelists (824)

# Minimum saving to make it worthwhile to read a smart water meter display



**Some polarisation on how much of a saving would make reading a smart meter display worthwhile. Notably those who are worried about paying their bill are in need of a substantial saving – a small saving will not make enough difference for many.**




Over £50: **20%**

Higher for:

- Responsible Citizens – 45%
- Those who often look to reduce environmental impact – 43%
- Those interested in a smart water meter – 40%

- Do not have a water meter – 36%
- Worry about affording bill – 31%
- Not interested in smart water meter – 31%

**Q17** What is the minimum annual saving on your water bill that would make it worthwhile for you to read a smart water meter display to help manage your water use?
Base: All panelists (824)

Photo by Hasan Almasi on Unsplash

# Conclusions & recommendations

blue marble

# Major mindset shift will be required to trigger water use reduction



**Use behavioural economics to develop campaigns and personal (meter) information to effect change**

| | |
|---|---|
| **Most people think they are already making an effort to save water… or believe others are doing less than they are** | **Use Social norms:**<br>• Motivate customers to take water saving seriously by **providing comparisons** with neighbours, similar households etc. (e.g. *daily* showers may not be the norm)<br>• Help to **ease worries by opening up the conversation around good hygiene in the bathroom**; customers need reassurance that water saving behaviours are both hygienic but also socially acceptable |
| **Cost is a strong driver to adopt new behaviours but water costs relatively low priority** | **Develop compelling messaging around cost savings:**<br>• To make behaviour change more worthwhile **group together energy and water costs** when showing examples of small changes in behaviour that can lead to impactful savings |
| **People lack the know-how to save water** | **Create campaigns around plugging information gaps:**<br>• Hacks: tricks and tips (e.g. reuse ideas, use the dishwasher instead of washing up)<br>• Fun stuff: especially for busy, high usage households with children |
| **People are disconnected from how much they use (and why it matters)** | **Develop meaningful ways to talk about volume:**<br>• This is a mental gap yet can have real impact. Visualising volume, especially around behaviours that involve flowing water needs simple comparisons (NB a suggested focus for the final stage) |

# Smart meters are integral to water efficiency strategies – but only if consumers see the benefits



**Response to smart meters is quite muted**

**Smart meters are an enabler for behavioural campaigns and interventions: data will bring to life how water is used**

- Promote benefits of smart meters
- Use to connect consumers with where they use water (inefficiently)
- Provide detailed data that is easy to understand and visually appealing

AQR QUALITATIVE EXCELLENCE AWARD Highly Commended 2021

MRS Awards 2021 Highly Commended New Consumer Insights

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# Customer motivations: water saving & smart meters

## Phase 3: Longitudinal behaviour change trial

November 2022

Photo by Amritanshu Sikdar on Unsplash

# Recap of objectives

Photo by Sarah Tatton on Unsplash

# Methodology: overview

*February 2022*

1

**Rapid evidence review of 25 sources**

- Summary of what is known and where there are gaps
- COM-B analysis of barriers to water efficient behaviours
- Informing the following stages

*March – April 2022*

2

**Qualitative behaviour change trial**

- 20 households participated in a month-long process
- 2 x 45-60 minute in-depth interviews with a series of interim tasks involving water use reduction
- 10 respondents participated in 2 x 90 minute follow-up workshops, including Wessex Water staff

*April 2022*

3

**Quantitative survey using Wessex Water's 'Have your say' panel**

- 12 minute survey
- 824 respondents

*Jun-October 2022*

4

**Qualitative behaviour change trial – extension of 5 months**

- 8 households were selected to represent a good cross of our initial sample and continued as participants in the trial
- Primarily to understand how new behaviours are maintained

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# Fieldwork timeline for participants

**Heatwave**
*July & August*

***March – April 2022***

***June-October 2022***

**1-month trial**

**2-month break (Interim period)**

**5-month trial**

**20 households**

**8 households**

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# 5-month behaviour change trial


Photo by Maddi Bazzocco on Unsplash

# A brief reminder from the 1-month trial period



## We asked participants to…

### …reduce the amount of water they use washing themselves

| | Key barriers | Ways to overcome |
|---|---|---|
| Capability barriers | • 'Only use what I need'<br>• The desire to use lots of water for mental wellbeing<br>• Unaware what to do to save water | • Need specific instructions so customers aware of how to reduce water use when washing<br>• Messaging to build awareness and 'norms' |
| Opportunity barriers | • Lack of practical help/ideas/tips | |
| Motivation barriers | • Need for hygiene and cleanliness<br>• Need a rationale: cost, environment etc | |

### …try and collect water that would normally get wasted and reuse it elsewhere

| | Key barriers | Ways to overcome |
|---|---|---|
| Capability barriers | • 'I'm doing all I can'<br>• Unaware what to do to save water | • Better understanding of water wasted when tap is left running<br>• Better understanding of reasons not to waste water<br>• Potential for (branded) jug or watering can as practical means for reuse<br>• Specific guidance: only so much people can do on their own |
| Opportunity barriers | • Lack of concern re water cost<br>• Lack of practical help/ideas/tips<br>• Busy, erratic home life | |
| Motivation barriers | • Lack idea of possible cost savings<br>• Lack idea of how much water used/whether typical or not<br>• Need for rationale: cost, environment etc | |

### …to reduce the amount of times they flushed the toilet

| | Key barriers | Ways to overcome |
|---|---|---|
| Capability barriers | • 'I'm doing all I can'<br>• Unaware what to do to save water | • Familiarise with 'new' behaviour<br>• Better idea of how much water flushes use<br>• Explain why saving via less flushing is worth the drawbacks<br>• Cistern bag a good option for those unwilling to adopt 'mellow yellow'<br>• Educating that 'mellow yellow' is adopted by others and therefore not unhygienic or 'impolite' |
| Opportunity barriers | • Lack of concern re water cost<br>• Lack of practical help/ideas/tips | |
| Motivation barriers | • Lack idea of possible cost savings<br>• Lack idea of how much water used<br>• Need for rationale: cost, environment etc | |

# Participants admitted that following the initial 1-month period water-saving behaviours had dropped off

Interim period

**For some behaviours, a 1-month trial period isn't long enough to enable behaviours to 'stick' and become habits**

**…reducing the amount of water they use washing themselves**

- Cutting down the number of showers or baths taken was difficult and something that was easy to forget to do
- While for many, keeping their showers down to 4 minutes wasn't necessarily observed during the 2-month break, households did report that they were certainly having shorter showers than they did before the research

**…trying to collect water that would normally get wasted and reuse it elsewhere**

- The 2-month break stretched over April and May where we didn't see particularly hot weather
- Participants therefore struggled to find regular uses for any water collected and so the act of collecting naturally dropped off

**…reducing the amount of times they flushed the toilet**

- For those who were initially willing to give this behaviour a go and were successful, this behaviour stuck
- Flushing the loo is done so often throughout the day that a 1-month trial period was long enough for the conscious behaviour to become a habit
- For those who did not attempt this previously or who weren't successful, attempts to maintain the behaviour stopped very quickly

**Families reported that many of their kids' water-saving efforts had also dropped off as they as parents became more relaxed about reminding them of their responsibilities**

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# However, picking behaviours back up felt relatively easy and some quite quickly became habits

**5-month trial period**

**Once motivated by the project to re-adopt some behaviours, picking them back up felt relatively easy compared with when they first trialled them**

**…reducing the amount of water they use washing themselves**

- Shorter showers quickly became part of the day-to-day routine without having to think too much
- Realisation that you can be and feel clean with a shorter shower once you've established an efficient washing routine
- Giving more thought as to whether you need a daily shower or if a flannel wash will do

*"Getting back into water saving tasks has not been difficult. My biggest change has been that I'm now mostly using showers, allowing myself baths only twice [in past 3 months] and honestly I'm totally OK with that."* Gillian

**… being more considered with usage when washing dishes and clothing**

- Ensuring that dishwashers and washing machines are fully loaded before turning them on became part of regular routine
- More considered thought about things that really needed to be washed after one use or could be worn again

*"The girls used to have 3 school shirts but now I've bought them more so that I don't have to do so much washing. The shirts were £14 for a pack so it's cost effective."* Laura

**… being generally cautious about water usage in their lives**

- Households began to consider un-necessary waster usage 'wasteful', resulting in feelings of guilt when they can see that what they're doing uses excessive water

*"I came back from my motorhome holiday and used the hot water left [from flasks] to wash up rather than throw it away. Before this research it would have been thrown away, probably on the grass or maybe down the sink."*
Betty

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# Products that worked well to help maintain behaviour change…


## The ShowerBob
is considered a useful device and provides additional benefits to the shower timer

- ✓ **The device is easy to use and install**
- ✓ **Having the box there in the shower motivates people to reduce water and time in the shower**
- ✓ **Green, amber, red system is handy for keeping to time**
- ✓ **Provides added information compared with shower timer:**
  - Shows how far you've gone over the 4-minute timer
  - Shows how much water is wasted when you're waiting for the water to heat up
  - Shows the litres used as well, and how much the shower really does use: the figure shown gives the sense that this is a lot of water
- ✓ **Good device for kids as it's easy to use/automatic**
- • **Areas for improvement:**
  - Screen goes off as soon as shower goes off – doesn't linger on end result for you to look at
  - Device/box on the hose is a bit bulky and can be unsightly/stick out

## Digital shower timer
a welcome upgrade from the low-tech sand timer

- ✓ **Generally much better than the sand timer**
- ✓ **Sticks better to surfaces where the sand timer is easy to drop or lose and falls off easily**
- ✓ **Shows exactly how long your showers take and you can see how long over the 4-minute mark you've gone**
- ✓ **Effective at reducing the amount of time spent in the shower**
- • **However, it is not waterproof and therefore unlikely to be long-lasting**

## Collapsible buckets
Can come in handy but not a game-changer

- ✓ **Useful for collecting water**
- ✓ **Collapsible helps reduce clutter in the house**
- • **If the weather isn't hot, limited uses for collected water (room for suggestions here)**
- • **Quite a big effort to do – easy to ignore and not bother**
- • **Doesn't feel like it's making a huge difference**

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# Products that worked well to help maintain behaviour change…

## Fit and forget products

### Shower flow regulator

- ✓ Once installed, was a great device
- ✓ Change in pressure wasn't noticeable and a good 'fit and forget' product
- × Bit tricky to install for some, especially if pipework is hidden behind tiles

### Cistern bag

- ✓ No effort to continue use once it's installed
- ✓ For most, didn't reduce flush too much to the point where you'd need to flush twice
- ✓ Relatively easy to install
- × Some have used other types of cistern bags before and felt this was a little clunkier to put in place
- × For some, flush reduction was noticeable and double flushing was required which defeats the point

### Tap inserts

- ✓ Some managed to fit this relatively easily and didn't notice much difference - which was positive
- × Others struggled with installation, and found it a little fiddly
- × Some were unable to fit it at all as either the type of tap wasn't compatible or the scale build up on their tap prevented the device from fitting properly

**Free products are an excellent way to capture attention and provide an opportunity to engage customers on the topic of water saving**

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# Scorecard: reducing water when washing

…reducing the amount of water they use washing themselves

| | | |
|---|---|---|
| Barriers to overcome |  | • Once informed of what to do and how e.g. time your showers and keep to under 4 minutes, limited pushback against reducing wash time and frequency |
| Easy to maintain |  | • Takes a bit of time for this behaviour to become a habit |
| Motivation |  | • Key motivation to reduce is from understanding potential cost savings (water and electric/gas bill) |
| How to encourage behaviour? |  | • ShowerBobs work well to encourage and remind people to take shorter showers<br>• Educate on potential cost savings swapping from 10 to 4 minute showers |
| Works best for… |  | • A successful behaviour change across the board but particularly for larger families who have more scope to save |

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# Scorecard: reusing water

…try and collect water that would normally get wasted and reuse it elsewhere

| | | |
|---|---|---|
| Barriers to overcome |  | • Difficult to measure the amount collected and therefore quantify how much water is saved<br>• Not sure what to do with collected water if it's not needed for garden<br>• Feels like a big effort |
| Easy to maintain |  | • Very easy to ignore and stop doing<br>• Doesn't feel like less effort over time |
| Motivation |  | • Without knowing how much can be saved, it doesn't feel like there is much point, especially for the amount of effort required |
| How to encourage behaviour? |  | • Collapsible buckets do help, but only to an extent<br>• Provide volumes for how much water can be saved and push the message that the water would be wasted otherwise<br>• Educate on ways to use collected water (esp. paddling pool in summer)<br>• Encourage easy collection e.g. tumble drier/dehumidifier water |
| Works best for… |  | • Younger (as it's relatively physical)<br>• Smaller households<br>• Eco-warriors willing to put in the effort |

# Scorecard: toilet flushing

…reducing the amount of times they flushed the toilet

| | | |
|---|---|---|
| Barriers to overcome |  | • For a few, the 'yuck' factor is something they cannot get past but for the rest this was easy to adopt<br>• Unanimously won't be followed when guests are over |
| Easy to maintain |  | • Due to it being such a regular behaviour, adopted as a second nature habit very quickly |
| Motivation |  | • All the flushes add up to a lot of water<br>• Very visible water usage |
| How to encourage behaviour? |  | • Educate on how much water is used per flush and calculate potential savings for an average 4-person family/couple etc. |
| Works best for… |  | • Those with lots of people in the house or those who live alone |

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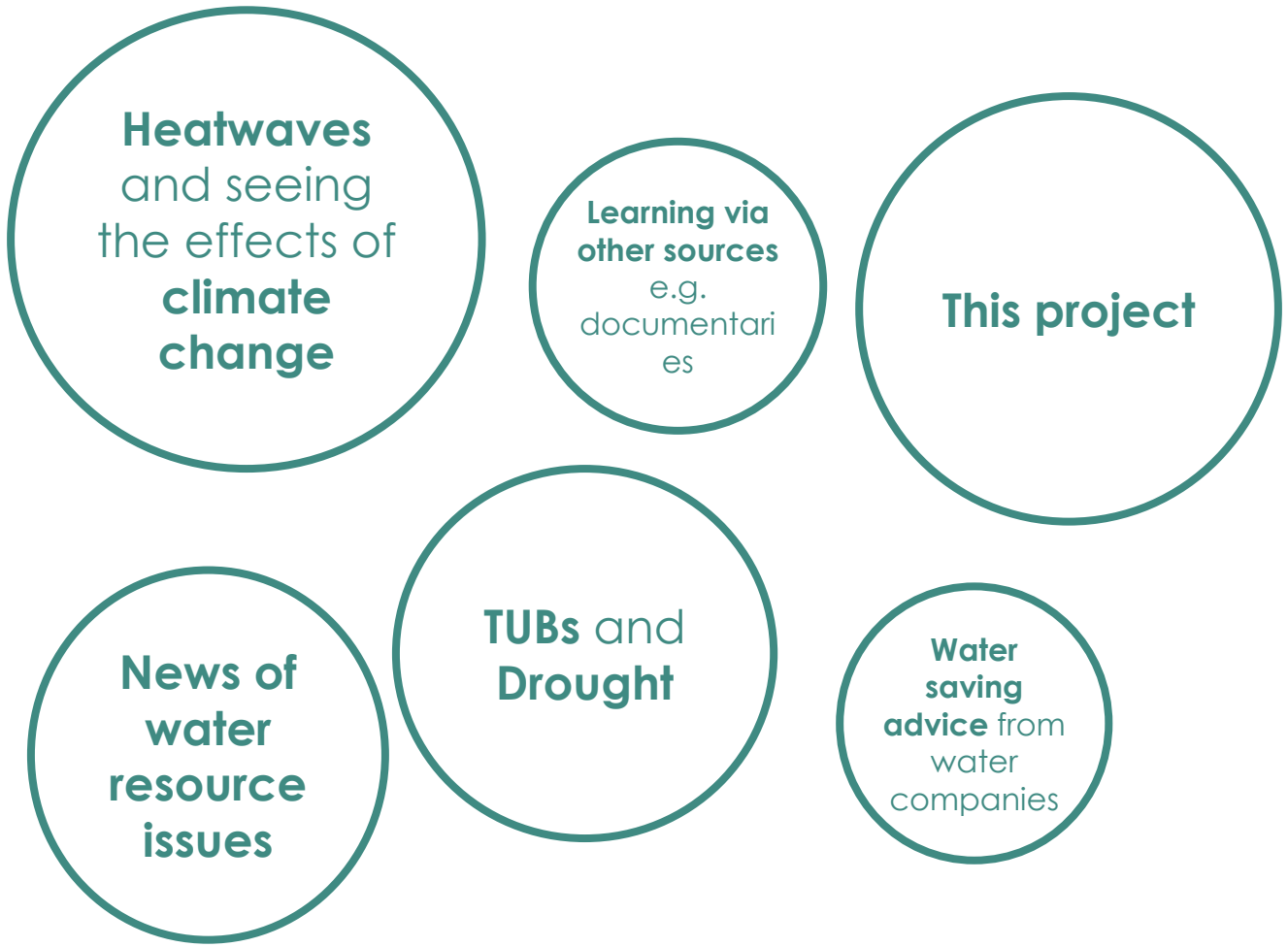
# Generally, people are more motivated to save water as they learn more and engage with the topic

**During the trial, various factors and sources contributed to increased engagement in the topic of water usage and efficiency:**




These factors work together to contribute to a more **rounded view of water resource** and the importance of saving water

In order to motivate consumers to save, it's imperative that they **understand *why*** they're saving

The past summer has done a good job of alerting consumers to potential water resource problems in the UK; it has provided a **good jumping off point for further education and engagement**

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# During the hot weather and heatwaves this summer, we saw some significant differences in behaviours

## In extreme heat, above around 30 degrees, many opted to stay inside with windows and curtains shut to keep the heat out

- This level of heat isn't something we're set up for enjoying here in the UK
- This was especially true for those with young kids to avoid heat stroke or sunburn

## Maintaining water saving behaviour around bathing was more challenging in hot weather

- The need to feel fresh/clean is important when the heat is already uncomfortable and is not something that is easy to compromise
- People found themselves taking more frequent showers – either daily or twice daily – to feel clean and to cool themselves down
- Some increased behaviours that require more time in the showers such as hair washing

HOWEVER:

✓ Keeping showers shorter or under 4 minutes was easy to maintain

✓ Less water was wasted waiting for shower to heat up as many got straight into the cold running water

## Paddling pool usage increases dramatically in hot weather

- For your own kids to play and keep cool; but also for any visiting kids (nephews & nieces etc.)…and even for adults: a great way to keep cool when other options such as fans aren't working to combat the heat sufficiently

✓ Examples of using old paddling pool water to water plants, and giving water to neighbours for plants; might chuck on the lawn too *'because you may as well'*

✓ In the context of the summer and this project, households made a more conscious effort to keep water clean so it doesn't require frequent refilling (chlorine, covers)

**?** A few questions as to whether this water is OK to use on plants… but considered better than plants dying due to no water and extreme heat

## Hosepipe bans and drought declared in other areas motivates people to save water

- Feels irresponsible to water the lawn and plants when there is a drought
- Generally, people were more careful with water, especially outside

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# Watering the garden feels a fruitless activity during periods of extreme heat

**When it comes to watering, only the most determined of our sample were keen to keep their gardens alive**

- Watering regularly at dawn and dusk
- Giving the plants a quick water to 'wet the soil' then coming back to it for a proper drink
- Using the hose where normally they'd use the water butt or leave plants alone to get water from rainfall

*"We are still trying to water half the garden one day and the other half the next although some of the plants are not coping very well. The vegetables definitely need more water at the moment."* Kevin

**It's more typical that people gave up on watering after the first period of hot weather**

- Feels as if there's no point, for a variety of reasons:
  - The water just evaporates quickly before it reaches the plant roots
  - It's a waste of water given how much the garden would need
  - Some plants have died to a point of no return

*"I've just spent the last hour watering garden: this heat is killing my shrubs!"* Gillian

**Doesn't feel worthwhile sowing seeds or planting new plants during hot summers like this**

- No point as they'd more than likely die in the heat and require too much water
- One example of careful planning – selecting specific plants for different areas of the garden – with drought resistant plants in dry areas so they don't need to be waterer (NB: behaviour began prior to the research)

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# News of TUBs can motivate people to use less water; even if not affected

**Though unaffected by temporary usage bans, customers were willing to accept one being imposed in the Wessex region**

In fact, it was expected given the hot, dry summer and minimal rain and considering surrounding areas were affected

**In the context of the hot weather, drought and implementation of TUBs, there is added motivation to reduce usage and a sense of responsibility to save water**

*"As far as I'm concerned, I've already stopped watering garden & washing cars, when the water butt is empty the plants will have to suffer. I have not bought any plants that I would usually buy in the summer. We've all got to take responsibility to help conserve water."* Gillian

Despite this understanding, **customers still consider water companies responsible** for providing adequate water resource

Specifically, water companies are expected to invest more in **increasing infrastructure** for additional water resources and **fixing leaks** to avoid waste

This is especially true in the context of water companies making media headlines for high CEO salaries

# Declarations of drought were considered inevitable; but questions as to whether it could be avoided

**Following hot, dry weather and limited rain, drought does not come as a huge shock**

- News was widespread and could be seen and heard in multiple places
- A topic of conversation amongst friends/family/colleagues
- Confusing to see hosepipe bans and droughts declared in all surrounding areas but not the Wessex region – what does this mean?
    - Implication here that understanding of drought is very closely linked to weather conditions in the wider region
    - Understanding of what leads to drought and how it is defined is unclear

**Similarly to TUBs, drought affects behaviours when it comes to water usage; excessive usage feels irresponsible**

*"Neighbours have the sprinkler on; given the situation I feel very disappointed."* Betty

**Some criticism of water companies and how they have dealt with the water resource issue over the summer**

**There is an assumption that extreme weather can be predicted in advance and water companies ought to have sight of this**

**Willingness for water companies to suggest advice and encourage behaviour change in advance if hot weather is predicted in coming months, especially if it will avoid restrictions and water resource issues further down the line**

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# What have we learned…?

1. **Understanding the need and purpose behind water saving is crucial**
   - Without this, there is ultimately no hook
   - Our sample grew to understand why water saving was important and were willing to put the effort in to act
2. **Campaigns need to encompass a range of behaviours**
   - This study highlighted that individuals behave differently, even within households
   - There are no simple categories for 'easy' and 'hard' behaviour changes – it's about finding a way to save that works best for the individual
3. **Campaigns need to be ongoing**
   - The trial showed how easy it was for good habits to slip after initial adoption
   - But small reminders are all it takes to help maintain behaviours up until they become habit
4. **We saw evidence of more permanent attitudinal shifts**
   - Feelings of guilt when water is wasted
   - Disappointment at not reducing average usage
5. **Gamification can work well to motivate some**
   - Competing with yourself to keep times or usage down
   - For kids, making a game out of behaviours (although risk of novelty wearing off here)
6. **It's easier to engage a key individual rather than a household**
   - Our lead respondents often had to chase or pester kids or partners into adhering
   - Cost savings (for partners) and environmental benefits (for teens) were good motivators to get others on board
   - Consider campaigns that highlight a water saving 'ambassador'

# Case studies

Photo by Markus Spiske on Unsplash

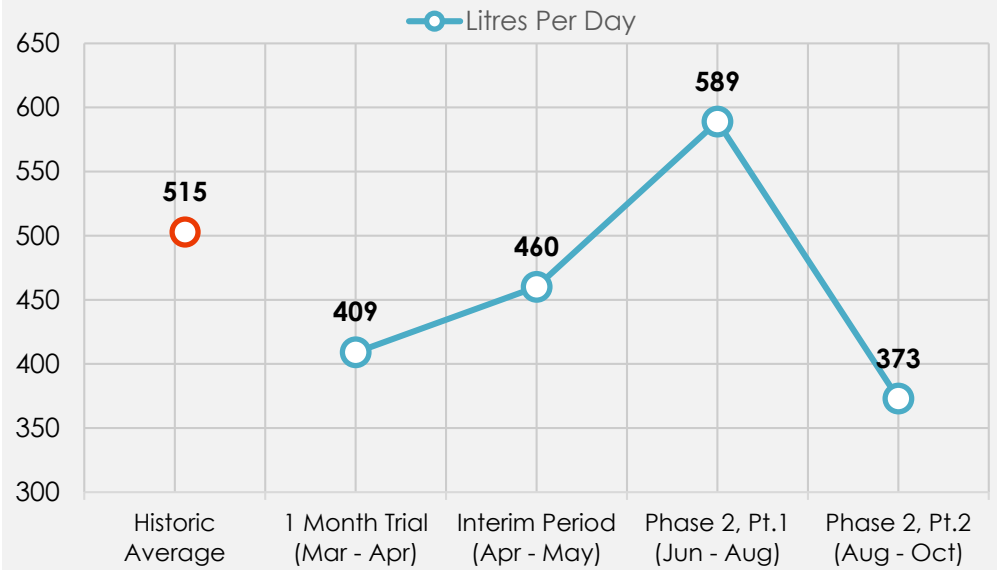
# Case Study – Grace

x = average litres per day

**Grace, 32**

*Family Focus*

- Grace lives in Calne in a 4 bed detached house with 4 bathrooms and a sizeable garden
- She lives with her husband, two children (6 and 4), and two dogs
- She works part-time with local company and likes gardening in her spare time
- She considers herself to be very environmentally friendly




## 1 Month Trial

409

-106 v historic average

- Previously, Grace's family thought they were as water conscious as they could be
- However, the trial was an eye-opening experience and her family is now much more aware of water usage and they realise they could do more to save water

## Interim Period

460

+51 v 1 Month Trial

- Water saving behaviours slipped a little in the interim period:
  - In particular, she was less strict in encouraging the kids to take shorter showers
- Though she kept her usage down from the historic average, the household's usage did increase somewhat during the interim period

## 5 Month Trial

Jun -Aug: 589 +129 v interim

Aug -Oct: 373 -216 v Jun-Aug

- Re-implementing the behaviours after the interim period was not challenging
- During the heatwave, Grace was using a lot more water than usual, mainly in the garden
- During second half of the trial however, her garden water usage decreased
- Moving forward, Grace and her family will endeavour to maintain all behaviours as they have now become habits

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# Case Study – Grace

## Shower behaviours

**Though as time has gone on the family have become less strict with the kids, generally shorter, less frequent showers are here to stay…**

At first, shorter showers were easy to do as Grace's **children saw them as a fun competition** to see who could shower the quickest; and the timers encouraged them to keep track every day.

Even after the **novelty of the games wore off**, Grace could see that their new shower routine was **still quicker than before** the project. She is generally less strict now too, and will allow them a longer shower if they ask, especially as it gets colder.

**Flannel washing the kids was another success:**

- It's quick, easy, and a good substitute if kids aren't dirty
- However, they weren't as practical during hot weather – kids were sweaty and often covered in sun cream!
- Reducing number of baths and sharing bath water for the kids was an easy win

On a personal level **Grace and her husband found having fewer showers was an easier swap** than having shorter showers. She in particular struggled to do everything she'd usually do in under 4 minutes (shampoo and condition hair, and shave legs).

*"All these things have become the norm now. I don't see why we wouldn't be able to keep this up."*

## Flushing behaviours

**Despite being a self-professed clean freak, Grace and her family were able to adopt this behaviour and make it a habit.**

At the beginning, Grace was **having to teach the kids new, different toilet habits** which was difficult to explain considering their age.

It did take some time for them to adapt and remember the new rules but **over time this has become second nature**.

*"It was a bit difficult teaching the kids to leave wee in the toilet, but now it's fine."*

## Reusing water

**Grace was willing to put in the effort to collect and reuse water where she could and this only got better over time, especially with the collapsible buckets.**

Grace made a habit of collecting water from the start of the project and used it as drinking water or for her indoor plants. The buckets boosted her collection efforts.

Grace filled the paddling pool in the summer but was able to reuse the water on her garden where possible.

*"Before the buckets I thought I was good at collecting water. But now with the buckets I'm saving water each time I wait for water to heat up across the house."*

# Case Study – Grace

## Coping with the Hot Weather

**Grace predicts that she uses less water in the summer than she does in winter, but in reality hot weather, the paddling pool, and tending to her garden increased her usage.**

Grace bought a very large, **6,000 litre paddling pool** at the start of the summer for her kids, and endeavoured to keep it clean with a cover for re-use throughout the summer. However, it **became dirty after a week** to the point where it needed to be emptied.

Grace didn't want to waste the water and tried to **use it on her plants**, but with such a large volume inevitably a lot of **water went down the drain**.

She initially decided not to refill the pool as she wanted to save water, but the **heatwave changed her mind** as she wanted to keep the kids cool and entertained. This time, she tried adding chemicals to maintain the water so it would last a bit longer.

*"With things being so hot, it seems silly not to [fill it up] with the children being as young as they are and trying to keep cool… so we filled it up and have put chemicals in the water so it lasts."*

Given the hot weather, Grace found herself using a lot more water than usual to keep her plants alive. However, a lot of this was from re-used water from inside the house.

Interestingly, Grace anticipated that her usage would have gone down despite her seemingly heavy usage…
**There seems to be a disconnect between her usage indoors and outdoors.**

*"In general, we tend to use less water when it's nice weather – we're having shorter showers and we are also in the house less. When it's warm we're outside more so we do save during the summer months in terms of water, as during the winter we are having more hot baths and stuff, so we tend to use more water then."*

## Conclusions

Grace anticipates **all the behaviours she and her family trialled throughout the project have now become habits** and they should be able to keep them up going forward without too much effort.

In addition to the project, Grace reckons that the drought announcement and the incredibly hot and dry summer made her **more aware of her water usage** and saving water.

Grace's motivations to save water are generally associated with the **environment** and being eco-friendly, but **saving money** is also a motivating factor, particularly given the rising cost of living.

*"The project made me realise how easy it is for us all to cut down our water usage and make an impact overall. I'm so much more mindful now of my usage than I ever was before."*

BLUE MARBLE

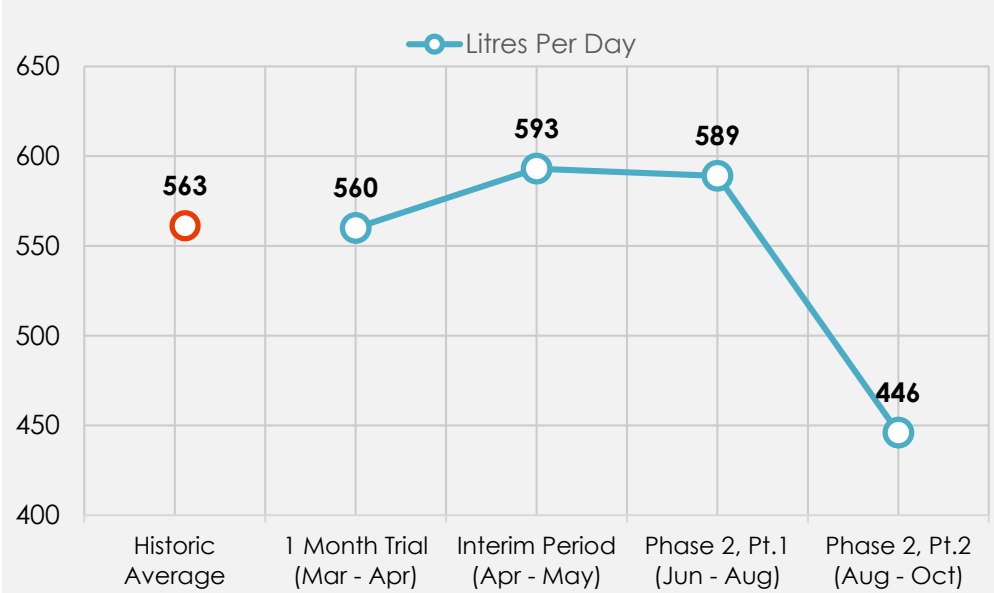
# Case Study – Laura

x = average litres per day

**Laura, 49**

*Responsible Citizen*

- Laura lives in a large house in Wiltshire
- She is married with 4 daughters, 3 of whom are teenagers living at home
- Laura describes her household as chaotic – they both work full time and their daughters are busy with school, exams and extracurriculars




## 1 Month Trial

560

-3 v historic average

- Laura was quick to admit that perhaps with a busy household there was some complacency when it comes to being careful with water
- During the trial, the household felt they did their best to really embrace the new behaviours
- Laura was shocked to hear her average readings – if she had seen this data at the time, she might have been motivated to be more careful

## Interim Period

593

+33 v 1 Month Trial

- Whilst generally trying to keep showers shorter remained, the household did become less strict when trying to save water
- It came to light that some behaviours just wouldn't work for them e.g. flushing the loo
- Convenience took precedence over water saving when it came to washing routines

## 5 Month Trial

**Jun -Aug**

589

-4 v Jun-Aug

**Aug -Oct**

446

-143 v Jun-Aug

- The family found it easy to pick behaviours back up since relaxing earlier efforts and have really embraced the new way of life
- The hot weather made it difficult as more washing and showering was needed, resulting in only a small reduction in the first half, but they still tried to keep conscious of usage
- Laura pleased to see the big reduction in usage in the second half of the trial and attributes to cooler weather

# Case Study – Laura

## Shower behaviours

**With a large household (many of whom have long hair!) it was tricky to keep the shower time down, but they soon got used to it – motivated both by the environmental benefits and cost saving.**

After some time, shortening the amount of time spent in the shower became easier and something the entire household became invested in doing.

Products such as the eco-showerhead or ShowerBob didn't work for them as the **reduction in pressure made it too difficult to clean sufficiently** and resulted in a longer time in the shower. Laura did however keep the showerhead up in one of her bathrooms, which her husband now uses.

With a large house and household, **multiple timers** would be useful to keep everyone engaged in timing their showers – Laura was strict on the shower times and was sure to mention if someone had taken too long.

For her daughters especially, **environmentally friendly activities feel worthwhile** as it's something that's important to them. Even if it means cutting down on shower time.

Laura now extends her behaviours to outside of the home – work trips etc.

*"I'm not having baths when I'm away which I always used to do. I don't want to waste water at all."*

## Flushing behaviour

**Initially, Laura tried to introduce this but it just didn't stick in a house full of teens!**

During the first month trial, they did try to maintain this behaviour but the girls in particular really didn't like it.

With so much going on and especially during exams, Laura decided it **wasn't something she wanted to enforce** if they really didn't feel comfortable with it.

*"Loo flushing didn't take off in the same way [as the short showers] and I don't think it will."*

## Reusing water

**The tumble drier water was reused often as it was a quick and easy way to collect.**

**Tumble drier water** was used for plants and for the steam iron which she uses for all the household clothes.

For Laura, the **buckets worked really well** too, and have become something she is really keen on. She is intent on finding new ways to collect and use (what would be) wasted water.

*"I've become obsessed with the buckets!! I keep one in the shower and use it to fill the cistern, I kid you not!!"*

# Case Study – Laura

## Coping with the Hot Weather

**The hot weather made some strongly engrained behaviours much harder, but Laura and her family quickly returned to normal once it died down.**

Laura's family found themselves **showering much more regularly** in the hot weather which inevitably used more water. However, they were conscious to only do quick body washes for the additional showers to minimise usage.

Washing also increased significantly, **with bedding, towels and clothes needing to be washed more** regularly. Laura was conscious of this as with such a large household the amount of washing did build up quickly.

However, there was **not much she felt she could do** to get around it, aside from ensuring it was always a full load.

*"Definitely more showers - some short though as just a body refresh not hair as well. Timer still in use for full showers!!!"*

The news of fires in France and seeing the dry fields in the UK really emphasised the water scarcity issue for Laura.

Historically she has been vigilant in watering her garden but in the hot weather she found she was using a lot of water on her garden and felt it was wasteful and decided to give up on her plants.

*"I only watered the flowerbeds once and gave up – it's too much of a waste of water. If I had a water butt I would have carried on."*

## Conclusions

For Laura's entire household, the **water scarcity issue is something they fully engaged with**, and they felt motivated to reduce their usage.

As well as the environmental benefits, the potential to save is appealing and motivating. Though it was great to see water usage going down, bills showed she was using **above average** which further **motivated their efforts**.

As well as **shorter showers** and **reusing water**, Laura focused on **reducing number of washing machine and dishwasher cycles** too, ensuring that loads are always full before turning them on.

*"None of these changes are rocket science, they're easy to implement. If we can do it with a big family of 6 there's no reason other people can't do it as well. Small changes can make a big difference and become second nature."*

BLUE MARBLE

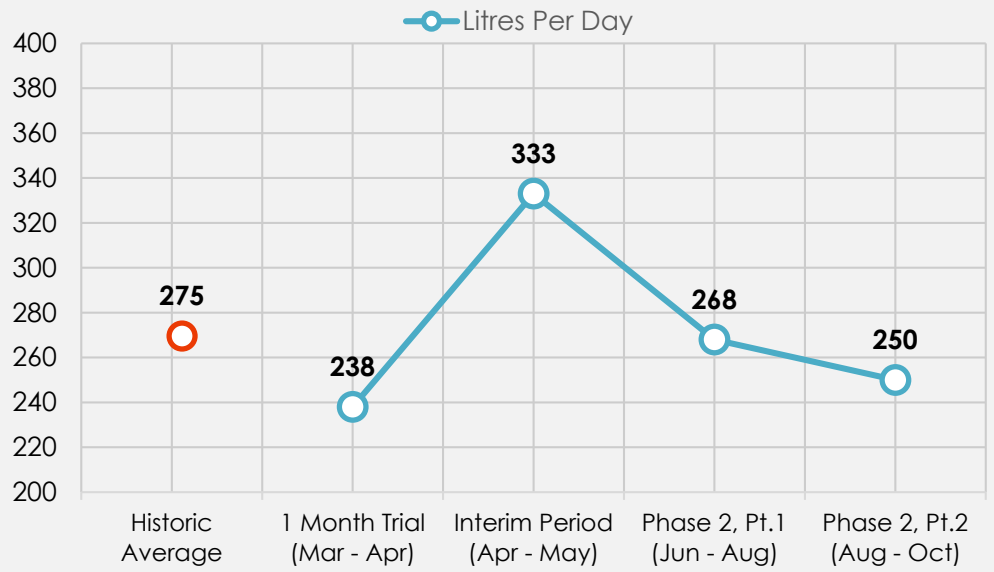
# Case Study – Betty

x = average litres per day

**Betty, 47**

*My World & Cost Conscious*

- Betty lives in a large 6-bed house with her husband
- They have two older children who are away at university, but do spend a lot of time at home in holidays and on weekends
- Betty works as an Academic Manager at a school so has time off during school holidays




## 1 Month Trial

238

-37 v historic average

- Betty considers herself to be **resource conscious** in general; since her children have flown the nest she has been driven mad by their wasteful behaviours e.g. long showers, washing machine on with one item etc.
- Being a water conscious person she felt there **wasn't a lot she could do**; the motorhome was an area of focus though as it uses a lot and an obvious way to save

## Interim Period

333

+95 v 1 Month Trial

- During the interim period, though Betty wasn't actively following the behaviours set in part 1, she was **thinking a lot about her water usage**
- She washed the roof of her motorhome and had the hose running for a long time which made her feel **guilty and wasteful** where she may not have done before
- She struggled to get the rest of the family on board with flushing habits

## 5 Month Trial

Jun -Aug: 268 — -65 v Jun-Aug

Aug -Oct: 250 — -18 v Jun-Aug

- During the first half of the 5-month trial, she had a long holiday away and carried through her water conscious behaviours whilst away
- The household started making a **conscious effort to save water** and Betty continued to pester her family into following the behaviours (though not always successfully!)

BLUE MARBLE

# Case Study – Betty

## Shower behaviours

**Betty was determined to keep showers short and less frequent from the start, whereas for her husband and kids (when home) it took a little more time.**

For the most part, keeping showers short was relatively easy for Betty to adopt and didn't require too much effort.

The **pressure in her house made the ShowerBob impossible to use** as the water would just dribble out. The eco showerhead from the GetWaterFit pack is still installed but they're not ideal and Betty is unsure if she will keep in there – although it has remained there for 7 months now!

With the help of Betty's encouragement (and enforcement!) by the end of the project, the **entire household had made of habit of having shorter showers**. Having less frequent showers however was more difficult, as they all liked to feel fresh and awake in the morning.

Betty can certainly see **4-minute showers a habit for life now** – although she can foresee herself adding an extra minute or so in the cold weather to heat the bathroom up.

*"I think we are all still better on showering, although I did notice when the weather turned I waned an extra minute in the shower."*

## Flushing behaviours

**Betty has made a habit of following the 'yellow mellow' rule but can't say the same for her husband.**

Betty quickly became used to not flushing each time she used the loo and remains doing it.

Her husband, however, was much harder to persuade.

Betty did mention her kids took it to a bit of an extreme!

*"He is home alone all day but still really bad at it - I don't know, he says it's disgusting. I think it's so habitual, I can't break the habit."*

## Reusing water

**As part of an effort to be more conscious generally, Betty found creative ways to reuse water.**

Betty found plenty of opportunities to collect and reuse water e.g. from steaming veg, using leftover flask water for washing up, water from motorhome on plants.

She found the buckets less appealing as they're not as convenient, but would have made more effort to use them during the heatwave.

*"Not using the buckets, just a bit of a shag frankly, not attractive sat on the work surface. Like that they're collapsible but not something... it's just a bit inconvenient."*

# Case Study – Betty

## Coping with the Hot Weather

**Betty was under the false impression that she was under a TUB and therefore avoided using her hosepipe altogether.**

As Betty thought she was **under a TUB she was even more motivated** to be conscious of her water usage throughout the summer.

This translated into **reusing as much water as possible** from her motorhome, as well as refraining from using the hose.

Betty was comfortable with the ban, but wanted to see **more action from water companies** to communicate that they are doing all they can to combat the water resource crisis.

*"I've just searched on Wessex Water and it's not easy to see if we're on a ban at home. I don't mind the ban, I understand the need but sort out the leaks, improve communication and give a timescale for the ban."*

Though Betty was determined to keep her water usage low, the hot weather made it difficult.

She found she was needing to **shower more regularly** to feel fresh and clean.

She found herself washing clothes and bedding more often too.

*"I think because we're all that little bit more sweaty it feels as though a good wash is needed."*

## Conclusions

Though at the start Betty felt she was conscious of her usage in general, she found **this project, hot weather and TUBs made her really consider her water usage** and how she could be less wasteful.

It was a challenge to get her family on board but after some time she did manage to persuade them to slowly change their habits (mainly through sheer persistence).

Betty is now **invested in water efficiency** and can't see her behaviours reverting to what they were before. She adapted her habits to re-use water wherever she could think of and is **willing to put in the extra effort.**

*"I don't think I was horrific at it before, but I think as a family we were bad or could have been better. We're taking it all away as a positive experience."*

BLUE MARBLE

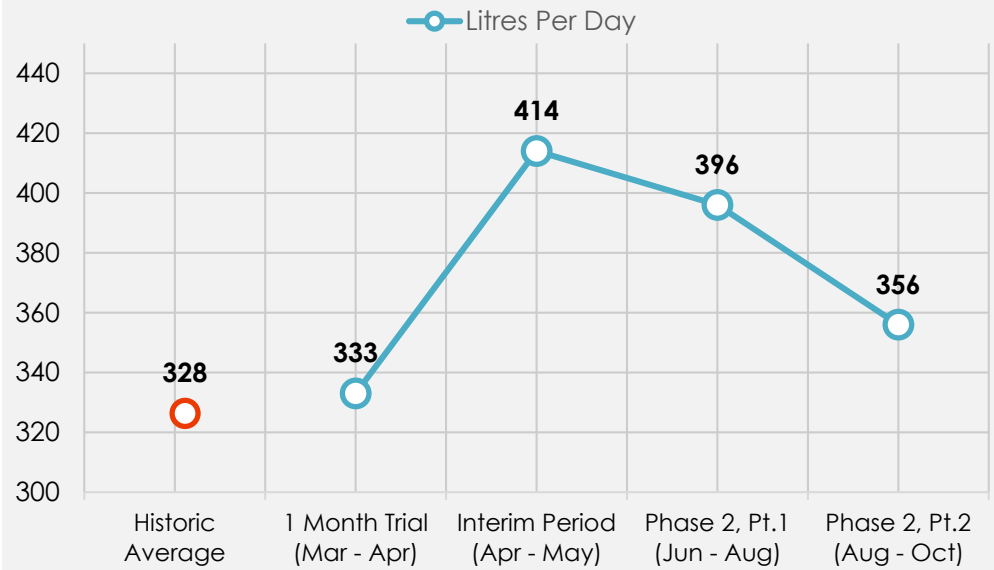
# Case Study – George

x = average litres per day

**George, 38**

*Responsible Citizen**

- George lives in a 4-bed semi in Chippenham with his partner Kelly
- He works from home full-time and so spends quite a lot of time in the house and in the garden
- George and Kelly spend a lot of time in the garden and they like to grow lots of fruit and veg all year round




## 1 Month Trial

333

+5 v historic average

- George felt that they'd both taken on board the new water saving behaviours (especially shorter and less frequent showers and flushing) and was expecting to see results
- George was shocked to see how high his average usage was and felt encouraged to continue with his water saving behaviours

## Interim Period

414

+81 v 1 Month Trial

- George had every intention of being more water conscious following the initial trial, but admitted with life getting busy he had 'taken his foot off the gas' a bit
- However, he was still following the shower timer and flushing habits, so in theory should have been using less than he had historically…

## 5 Month Trial

Jun -Aug: 396 — -18 v interim

Aug -Oct: 356 — -30 v Jun-Aug

- During the first half of this trial, George noticed a leak in the house that he hadn't noticed before and got it fixed – potentially a contributor to the increased usage!
- George set out to be strict on his behaviours as he really wanted to see a reduction. The key thing he tried to do was use less water from the hose and try harder to recycle water to use on his plants
- He managed to decrease his average usage despite filling a paddling pool in the heatwave

*Under age bracket for Responsible Citizen

BLUE MARBLE

# Case Study – George

## Shower behaviours

**From the start, George was determined to keep his shower frequency and time down, and managed to engrain this into his day to day life.**

For George and Kelly, longer daily showers were simply a habit as they hadn't really thought about showering any other way. George loved the timer as it **made him conscious of the time** (and sparked his competitive streak!) He also found he noticed **very little difference in experience** when cutting down the time he took in the shower.

The ShowerBob was particularly helpful as it highlighted for George **how much water he wasted waiting for the water to warm up**. It also helps to see the number of litres as it shows just how much water a shower uses.

Throughout the trial, George referred back to information on how much could be saved on both water and electric/gas bills by shortening the shower. The **monetary comparison really helped to motivate** George and give him a reason to make the effort to cut down.

*"When we had that group meeting, there were some slides about how much water we used and I think the big eye opener for me was even if you go slightly over with ShowerBob (4 mins) you're not using that much water [compared to 10 min shower]."*

## Flushing behaviours

**Though his partner Kelly wasn't on board with the 'yellow mellow' habit, George fully embraced it.**

As someone who works from home, he's absolutely **fine reducing flushing** during the day.

It has become 'the norm' now for him to follow the rule when home alone and for them both to follow the rule during the night.

*"Not flushing in the night is something we've stuck to and will continue to do."*

## Reusing water

**Though George had good intentions, this was a behaviour he struggled with and didn't maintain.**

Using a water butt or leaving buckets out in the rain was easy enough, but **actively collecting water inside to use elsewhere was not something they felt able to do.**

For them it is a high-effort behaviour that didn't fit into their busy lifestyles and didn't feel worthwhile.

*"Buckets are great but I think it's one of those where it's such a change in behaviour.. We've had it in the shower for a while and I don't think we do it every time just because it's so conscious, you have to consciously do it."*

# Case Study – George

## Coping with the Hot Weather

**George and his partner found themselves relaxing on their water saving a during the very hot weather because it felt too difficult to maintain.**

George was quick to admit that across the board his **behaviours slipped in the hot weather**. He found they were both showering more frequently to keep clean and cool down (though they were keeping the showers short).

He also found that the loo flushing was tricky as it left a bad smell in the loo, so they did flush every time during the heatwave.

*"One of those that it's been so hot that it has been a case of needs must over the last few days. Now it has cooled down it'll be business as usual."*

George put up a **paddling pool at the beginning of the summer** for his nephews to use when they visited. However, they found this was kept for a proportion of the summer for their own use too as it was an excellent way to cool down – as much as they tried to maintain it, it **did need to be refilled** every 4-5 days or so.

**Once it cooled down both were keen to get back to their previous behaviours** so the increase was only a momentary blip.

*"Since the heat has died down I think we have reverted much better this time to the new habits we've learnt along this journey and to be honest I think they'll remain with us now."*

When it came to their garden, George did his best to keep his fruit and veg alive and watered during the summer. They **reused water from the paddling pool** to give the garden as much hydration as possible.

## Conclusions

Though George and Kelly were keen to get their usage down from both an environmental and cost perspective, when it came to it **they weren't in a position to make big sacrifices** and go above and beyond to save water.

Easier, day to day habits worked best such as short showers and loo flushing which quickly became second nature for them.

George admitted that his competitive side was a big motivator to change behaviours, so **a smart meter would work well for him** to demonstrate any spikes in usage.

*"I think it has brought water to the forefront of my consciousness. I was pretty blasé about water usage before. I'd not think about leaving the tap on when brushing teeth - I wouldn't do it every time but not worry if I did. We do think more about our water usage. Little things can lead to big differences."*

BLUE MARBLE

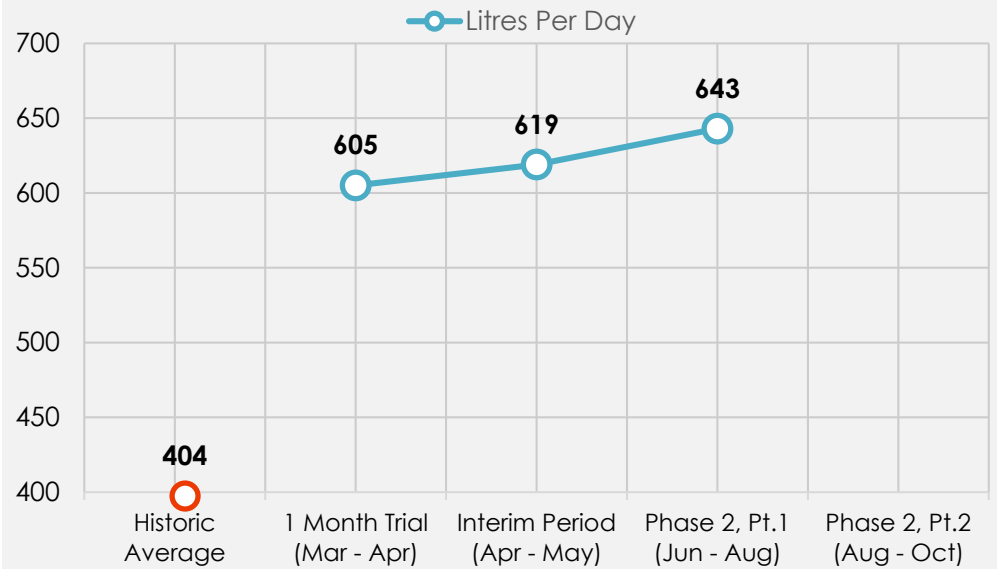
# Case Study – Meg

x = average litres per day

**Meg, 40**

*Responsible Citizen**

- Meg lives in Bath with her partner and 15 year old son
- Meg was pregnant when she began this project and had her little boy Freddie during the project
- She also moved during the project to another home in Bath




## 1 Month Trial

605

+201 v historic average

- During this stage of the project, Meg was heavily pregnant and was home most of the time (i.e. more than usual)
- The water saving behaviours did not come easily to her and she found that she was having to consciously remember to maintain the habits

## Interim Period

619

+14 v 1 Month Trial

- During the interim period, everything changed for Meg as she had her baby
- Some small behaviours did stick and she found they were easy to maintain without having to put too much thought in
- She predicted that all the baby-related things like washing bottles and clothes etc. had increased her water usage overall

## 5 Month Trial

**Jun -Aug** 643

+24 v interim

**Aug -Oct** n/a

- Everyday water saving habits like shorter showers, using the dual flush and reusing tumble drier water became second nature from the start of the project and continued throughout
- Usage going up felt inevitable with the new baby, but behaviour changes would prevent them from sky-rocketing
- Meg moved house in August so we were unable to get a reading for her new home

*Under age bracket for Responsible Citizen

BLUE MARBLE

# Case Study – Meg

## Shower behaviours

**Meg has always showered twice a day so this was a habit that was difficult to break; but she did try to cut the time down.**

Especially whilst pregnant, **Meg wasn't keen on the idea of cutting down her two showers a day**. During her final month of pregnancy, showers were one of the few things she could still do and enjoy!

Reducing the time of her showers was an **easy win** – she could still feel fresh and clean but in a shorter space of time.

Once the baby was born, Meg did in fact cut down on her showers but more because she didn't have time.

The ShowerBob was a helpful tool to reduce the amount of water used through the eco shower head. She has been **strict on her shower timing**, but allows herself one day per week - '**self-care Saturdays**' – where she can go over to wash her hair and shave her legs etc.

As her son got a bit bigger, she was having to bathe him more and more frequently which ended up using more water too. She decided to get a **small baby bath** so that she wasn't having to fill the whole bath tub up each time as he was needing to be bathed so often.

*"I quite liked the ShowerBob – it was visual so you could really see it and take notice."*

## Flushing behaviours

**Meg was unable to get past the 'yuck' factor of the yellow mellow rule but did start using the dual flush.**

Not flushing at night is about as far as she can take this behaviour.

She hadn't thought twice about using the dual flush but Meg now uses it every time she goes.

*"I found out that I have a double flush so I've now started using the small flush and I can notice the difference in the amount of water."*

## Reusing water

**Tumble-dryer water was an easy way to re-use for Meg as the water is already collected.**

As she was doing so much washing with her newborn, the tumble-dryer has been a good source of excess water to use on her plants.

She also uses water from her dog's bowl on her garden every time she refills it.

*"I didn't water the garden much in the hot weather but I was tipping water from the condenser onto it."*

# Case Study – Meg

## Coping with the Hot Weather

**For the most part, Meg kept inside with her newborn during the hot weather so didn't see much of a change in her water usage**

Having a new baby, Meg spent **most of the hot weather inside with fans** on to prevent him from overheating. As he is so young, there is nothing to cool him down if he goes outside in the hot weather.

In terms of her garden, Meg did make an effort to use collected water for her plants (as well as watering where needed).

During the very hot weather however, **she didn't water as it felt pointless** and a lot of effort for plants that likely wouldn't fare very well anyway.

*"I basically didn't go outside. It was too hot with the baby… I didn't water the garden like I thought I would because I couldn't be bothered and didn't want to burn [damage] the plants."*

## Moving house

Meg moved house during the project and found she was using a lot more water than she normally would.

Mostly she was cleaning items before they were packed away, cleaning the house, washing furniture, clearing up outside etc.

*"We are moving in the next two weeks so actually we are using a lot more water. Washing and cleaning the house and items before they go into boxes."*

## Conclusions

During this project **Meg went through lots of changes** with having a baby and moving house.

With all else going on, she did manage to **maintain some behaviours**, such as cutting down her time in the shower, with the help of devices such as the ShowerBob. But **with other things taking priority, it was only the simpler behaviours that she was able to maintain.**

Talking about water resource within the project itself, Meg has become **more aware of the need to preserve water** and has adopted small behaviour changes in her every day life to reduce the amount of water wasted when carrying out activities.

*"I'm more aware of the amount of water we're using and I think about it which I never used to. Lots of little ways to save, there are probably so many ways that I don't even know. I'm pleased I'm doing the little things."*

BLUE MARBLE

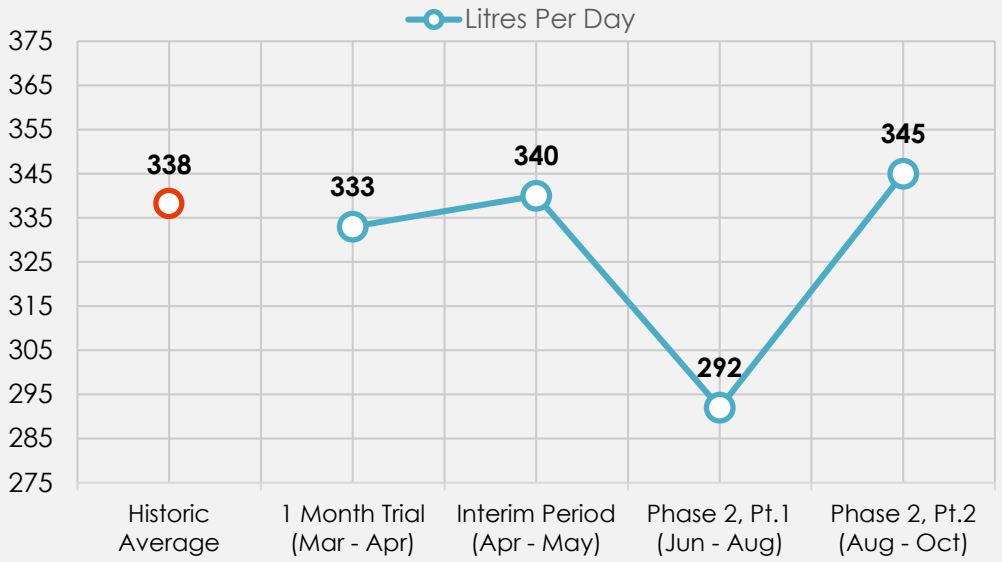
# Case Study – Tamara

x = average litres per day

**Tamara, 37**

***Responsible Citizen****

- Tamara lives in Bath with her husband, Joe, and three kids, aged 9 (twins) and 6
- They have a 3 bed, semi detached house with one bathroom and a large back and small front garden
- Tamara works in music education and as a councillor
- She is a keen gardener and environmentally friendly




## 1 Month Trial

338

-5 v historic average

- The 1 Month Trial made Tamara and her family a lot more conscious of how they wasted water:
  - Leaving tap running when brushing teeth
  - Long showers / having baths
  - Flushing the toilet each time
- Despite their best efforts they only saw a very moderate reduction in usage during this period – as they already have low water use for a 5 person HH

## Interim Period

340

+7 v 1 Month Trial

- During the interim period, Tamara told us that they had tried to keep up all of the water saving behaviours
- Despite this their usage crept up slightly between the 1 Month Trial and Phase 2, but only very moderately

## 5 Month Trial

**Jun -Aug**

292

-48 v interim

**Aug -Oct**

345

+53 v Jun-Aug

- Tamara was surprised that her water usage dropped by a significant amount during June and August as she felt she had been using a lot more water in the garden as a result of the heatwave. But, Tamara's family had been away on holiday for a period between June and August
- In August, their tap water came out cloudy, so they had to run the tap for 40 mins until it went clear. They re-used the water filling their neighbour's water butts

**Under age bracket for Responsible Citizen*

# Case Study – Tamara

## Shower behaviours

**Tamara struggled to reduce her shower times to under 4 minutes, both practically and psychologically** – she found it difficult to do everything she'd usually do in under 4 minutes and told us that showers are her personal relaxation and 'luxury time'.

**Tamara did not get used to having shorter showers all the time, so as a compromise followed a version of the 5-2 shower diet**, having mostly short showers and at times a longer shower.

**Tamara found the ShowerBob quite stressful at first**, particularly seeing the numbers increasing and the lights changing colour. **Tamara's husband, Joe, finds it easy to keep under 4 minutes – so Tamara 'trades extra minutes' with Joe so she can have a longer shower.**

By comparison, **Tamara's children enjoyed ShowerBob.** Although they were already competing to have quick showers with the sand timer, the ShowerBob heightened the competition and led to shorter shower times.

Tamara's family did not completely cut out baths – after being shown information in the first stages of research that a small bath uses less water than a 10 minute shower, Tamara told us that occasionally a few of them will share a half full bath.

*"I found with Bob that my showers became a bit more stressful."*

## Flushing behaviours

**Tamara was not keen to start the yellow mellow behaviour, with only one toilet between 5 and not wanting it to get smelly - but by the end of the project this behaviour had stuck.**

It was difficult instilling this behaviour into her children – so Tamara put a sign by the toilet so they did not forget.

**Tamara did not flush the toilet when guests came around, but rather informed them of the project** and the behaviours they were trying.

*"It took at bit longer to get it started and make it a habit – so we put a little sign by the loo with the rhyme so kids didn't forget."*

## Reusing water

**Tamara struggled to re-use water in the house as she found it impractical, especially in a rush.**

The collapsible buckets helped Tamara re-use water during the summer months – **but by the end of the project the buckets were being used as storage, such as for tools in their shed.**

When it came to re-using water from their paddling pool, Tamara was very vigilant.

*"All these things are just a shift in behaviour, some of these shifts are really easy to make quickly, whilst some are more practically difficult, and less easy and less appealing when you're short on time."*

# Case Study – Tamara

## Coping with the Hot Weather

**During the hot weather, Tamara noticed that her family's water usage behaviours had changed and they were using more water than usual**

**Tamara noticed that her children needed showers a lot more frequently as they were hot and sweaty from summer activities.**

Tamara and Joe also bought a paddling pool as they felt that the hose alone was enough to cool everyone down in the extreme heat.

Over the summer, **they filled the paddling pool three times – but each time completely re-used the water from the pool to water their garden.** To ensure none went to waste, Tamara also watered her elderly neighbours garden with the re-used water.

Tamara is a keen gardener – she has planted specific plants for the different areas of her garden. For example, **her front garden is south facing, hot, and dry, so she selected drought resistant plants for this area. As a result, she did not have to water this area very much during the summer** for the plants to survive and thrive, thus saving her water.

*"In the warm weather the children are having more showers – often one each per day, whereas in the winter it's every other day. They have been hot and sweaty from end of term activities like sports day and needing to cool off before bed."*

*"We did end up having to get the paddling pool out because it was just so hot, and when it's that hot, it's the only way you can cool down realistically."*

Tamara also selectively watered the plants she knew required more water than others in order to survive, whilst also leaving the lawn to go brown.

During the research, Tamara bought a meter that indicates how moist the soil of her potted plants is. This was really helpful in saving water as it told her which plants needed water and which ones could wait.

## Conclusions

Overall, **Tamara found the project pushed her and her family to try different water usage behaviours and showed them where they could make water savings** at home and in the garden.

Despite admitting to facing certain challenges in changing her water behaviours during the project, **Tamara never felt she was having to make sacrifices.**

Tamara also found **the information shown during the focus groups particularly enlightening** – from this she could work out which of her family's behaviours used the most water and decide where they could make the most effective cutbacks to save water.

*"I think it's been more for us about adjusting our mindset. Thinking like these are the small changes we can make, now let's see what impact they have."*

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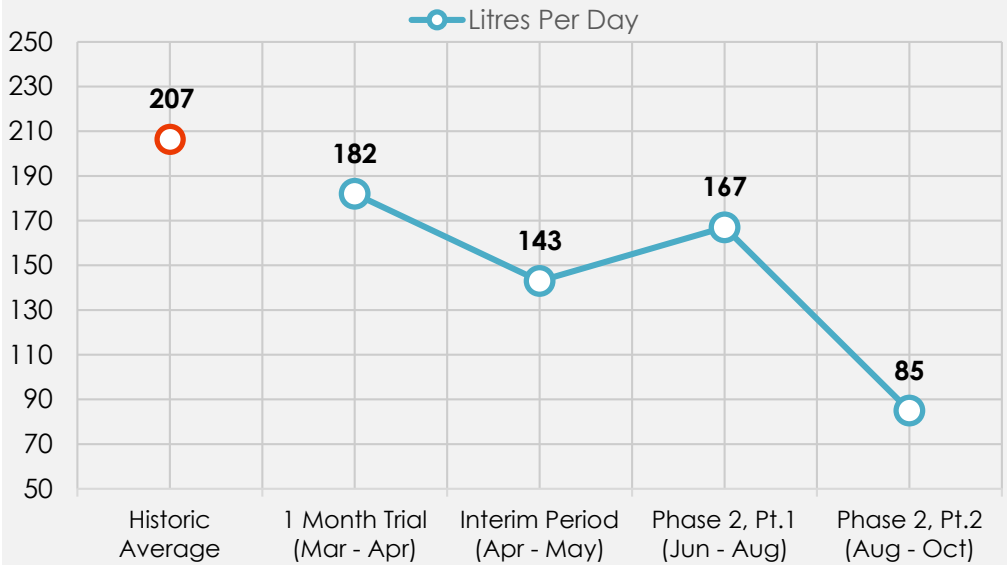
# Case Study – Gillian

x = average litres per day

**Gillian, 71**

*Closed World View**

- Gillian lives just outside Poole with her dog. She has four grandchildren whom she regularly looks after
- Gillian is retired and used to be a social worker and a nursery nurse
- She lives in a 3 bedroom, detached bungalow with front and back garden and garage
- Gillian likes to garden and is a sportscar enthusiast, taking a lot of pride in her Mazda MX-5




## 1 Month Trial

182

-25 v historic average

- Gillian found some behaviours harder to adopt than others, particularly cutting out baths / taking showers due to her medical condition (arthritis)
- Gillian told us that the trial made her far more water conscious – before she would never really think about her water usage whereas now water resource is a regular topic of conversation with friends and family

## Interim Period

143

-39 v 1 Month Trial

- During the interim period, Gillian continued with the water saving behaviours that she had been doing during the 1 Month Trial
- As a result, her daily usage saw a further reduction during the interim period

## 5 Month Trial

Jun -Aug: 167

+24 v interim

Aug -Oct: 85

-82 v Jun-Aug

- In the first half of the 5 Month trial, Gillian reported using a lot more water in her garden during the heatwave
- By the second half of the 5 Month Trial, Gillian had given up trying to keep her lawn and garden green – it was taking too much water and time with little to show for it. She therefore put herself under a self-imposed TUB
- By reducing her water usage in the garden, Gillian cut her water usage down by half

*Over age bracket for Closed World View

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# Case Study – Gillian

## Shower behaviours

**Gillian prefers to take baths as soaking in warm water helps with her arthritis, particularly when the weather is cold.**

Instead of switching to showers, during the 1 Month Trial Gillian simply cut down the amount of water she used to fill the baths.

After starting the 5 Month Trial, **Gillian tried to switch from baths to showers in order to save even more water – the warm weather during the summer helped her to achieve this as it improved her arthritis.**

*"I've been able to showers rather than baths because in the hot weather my arthritis is better so I don't feel the need to soak in a bath."*

By the middle of the 5 Month trail, Gillian was having 1 half-filled bath a week and showering the other days. Using the digital shower timer, Gillian kept her showers to under 4 minutes – and found this easy to do on a practical level.

By the end of the project, **Gillian was still following the same pattern of behaviour**, even though the weather had cooled down significantly.

Though baths are tempting with her arthritis when it's cold, Gillian told us that she was still managing just 1 bath a week in order to save water.

*"My biggest change is I'm now mostly having showers. I've only had a bath twice since talking to you last – honestly I'm totally ok with that."*

## Flushing behaviours

**Gillian was already doing this behaviour from time to time prior to the 1 Month Trial.**

Gillian's main motivation in doing this concerned **saving money**, but also not wasting water flushing each time when she knows it's not strictly necessary.

By the end of the 5 Month trial Gillian was reusing water from her baths and shower to flush the toilet – she had noticed that she was having to **use more chemicals** to keep the toilet stain-free. So she started flushing more frequently, but only using re-cycled water.

*"I live on my own so I know don't have to pull the chain every time I go to the toilet."*

## Reusing water

**Gillian initially struggled to re-use water but the buckets helped her to change habits.**

It was only during 5 Month Trial – after we had sent her the collapsible buckets to use that Gillian started re-using water, mainly from her showers/baths to flush her toilet more frequently.

## Gillian's Car

**Gillian used to wash her car twice a week before the trial.**

Gillian is a sports car enthusiast and takes great pride in keeping her Mazda MX-5 clean and shiny.

To save water and time, she now gets a valet service once a month – which keeps her car shiny and clean for longer.

# Case Study – Gillian

## Coping with the Hot Weather

**At the beginning of summer Gillian was using lots of water to try and keep her garden alive – with little to show for it. Eventually she stopped using the hosepipe altogether in the spirit of saving water.**

During the first part of the 5 Month Trial, Gillian found herself having to **water her garden a great deal more** with the extremely hot weather. Though she has a few water butts, these quickly ran dry in early July.

Initially, Gillian was trying to keep her grass green by using a sprinkler. In July she also had a specialised **water conserver treatment** called 'Oasis' applied to her lawn by a gardening company. She hoped this would reduce the amount of water she'd need to put on the lawn to keep it green.

*"I've given in this week and ended up having to have the sprinkler on in the garden as my grass is now brown."*

But, despite her best efforts, it was simply too hot and dry to keep her lawn green and all of her plants alive.

By the middle of the 5 Month Trial, Gillian had **stopped watering her lawn and her garden as she had heard about water resource issues and hosepipe bans** in the news. Realising how much water she was using in the garden with little to show for it, Gillian thought the right thing to do was to conserve water by putting herself under a self-imposed hosepipe ban.

*"I've heard Southern Water has announced a hosepipe ban, and as far as I'm concerned I've already stopped watering the garden. When the water butt is empty the plants will have to suffer. I've not bought any plants that I would usually buy in the summer as we've all got to take responsibility to help conserve water."*

## Conclusions

Reflecting on the project, **Gillian thinks she is far more water conscious now than she was at the beginning.**

She told us that **now she is always questioning how much water she is using** – and whether she really needs to be using that much.

**Gillian's main motivation throughout the project has been in terms of saving money**, however environmental factors also play a role in her water consciousness.

*"The key thing I've learnt is that often we don't need to use the amount of water that we do. Often we just turn the tap on and just don't think about it as money – and it is money. If we were educated a bit more about it, if water companies actually put money signs in front of people then it might change a bit."*

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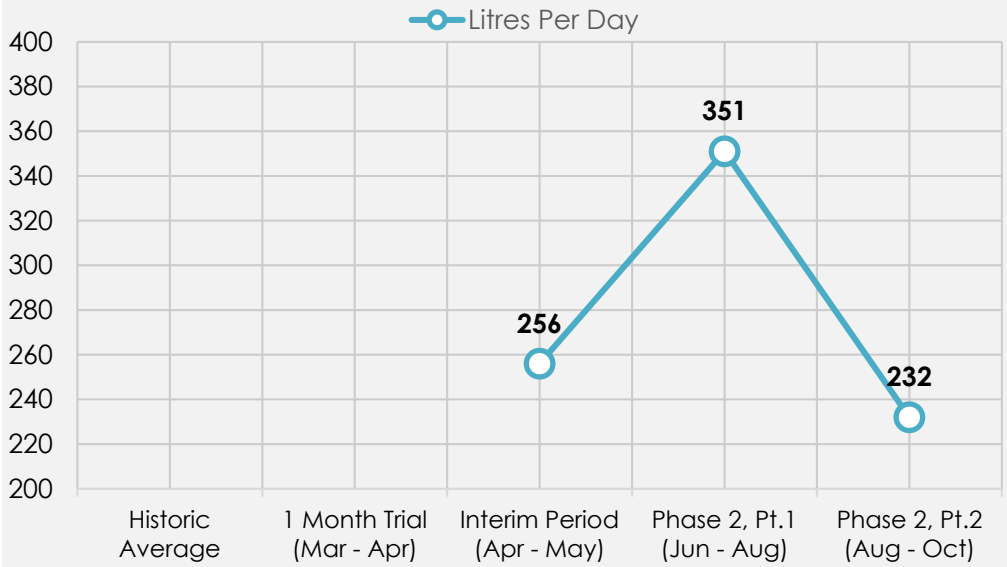
# Case Study – Kevin and Susan

x = average litres per day

## Kevin and Susan, 70

*My World & Cost Conscious*

- Kevin and Susan live in Corfe Mullen with their dog and two cats
- They have 5 children, all of whom have left home, and 7 grandchildren, who visit regularly
- They live in a 4 bedroom house with an upstairs bathroom and shower room
- They have a moderately sized garden and Kevin like to grow fruit and veg. Susan is out a lot with friends




## 1 Month Trial

n/a

**n/a** v historic average

- Kevin and Susan tried a few of the water saving tasks and told us they were moderately successful:
  - Re-using water
  - Shorter shower times
- However, they ruled out trying other saving tasks, mainly the "If it's yellow, let it mellow…" task
- **NB: we were unable to read Kevin and Susan's meter for the 1 Month Trial**

## Interim Period

256

**n/a** v 1 Month Trial

- Following the interim period, Kevin and Susan reported that they were still far more water conscious as a result of the initial 1 Month Trial
- They had continued with the behaviours they had found relatively easy to adopt in the 1 Month Trial

## 5 Month Trial

**Jun -Aug** 351 **+96** v interim

**Aug -Oct** 232 **-119** v Jun-Aug

- During the first half of the 5 Month Trial, Kevin and Susan used a lot more water than usual due to the extreme weather
- Toward the second half, they cut down on their water usage in the garden as they had heard about water resource issues

# Case Study – Kevin and Susan

## Shower behaviours

**Susan really struggled to reduce her shower times to under 4 minutes on a practical basis – she found it difficult to do everything she'd usually do in under 4 minutes.**

Susan told us that she did try to shorten her showers and believed she was successful in this.

Kevin on the other hand, found showering under 4 minutes quite easy.

**Kevin also found flannel washes an easy behaviour** to adopt – when he was growing up he used to do this a lot.

Kevin and Susan said that their shower behaviours changed a lot in the hot weather – they were showering around twice a day to both clean off the day's sweat as well as to cool down in the evening before bed.

*"It was absolutely impossible [to shower under 4 minutes] if washing my hair or shaving. If found it really hard – not sure how people do manage to be honest."*

*"I've always done [flannel washes] since I was small – back in the '60s I used to have a bath on the weekend and then flannel wash during the week."*

However they did not feel like they were wasting too much water as each shower was far quicker than usual and they'd jump without waiting for it to heat up.

## Flushing behaviours

**Kevin and Susan did not attempt the "yellow mellow" behaviour as they thought it unclean, unsightly, and unseemly.**

Susan did try this behaviour at night time, but still felt uncomfortable doing so.

Instead they started using the small button on their dual-flush toilet in attempt to save water.

*"We both agreed that we didn't want to do that. We don't like to leave it in there, with lots of family coming and going. It's rude to expect them to use the toilet and see other people's wee and toilet paper."*

## Reusing water

**Kevin and Susan have several large water butts which they use to water their garden.**

In the summer, they put up a **small paddling pool** for their grandchildren several times, but managed to re-use some of the water on their garden.

They also **have a hot tub, which they did not fill as regularly as usual, mainly to save money on energy**. Throughout the trials, Kevin re-used the water from the hot tub on the garden as much as possible before re-filling.

Kevin used the collapsible buckets to collect rain water as well as grey water from the kitchen. Both Kevin and Susan did not see the need for the buckets to be collapsible and so small – they thought they **could have just used regular buckets** to collect and re-use water from the kitchen.

# Case Study – Kevin and Susan

## Coping with the Hot Weather

**During the summer, Kevin and Susan admitted to struggling to save water as their behaviours and habits changed with the hot weather.**

Despite having **several water butts**, with the extremely hot and dry weather these **ran out early in the summer** and never fully refilled until the autumn. Kevin was forced to keep his crop of fruit and veg alive and his garden green by using the hose instead – but he did not water the lawn.

With Kevin and Susan's grandchildren coming round frequently during the summer holidays, they put up a **small paddling pool** and tried to make the water last for as long as possible and re-use it where possible.

Throughout the hot spell, they found themselves using a lot more water, particularly in keeping their grandchildren cool and the garden alive.

After hearing in the news about the severe state of water resource across the south of England, **Kevin and Susan told us they felt guilty for all the water they had been using**.

In response, they cut down how frequently they watered the garden and did not fill the paddling pool for several weeks. Kevin and Susan felt like they **had to do their bit in conversing water** when resources were so low.

*"It has been a difficult week to save water as we have had temperatures rising to over 30 degrees."*

*"We started the week off with warm, sunny weather which peaked on Wednesday where our water meter must have worked overtime as we had to fill up he paddling pool, a baby bath, and a foot bath to try and keep the grandchildren cool. Then they all had showers afterwards! The garden also benefited from a few long sessions with the garden hose."*

## Conclusions

**Kevin and Susan both think they have become a lot more conscious of the water they use, not only as a result of participating in the project but also because of the extremely hot and dry weather this summer.**

They believe that the behaviours they have implemented during the project have now become habits and will persist into the future.

*"We are more water aware and being more water efficient. We didn't give it much thought before, but now we do. Before the project we'd just turn the tap on and not think about it. But with climate change and the project, we are now far more aware."*

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# Appendix

Photo by Filip Zrnzevic on Unsplash

Photo by Hasan Almasi on Unsplash

# Behaviour change trial: identifying behaviours to promote

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# Once behaviour change was trialed, it was felt to be less daunting than expected

**Initial reaction to adopting new water usage behaviours was met with trepidation:**

- **Concerns that sacrifices would have to be made**
  - In terms of **hygiene** e.g. skipping showers or flushing the loo less
  - In terms of **time** e.g. collecting water to use elsewhere
  - In terms of **effort** e.g. collecting water to use elsewhere, actively thinking about water use generally
- **Change in routine can be disruptive** to the household esp. for those with children or guests
- For some, behaviours such as reducing loo flushing felt so alien that they were reluctant to even attempt them; in these scenarios, customers may need a bit more guidance and help to overcome the barriers

**However, in reality most were pleasantly surprised at how easy it was to adapt to these new behaviours and incorporate them into their day to day lives**

**Often the anticipated 'sacrifices' didn't feel as such, and people found it's possible to get the same result as before with less water e.g. a relaxing shower being cut down from 10 minutes to 4 minutes**

*"It has been a bit of an eye opener, especially how quickly our behaviour changed and how quickly we adapted."*
(Couple, no kids)

# Assessment of 1-month behaviour change trial: in summary

## We asked participants to…

### …reduce the amount of water they use washing themselves

| | Key barriers | Ways to overcome |
|---|---|---|
| Capability barriers | • 'Only use what I need'<br>• The desire to use lots of water for mental wellbeing<br>• Unaware what to do to save water | • Need specific instructions so customers aware of how to reduce water use when washing<br>• Messaging to build awareness and 'norms' |
| Opportunity barriers | • Lack of practical help/ideas/tips | |
| Motivation barriers | • Need for hygiene and cleanliness<br>• Need a rationale: cost, environment etc | |

### …try and collect water that would normally get wasted and reuse it elsewhere

| | Key barriers | Ways to overcome |
|---|---|---|
| Capability barriers | • 'I'm doing all I can'<br>• Unaware what to do to save water | • Better understanding of water wasted when tap is left running<br>• Better understanding of reasons not to waste water<br>• Potential for (branded) jug or watering can as practical means for reuse<br>• Specific guidance: only so much people can do on their own |
| Opportunity barriers | • Lack of concern re water cost<br>• Lack of practical help/ideas/tips<br>• Busy, erratic home life | |
| Motivation barriers | • Lack idea of possible cost savings<br>• Lack idea of how much water used/whether typical or not<br>• Need for rationale: cost, environment etc | |

### …to reduce the amount of times they flushed the toilet

| | Key barriers | Ways to overcome |
|---|---|---|
| Capability barriers | • 'I'm doing all I can'<br>• Unaware what to do to save water | • Familiarise with 'new' behaviour<br>• Better idea of how much water flushes use<br>• Explain why saving via less flushing is worth the drawbacks<br>• Cistern bag a good option for those unwilling to adopt 'mellow yellow'<br>• Educating that 'mellow yellow' is adopted by others and therefore not unhygienic or 'impolite' |
| Opportunity barriers | • Lack of concern re water cost<br>• Lack of practical help/ideas/tips | |
| Motivation barriers | • Lack idea of possible cost savings<br>• Lack idea of how much water used<br>• Need for rationale: cost, environment etc | |

# Assessment of the behaviour change trial – Reduce personal washing time/amount

**We asked participants to reduce the amount of water they use washing themselves – either by reducing time spent washing or number of washes**

## Effort or sacrifice required

- Showers are habitual, so this feels like a sacrifice and big change for some
  - Especially as it's related to hygiene
  - Used as a way to wake yourself up, feel fresh (or in winter, to warm up)
  - If baths are taken for physical or mental health, cutting them out feels like a sacrifice; however reducing amount of water feels doable
- Hard to know what 'shorter' is without a way to measure
- Ongoing effort – need to keep remembering to do it and easy to slip back to old ways
- In reality, many felt it would be harder/more effort than it actually was
- **Harder for:** sporty types; jobs with physical labour; long hair; shaving etc.

## Gain

- Opened eyes up to flannel washing – some for selves, some for kids
- Many realising they can easily cut down shower time if they tried – most showers can be done in 4 minutes
- Less time in the shower means time in bed! Saves a bit more time in your life/morning
- Lathering, washing hair, shaved their legs with the shower off is a low effort change

## Reduce personal washing time/amount

| | Key barriers | Ways to overcome |
|---|---|---|
| **Capability barriers (skills, ability)** | • 'Only use what I need' mentality<br>• The desire to use lots of water for mental wellbeing<br>• Don't know what can do to save water | • Need clear and specific instructions (hacks?) so customers aware of what they can do to reduce water consumption when washing<br>• Messaging to build awareness and 'norms' |
| **Opportunity barriers (time, money, context)** | • Lack of practical help/ideas/tips | |
| **Motivation barriers (desire, obligation)** | • Need for hygiene and cleanliness<br>• Need for rationale: cost, environment etc | |

**Specific behaviour recommendations work best here – if you're not sure exactly what to do it's much easier to ignore/avoid. More rewarding to know you've achieved a specific goal.**

# Assessment of the behaviour change trial – Reusing water

**We asked participants to try and collect water that would normally get wasted (e.g. when waiting for tap to get hot/cold or from tumble dryer) and reuse it elsewhere**

## Effort or sacrifice required

- Ongoing effort – need to consciously think about doing this
- Physical element which is quite difficult to overcome; as water collection builds up it becomes heavy and difficult to move around and store, and large vessels often don't fit under tap
- A lot of people were unsure what to use it for
  - House plants don't need much water
  - Not that helpful in rainy weather
  - Need specific examples to help
- Often remember when tap is already running, by the time you've found a vessel it's too late

## Gain

- Good to keep kettle topped up
  - BUT end up always boiling a full kettle
- Some found it easy to have a jug/watering can/bottle on hand to fill
- Some using tumble dryer water – felt like a lot of water coming out of this: an easy win
- Reusing cooking water from pasta or vegetables – can be nutritious/has health benefits

## Reusing water

| | Key barriers | Ways to overcome |
|---|---|---|
| **Capability barriers (skills, ability)** | • 'I'm doing all I can' mentality<br>• Don't know what can do to save water | • Better understanding of how much water can be wasted when tap is left running<br>• Better understanding of the reasons why it's important not to waste water<br>• Might need some sort of branded jug or watering can to help encourage this behaviour<br>• There is only so much people can do on their own – need specific guidance |
| **Opportunity barriers (time, money, context)** | • Lack of concern about water cost<br>• Lack of practical help/ideas/tips<br>• Busy, erratic home life | |
| **Motivation barriers (desire, obligation)** | • Lack of understanding of possible cost savings<br>• Lack of understanding about how much water used/whether this is typical or not<br>• Need for rationale: cost, environment etc | |

# Assessment of the behaviour change trial – Reducing flushing

**We asked participants to reduce the amount of times they flushed the toilet – "If it's yellow let it mellow, if it's brown flush it down"**

## Effort or sacrifice required

- Divisive – a few were on board with trying this, but many were reluctant
- 'Yuck factor' – for some this felt unpleasant/unhygienic
- Concerns about it looking unsightly and making your toilet smell
- Some faced a dilemma in that in contradicted what they were teaching their young children when it comes to toilet etiquette
- Feels socially unacceptable if you have guests coming round – don't want them to have to use an 'unclean' toilet
- Worry about staining the toilet esp. those with limescale or hard water – compensating with more bleach
- Little effort for those who are already doing it – those at home a lot alone, those who have kids who can't reach flush yet, those who don't flush at night to avoid waking up others

## Gain

- Quite a revelation for some – once they were doing it, wasn't as bad as they thought
- Some found workarounds: doing it when they were home alone, communicating with others who would use the toilet just after or keeping the toilet lid closed
- Seeing or thinking about how much water you're saving every day (would be useful to inform customers on how much water is used with each flush)
- Made people more strict on using small flush on dual flush toilets
- For some, gain (in terms of water saving) outweighed the effort/sacrifice required

## Reducing flushing

| | Key barriers | Ways to overcome |
|---|---|---|
| **Capability barriers (skills, ability)** | • 'I'm doing all I can' mentality<br>• Don't know what can do to save water | • Introduction to behaviour they hadn't necessarily though of before<br>• Better understanding of how much water used when flushing<br>• Explain why saving water when flushing is worth the drawbacks<br>• Cistern bag a good option for those who are unwilling to adopt 'mellow yellow' idea<br>• Educating that this is a behaviour adopted by others and therefore not unhygienic or 'impolite' |
| **Opportunity barriers (time, money, context)** | • Lack of concern about water cost<br>• Lack of practical help/ideas/tips | |
| **Motivation barriers (desire, obligation)** | • Lack of understanding of possible cost savings<br>• Lack of understanding about how much water used<br>• Need for rationale: cost, environment etc | |

Photo by Hasan Almasi on Unsplash

# Smart meters

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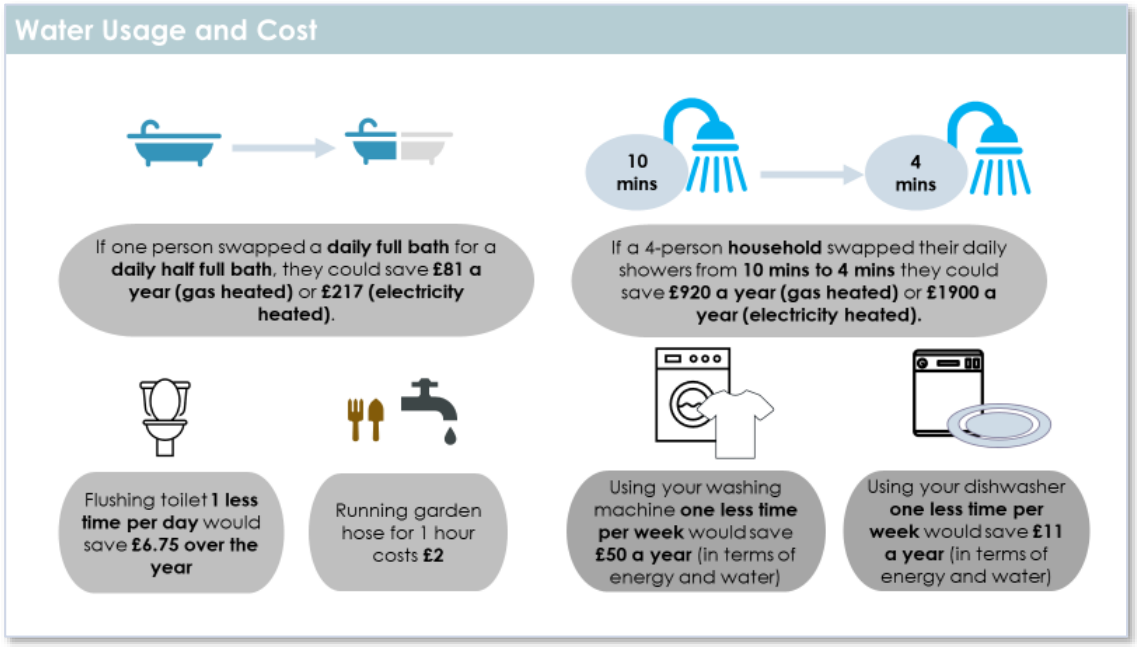
# Combining possible energy savings and water savings has the potential to be highly impactful

**In the qualitative workshops, we presented customers with potential savings they could make on their energy and water bills over the course of a year if they were to change their behaviours**




**Seeing the potential cost saving that could be made by making relatively small changes was met with surprise and shock**

**Statistics that highlight how quickly cost savings add up are successful in motivating and encouraging small but impactful behaviour change**


**Of panellists would be motivated to read a smart meter display if it would help them to save money on their energy bill by reducing hot water use (the third strongest motivation)**

NB: specific statistics shown in the stimulus have been revised and reviewed since fieldwork (statistics for reducing shower time are: £650 a year (gas heated) and £1450 a year (electricity heated)

# Meter data could be helpful in educating customers about their usage

## Customers are very interested to know more about how much water they're using:

- It's unfamiliar territory for most; even for those who exhibited some water saving behaviours, water usage in volumes isn't well understood
- Most were unable to make an approximate guess as to how much their household uses on average each day

## We presented average daily usage per household to participants, based on historic meter reads:

- Most were shocked to hear how much they used each day and said that it seemed like a lot of water
- However, customers were still unsure how their usage might compare to average usage; even though it sounds like a lot they're unsure if it's more or less than other people

## We found that revealing PCC was very powerful

- Many asked what average usage was so that they could compare it to their usage… specifically comparing with similar HHs is helpful
- When we explained that average PCC was around 140-150L per day, customers calculated how that compared to their household
- **Knowing it was below average immediately provided a sense of relief, knowing it was above fuelled motivation**
- For those whose average usage went down during the fieldwork period, seeing the drop in litres was very motivating

NB: not everyone saw a reduction in their average use despite best efforts (this could be due to the method of data collection in this project)

- This has potential to demoralise customers who have worked hard but are not seeing any benefit – we will explore this further in the next wave

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# Appendix: addressing Ofwat's research principles



| Ofwat standards for high-quality research: | How addressed in this project: |
|---|---|
| Useful and contextualised | This research was run on behalf of Wessex Water but the principle learnings are relevant for the industry as a whole. The project was commissioned to provide an in-depth understanding on two separate but linked issues: what customers want in terms of water efficiency services and smart metering. Specifically, the project will feed into both longer and shorter term plans with the following objectives: supporting WRMP and longer term strategy, informing potential smart meter roll out from 2025, refining current and future water efficiency programmes. |
| Fit for purpose | The research begun with an evidence review to assess what we know already. We then held a qualitative phase with a sample of 20 households to understand barriers to behaviour change when it comes to water efficiency. We held reconvened interviews with all households and asked them to trial water saving interventions in between interviews. We then held co-design workshops with 10 of these households and Wessex Water to explore new ideas for engaging customers in water saving. Finally, we ran a 5-month long behaviour change trial with 8 of our households to put water saving interventions to the test and follow their journeys over a long time-period. |
| Neutrally designed | Our team's extensive experience in designing research stimulus and discussion guides ensured our lines of questioning were neutral and not leading. In particular, the language, stimulus and guides for discussions and tasks were designed iteratively, taking learnings from each stage of the research into account. |
| Inclusive | The samples for all elements of both the qualitative and quantitative fieldwork were recruited to a variety of quotas to ensure we achieved a mix of ages and life stages within the sample.. |
| Continual | Wessex Water to advise |
| Shared in full with others | The research findings are included in this full report for Wessex Water to share as required. |
| Ethical | Blue Marble is a company partner of the MRS. All of its employees abide by the MRS code of conduct and as such all of our research is in line with their ethical standards. |
| Independently assured | Wessex Water to advise |

https://www.ofwat.gov.uk/wp-content/uploads/2022/02/PR24-customer-engagement-policy.pdf

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