

Service Commitment Plan

Dŵr Cymru Welsh Water



Dŵr Cymru
Welsh Water

November 2023

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1. Introduction

What is the Service Commitment Plan?

In October 2023 Ofwat published their Water Company Performance Report for 2022/23. This report assesses and compares the annual performance achieved on 12 common measures by all water and wastewater companies in England and Wales.

Ofwat groups companies into three categories relative to each other (leading, average and lagging behind) based on how they have performed against the performance commitment levels.

In 2022/23 Ofwat has not assessed any company as 'leading'. Ofwat requires companies in the lagging behind category to publish service commitment plans, outlining when and how customers will receive the service they expect.

Welsh Water has met or exceeded its performance commitments in five out of 12 areas and is a top performer for the industry on internal sewer flooding. However, Ofwat assessed performance in the other seven areas as being behind expectations and requiring improvement, and as a result categorised Welsh Water as 'lagging behind'.

This document sets out the actions we are taking as part of our recovery plan to return those performance levels assessed as not meeting expectations to the targeted levels our customers, stakeholders and regulators rightly expect.

Our Service Commitment Plan

Action plans have been developed based on a detailed understanding of the drivers of historic performance.

Root cause analysis has helped shaped the actions and prioritisation of those actions to return performance to targeted levels.

This Service Commitment Plan addresses performance in the following areas:

- Leakage
- Per capita consumption
- Supply interruptions
- Drinking water quality
- Mains repairs
- Pollutions
- Treatment works compliance

Individual sections on each of the performance measures consider:

- Reasons for underperformance
- Clear actions based on these reasons
- Benefits linked to those actions
- Expected forward trajectory of performance

Our Service Commitment Plan is designed to return performance to expected levels as quickly as possible and ensure Welsh Water is no longer assessed a 'lagging' company by 2024/25.

Performance measure	2022/23	2023/24	2024/25	PR24
Customer satisfaction				
Priority services				
Leakage				
Per capita consumption				
Supply interruptions				
Drinking water quality				
Mains repairs				
Unplanned outage				
Internal sewer flooding				
Pollutions				
Sewer collapses				
Treatment works compliance				
Estimated Ofwat assessment	Lagging	Lagging	Average	Leading
EPA	2*	2*	3*	4*

2. Leakage

Leakage is measured against the percentage reduction of three-year average leakage in megalitres per day (MI/d) from the 2019-20 baseline.

The total level of leakage is defined in the Final reporting guidance for PR19 – Leakage, published on 27 March 2018.¹

Three-year average values are calculated from annual average values for the reporting year and two preceding years and expressed in megalitres per day (MI/d).

Regrettably, in 2022/23 we did not meet our leakage target, reporting a 11.5% increase compared to a targeted reduction of 7.3%.

Part of the increased leakage has been driven by the extreme weather events experienced in 2022/23. The hot summer caused soil shrinkage which increased the number of burst water distribution pipes. Further, the significant freeze/thaw event also caused distribution pipes to burst leading to a significant increase in leakage.

The number of bursts also increased in our cement-lined asbestos cement (AC) pipes across our rural areas of mid and west Wales. These bursts present a particular challenge to repair due to the difficulties in accessing remote areas, and the need for the pipes to be fully cut out without an alternative water supply due to the lack of network interconnectivity.

Our leakage recovery plan focuses on the three main elements which contribute to the total reportable leakage; Upstream leakage, Distribution leakage and Customer Supply Pipe leakage, and we have initiatives targeted at each.

The initiatives within the recovery plan will deliver the following benefits:

- Introducing permanent acoustic monitoring on our distribution system, giving us the ability to continually monitor our most problematic networks and respond quickly and effectively to resolve any leaks.
- Build on our trunk mains flow balancing and assessment to better target and report leakage on our upstream network. We will deploy in-pipe survey technology together with non-intrusive methods to detect leakage and consumption.
- Continue to deploy our 'WaterNet' leakage reporting tool to respond to leakage events more quickly and accurately. Use this system to automate pressure monitoring and optimisation analysis.
- Restructure the balance of insourced and outsourced leakage detection resources to provide stability for AMP8 and increase the competence within the team. This will include the recruitment of leakage apprentices through a nationwide programme.

¹ <https://www.ofwat.gov.uk/publication/reporting-guidance-leakage/>

2. Leakage

The impact of these plans is summarised below:

Leakage initiatives – MI/d	Performance - annual	Performance - 3YA	Performance - 3YA %	FD Target - 3YA %
2022/23	253.2	242.1	-11.5%	7.3%
Year to date	249.0			
Initiative 1 - reduction in DMA leak repair basket	-2.7			
Initiative 2 - reduction in private repair basket	-3.8			
Initiative 3 - reduction in trunk mains repair basket	-3.1			
Initiative 4 - supply pipe repairs	-3.8			
Initiative 5 - trunk mains leak location	-3.7			
Initiative 6 - transitional leakage policy	-6.4			
Initiative 7 - reduction in leak run times	-0.5			
Position at March 2024	225.0			
Annual average 2023/24	249.0	247.4	-14.0%	10.3%
Initiative 1 - supply pipe repairs	-4.0			
Initiative 2 - trunk mains leak location	-10.0			
Initiative 3 - transitional leakage policy	-20.0			
Position at March 2025	191.0			
Annual average 2024/25	208.0	236.7	-9.0%	13.3%

Our longer-term plans are to continue to use the latest innovation and technologies to target the quick identification and repair of leaks. Similarly, increases in customer meter penetration will increase the speed at which leaks are detected.

3. Supply Interruptions

This measure reports on the average number of minutes lost per customer for interruptions lasting three hours or more.

Having a constant supply of water is important for our customers. We manage our network every day to try to ensure any operational challenges we encounter do not impact customers' supply. However, sometimes circumstances outside our control do impact on customer supply, particularly in difficult weather conditions.

Regrettably, in 2022/23 we did not meet our supply interruptions target with our reported performance being 44 minutes and 31 seconds compared to a target of 5 minutes and 45 seconds.

The main cause of this significant underperformance has been due to extreme weather events such as the summer drought and the freeze thaw during the Winter. These prolonged events imposed additional strain upon the distribution system resulting in increased activity and loss of supply across the network. In total, the December 2022 freeze thaw accounted for 25 minutes and 32 seconds of our reported performance and impacted 25,333 properties.

In addition, our performance has been impacted by some significant mains bursts affect large volumes of customers where restoration within 3 hours was unachievable. These include:

- A burst on a trunk main in Cardiff impacted 5,525 properties in the Llanrumney/Cyncoed area in November 2022. Multiple restoration methods were put in place to mitigate impact, including laying overland pipes, rezoning and tankering.
- Another burst on a 15" trunk main in Cardiff impacted 4,299 properties in the Llanrumney area in November 2022. Rezoning and tankering activities took place, however due to burst happening at peak evening demand, the water network drained significantly, and recharge of the water took several hours.
- A burst on an 18" main in Penarth impacted 2,988 properties in August 2022. Rezoning and tankering activities took place to minimise the impact.

Improving our supply interruption performance is a challenge due to the topography of Wales. Customers are often served by a single trunk main with high operating pressure in our rural networks where there is no alternative supply. This can result in complex engineering repairs that take longer to fix than most of our more urban pipe networks, because there is limited opportunity to use alternative supplies to keep customers connected. To mitigate the impacts of supply interruptions, our 40-strong tanker fleet is one of the sector's largest.

Asbestos cement pipe failures account for 38% of all supply interruptions and the West Wales network contributes 31% of all supply interruptions performance.

To significantly improve our response times to interruptions we are making organisational changes to centralise our response to bursts 24/7 and to optimise the location of our tanker fleet and locally based response teams.

This move to a truly responsive 24/7 operation aims to reduce the time taken to mobilise our tankers to provide temporary supplies; and for our repair teams to respond; and to allow water to be brought in from other pipelines where possible.

3. Supply Interruptions

The impact of these plans is summarised below:

Supply interruptions initiatives – Mins / prop	Actual	FD Target
2022/23 actual performance	44.5	5.45
Atypical weather impact	-25.0	
Initiative 1 - asset replacement	-0.1	
Initiative 2 - upstream losses repair programme	-0.1	
Initiative 3 - enhanced post incident review	-0.1	
Initiative 4 - model builds of summer demand / freeze thaw	-0.2	
Initiative 5 - culture campaign	-0.5	
2023/24 forecast performance	18.0	5.23
Initiative 1 - relocation of tanker fleet	-2	
Initiative 2 - local response teams	-2	
Initiative 3 - 24/7 working patterns	-2	
Initiative 4 - SMART hub capability	-1	
Initiative 5 - pressure management schemes	-1	
2024/25 forecast performance	10.0	5.0

Whilst these plans do not result in the necessary improvements required to meet the performance target for 2023/24 and 2024/25, our plans will keep reducing the length of supply interruptions every year until the performance target is achieved in 2025/26.

Our longer-term plans are built on optimising and embedding our initiatives and move to a more predictive capability based on our SMART Networks programme, improving our response and repair times even further.

4. Per Capita Consumption

Annual average per capita consumption (PCC) is defined as the sum of measured and unmeasured household consumption divided by the total household population. This measure is reported as a percentage reduction of our three-year average PCC from the 2019/20 starting baseline.

In 2022/23 we did not meet our PCC target, reporting a 6.2% increase compared to a targeted reduction of 3.0%.

Significant improvements in our leakage and PCC reporting have been implemented in 2022/23 following a comprehensive review of the data components, methodologies and reported outcomes for both leakage and PCC.

This process has resulted in the identification and implementation of several improvements across data sources and reporting methodologies that contribute to these performance measures. The impact of these changes is significant and have led to a greatly improved understanding of true performance and a restatement of reported performance for prior years in this regulatory period.

All components of our restated leakage and PCC methodologies are scored green against the Ofwat Consistent Reporting Guidance 'RAG status'. Changes have been made to how leakage reduction activities are managed, and reporting and governance processes have been strengthened, including the creation of a Leakage and PCC Reporting Technical Oversight Committee. An additional £54 million has been allocated to support intensive leakage and PCC reductions in 2023/24 and 2024/25.

One of the challenges we have is a large number of unmetered customers meaning that customer leaks are not easily identifiable unless visible and causing damage. It is also difficult to fully convince customers of the benefit of using less water without being able to measure the value through a metered supply.

The pandemic and drought during 2022 have also impacted PCC levels. We are only now seeing demand return back to pre-covid levels and a "sustained" level may now be the new norm in light of hybrid working patterns, contrary to baseline PCC estimates which does not reflect that shift.

Sustainable reduction in PCC requires us to influence the consumption behaviour of our customers, and to develop more efficient household water distribution systems.

We will achieve these outcomes by:

- Increasing the number of meters that customers have, because our existing data shows that customers on meters tend to consume less water.
- Developing a behavioural change campaign that explains the links between the water our customers consume and the environment around them, including the carbon footprint and costs to them. It is essential to our strategy that we increase awareness, providing our customers with the information they need to consider the role they need to play.
- Advocating changes to building regulations that move towards grey water harvesting and more efficient customer-side supply systems.
- Promoting the introduction of labelling white goods with their water efficiency to provide customers with the right information to make informed decisions about the efficiency of household appliances.

The impact of these plans is summarised below:

PCC initiatives – l/h/d	Performance - 3YA	Performance - 3YA%	FD Target - 3YA%
2022/23 actual performance	154.8	-6.2%	3.0%
Initiative 1 - customer advertising campaign	-1.0		
Initiative 2 - Cartref private leakage initiative	-0.5		
Initiative 3 - behavioural science	-0.5		
Initiative 4 - water efficiency audits	-0.5		
Initiative 5 - AMR metering	-0.5		
2023/24 forecast performance	151.8	-4.2%	4.6%
Initiative 1 - customer advertising campaign	-1.0		
Initiative 2 - Cartref private leakage initiative	-0.5		
Initiative 3 - behavioural science	-0.5		
Initiative 4 - water efficiency audits	-0.5		
Initiative 5 - AMR metering	-0.5		
2024/25 forecast performance	148.8	-2.1%	6.3%

Our longer-term plans are to move to more metering and SMART metering for customers to reduce the risk of missing any future PCC targets.

5. Drinking Water Quality

The Compliance Risk Index (CRI) measures the risk to consumers of companies not meeting the requirements of drinking water quality regulations and is compiled by the Drinking Water Inspectorate (DWI).

The CRI score represents an aggregated assessment of risk across the distribution network, service reservoirs and water treatment works.

The regulatory target for CRI is zero in each year, with a deadband for underperformance payments of 2.0, and we strive to get as close to zero as possible. In 2022/23 our reported performance was 5.40, which was a disappointing result.

The main reasons for this measure not meeting target are due to bacterial failures from treatment works / service reservoirs and iron failures in the network along with the impact of multipliers as a result of enforcement action.

Bacterial failures

A performance 'blip' in 2021/22 in bacterial performance led to a DWI enforcement notice involving enhanced tank cleaning with some assets not having bypass facilities. Performance in 2022/23 returned to expected levels but because the DWI enforcement notice applies a multiplier of 4 to any failure, the value of a Felindre failure is now 3.1 (previously 0.8). Until the DWI enforcement notice is concluded in 2025 we will incur a x4 impact to all bacterial failures.

Iron compliance

Nearly half of our network (11,500km out of 27,500km) is oversized cast iron pipework. Because of the demand reduction seen through an industrial decline there has been iron build up in the network which is generally mobilised through bursts or high demand

During the pandemic we were unable to take samples from customer taps and lost our ability to target flushing activities where high Iron levels are observed. This has led to a legacy of failures in the short term

Through a revised DWI acceptability of water enforcement notice we also incur a multiplier of 4 impact to any iron failure. In 2022/23 one sample failed for iron and manganese led to a 0.9 impact to CRI.

We launched our DWR Plan in 2022 to return performance to targeted levels – it has been the largest change programme within Water Business overseen by the Executive with regular progress reviews by the Quality and Safety Committee (QSC) of our Board. Key elements of this plan include:

- Additional investment of £20 million on tank cleaning and £16m for the refurbishment of Felindre water treatment works.
- Further £30 million investment in 2023/24 for Zonal Study Programme aimed at acceptability and iron compliance.
- 15 innovation projects totalling circa £0.5 million including NMR Pipetector - prevention of corrosion build up inside water distribution pipes.
- Enhanced Distribution and Operational Maintenance Strategy (DOMS) targeting Iron.

The impact of these plans is summarised below:

CRI initiatives – CRI score	Actual	FD Target
2022/23 actual performance	5.4	0
Bacti failures	3.4	
Iron failures	1.9	
Initiative 1 - tank notice / annex 1	-1	
Initiative 2 - tank cleaning programme	-1	
Initiative 3 - DOMS	-0.2	
Initiative 4 - zonal studies programme (AMP7)	-0.5	
Initiative 5 - zonal studies programme (AMP8)	0	
2023/24 forecast performance	8	0
Bacti failures	-3.4	
Iron failures	-1.9	
Other failures	2.2	
Initiative 1 - tank notice / annex 1	-0.1	
Initiative 2 - tank cleaning programme	-0.1	
Initiative 3 - DOMS	-0.1	
Initiative 4 - zonal studies programme (AMP7)	-0.1	
Initiative 5 - zonal studies programme (AMP8)	0	
2024/25 forecast performance	4.5	0

Our longer-term plans are to invest £360 million to improve tap water quality through additional maintenance in water treatment works, replacement of customer lead pipes and partnerships catchment uplands. This will help to reduce the risk of experiencing any water quality failures and as a result meet future CRI targets.

6. Mains Repairs

This measure includes all physical repair work to mains from which water is lost. It is reported as the number of mains repairs per thousand kilometres of the entire water main network (excluding communication and supply pipes).

Our performance for 2022/23 was 156.2 - worse than the target of 135.1. Our performance was significantly impacted by the freeze thaw weather conditions in December 2022.

Our operating area experienced a prolonged period of low temperature accompanied by some snowfall from 6 to 17 December, as an Arctic Maritime Air Mass brought hard frosts, with daytime temperatures struggling to rise above freezing in many areas. Daily minimum temperatures were amongst the coldest in the UK, with many areas between -5 and -10 degrees centigrade for several consecutive nights. We experienced a 300% increase in the number of mains bursts repaired in the period 11 December 2022 to 4 January 2023 compared to the previous year.

Whilst the majority, if not all, of the root cause of the increased number of mains burst repairs was a result of the extreme weather in 2023/24, we do have plans to reduce the number of mains repairs bursts. These plans and their impact are summarised on the following page:

Mains repairs initiatives – repairs per 1,000km of main	Actual	FD Target
2022/23 actual performance	156.2	135.1
Atypical weather impact	-21.1	
Initiative 1 – calm network training	-0.4	
Initiative 2 – competency programme rewrite and retrain	-0.2	
Initiative 3 – PRV maintenance and air valve replacements	-0.4	
Initiative 4 – predictive analytic tools (NEAT)	-0.1	
Initiative 5 – network operational control system (NOCS)	-0.2	
Initiative 6 – post incident review with NDT trials	-0.1	
Initiative 7 – leak detection and repair	-0.6	
2023/24 forecast performance	133.1	133.1
Initiative 1 – calm network training	-0.3	
Initiative 2 – competency programme rewrite and retrain	-0.2	
Initiative 3 – PRV maintenance and air valve replacements	-0.3	
Initiative 4 – predictive analytic tools (NEAT)	-0.1	
Initiative 5 – network operational control system (NOCS)	-0.2	
Initiative 6 – post incident review with NDT trials	-0.1	
Initiative 7 – leak detection and repair	-0.7	
2024/25 forecast performance	131.2	131.2

7. Pollution Incidents

Pollutions performance is measured as the total number of Category 1 – 3 pollution incidents per 10,000 km of sewer length (caused by blockages or collapsed sewers). Pollution incidents are categorised as category 1, 2 or 3 incident and reported by Natural Resources Wales and the Environment Agency

- Category 1 (High – Major) – are the most severe and have a major or serious impact on the environment, people or property.
- Category 2 (High – Significant) – significant impact or effect on the environment, people or property.
- Category 3 (Low) – minor or minimal impact on the environment, people or property.

This measure is reported on a calendar year basis. Our performance on this measure has been historically good, with Welsh Water consistently being amongst the best in the industry. The number of pollution incidents in 2022/23 was higher than the previous year by 6, and was regrettably worse than the target. This was due to higher strength influent treated at our works, and more blockages in the system caused by low flows resulting from the dry weather. Lower river levels also meant that incidents had the potential to cause more harm than in average conditions.

Our reported performance was 24.55 incidents per 10,000km of sewer length, compared to a target of 23.00, and compared to 22.90 in the previous year. This equates to 89 pollution incidents in total (five of which were Category 2 incidents) compared to 83 in 2021/22.

The five Category 2 High-Significant pollution incidents were:

- A storm tank overflowing after a period of heavy rain into the River Tawe.
- An emergency overflow spilling in Haverfordwest as a result of a pump failure which was exacerbated by a third party trade discharge.
- A blockage of rags in a sewer causing a pumping station to spill from a manhole in Narbeth.
- A blockage of rags and fat causing a spill into a surface water sewer which discharged into a river in Coychurch.
- A new housing estate connected to a previously abandoned sewer causing a spill in Barry.

Plans are in place to reduce the risk of all pollutions occurring and make the necessary small improvements in performance to return this measure to targeted levels. These plans and their impact are summarised on the following page:

Pollutions initiatives – Number per 10,000km	Actual	FD Target
2022/23 actual performance	24.55	23.0
Initiative 1 – low cost sewer monitoring	-0.4	
Initiative 2 – hot spot investigations	-0.4	
Initiative 3 – asset rehabilitation	-0.4	
Initiative 4 – SMART network delivery team	-0.3	
Initiative 5 – SMART air valves	-0.3	
Initiative 6 – rising main pressure monitoring	-0.1	
Initiative 7 – pollution sprint	-0.1	
Initiative 8 – enhanced incident reviews	-0.1	
Initiative 9 – SMART pump intelligent notification (SPIN)	-0.1	
2023/24 forecast performance	22.35	22.4
Initiative 1 – low cost sewer monitoring	-0.1	
Initiative 2 – anomaly detection, storm harvester	-0.1	
Initiative 3 – alarm optimisation	-0.1	
Initiative 4 – hot spot investigations	-0.1	
Initiative 5 – asset rehabilitation	-0.1	
Initiative 6 – additional pollution technicians	-0.1	
Initiative 7 – SMART air valves	-0.1	
Initiative 8 – rising main pressure monitoring	-0.1	
Initiative 9 – pollution sprint	-0.1	
Initiative 10 – refine learning opportunities	0	
Initiative 11 – SMART pump intelligent notification (SPIN)	0	
2024/25 forecast performance	21.45	19.5

Our longer-term plans are to continue to focus on reducing the number of pollutions from our assets and meet future targets.

8. Treatment Works Compliance

For each of our water and wastewater treatment works there is a permit which regulates the quality of wastewater we are allowed to discharge into rivers and coastal waters. These permits are regulated by Natural Resources Wales.

The measure is reported as the number of failing sites (as a percentage of the total number of discharges) and not the number of failing discharges. This measure is reported on a calendar year basis.

The regulatory target is 100% compliance, with a deadband for underperformance payments of 99%. In 2022/23 our result was 98.49%.

This is as a result of nine non-compliant works (six wastewater treatment works and three water treatment works) out of a total of 602 permitted water and wastewater treatment works. Three of the failures during 2022 were technical breaches at our peak flow equivalent treatment (PFET) works where there was no actual environmental impact but we failed to meet the requirements of the permit. We continue to focus on improving our processes to achieve full compliance.

The main driver of our performance was that during the summer of 2022 we witnessed one of the most severe droughts on record which required significant intervention and mitigation work at our treatment works to maintain compliance and ensure that our effluent discharges did not impact low river levels.

There is an improvement plan in place to target those treatment works that are not meeting their environmental permits. Key elements of that plan and the impact of those plans are summarised on the following page:

Wastewater compliance initiatives - % compliance	Actual	FD Target
2022/23 actual performance	98.49	100
Initiative 1 - silver centre, FE compliance focus and support		
Initiative 2 - additional tankering and seasonal resource		
Initiative 3 - environment permit reviews		
Initiative 4 - improved MI and automated work manager escalation		
Initiative 5 - local mitigation, capital reliability and resilience schemes		
Initiative 6 - new telemetry dashboard and alarms		
Initiative 7 - rotation failure sensor investment		
Initiative 8 - lagoon database and lagoon cleans at WTW		
Initiative 9 - innovative remote image monitoring		
Initiative 10 - innovative solar powered recirculation for filter beds		
Initiative 11 - innovative portable batter / solar dosing solutions		
Impact of initiatives	0.00	
2023/24 forecast performance	98.50	100
Initiative 1 - additional tankering and seasonal resource		
Initiative 2 - enhanced sample failure and incident reporting process		
Initiative 3 - refreshed new starter and competent operator initiative		
Initiative 4 - competence management system		
Initiative 5 - innovative remote image monitoring		
Initiative 6 - rotation failure sensor installation		
Initiative 7 - anomaly detection / proactive FE compliance		
Initiative 8 - optimisation of value added alarms and responses		
Initiative 9 - exploration of SMART and optimised works		
Initiative 10 - lagoon clean investment at WTWs		
Impact of initiatives	0.50	
2024/25 forecast performance	99.00	100

9. Monitoring of the Plan

These action plans have been challenged and scrutinised by our Board. The Board fully support the delivery of these plans and receive updates on performance and action plan delivery at every Board where it is a standing agenda item on the Quality, Safety and Compliance Board Committee.

Performance against all service measures is reviewed and scrutinised at the monthly Executive Team meeting with senior incident reviews occurring for any significant event unduly impacting performance.

We also provide updates on company performance to the Independent Challenge Group. Our performance for 2022/23 and future forecasts were also shared with the PR24 Forum in Wales as part of discussions on long-term ambition, outcomes, and performance in AMP8 and beyond.

The company's performance is also discussed during the Annual General Meeting of the Glas Members, who perform the role of shareholders in other companies of holding the Board to account.

Quarterly updates on the progress and effectiveness of these action plans will be produced and published on our website for on-going communication with customers, stakeholders and regulators. These quarterly updates will provide, clear, accessible and transparent progress reports against all of the performance areas requiring improvement.



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