

# SRN-DDR-030: Water Resources – Demand (Water Efficiency)

## Enhancement Cost Evidence Case

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from  
**Southern  
Water** 

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# 1. Summary

## 1.1. What is this document about?

Our demand management strategy is a key building block of our long-term Water Resources Management Plan (WRMP) 2024 which is centred around delivering our contributions to long-term targets within the Government's Environment Improvement Plan 2023 (EIP). This requires water companies in England and Wales to contribute to:

- achieving an average per capita consumption (PCC) of 110 litres/head/day (l/h/d) by 2050 under dry year conditions; and
- reducing non-household consumption by 9% by 2037-38 and by 15% by 2049-50 compared to 2019-20.

AMP8 is the first step in a long-term investment plan to achieve the required demand reductions.

Our overall demand management strategy comprises leakage reduction, smart metering, household and non-household demand management activities.

This document provides our representation to Ofwat on our water efficiency demand management (excluding metering and leakage) enhancement investment.

**Ofwat's assessment of our CW8 business plan table and its Draft Determination provided us an allowance of £2.985m. This is insufficient for us to undertake the required household and non-household demand reduction activities required to achieve our contribution towards our WRMP aligned business demand and PCC targets.**

**We require a minimum uplift from Ofwat's DD allowance to £7.574m for water efficiency activities to enable us to achieve our contribution towards our WRMP aligned business demand and PCC targets. There is a risk of us not achieving these targets if we are not funded to do so.**

## 1.2. Ofwat's determination

Our enhancement case for demand management included investment of £21.444m for 2.578MI/d of demand-side improvements delivering benefits in 2025-30 (excl. leakage and metering). This was driven from a combination of home and business audits and a range of water efficiency enabling activities. Ofwat determined that our efficient costs for water efficiency activity would be £2.985m for all water efficiency (T100) activities.

This is insufficient for us to undertake the required activities to achieve our contributions towards our WRMP PCC and business demand targets.

**We submit that Ofwat's approach to cost efficiency for water demand reduction activities is not appropriate and its rationale is not suitably transparent.**

## 2. Response

### 2.1 What did we request?

Our enhancement case for demand management included investment of £21.444m for 2.578MI/d for water efficiency (Demand-side improvements delivering benefits in 2025-30 (excl. leakage, metering and government initiatives)). These benefits were driven largely from home and business audits and a range of water efficiency enabling activities including education, communication campaigns and business customer and retailer initiatives.

### 2.2 What did Ofwat determine?

Ofwat determined that our efficient costs for water efficiency activities would be £2.985m for all water efficiency (T100) activities. Table 1 below summarises the cost challenge placed on the sector for water efficiency activities identified in business plan data table CW8. We had the greatest cost challenge in % terms against the totex assessed.

**Table 1: Ofwat’s DD Water demand cost allowance (£m)**

Company	Totex in business plan - wholesale water (£m)	Totex assessed (£m)	Totex allowed - wholesale water (£m)	Water efficiency cost gap (Allowed-assessed) (£m)	% cost gap (to assessed)
<b>SRN</b>	<b>21.444</b>	<b>21.444</b>	<b>2.985</b>	<b>-18.5</b>	<b>-86%</b>
YKY	32.435	32.435	6.948	-25.5	-79%
SEW	53.661	53.661	13.776	-39.9	-74%
SSC	13.837	13.837	3.914	-9.9	-72%
WSH	15.301	15.301	5.570	-9.7	-64%
BRL	1.324	1.324	0.522	-0.8	-61%
SVE	81.668	19.925	15.984	-3.9	-20%
PRT	5.445	5.445	5.323	-0.1	-2%
NWT	20.502	20.502	20.984	0.5	2%
ANH	21.719	21.719	22.522	0.8	4%
NES	14.526	14.526	15.210	0.7	5%
TMS	54.996	54.996	59.292	4.3	8%
AFW	21.152	21.152	26.494	5.3	25%
WSX	9.163	9.163	11.873	2.7	30%
HDD	0.525	0.525	0.921	0.4	75%
SWB	4.004	4.004	13.556	9.6	239%
SES	0.000	0.000	0.000	0.0	-
<b>Total</b>	<b>371.703</b>	<b>309.960</b>	<b>225.876</b>	<b>-84.084</b>	<b>-27%</b>

Source: <https://www.ofwat.gov.uk/wp-content/uploads/2024/07/PR24-DD-W-Demand-side-Improvements.xlsx>

Ofwat adjusted companies input data and then modelled an allowance used an industry median rate for the sector of £1.158m per Ml/d of assumed water efficiency benefits.

Ofwat then undertook a deep dive on costs for Southern Water, Yorkshire Water and South East Water costs. Ofwat's deep dive assessment on our costs is repeated in Appendix A.

## 2.3 The median unit rate benchmark approach is flawed

Using a sector wide median value benchmark to set cost allowances is flawed and not pragmatic for water efficiency demand reduction activities. Ofwat have not provided any rationale for why its median unit rate multiplied by benefits methodology is appropriate.

**A one-size-fits all approach ignores company-specific circumstances** with companies in very different stages in their journey towards reducing PCC and implementing smart metering. A single median value fails to account for these variations which may disadvantage those companies who are only just starting their smart metering roll-outs compared to those who are much more advanced in their smart metering journey such as Thames Water<sup>1</sup>. Given the data and insights that smart metering provides Thames have been able to target water efficiency activities (e.g., home audits) on specific customers based on data insights on their water use. We expect to be able to leverage data insights to a greater extent following our smart meter roll out to deliver greater benefits in future periods.

**Benchmarking reliably is not possible for demand reduction activities.** Activity cost benchmarks and benefit assumptions are not transparent. Benchmark estimates for similar-sounding activities vary significantly between companies but there is no common activity definition. Unit costs of each activity are not transparent i.e., companies have not been required to submit rate cards with clear activity breakdowns and benefit assumptions.

The variability of what constitutes a 'home visit' or 'home audit' has been observed and documented by a third party report. Artesia Consulting<sup>2</sup> noted that "*visit programmes vary widely across water companies, with various levels of delivery experience, outcomes, approaches, and evaluation*". The Artesia Consulting report highlights the differing levels of interventions that water companies complete during home visits which can vary from a simple conversation with the customer to the supply and installation of water efficiency devices. This raises a fundamental concern about the appropriateness of using a median benchmark. There is a lack of detail and transparency on the constituent parts of each companies' various activities and the assumptions that sit behind the benefits for each of these activities – this does not allow an appropriate efficiency benchmark assessment.

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<sup>1</sup> <https://www.thameswater.co.uk/news/thames-water-surpasses-1-million-smart-meter-installations#:~:text=It%20is%20the%20largest%20smart%20meter%20rollout%20in,33%2C000%20smart%20meters%20will%20be%20deployed%20in%20London>

<sup>2</sup> [https://database.waterwise.org.uk/knowledge-base/water-efficiency-home-visit-enhancement-framework/?mc\\_cid=be2af58733&mc\\_eid=a5682d98b8](https://database.waterwise.org.uk/knowledge-base/water-efficiency-home-visit-enhancement-framework/?mc_cid=be2af58733&mc_eid=a5682d98b8)

There is a lack of objective definition and comparability of demand reduction activities, coupled with commercial confidentiality attaching to company rate cards. Where companies have been unable to benchmark their costs, they should not be penalised (by reducing cost allowances) for not doing so.

**Household and non-household activities are not comparable** - Ofwat make no allowance for unit cost rate differences between household and non-household activities. This is not appropriate as the activities within each are not comparable.

Economic Insights<sup>3</sup> identified that that the costs for delivering water savings can differ based on differing activities and the associated costs that retailers incur. This logic extends into why any benchmarking should, at minimum, consider household and non-household activities separately as even in the subset of non-household activities, the cost for delivering water saving activities differs.

**There is potential for unintended consequences such as stifling innovation** – the MI/d unit rate benchmark signals to companies to not undertake activities where costs are above the median benchmark value. Not undertaking these activities will mean companies are unable to deliver their required contributions to reduce PCC and business demand. More novel and immature initiatives typically start out less cost effective than mature activities that companies have been undertaking for a long time – Ofwat’s median unit rate approach is likely to stifle innovation. Ofwat’s approach does not represent the full benefits for the lifetime of the activity – it only takes a very short-term and narrow view.

As an example, Southern Water’s *business partnership fund* activities are perceived by our peers as sector leading and can provide a model for replication across the sector. Early findings from this initiative have proven to deliver water savings. Our *Business partnership fund* is a first of a kind in the sector and only in its first year for Southern. The costs to benefit ratio is above Ofwat’s median benchmark value but we expect this to improve over time. We are continually refining our approach we have developed a framework to assess whether a potential investment with a business partner will bring water saving benefits as well as encourage changes in behaviour. Other companies are looking to us to build similar business partnership models of their own. We anticipate that through sharing and replication of these ideas across the sector cost per unit of benefit will reduce.

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<sup>3</sup> <https://database.waterwise.org.uk/knowledge-base/options-for-promoting-water-efficiency-in-the-non-household-water-market-april-2022/> - slide 11

## 2.4 Changes since business plan submission

Our October 2023 business plan submission in CW8 indicated an overall demand reduction from water efficiency activities (excluding metering, leakage and government interventions) of 2.578MI/d with an associated cost of £21.44m as shown in Table 2 below.

**Table 2: Southern Water October 2023 CW8 (Demand-side improvements delivering benefits in 2025-30 (excl. leakage and metering))**

Original business plan CW8			
	MI/d	£m/MI/d	£
Home audits	1.18	3.63	4.26
Water efficiency enablers	0.19	63.28	11.83
Water audits - Business	1.18	0.95	1.12
Comms - business	0.04	29.68	1.13
Tariffs - business	0.00		0.28
Partnership funds - business	0.00		1.69
Trials and innovation - business	0.00		1.13
<b>Total</b>	<b>2.58</b>		<b>21.44</b>

Since our business plan submission, we identified an inconsistency with the benefits that were in our WRMP. The current WRMP benefit is marginally lower at 2.391MI/d therefore we have first adjusted the programme to align with our WRMP.

We have also made further adjustments to our benefits based on new information. In addition to the WRMP benefit of 2.391MI/d, we believe through our innovative business partnership fund, we can deliver a further 0.401MI/d benefit bringing the total benefit we aim to deliver to 2.792MI/d. We will discuss how these will be achieved and the associated costs in the following sections.

## 2.5 Our water efficiency programme composition

Ofwat's overall allowance is based on the industry median unit cost (for company led only options) at £1.158m/MI/d multiplied by the reported company led benefit. In our case the benefits submitted in our business plan were estimated to be 2.578MI/d. Ofwat states that it believes *"the model would provide a sufficient allowance in the round to deliver the same proposed reductions in PCC and business demand"*. Our water efficiency demand reductions are driven by our WRMP. Within our WRMP we considered two different scenarios for reducing household demand.

- I. Reducing PCC to 110 l/h/d by 2045 under DYAA conditions
- II. Reducing DYAA PCC to 98l/h/d by 2045

After a careful review of the deliverability risks associated with the more ambitious PCC reduction scenario, our preferred WRMP plan was based on reducing PCC to 110 l/h/d by 2045 under DYAA conditions - the starting point for our demand reduction activities.

Our T100 programme is structured to take household customers through a gradual journey from understanding why they need to change their water habits, to how to use less water and finally to lasting, water-saving behaviour change. Aligning to the objective of the National Framework for Water Resources<sup>4</sup> to reduce water consumption to 110 litres of water per person per day by 2050, our original options analysis identified seven catalysts that were essential to help bring about a consciously water-efficient culture. These are:

- I. Home audits;
- II. Smart meter technology;
- III. Innovative tariffs;
- IV. Communications and marketing;
- V. Education;
- VI. Water efficiency solutions; and
- VII. Government interventions.

Our non-household strategy was developed by identifying activities that are under our control and maximising those with the greatest benefits. We will work with non-household customers in three ways:

- I. in partnership wherever possible;
- II. innovate by trialing new water-saving solutions; and
- III. through agile development principles – testing at small scale and adjusting our approach.

Since the October 2023 business plan submission we have re-optimised our efficient demand reduction programme. This was re-optimised because of new information following our *business partnerships fund* pilot and the focus of Ofwat's Water Efficiency Fund (WEF) on widescale water efficiency behaviour change campaign. Our programme is now focused on the following water efficiency activities:

- Water home audits;
- Business audits;
- Business partnership funds; and
- Education.

These are discussed in turn in the following sections.

### 2.5.1 Water home and business audits

Home audits are recognised and remain a key element of delivering water efficiency programmes across the sector. As noted previously, Artesia Consulting has completed a Water Efficiency Collaborative Fund Project<sup>5</sup> which we and other water companies participated in.

Our collaboration activities with other water companies and the Artesia Consulting study confirmed that home audit activities varied widely, with various levels of delivery experience, and outcomes. In its study,

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<sup>4</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/873100/National\\_Framework\\_for\\_water\\_resources\\_summary.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/873100/National_Framework_for_water_resources_summary.pdf)

<sup>5</sup>[https://database.waterwise.org.uk/knowledge-base/water-efficiency-home-visit-enhancement-framework/?mc\\_cid=be2af58733&mc\\_eid=a5682d98b8](https://database.waterwise.org.uk/knowledge-base/water-efficiency-home-visit-enhancement-framework/?mc_cid=be2af58733&mc_eid=a5682d98b8)



Artesia also highlighted a range of interventions that could be undertaken to maximise water savings from home visits. Ranging from just having a short conversation, to having a conversation, supplying and fitting devices and identifying leaks, the outcome of the visit varies significantly. The report highlights that the “end saving is affected by three key factors:

- I. **Targeting regime:** *which customer groups have been targeted and provided with a visit? For example, in targeting high users they have a larger potential for saving.*
- II. **Type of audit and interventions offered:** *are leaks (usually customer side) identified and fixed as part of the visit? What devices and products are provided and installed? What wider communications, literature-sharing and conversations take place?*
- III. **Add-on factors:** *for example, fixing leakage (customer-side and supply-pipe), metering/smart metering fitting (if they haven't already got one).”<sup>6</sup>*

In a separate report completed by Artesia Consulting<sup>7</sup> references the multiple interventions that are carried out as part of home visits. The same report and references a unit cost rate of £102<sup>8</sup> to complete audits. We have 4 years of home audit data to support the calculation of costs, however the effects of Covid and the cost of living crisis during AMP7 have made it challenging to effectively use data from the earlier years. Therefore, we have used data from the latter part of AMP7 to calculate our unit rate for home audits. Using 2023–24 data, we delivered 13,526 home visits at a cost of £1.522m reducing water consumption by 0.3MI/d.

In our home visits, we discuss the water scarcity challenge and the need for behaviour change with customers. We identify leaks as part of the visit and provide customers with products that we install - at no cost to the customer. We also provided customers with our Affordability Team details if they require financial support.

Our unit rate of £113 per audit is based on 2023–24 outturn data and reflects the quality and multiple interventions that we deliver during the home visits. Our current unit rate is above Ofwat’s benchmarked allowance – comparable to the £102 unit cost rate that was published in an Artesia Consulting report<sup>9</sup> that examined the costs for water demand reduction interventions including home visits.

Our home visits help our customers make water efficient conscious choices and save water and money. In our 2023-24 data, our unit rate includes the fixing leaky loos, and the supply and installation of products such as water efficient shower heads, tap aerators and garden hose spray guns. Multiple interventions are more expensive but also deliver greater water saving benefits. Waterwise identified that switching shower heads can save as much as 150l per shower and fixing a single leaky loo can save between 72,000l to 146,000l of water a year<sup>10</sup> - a large range of benefits.

Business audits are very effective at delivering water savings and despite challenges of market reform we have continued to refine our approach to completing water efficiency audits with business customers (who

<sup>6</sup> [Water Efficiency Home Visit Enhancement Framework – Database WW \(waterwise.org.uk\)](#) slide 18.

<sup>7</sup> <https://www.water.org.uk/wp-content/uploads/2019/12/Water-UK-Research-on-reducing-water-use.pdf> page 2

<sup>8</sup> <https://www.water.org.uk/wp-content/uploads/2019/12/Water-UK-Research-on-reducing-water-use.pdf> page 21

<sup>9</sup> <https://www.water.org.uk/wp-content/uploads/2019/12/Water-UK-Research-on-reducing-water-use.pdf> - page 21)

<sup>10</sup> <https://www.waterwise.org.uk/save-water/>

are managed through retailers). We intend to continue our work with both retailers and where possible, business customers directly to deliver water savings.

Since our business plan submission in October 2023, we have worked with retailers and business customers directly to complete audits ranging from large football stadiums delivering 0.04MI/d at a cost of █████, to office buildings delivering 0.0001MI/d at a cost of █████. Given the size and nature of water use of business customers our unit rates for these activities are calculated using a day rate as the time to complete a business audit varies.

Our day rate cost of █████ is based on our 2023-24 outturn costs and costs obtained from companies we have worked with for delivering similar activities such as home audits. We have a contract in place to deliver business audits that detail the cost for skilled plumbing engineers and audit management. We have combined contract day rate for these resources from our service provider at █████ per day – we have allowed 5% for parts which takes us to our unit rate of █████. For AMP8, we are planning to target the highest consumers to achieve a higher level of water savings.

Ofwat’s median unit rate multiplied by benefits approach simply does not provide us with a sufficient allowance to undertake the activities required to enable us to achieve our contributions towards hitting both our business demand and PCC WRMP reductions. As we have stated in section 2.3 the median unit rate benchmark approach is flawed as there are inconsistent cost estimates and benefit assumptions are not transparent.

To enable us to achieve our contributions towards hitting our business demand and PCC WRMP reductions all else equal we need to achieve a minimum of 1.36MI/d from reducing household demand and 1.03MI/d from reducing business demand. Household and non-household audit activities will cost in the region of £5.4m.

**Table 3: Household and business water audits AMP8 costs**

Activity	Capex	Opex	Totex AMP8
Home Audits	We have assumed 0 capex – these are all operational initiatives	We have assumed a full cost of £113 per home audit (2022/23 prices). This programme has been running for 4 years and we have outturn costs with which to base our forecasts on.	£4.300m
Business Water Audits	We have assumed 0 capex	£220k p.a. (£1.100m across AMP8). This increased to £1m p.a. beyond AMP8. In AMP8 we are targeting highest users. Our unit rates (█████ per day of auditing) are based on comparable activities undertaken by our peers and ongoing Southern Water trials on business customers.	£1.100m



## 2.5.2 Business partnership funds, trials and innovation

Our October 2023 business plan included an AMP8 enhancement allowance of £1.690m for our business partnership fund (see PR24-DD-W-Demand-side-Improvements model, CW8 spreadsheet, Scheme ID 146.).

Our Business Partnership fund is an innovative scheme aiming to promote water efficiency in our region and find new ways to save water. The fund is available for retailers to facilitate water efficiency projects with their customers. The fund looks beyond the water audit as a sole solution to water efficiency and is focused on innovative solutions, including larger more complex solutions such as Rainwater Harvesting that are likely to have more longevity of benefits than an audit.

This activity was chosen within our WRMP as it overcomes market barriers as follows:

- the low margins for retailers meaning large upfront payments can create cash flow restrictions.
- the lack of access to capital for the customer to invest in solutions to make the savings in water use.
- the low marginal cost of water that makes the pay back for water efficiency often too long – especially for small businesses.

The money will fund projects that switch organisations from potable water supplies to non-potable supplies, or that reduce consumption with water-efficient fittings, or that target continuous flows. Applications that can demonstrate benefits to the community will also be prioritised.

The funding criteria will assess the best value schemes as well as our confidence in their delivery. Projects of various sizes will be funded, and we expect to include rainwater harvesting for toilets, drought-tolerant gardens, water butts for community allotments, greywater recycling, or trials that can harness new technology to educate people about water use.

We are looking at how we can help high water-use businesses who use mains water for irrigation purposes during the summer and early autumn, such as livestock farms, plant nurseries, estates and recreational facilities. We have already funded the planning process for Littlehampton Golf Course to install a reservoir on site, to reduce their mains water use. We are now scoping out a further project to invest in rainwater harvesting equipment in areas under stress during prolonged dry weather. We will work collaboratively with the retailer and business to identify a range of options to make water savings and to reduce the demand by funding the installation of rainwater harvesting equipment.

We will also invite funding bids made by retailers willing to replace potable water with treated effluent - where it is safe to do so - such as for watering the grass on golf courses; for washing commercial vehicles, such as buses; or, for road cleaning.

At the business plan stage, the business partnership fund initiative was only in its infancy, and it was not possible to reasonably quantify a MI/d benefits for the submission – we did not have a robust evidence base to include benefits. Consequently, a 0MI/d benefit for AMP8 was submitted.

Since October 2023, we have funded and completed 5 projects that have yielded benefits of 0.01 MI/d at a cost of £0.048m.

**Table 4: AMP7 business partnership fund interventions by customer type**

Customer type	Round of BPF	Intervention	Amount of funding provided (£m)	Savings achieved (M/d)	Cost per (£m/MI/d)
Theatre	Pilot	Bathroom Refurbishment	£0.007	0.000619	£10.84
Campsite	Pilot	Bathroom Refurbishment	£0.019	0.005071	£3.69
Activity Farm	First	Retrofit	£0.008	0.003059	£2.76
Commercial	First	Recycled Water stations	£0.010	0.000684	£14.62
Country Park	First	Rainwater Harvesting	£0.031	0.001917	£16.23
		<b>Total</b>	£0.048	0.011350	£4.21

We have a further 7 business customers identified for interventions in AMP7 from which we will continue to learn lessons and refine our approach going to AMP8.

**Table 5: AMP7 interventions by location**

Planned for AMP7	Round of BPF	Intervention
Leisure Centre	First	Rainwater harvesting
Commercial	First	Audits
Parish Hall	Second	Bathroom refurbishment
Motor group	Second	Rainwater harvesting
Prison	Second	Flow restrictors
Leisure Centre	Second	Water recycling
Primary School	Second	Rainwater harvesting

Since its inception, we have had over 40 applications which are assessed against a governance structure that considers factors such as retailer collaboration, the scalability of the concept, the area of water scarcity and environmental/community benefits.

Owat's Water Efficiency Fund aims to empower customers to *make environmentally conscious choices*<sup>11</sup>. We fully support this objective, and our business partnership fund is fully aligned to this.

**Case study: recycled water station project** - Working with a painting and decorating business, a wastewater treatment system was introduced to encourage water efficient and environmentally friendly

<sup>11</sup> <https://www.ofwat.gov.uk/regulated-companies/water-efficiency-fund/#why>

cleaning practices. Not only did the system improve water efficiency, but it also had the capability to capture the chemicals within paints and turn them into solid products that could be removed and recycled.

An enhancement allowance of £1.690m would allow us to continue these activities which are perceived by our peers as sector leading and provide a model for replication which will reap broader benefits across the sector.

### 2.5.3 Water efficiency education

Investment in water efficiency education activities is important both now and in the long-term to support a future generation that is water conscious.

We currently spend £0.1m per year on our educational programme 'New Wave'. This delivers a set of classroom modules designed by curriculum specialists to help children to learn simple ways of saving water and protecting our local environment. The content ranges from school assemblies, card games, classroom modules, school trips, interactive games customised to local area.

We're also working with schools across our region on education initiatives such as 'Water Wise' talks, a trial called 'Our River, Our Water' and running a 'Water Supply Challenge' for older students all aimed to build a water aware society and change behaviours.

As part of these programmes, we capture the number of schools and students that have participated and record the feedback from both students and teachers. Since the start of these programmes, we have interacted with over 110,000 students – the vision is that these 110,000 students will remain consumers of water, customers to water companies but with an awareness of where water comes from and the challenges we face if usage behaviours do not change.

As mentioned previously, we would support the objectives of Ofwat's Water Efficiency Fund and its national approach. However, we strongly believe that the effectiveness of the Water Efficiency Fund will be limited if water companies had no allocated funding to support and enable customers through awareness and education to make those conscious choices that directly impact their local surroundings.

An enhancement allowance of £0.5m for AMP8 would allow us to continue these key educational activities and enable existing and future customers to make conscious choices that impact their local surroundings.

This activity is a long-term activity, and we do not expect the investment to yield directly attributable benefits in AMP8. We expect benefits to be realised beyond AMP8 and as such have not included benefits in the CW8 resubmission. This activity is consistent with our long-term delivery strategy and our long-term goals to build resilience in our customer base (as well as our asset base). It also addresses the multi-generational challenge of investing now for the benefit of our future customers.

### 3. Summary of benefits and cost challenge and updated requested allowance

Since our October 2023 submission we have reviewed shape of our water efficiency programme and re-optimised the plan to deliver benefits more efficiently:

We identified an inconsistency with the current WRMP benefit (2.391MI/d) and we have taken steps to adjust the programme to align with our WRMP and the original CW8 submission of 2.578MI/d. Since October we have started work on our innovative business partnership fund. This has demonstrated that we expect to deliver a further 0.401MI/d benefit in AMP8 bringing our total AMP8 benefit to 2.792MI/d.

Through sharing and collaboration with other water companies, the water saving benefit and desired behaviour change may be greater. Table 6 below provides the benefits and costs at each business plan stage.

**Table 6: Summary of benefits and cost challenge and updated requested allowance**

	October 2023 business plan submission (CW8)	Ofwat's DD allowance	Our updated cost allowance request
Cost (£m)	21.444	2.985	<b>7.574</b>
Benefits (MI/d)	2.578	2.578	<b>2.792</b>

Table 7 below summarises the cost and benefits delivered by each water demand reduction activity which we have detailed in section 2.5.

**Table 7: Updated AMP8 costs and benefits by water demand reduction activity**

Scheme name	Cost AMP8	MI/d benefits AMP8	£m/MI/d
Home audits	4.264	1.362	3.131
Water audits - Business	1.120	1.029	1.088
Business partnership funds*	1.690	0.401	4.214
Water efficiency education	0.500	0.000	N/A
<b>Total</b>	<b>7.574</b>	<b>2.792</b>	<b>2.713</b>

\*benefits for business partnership funds are not included within our WRMP due to timing of modelling and when we started our pilot work in AMP7 and analysing results

## 4. Business Plan Dependencies

This document is supported by our **SRN27 Water Resources – Demand** enhancement case submitted in October 2023.

Data Tables impacted by the representation:

Table/s Impacted	Data Lines Impacted
CW3	45 Demand-side improvements delivering benefits in 2025-2030 (excl leakage and metering)
CW8	34 Home audits, 35 Water audits - Business, 36 Partnership funds - business, 37 Water efficiency education

All documents and tables referenced above can be found on our website here: [Business Plan 2025-30 - Southern Water](#)

## Appendix A – Ofwat’s deep dive assessment

Table 8: Ofwat’s SRN Deep-dive assessment

Enhancement assessment criteria grouping	Assessment comments	Criteria decision	% adjustment	Reference (e.g., document and page number)
<b>Need for enhancement investment</b>	<p><b>Pass:</b> The investment meets the criteria for enhancement investment and additional customer funding. The proposed investment is consistent with the company’s water resource management plan (WRMP) schemes.</p> <p>The company has targets to reduce per capita consumption (PCC) and business demand as part of the statutory WRMP. The company’s WRMP proposals provide sufficient ambition to meet these statutory targets, and we consider the business plan is aligned with the WRMP. The company states that without any investment household consumption would increase by 54Mld by 2050. Currently, activities to maintain PCC and business demand are funded through base expenditure and activities to reduce are funded through enhancement. The company states current botex for water efficiency covers business as usual activities, and the requested enhancement enables the company to meet supply demand targets. We have not identified any base activities in the enhancement case, the proposed activities are comparable to activities in our enhancement model.</p> <p>We note that some enhancement options proposed have zero benefits, however we consider the zero benefit options are either enablers for enhancement or should be delivering reductions and therefore separate from base, although we have challenged zero benefit options through the cost efficiency assessment.</p>	<b>Pass</b>	0%	OFW-PR24 - SRN27 Water Resources - Demand.pdf - All Documents (sharepoint.com)  Page 15
<b>Best option for customers</b>	<p><b>Pass:</b> The company provides sufficient and convincing evidence that the investment fulfils the best option for customers criteria in our final methodology.</p> <p>The company has provided a list of 31 sub-options in the business plan, and states 40 feasible options were considered. We consider the company has provided an appropriate number of options. The company has described the criteria for the optioneering process which</p>	<b>Pass</b>	0%	OFW-PR24 - SRN27 Water Resources - Demand.pdf - All Documents (sharepoint.com)  page 23, 26-27, 29



	<p>involves delivering secure supply, delivering environmental benefit, increasing regional resilience, and delivering at an acceptable cost. There is a list of options that have been removed with reasons provided for removing these options, or for each preferred option. We note the company has provided quantified environmental benefits as well.</p> <p>The company provides sufficient and convincing evidence that it has considered an appropriate number of options and has considered the costs and benefits of alternative options.</p>			
<p><b>Cost efficiency</b></p>	<p><b>Significant concerns:</b> We have significant concerns whether the investment is efficient. The company does not provide sufficient and convincing evidence to justify why the requested unit cost is an outlier compared to our modelled benchmarks and does not provide evidence that the proposed activities are not included in our enhancement model approach.</p> <p>The company's PR24 data table CW8 has requested £21.44m enhancement to deliver 2.578Mld benefits through water efficiency activities. The company has stated it has used outturn data for cost estimations and comparable activities for benchmarks. We accept that reliable outturn costs calculations are provided for some of the options.</p> <p>However, we do not consider the company has provided sufficient or convincing evidence of its benchmarking process. Several of the options do not deliver any demand reduction benefits and at a company level the programme has high unit costs. We consider the company has not benchmarked its benefit data. One option, "water efficiency enablers" costs £11.8m and delivers 0.187Mld benefits. We note for this option there is a description of the cost approach, which is opex and based on current outturn costs. However, there are no supporting calculations, and no benchmarking such as costs from comparable activities. We consider the company does not provide any econometric or engineering evidence (company specific material drivers) which would support a model adjustment.</p> <p>The overall allowance is based on the industry median unit cost (for company led only options), multiplied by reported company led benefit of 2.578Mld. We believe the model would provide a sufficient allowance in the round to deliver</p>	<p><b>Significant concerns</b></p>	<p>86%</p>	<p>OFW-PR24 - SRN27 Water Resources - Demand.pdf - All Documents (sharepoint.com)</p> <p>page 33, 41, 46</p>

	the same proposed reductions in PCC and business demand.			
<b>Customer Protection</b>	The proposed investment does not meet the materiality threshold for investment.	<b>N/A</b>	N/A	OFW-PR24 - SRN27 Water Resources - Demand.pdf - All Documents (sharepoint.com)  page 57