

2021/22

Annual Performance Report

Part 3



Annual Performance Report 2021/22

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1. Introduction

Our vision is “to earn the trust of our customers every day”.

Welsh Water’s purpose is to provide high quality and better value drinking water and environmental services, so as to enhance the wellbeing of our customers and the communities we serve, both now and for generations to come.

Throughout the year, we monitor our performance against a wide range of indicators, including 56 performance commitments (PCs) as contained within Ofwat’s 2019 Final Determination (FD).

In this part of the Annual Performance Report, we set out how we have performed against our PCs, of which 15 are common measures across all companies and the remainder are bespoke measures for Welsh Water. The 56 PCs comprise:

- 25 financial (i.e., the PCs have either rewards/penalties applying in the year depending on our performance to meet the Ofwat FD target for the year or the end of the AMP);
- 25 reputational (i.e., no reward/penalty is applicable, but we strive to meet the target set for the year); and
- 6 expenditure delivery (i.e., there are penalties both for late delivery during the AMP and non-delivery at the end of the AMP).

In terms of presentation, we have used colour coding to group these PCs together by reference to our eight Customer-led Success Initiatives (Outcomes). These are:

- Safe clean water for all;
- Safeguard our environment for future generations;
- Fair bills for everyone;
- Put things right if they go wrong;
- Resilience;
- Personal service that’s right for you;
- Create a better future for all communities; and
- Colleague promises.

A summary of overall performance for all PCs is contained within section 2.1.

Performance against each individual PC is set out in section 2.2. Where we can, we have included details of historical performance and how our performance compares with other companies in the sector. We have included brief commentary on our performance. Some of the individual PCs have associated rewards or penalties for over or under performance. Where this is the case, we provide an update and show on the appropriate graph actual performance against target and where this places us in terms of earning a reward or incurring a penalty.

In section 3, we have set out the assurance processes followed in preparing this document and, in particular, ensuring that the information we have provided is accurate and complete.

An Assurance Statement provided by our Reporter, who audited aspects of this Annual Performance Report, is included in section 3.2.

2. Performance Commitments

For the AMP7 period (2020-2025) we are reporting against a suite of 56 performance commitments.

2.1 Summary of Overall Performance

Table 1 below lists 15 of our performance commitments which are common across the industry, with the remaining 41 performance commitments listed within Table 2 which are bespoke and not largely comparable across the industry. The tables summarise our performance on each of the 56 measures and compares against the 2021/22 Ofwat Final Determination target. To provide further transparency in relation to the Outcome Delivery Incentive (ODI) penalty and reward payments that are applicable on our 2021/22 performance we have included this within the summary table on page 5 and also our forecast for ODI incentives to the end of this 5 year AMP period i.e. 2024/25.

Each of the performance commitments are colour coded to reflect which of the eight Outcomes they are most applicable to. Finally, reference is made to the page number where further detail on performance, industry comparison, measure definition and some high-level commentary on the current year's performance is included.

2.2 Restatement of 2020/21 data

We have provided a summary below of where we are restating figures from our Annual Performance Report Part 3 2020/21.

Performance Commitment	2020/21 submitted figure	2020/21 restated figure	Reason for change
Rt5 – Worst served customers for water service	1,852	1,771	Revised number following verification of the property data as part of the Waterfair process. See page 50 for further detail.
Wt8 – Lead pipes replaced	1,097	1,099	It was identified that two of the 365 replacements identified in 2021/22 were completed in 2020/21. As this Performance Commitment is reported as cumulative figure over the AMP (2020/25), the two replacements have been added to the 2021/22 reportable number. See page 32 for further detail.

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Table 1 - Performance Commitment – Common Measures		*	2021/22 Outturn	2020/21 Outturn	2021/22 FD Target (Final Determination)	2021/22 Vs FD Target	Penalty or Reward 2021/22 (£m)	Total ODI Incentive (2020/21 to 2024/25) (£m)	PAGE
*C – Calendar year									
Wt1	Water Quality Compliance (CRI) (%)	c	9.77	4.17	0	X	-3.660	-5.695	8
Wt2	Water supply interruptions (mm:secs)		16:12	11:05	06:08	X	-6.139	-15.198	10
Wt4	Mains repairs		136.6	140.2	137.0	✓	0.000	-0.133	12
Wt5	Unplanned outage %		0.55	0.73	2.34	✓	0.000	0.000	13
En1	Treatment works compliance %	c	98.32	99.66	100	X	-0.476	-0.476	15
En3	Pollution incidents (per 10,000km of Sewer)	c	22.90	21.46	23.74	✓	0.150	0.184	16
En4	Leakage (% reduction) – 3 year average		5.2	2.2	4.2	-	0.000	0.000	17
En5	Per capita consumption (% reduction) – 3 year average		-8.9	-5.2	2.0	X	0.000	-8.100	18
Ft1	Risk of severe restrictions in a drought %		4.5	4.5	4.5	✓	Reputational		20
Ft2	Risk of sewer flooding in a storm %		25.05	26.88	30.38	✓	Reputational		21
Rt1	Internal sewer flooding (per 10,000km sewer connections)		1.36	2.05	1.63	✓	1.154	-1.453	22
Rt3	Sewer collapses (per 1,000km sewer)		6.71	7.69	7.20	✓	0.000	-0.069	23
Sv1	C-MeX – Company Measure		82.93	85.15			1.600		24
Sv2	D-MeX		83.94	82.69			-0.139		25
Sv5	Priority services for customers in vulnerable circumstances								
•	• Reach %		8.1	5.5	5.0	✓	Reputational		27
•	• Actual contact %		40.9	27.1	35.0	✓	Reputational		27
•	• Attempted contact %		93.2	62.8	90.0	✓	Reputational		27

Outcomes

Fair Bills for everyone

Put things right if they go wrong

Resilience

Safe Clean Water for all

Create a Better Future for all Communities

Safeguard our Environment for Future Generations

Colleague Promises

Personal Service that's right for you

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Table 2 - Performance Commitment – Bespoke Measures			2021/22 Outturn	2020/21 Outturn	2021/22 FD Target (Final Determination)	2021/22 Vs FD Target	Penalty or Reward 2021/22 (£m)	Total ODI Incentive (2020/21 to 2024/25) (£m)	PAGE
*FD – Final Determination									
*C – Calendar year									
Wt3	Acceptability of drinking water (contacts per 1,000 population)	c	2.44	2.70	2.07	X	-0.891	-6.354	29
Wt6	Tap water quality event risk index (ERI)	c	355.169	3.903	10.000	X	Reputational		30
Wt7	Water catchments improved		23	23	23	✓	Reputational		31
Wt8	Lead pipes replaced		1,462	1,097	2,800	X	0.000	0.000	32
En2	Wastewater treatment works 'look-up table' compliance %	c	99.82	100.00	100.00	X	Reputational		33
En6	Km of river improved		94	5	5	✓	0.000	4.923	34
En7	Bioresources product quality %		99.2	96.1	97.3	✓	0.454	0.909	35
En8	Bioresources disposal compliance %	c	100.00	100.00	100.00	✓	0.000	0.000	36
En9	Combined sewer overflow storage systems		0	0	0	✓	0.000	0.000	37
Ft3	Energy self-sufficiency %		24	23	32	X	Reputational		38
Ft4	Surface water removed from sewers (m3)		0	38,473	141,900	X	-0.050	-0.150	39
Ft5	Asset resilience (reservoirs) %		92.7	92.7	92.2	✓	Reputational		40
Ft6	Asset resilience (water network+ above ground) %		86.7	87.4	84.0	✓	Reputational		41
Ft7	Asset resilience (water network+ below ground) %		68.0	68.9	68.0	✓	Reputational		42
Ft8	Asset resilience (wastewater network+ above ground) %		79.4	79.0	77.7	✓	Reputational		43
Ft9	Asset resilience (wastewater network+ below ground) %		30.9	11.4	28.3	✓	Reputational		44
Ft10	Community education		45,655	5,834	72,000	X	-0.105	-0.217	45
Ft11	Visitors to recreational facilities		842,701	294,763	675,000	✓	0.168	-0.308	46
Rt2	External sewer flooding on customer property (per 10,000km sewer connections)		26.27	25.82	25.29	X	-0.881	-5.282	48
Rt4	Total complaints (per 10,000 connections)		28.2	122.1	UQ	✓	0.000	-0.054	49
Rt5	Worst served customers for water service		3,230	1,852	2,025	X	Reputational		50
Rt6	Worst served customers for wastewater service		557	547	371	X	Reputational		52

Outcomes

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Performance Commitment – Bespoke Measures Cont'd			2021/22 Outturn	2020/21 Outturn	2021/22 FD Target (Final Determination)	2021/22 Vs FD Target	Penalty or Reward 2021/22 (£m)	Total ODI Incentive (2020/21 to 2024/25) (£m)	PAGE
*FD – Final Determination									
*C – Calendar year									
Sv3	Customer trust		8.30	7.95	8.15	✓	Reputational		54
Sv4	Business customer satisfaction		4.4	4.4	4.5	✗	-0.125	-0.625	55
Sv6	Customers on Welsh language register		6,568	6,472	16,000	✗	Reputational		56
Bl1	Change in average household bill %		-1.5	-0.0	<CPIH	✓	Reputational		57
Bl2	Vulnerable customers on social tariffs		127,247	127,238	133,000	✗	Reputational		58
Bl3	Company level of bad debt %		2.4	4.2	2.2	✗	Reputational		59
Bl4	Unbilled properties (Voids) %		3.78	4.03	3.80	✓	0.052	-0.288	60
Bl5	Financial resilience		High	High	High	✓	Reputational		61
Bl6	Delivery of our reservoirs enhancement programme		8	2	8	✓	0.000	0.000	62
Bl8	Delivery of our water network improvement programme		2	0	0	✓	0.000	0.000	63
Bl10	Delivery of our South Wales Grid water supply resilience scheme		0	0	3	✗	0.000	0.000	63
Co1	Reportable injuries		9	6	8	✗	Reputational		64
Co2	Employee training and expertise %		87.7	85.0	95.0	✗	Reputational		65
Co3	Employee engagement %		69	N/A ¹	80	✗	Reputational		66
DPC01	Direct procurement for customers: Cwm Taf Water supply strategy scheme (Underperformance)		0	0	TBA	✓	0.000	0.000	67
DPC02	Direct procurement for customers: Cwm Taf Water supply strategy scheme (Outperformance)		TBC	TBC	TBA	✓	0.000	1.360	67
VIS01	Delivery of a new visitor centre		N/A	N/A	N/A	✓	0.000	0.000	68
DWMPs	Drainage and wastewater management plans		0	0	0	✓	Reputational		68
NEP01	Delivery of Environment programme requirements		Met	Met	Met	✓	Reputational		69
Total							-8.888		

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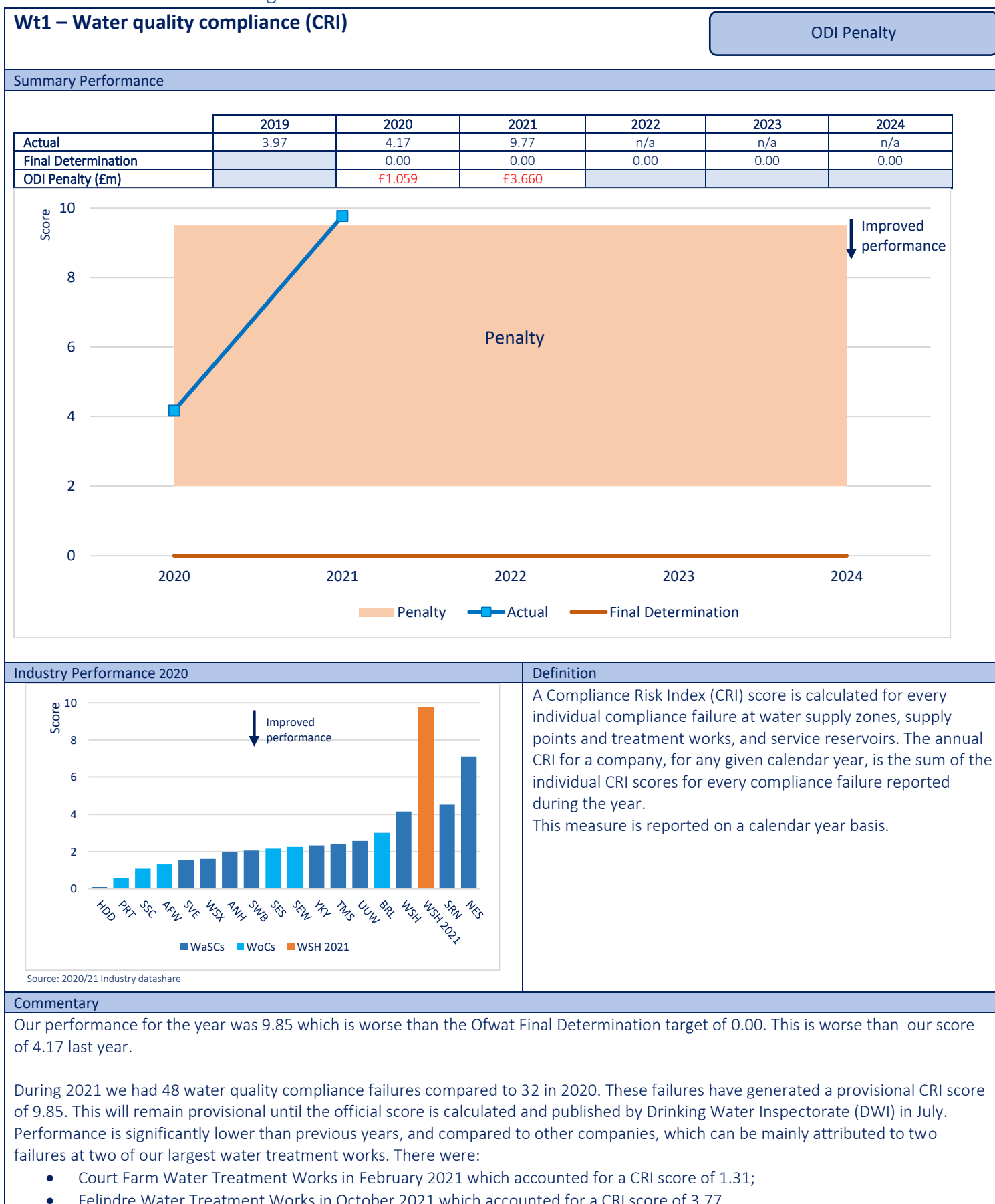
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¹ No survey carried out in 2020/21 due to the service provider informing us that they had exited the market and were unable to carry out the survey for us.

2.3 Performance Against Individual Measures



Industry Performance 2020

The bar chart shows the CRI scores for various water supply zones (WaSCs, WoCs, WSH 2021) in 2020. The Y-axis represents the Score (0 to 10), and the X-axis lists the zones. WSH 2021 has the highest score at 9.77, followed by SRN at 4.17 and NIS at 3.97. An arrow points to the WSH 2021 bar with the text 'Improved performance'.

Definition

A Compliance Risk Index (CRI) score is calculated for every individual compliance failure at water supply zones, supply points and treatment works, and service reservoirs. The annual CRI for a company, for any given calendar year, is the sum of the individual CRI scores for every compliance failure reported during the year. This measure is reported on a calendar year basis.

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Continued commentary

Another contributory factor is the initiation of enforcement action by the Drinking Water Inspectorate which has imposed a four times multiplier on all bacteriological failures at assets in 2021.

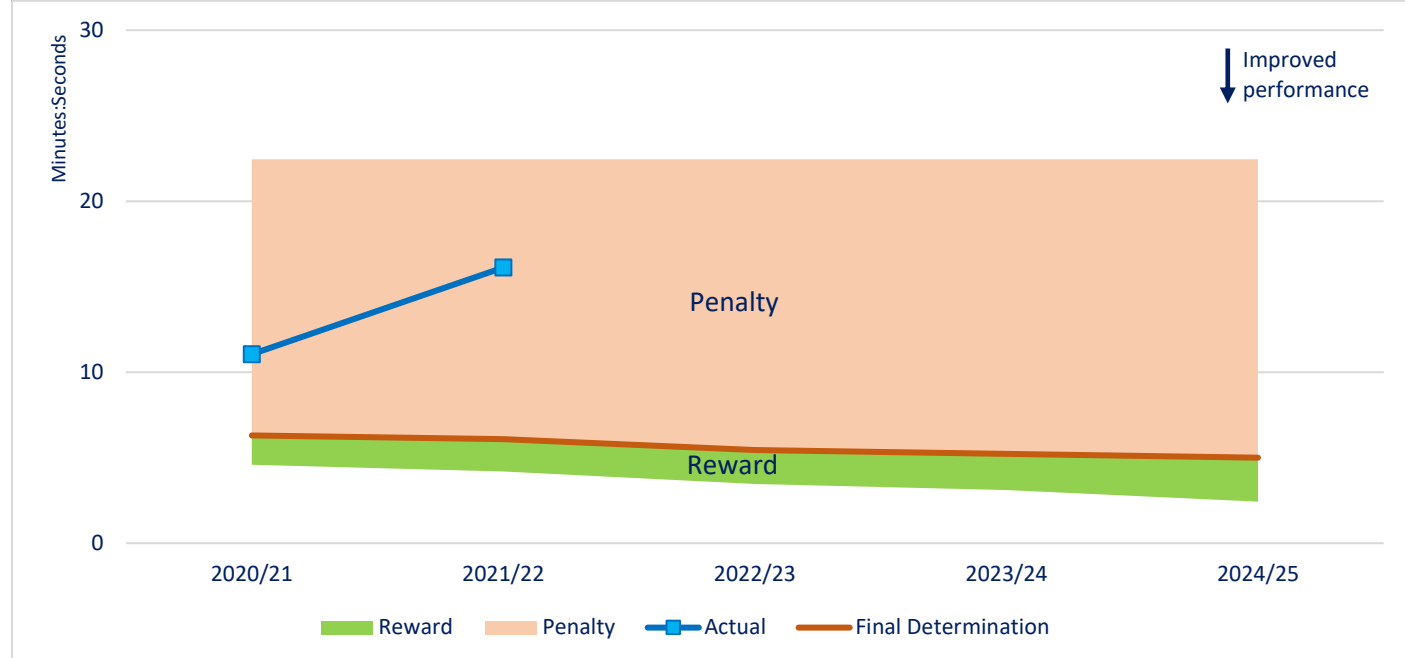
Update – 20 July 2022. The Drinking Water Inspectorate have now published final CRI scores for 2021. Our performance for the year was 9.77 which is worse than the Ofwat Final Determination target of 0.00. This is worse than our score of 4.17 last year.

Wt2 – Water supply interruptions

ODI Reward & Penalty

Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	17:46	11:05	16:12	n/a	n/a	n/a
Final Determination		6:30	6:08	5:45	5:23	5:00
ODI Reward/Penalty (£m)		£2.796	£6.139			

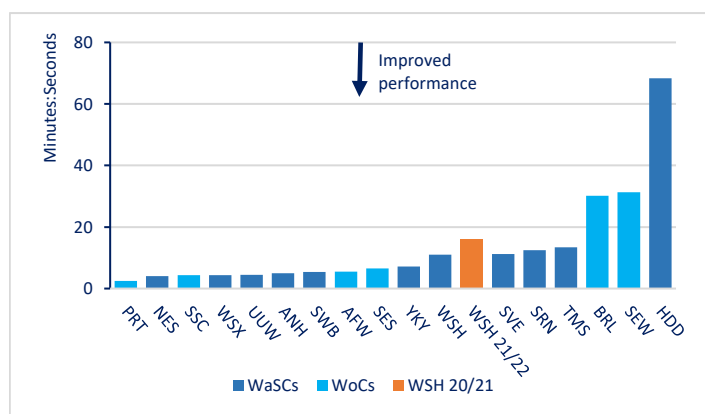


Industry Performance 2020/21

Definition

The average number of minutes that customers are without water within our supply area (includes both planned and unplanned interruptions).

It is calculated as the average number of minutes lost per customer for the whole customer base for interruptions that lasted three hours or more.



Source: 2020/21 Industry dashshare

Commentary

Our performance for the year was 16 minutes and 12 seconds, which is worse than the Ofwat Final Determination target of 6 minutes and 08 seconds.

Our performance has been impacted by some significant trunk main bursts affecting large volumes of customers where restoration within 3 hours was unachievable. These include:

- A burst on a 15" trunk main in Port Talbot impacted 8,792 properties in July 2021. Due to the nature of the burst and the shallow topography of the area thousands of properties lost supply straight away, unlike the usual drain down. Tankering and rezoning took place, but the size of the area meant that it took longer than usual for the water to be restored to customers.
- A burst on an 18" trunk main in Cardiff impacted 4,120 properties in September 2021. Rezoning and tankering activities took place to minimise the impact during the repair.

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Continued commentary

- A burst on a 300mm trunk main in Drybrook impacted 3,677 properties in May 2021, which was on the inlet to a Service Reservoir. Rezoning and tankering activities were undertaken to restore supply to properties.

We continue to operate one of the highest-pressure trunk mains systems in the UK and safety remains our number one priority. Our background level of performance has plateaued, however we will reinvigorate our focus through 2022/23 through effort on the ground, improved training and awareness, better monitoring, data capture and more effective response.

Our asset base is ageing and while every effort is being made to prevent and predict incidents, through pressure management and planned maintenance, bursts and power outages will continue to occur, and we must ensure that our response is adequate to prevent significant impact.

Please see appendix 2.ii for details of the compliance checklist for this common performance measure. We are reporting all components as Green except for two Amber assessments as listed.

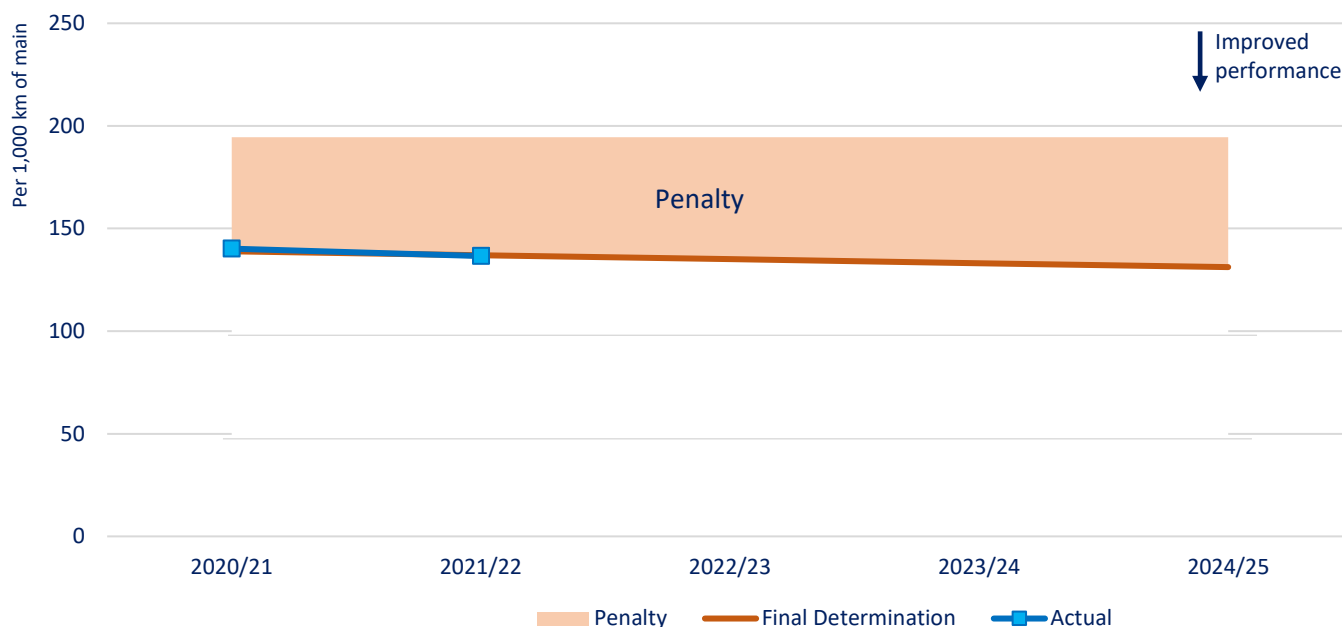
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Wt4 – Mains repairs

ODI Penalty

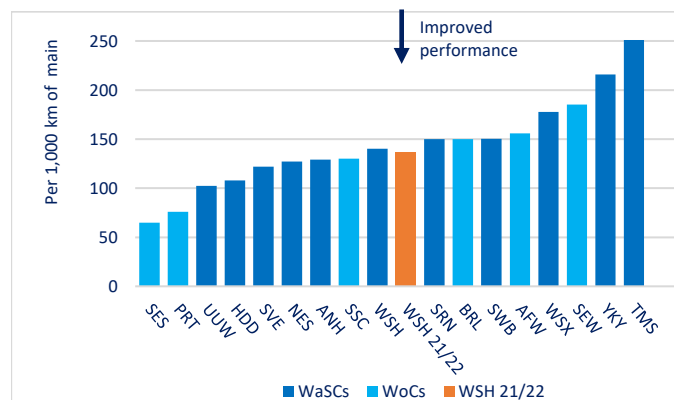
Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	138.8	140.2	136.6	n/a	n/a	n/a
Final Determination		138.9	137.0	135.1	133.1	131.2
ODI Penalty (£m)		£0.133	£0			



Industry Performance 2020/21

Definition



Source: 2020/21 Industry Datashare

This 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).

Commentary

Our performance for the year was 136.6 which is better than the Ofwat Final Determination target of 137.0. This is an improvement on last years performance of 140.2 seeing a decrease of 3.6 repairs per 1,000 km pipe.

Please see appendix 2.iii for details of the compliance checklist for this common performance measure.

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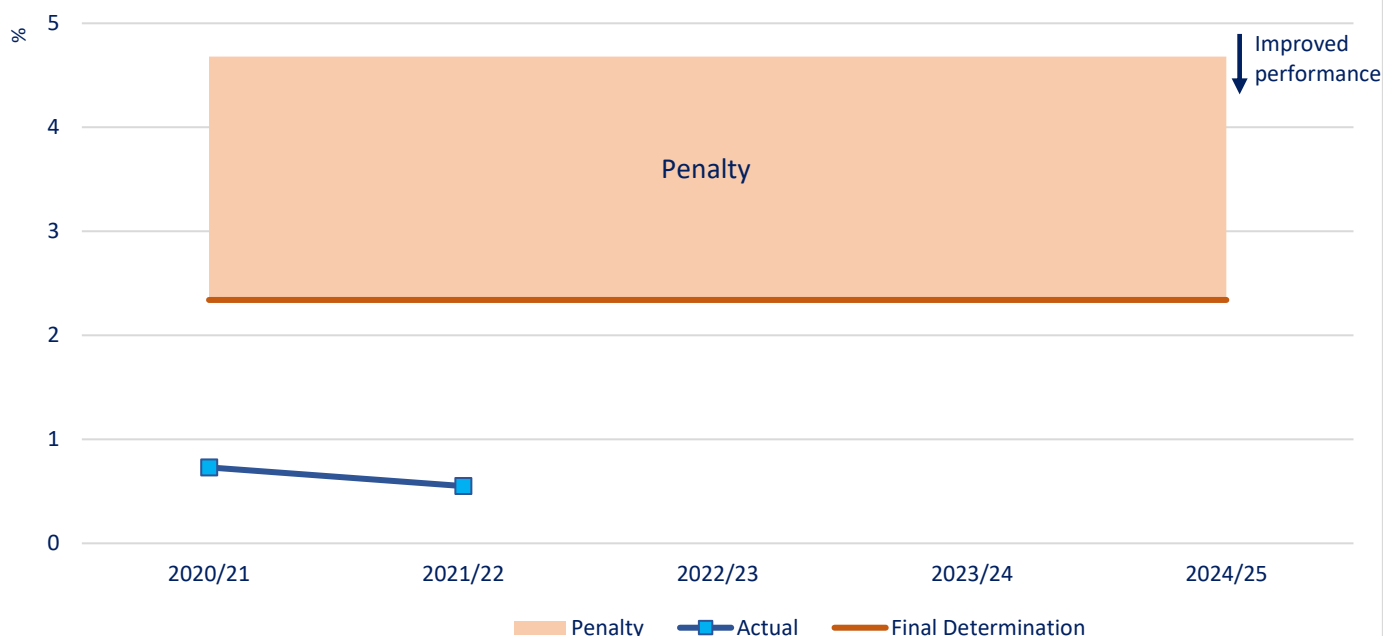
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Wt5 – Unplanned outage %

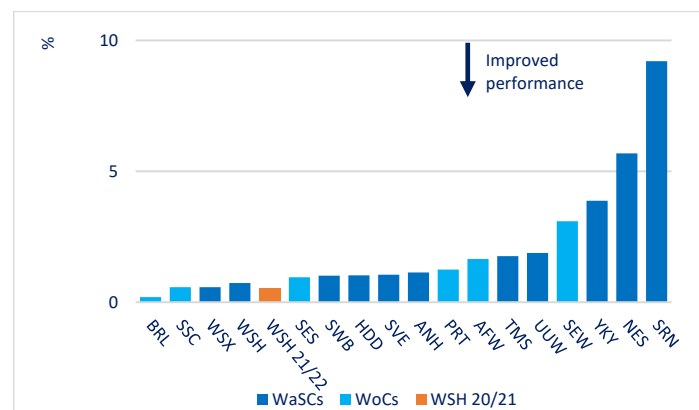
ODI Penalty

Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	0.13	0.73	0.55	n/a	n/a	n/a
Final Determination		2.34	2.34	2.34	2.34	2.34
ODI Penalty (£m)		£0	£0			



Industry Performance 2020/21



Source: 2020/21 Industry Datashare

Definition

This measure is a means of assessing asset health (primarily for above ground assets), for water abstraction and water treatment activities. It is defined as the annualised unavailable flow, based on the Peak Week Production Capacity (PWPC). This measure is proportionate to both the frequency of asset failure as well as the criticality and scale of the assets that are causing an outage.

Commentary

Our performance for the year was a total 2,629 megalitres of unplanned outage, representing 0.55% of annualised production capacity. The reporting of planned outage within the year is 5,564 megalitres. The continued improvement is largely attributed to enhanced business emphasis on the rapid resolution of any asset defects that can contribute to unavailable flow.

Data for two Water Treatment Works (WTW) that were taken offline for operational efficiency (Carno WTW and Trecastell WTW) are excluded from the Planned Outage value. Both assets are stand-by or supplementary sources which were taken offline by choice to reduce operational activity, rather than as a requirement for additional planned maintenance. Both assets are still included within the PWPC value for the company as the water is still available when required.

Please see appendix 2.iv for details of the compliance checklist for this common performance measure. We are reporting all components as green assessments as listed.

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Continued Commentary

Reporting Methodology			
Peak Week Production Capacity (PWPC) [Max]	ML/Day (Megalitres per day)		
	1,313.01		
Total	ML /Year		
	479,248		
Total Planned Outage	ML /Year	%	MLD
	5,564	1.16	15.24
Total Unplanned Outage	ML /Year	%	MLD
	2,629	0.55	7.20

En1 – Treatment works compliance %

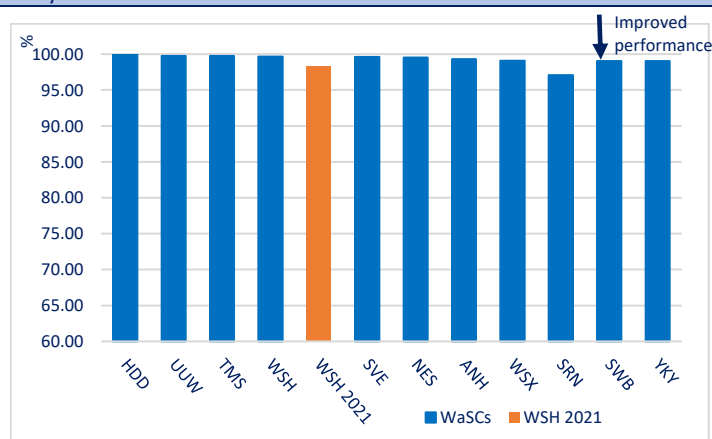
ODI Penalty

Summary Performance

	2019	2020	2021	2022	2023	2024
Actual	98.18	99.66	98.32	n/a	n/a	n/a
Final Determination		100.00	100.00	100.00	100.00	100.00
ODI Penalty (£m)		£0	£0.476			



Industry Performance 2020



Source: 2020 Industry datashare

Definition

For our water and wastewater treatment works there is a permit which regulates the quality of wastewater the Company is allowed to discharge into rivers and coastal waters, which is 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.

Commentary

Our performance for the year was 98.32% which is worse than the Ofwat Final Determination target of 100%. This is worse than our performance of 99.66% last year.

There were ten non-compliant works (seven wastewater treatment works and three water treatment works) out of a total of 596 permitted water and wastewater treatment works.

Our performance deterioration this year was mainly due to the variation in volumes received at our Treatment Works from a very dry and cold winter and the unprecedented population increases on our coastal sites due to staycations over summer and into late September.

There is an improvement programme in place to target those water treatment works that are not meeting their environmental permits.

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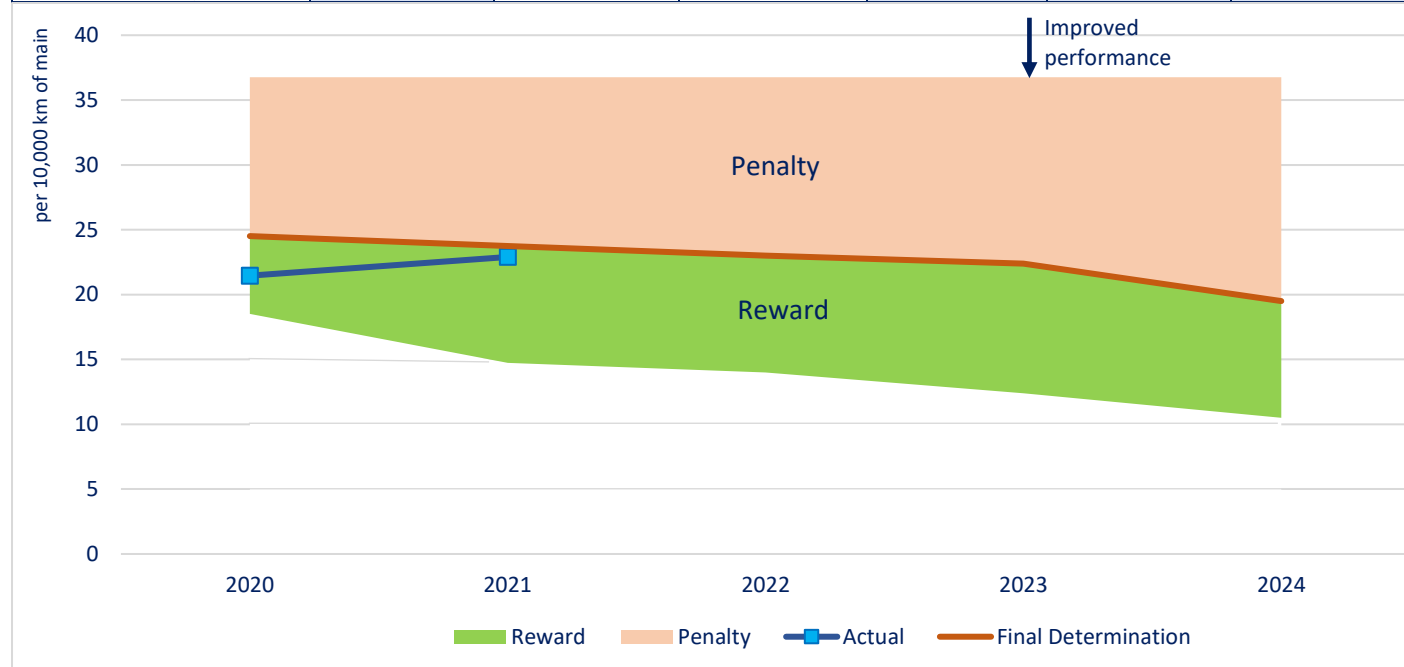
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En3 – Pollution incidents

ODI Reward & Penalty

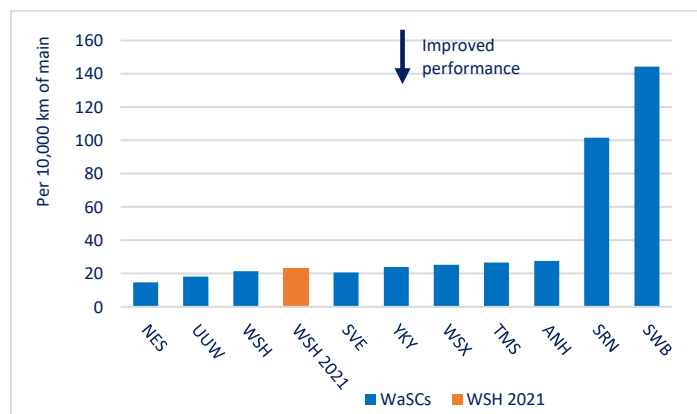
Summary Performance

	2019	2020	2021	2022	2023	2024
Actual	26.20	21.46	22.90	n/a	n/a	n/a
Final Determination		24.51	23.74	23.00	22.40	19.50
ODI Reward/Penalty (£m)		£0.543	£0.150			



Industry Performance 2020

Definition



Source: 2020 Industry datashare

The total number of 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.

Commentary

Our performance for the year was 23.17 which is better than the Ofwat Final Determination target of 23.74, but worse than our performance of 21.46 last year. This equates to 84 pollution incidents (two of which are categorised as high significant (category 2)), compared to 77 incidents in 2020.

The two high-significant pollution incidents were:

- A burst on a final effluent sea outfall at Rhyl flood relief pumping station; and
- A burst rising main at Bynea which discharges into the river Loughor.

Update – 18 January 2023. Natural Resources Wales published final number of pollution incidents for 2021 is 83. This is also as stated in the Ofwat in-period determination for 2021-22 document.

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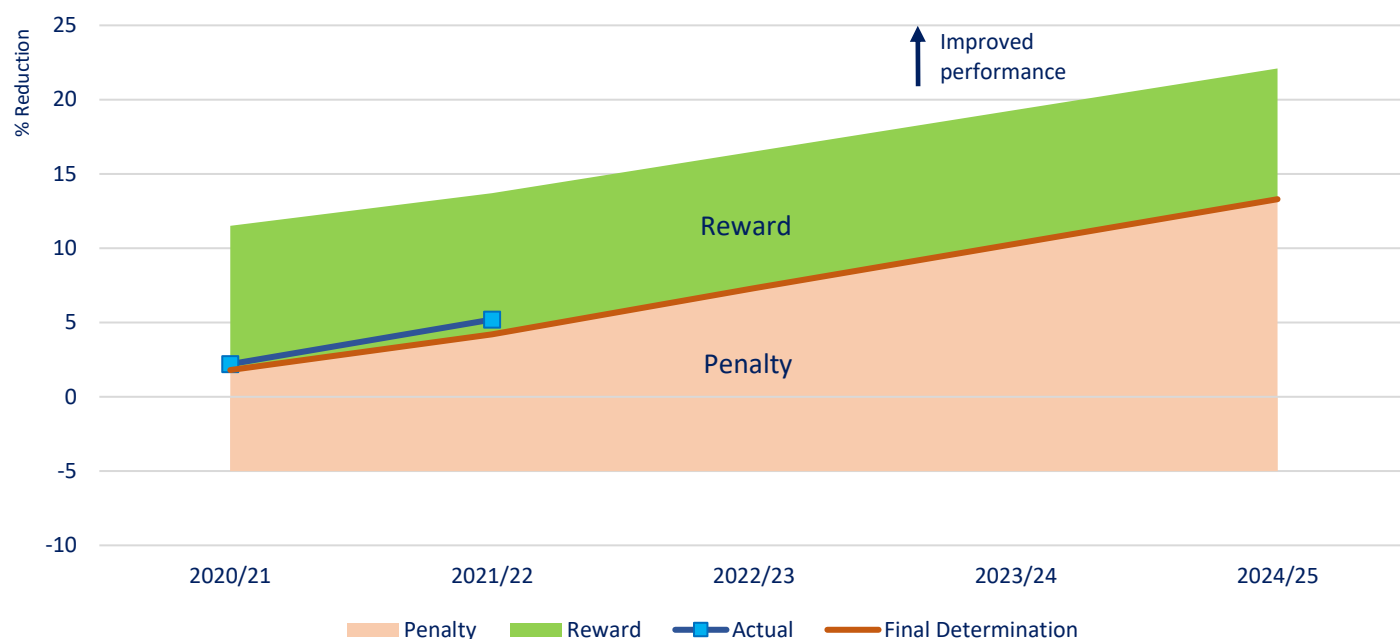
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En4 – Leakage

ODI Reward & Penalty

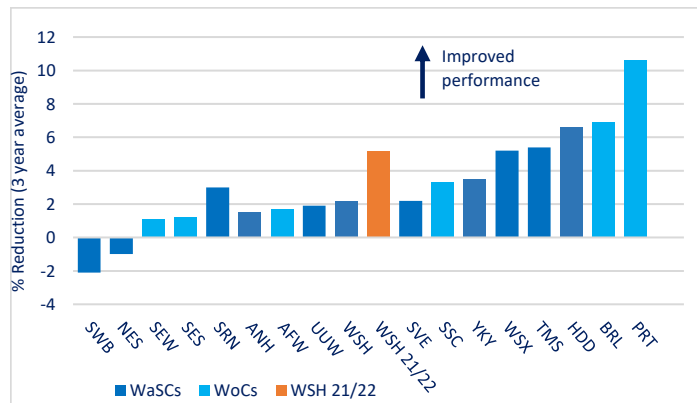
Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	2.2	5.2	n/a	n/a	n/a
Final Determination	1.8	4.2	7.3	10.3	13.3
ODI Reward/Penalty (£m)	£0.114	£0.257 Reward not claimed			



Industry Performance 2020/21

Definition



The percentage reduction of three year average leakage in megalitres per day (ML/d) from the 2019/20 starting baseline.

Source: 2020/21 Industry datashare

Commentary

We are currently undertaking an extensive review of the components that feed into the leakage reporting process which will take several months to complete. We have reported our 2021/22 performance on a like for like basis with that followed in the 2020/21 APR. Ofwat are aware of the review and we will be providing regular progress updates. As a result of this review, we have not claimed the Outcome Delivery Incentive reward of £0.257m which would be applicable based on our reported 2021/22 performance of 5.2%; we have used the override function within the Ofwat ODI model to reflect this. We have submitted the Ofwat tables accordingly and not recorded either Yes or No within the performance commitment level met column.

Please see appendix 2.i for details of the compliance checklist for this common performance measure.

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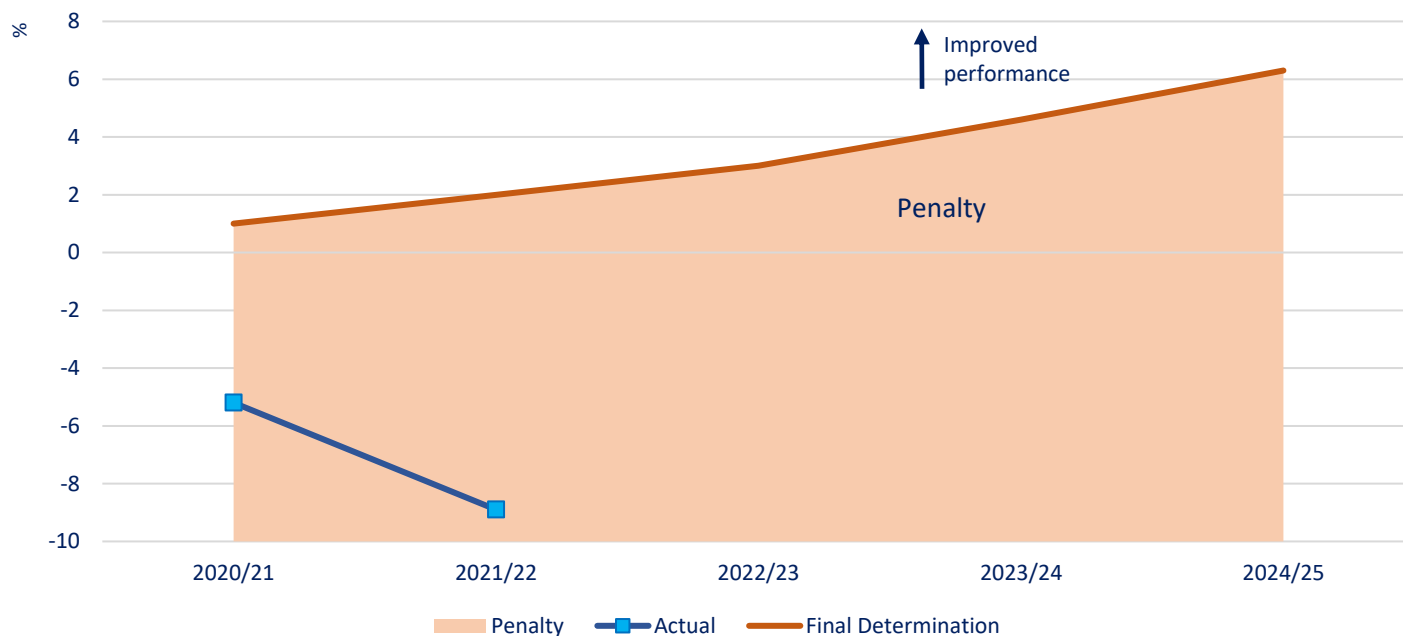
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En5 – Per capita consumption

ODI Penalty

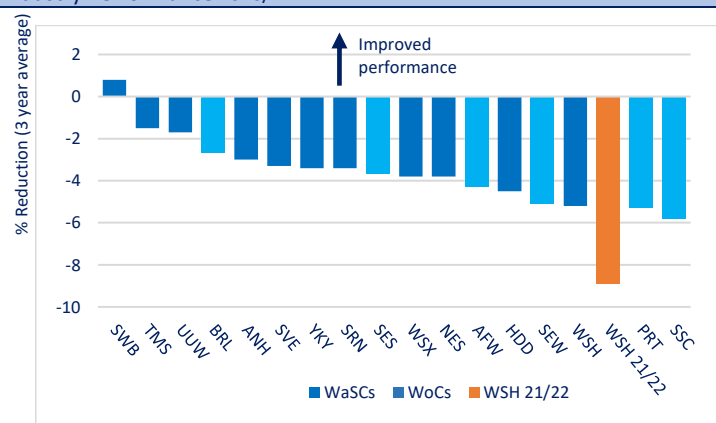
Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	-5.2	-8.9	n/a	n/a	n/a
Final Determination	1.0	2.0	3.0	4.6	6.3
ODI Penalty (£m)	£0.000 (£1.310 Penalty end of AMP)	£0.000 (£2.282 Penalty end of AMP)			



Industry Performance 2020/21

Definition



Source: 2020/21 Industry datashare

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 % reduction of our three year average PCC from the 2019/20 starting baseline.

Commentary

We are currently undertaking an extensive review of the components that feed into the per capita consumption reporting process which will take several months to complete. We have reported our 2021/22 performance of -8.9% on a like for like basis with that followed in the 2020/21 APR. Ofwat are aware of the review and we will be providing regular progress updates.

On the 4 November 2021 Ofwat issued a change to our Outcomes performance commitments appendix that accompanies our Final Determination. The change instructed that the timing of any underperformance or outperformance payments are claimed at the end of the AMP period i.e. 2024/25 and not at the end of each financial year.

Please see appendix 2.v for details of the compliance checklist for this common performance measure.

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Continued commentary

We continue to roll-out our Project Cartref programme across Wales through community engagement, social media targeting and the physical survey of high consumption areas. The project helps customers to become more water efficient, providing new ways of saving water and helping identify and fix leaks within their homes.

The programme and follow-up home visits promote the efficient use of water and installation of water saving products and devices. In addition, we continue with our communication campaigns and schools education programmes. We have also installed smart meters to help us better understand consumption and the impact of additional tourism and home working.

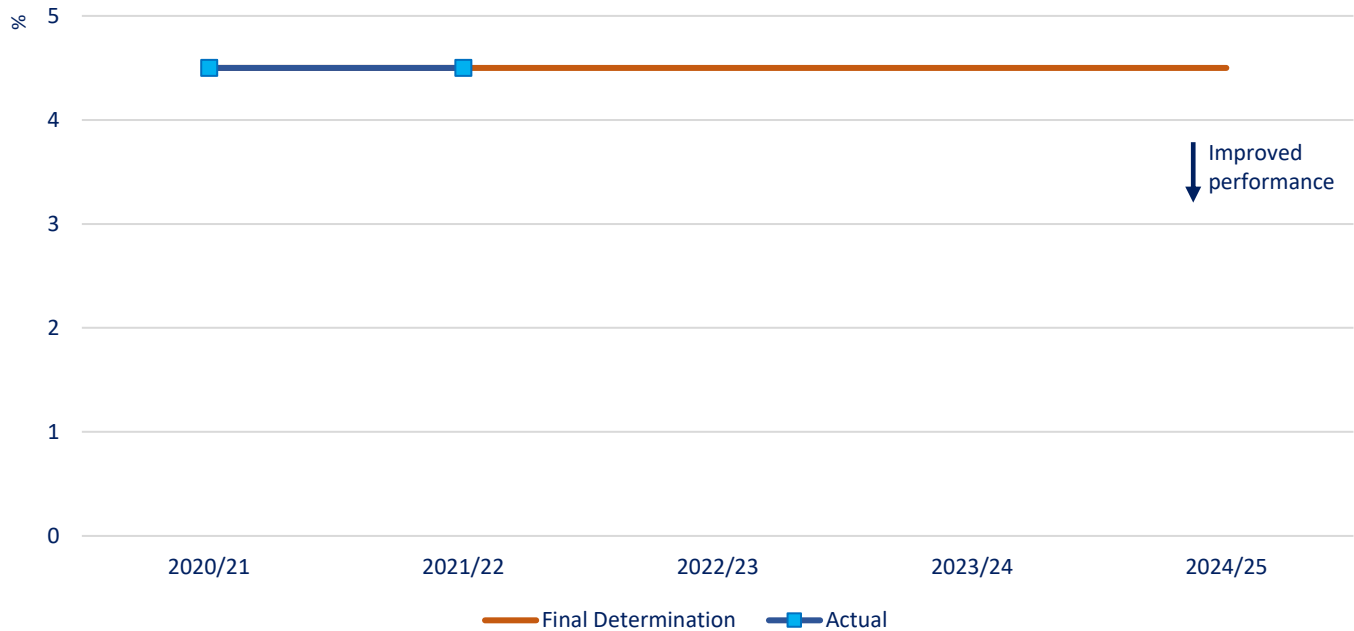
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Ft1 – Risk of severe restrictions in a drought %

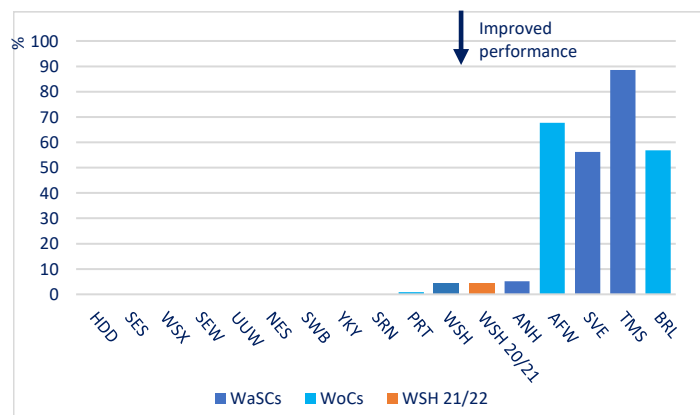
Reputational

Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	4.5	4.5	4.5	n/a	n/a	n/a
Final Determination		4.5	4.5	4.5	4.5	4.5



Industry Performance 2020/21



Source: 2020/21 Industry datashare

Definition

The overall metric is the percentage of the customer population at risk of experiencing severe restrictions in a 1-in-200 year drought, on average, over 25 years.

Commentary

Our performance for the year was 4.5% which meets the Ofwat Final Determination target and is equal to our performance last year. There are three zones identified at risk (Vowchurch, Tywyn Aberdyfi, Pembrokeshire)

Given the long-term nature of this metric, the process uses the actual population data for 2021/22 and also forecast population, as per the Ofwat guidance.

There has been no change to our calculation of population at risk as result of the demand side enhancement measures reported in the Annual Performance Report Table 6C Lines 23 and 24.

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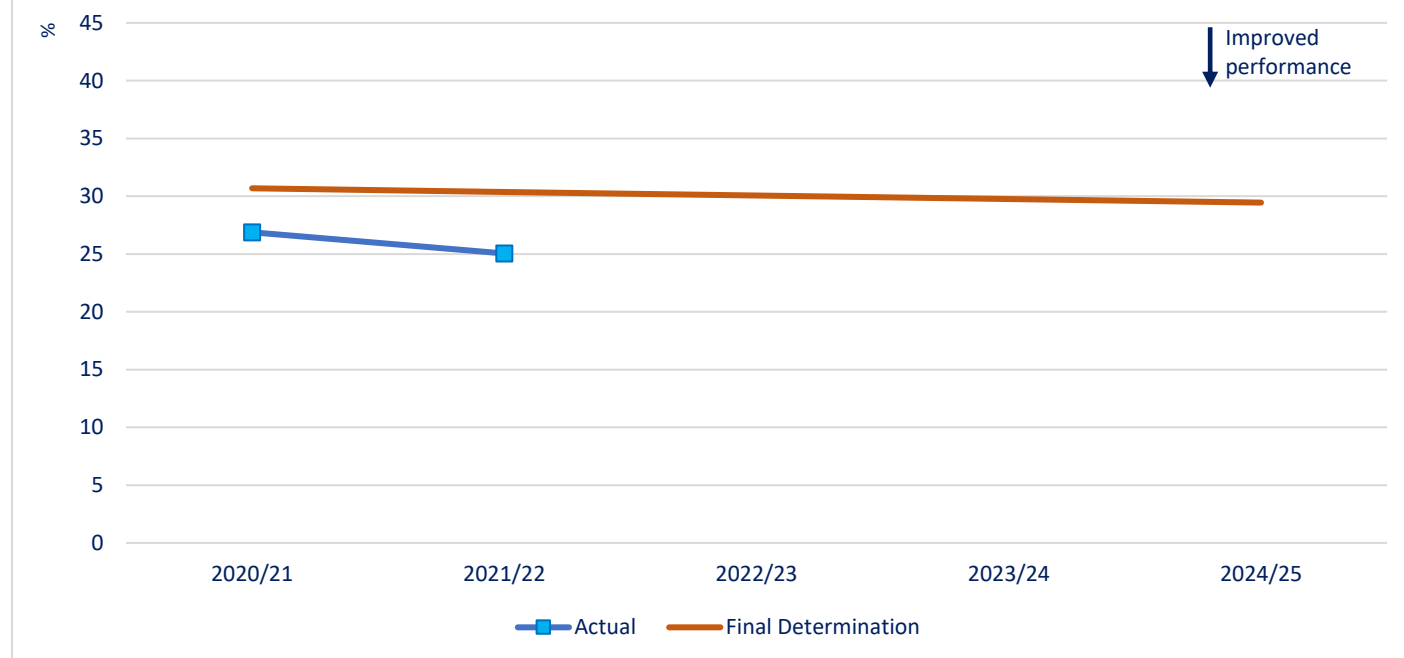
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Ft2 – Risk of sewer flooding in a storm %

Reputational

Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	41.81	26.88	25.05	n/a	n/a	n/a
Final Determination		30.69	30.38	30.07	29.76	29.45



Industry Performance 2020/21



Source: 2020/21 Industry datashare

Definition

This measure will record the percentage of the region's population at risk from internal hydraulic sewer flooding from a 1 in 50-year storm, based on modelled predictions.

Commentary

Our performance for the year was 25.05% which is better than the Ofwat Final Determination target of 30.38% and last years performance of 26.88%. The increase can be attributed to improvements driven from our drainage and wastewater management plans.

The result shows a slight improvement in reported figures due an improved process of flood property mapping Feature Manipulation Engine (FME). This year no changes have been made to the catchment vulnerability assessment or to new catchments being modelled.

One catchment has been altered from a 1b assessment to 1a as part of the improved process.

It is important to note that it is not anticipated that there will be any additional model coverage increases until cycle two of the DWMP.

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Rt1 – Internal sewer flooding

ODI Reward & Penalty

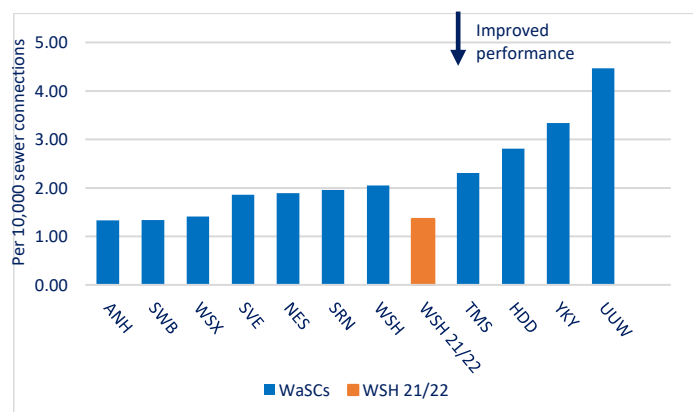
Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	1.75	2.05	1.36	n/a	n/a	n/a
Final Determination		1.68	1.63	1.58	1.44	1.34
ODI Reward/Penalty (£m)		£1.581	£1.154			



Industry Performance 2020/21

Definition



Source: 2020/21 Industry datashare

The measure is calculated as the number of internal sewer flooding incidents normalised per 10,000 sewer connections including sewer flooding due to severe weather events.

Commentary

Our performance for the year was 1.36 which is better than the Ofwat Final Determination target of 1.63, measured per 10,000 sewer connections. This is equivalent to 201 properties this year and 302 in 2020/21.

As part of our investigation process onsite, we have identified, and self-reported 14 internal flooding incidents (7%). Customers have had to proactively call us for 93% of our internal flooding performance.

Please see appendix 2.vii for details of the compliance checklist for this common performance measure. We are reporting all components as Green assessments as listed.

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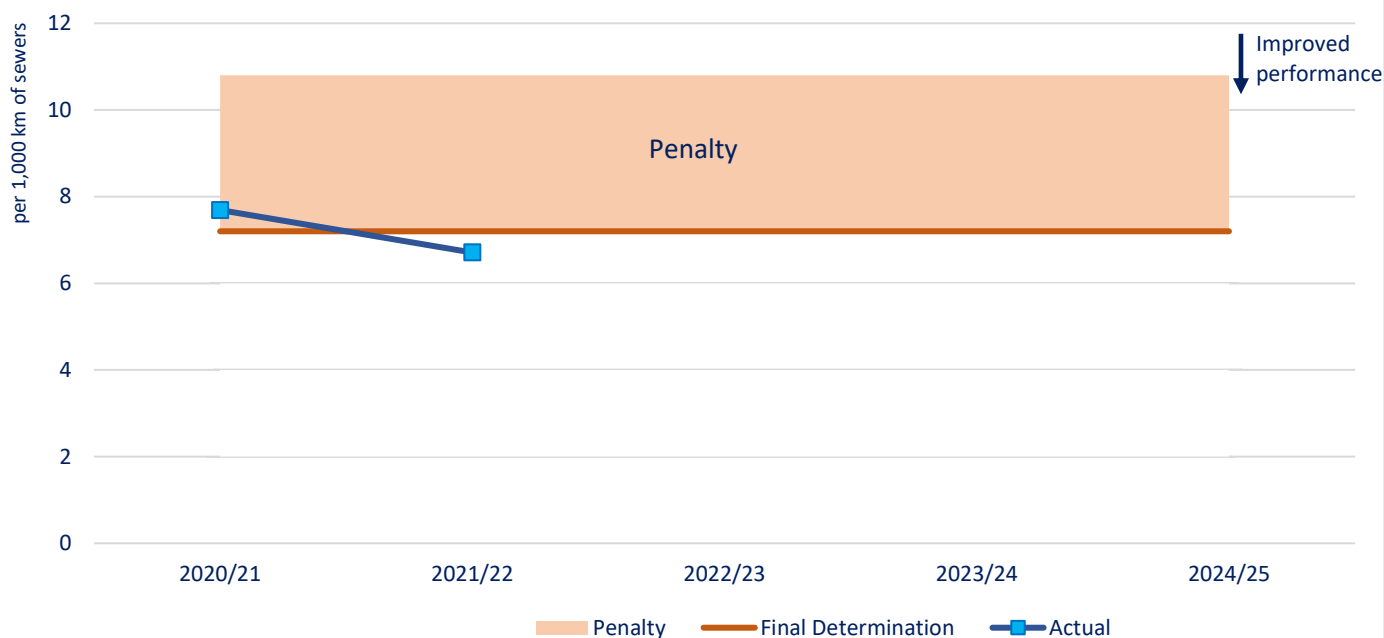
Annual Performance Report 2021/22

Rt3 – Sewer collapses

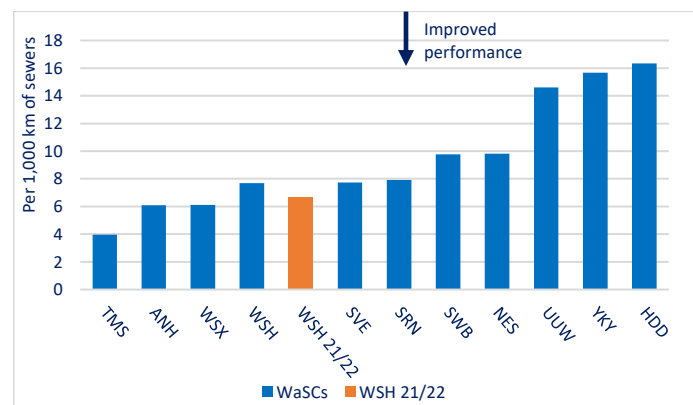
ODI Penalty

Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	7.23	7.69	6.71	n/a	n/a	n/a
Final Determination		7.20	7.20	7.20	7.20	7.20
ODI Penalty (£m)		£0.069	£0			



Industry Performance 2020/21



Source: 2020/21 Industry datahare

Definition

The number of sewer collapses per 1,000 kilometres of all sewers causing an impact on service to customers or the environment.

A sewer collapse is where a structural failure has occurred to the pipe that results in a service impact to a customer or the environment and where action is taken to replace or repair the pipe to reinstate normal service.

Commentary

Our performance for the year was 6.71 which is better than the Ofwat Final Determination target of 7.20 measured per 1000km of sewers, based on a total sewer length of 36,959km. This equates to a total of 248 collapses (162 on gravity sewers, 86 rising main bursts). This is better than last years performance of 7.69 per 1,000km based on 283 incidents.

Please see appendix 2.vi for details of the compliance checklist for this common performance measure. We are reporting all components as green assessments as listed.

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Annual Performance Report 2021/22

Sv1 – C-MeX

ODI Reward & Penalty

Summary Performance

Item	Unit	2019/20	2020/21	2021/22
Annual customer satisfaction score for the customer service survey	Number		83.11	80.72
Annual customer satisfaction score for the customer experience survey	Number		87.19	85.14
Annual C-MeX score	Number	82.47	85.15	82.93
Annual net promoter score	Number		51.50	44.50
Total household complaints	Number		18,041	4,181
Total connected household properties	Number		1,477,758	1,487,857
Total household complaints per 10,000 connections	Number		122.08	28.158
Confirmation of communications channels offered	TRUE or FALSE		TRUE	True
ODI Reward / Penalty	£m		£2.018	£1.600

Industry comparison

Source: Ofwat C-MeX results 2021/22

Company	2021/22		2020/21	
	C-MeX scores	Rank	C-MeX scores	Rank
WSX	84.82	1	86.09	2
NES	84.46	2	85.76	3
PRT	83.76	3	86.21	1
SSC	83.38	4	81.89	10
WSH	82.93	5	85.15	4
BRL	82.86	6	83.30	6
UUW	82.01	7	83.59	5
SVE	80.61	8	82.35	9
ANH	80.43	9	83.05	7
YKY	80.41	10	82.78	8
HDD	78.78	11	81.38	11
SWB	78.48	12	80.96	12
SEW	76.59	13	80.70	13
AFW	76.57	14	77.88	15
SES	76.35	15	78.97	14
SRN	72.00	16	74.64	16
TMS	68.86	17	72.91	17

Definition

C-MeX is a customer measure of experience and customer satisfaction. It is comprised of two survey elements:

- Customer Experience Survey – a customer satisfaction survey amongst a random sample of the water company's customers; and
- Customer Service Survey – a customer satisfaction survey amongst a random sample of those customers who have contacted their water company.

The scores of each of the two surveys are weighted equally to produce the combined C-MeX measure.

Commentary

Our performance for the year was 82.93 which placed us in 5th position against all of the other water companies. This overall C-MeX score can be broken down into two components:

- Customer Service Survey (CSS) - Our score for the year was 80.72, which placed us 7th amongst all other companies.
- Customer Experience Survey (CES) - Our score for the year was 85.14, which placed us in 2nd amongst all the other companies.

There is a 3 point out of 100 deduction if fewer than five communication channels are offered, of which three must be online. During the year we have offered seven channels, four of which are digital. These are:

- Non Digital – Telephone, Written and Visits
- Digital – Emails, Social Media, Webform and Live Chat.

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Sv2 – D-MeX

ODI Reward & Penalty

Summary Performance

Item	Unit	2019/20	2020/21	2021/22
Qualitative component annual results	Number		67.78	67.96
Quantitative component annual results	Number		97.61	99.92
D-MeX score	Number	84.38	82.69	83.94
Developer services revenue (water)	£m		16.035	19.245
Developer services revenue (waterwater)	£m		7.724	7.196
ODI Reward / Penalty	£m		£0.353	£0.139

Industry comparison

Source: Ofwat D-MeX results 2021/22

Company	2021/22	Rank	2020/21	Rank
	D-MeX Score		D-MeX Score	
HDD	91.26	1	89.01	4
SVT	90.90	2	89.70	1
PRT	90.56	3	89.20	3
WSX	89.65	4	89.47	2
NES	88.57	5	86.94	7
UUW	88.40	6	88.44	5
ANH	87.54	7	87.72	6
AFW	85.54	8	84.39	10
BRL	85.26	9	86.81	8
SWB	84.99	10	85.88	9
SSC	84.38	11	83.59	11
WSH	83.94	12	82.69	12
SEW	81.34	13	79.85	13
TMS	79.64	14	77.56	14
SRN	77.78	15	73.77	15
SES	77.73	16	60.20	17
YKY	55.10	17	62.25	16

Definition

D-MeX is a measure of customer satisfaction for Developer Services.

The D-MeX score is calculated from two components that contribute equally:

- Qualitative D-MeX score, based on the ratings provided by developer services customers who transacted with the company throughout the reporting year to a customer satisfaction survey; and
- Quantitative D-MeX score, based on the company's performance against a set of selected Water UK performance metrics throughout the reporting year.

Commentary

Our performance for the year was 83.94 (based on latest extract for all companies as at 09 June 2022) which placed us in 12th place against other water companies.

The scoring mechanism of D- MeX is made up of the two components - Qualitative and quantitative, with a 50/50 weighting to give overall performance.

- Qualitative component – Our result for the year was 67.96.
- Quantitative component – Our result for the year was 99.92.

The legal and regulatory arrangements in our operating area that apply to developer customers are very different to those for English water companies (e.g. mandatory sewer adoption and standards, compulsory fire sprinklers in all new homes). These differences have a material negative impact on our qualitative scores where we have very little ability to improve the legal/regulatory procedure that both developer customers and Welsh Water are obliged to follow.

We have several actions under way to support improving customer satisfaction levels. This includes:

- Challenging our Levels of service internally – Working to exceed current Levels of Service metrics to maintain high levels of performance of the quantitative measure and improve our qualitative performance by being more responsive;
- New Water Connections - process review to reduce the number of customer hand-offs and reduce the timescales involved

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Continued Commentary

- Detailed analysis of anonymised customer feedback - Key themes of focus are responsiveness, reliability / right first time/ single point of contact/ proactive contact;
- Root cause analysis of customer complaints- both written and telephone, completed and included as part of the DS customer improvement group to identify areas for improvement;
- Root cause analysis of Levels of Service failures – completed and included as part of the Developer Services improvement group to identify areas for improvement;
- Customer Stakeholder Strategy – to continually engage with customers at the level and frequency they want to include facilitating Developer Forums; and
- Developing improved technology that enhances the customers experience and satisfaction.

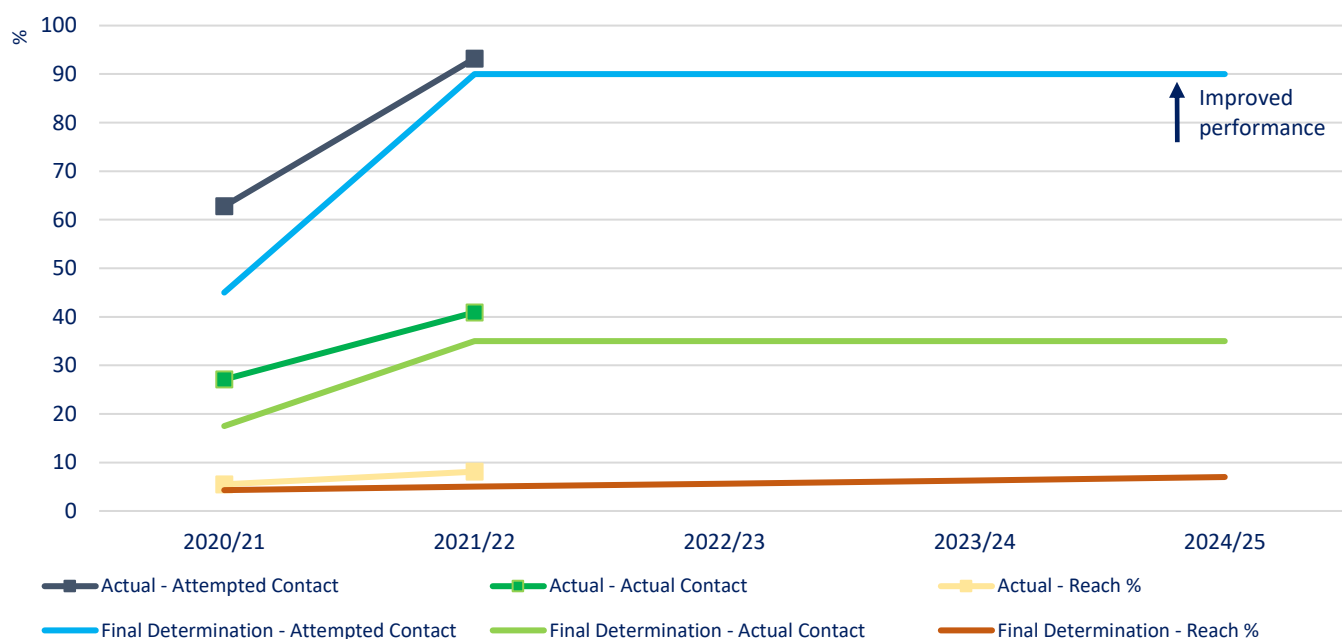
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Sv5 – Priority services for customers in vulnerable circumstances

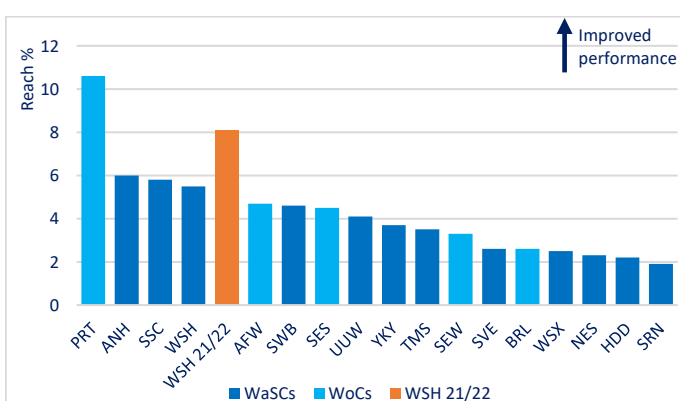
Reputational

Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual - Attempted Contact %	92.4	62.8	93.2	n/a	n/a	n/a
Actual - Actual Contact %	57.6	27.1	40.9	n/a	n/a	n/a
Actual - Reach %	4.0	5.5	8.1	n/a	n/a	n/a
Final Determination – Attempted Contact %		45.0	90.0	90.0	90.0	90.0
Final Determination – Actual Contact %		17.5	35.0	35.0	35.0	35.0
Final Determination – Reach %		4.3	5.0	5.6	6.3	7.0

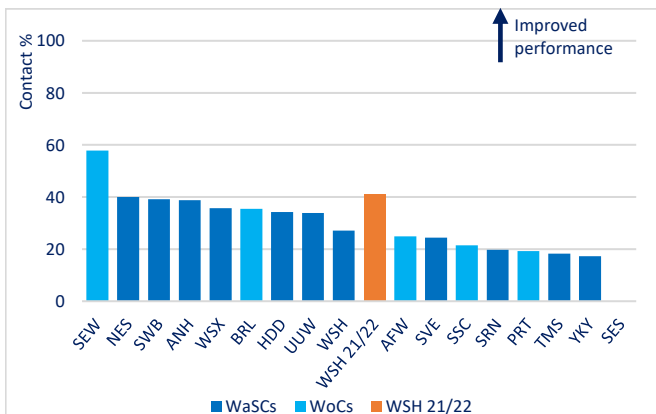


Industry Performance 2020/21 – Reach %



Source: 2020/21 Industry datashare

Industry Performance 2020/21 – Contact %



Source: 2020/21 Industry datashare

Definition

We provide special assistance to those customers in vulnerable circumstances who are registered on our Priority Services Register (PSR). This measure reports on the number of households on the Company's PSR as a proportion of all households in the Company's region.

Commentary

For 2021/22 we are reporting there are 116,290 household customers on our Priority Services Register (PSR) as of 31 March 2022. This is an increase of 48% on last year's figure of 78,683.

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Continued Commentary

Welsh Water's Priority Services scheme offers additional practical services to customers who may for example be disabled, chronically sick, of pensionable age, parents with young children, on dialysis, or have sight or hearing impairment. A summary of services provided is:

- 1,763 household receive support with communication;
- 824 households received support with mobility and access restrictions;
- 116,290 households receive support with supply interruptions;
- 3,852 households receive support with security; and
- 5,050 households receive support with other needs.

These total to more than 116,290 as some households are registered for more than one service.

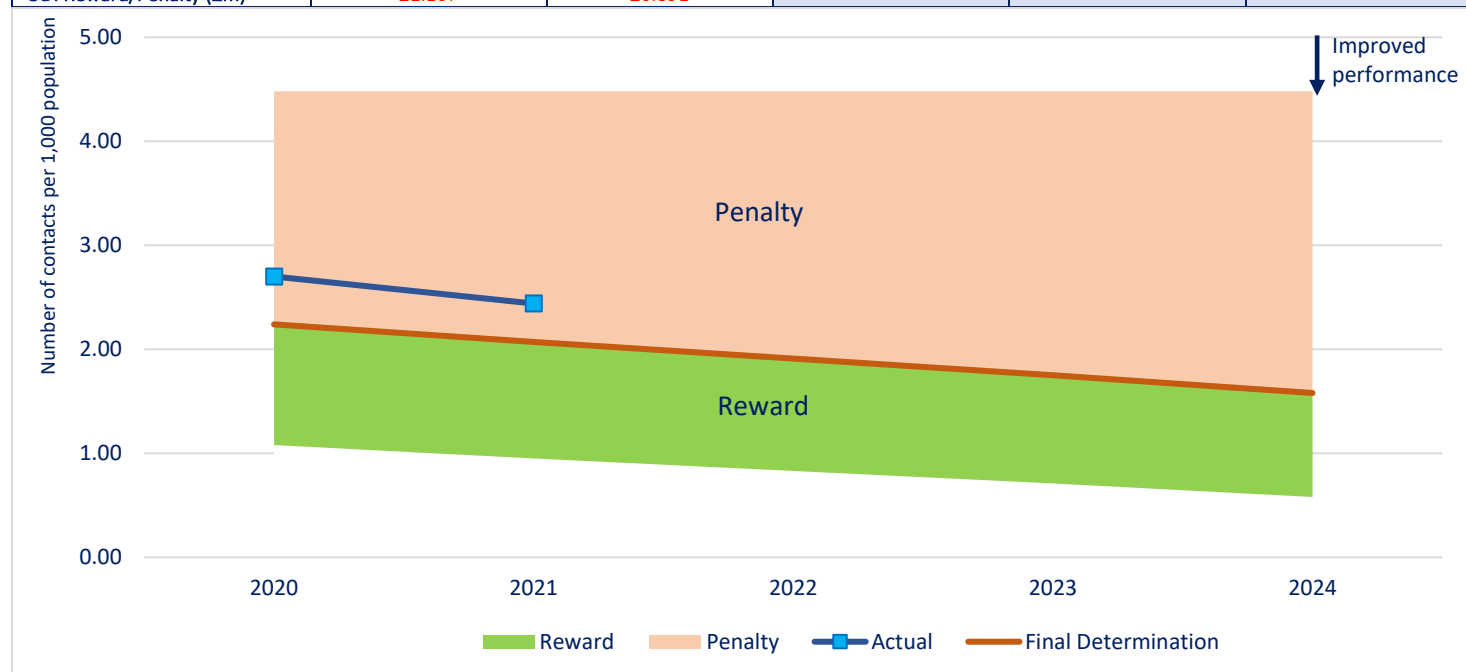
- 8.1% of our households were registered for priority services (as of 31 March). The total number of household connections used at 31 March 2021 for this calculation was 1,438,041 and excludes void properties.
- As at 31 March 2022 there were 51,241 households which had been on the register for more than 2 years and which were in scope for data checking. Contact was attempted with 47,782 (93.2%) of those households over the last 2 years.
- As at 31 March 2022, 20,934 (40.9%) of households which have been on the PSR for more than two years have had an actual contact in the last two year period.

Wt3 – Acceptability of drinking water

ODI Reward & Penalty

Summary Performance

	2020	2021	2022	2023	2024
Actual	2.70	2.44	n/a	n/a	n/a
Final Determination	2.24	2.07	1.91	1.75	1.58
ODI Reward/Penalty (£m)	£1.107	£0.891			



Definition

The number of times the company is contacted by consumers due to the taste and odour of drinking water, or due to drinking water not being clear, reported per 1,000 population. This measure is reported on a calendar year basis.

Commentary

Our performance for the year was 2.44 contacts per 1,000 population which is worse than the Ofwat Final Determination target of 2.07, but better than last years performance of 2.70.

During 2021 we received 7,715 contacts from our customers on the acceptability of drinking water.

Our performance was largely achieved through the delivery of the Acceptability of Water Strategy which follows a Source to Tap approach, supported by innovation and investment. The strategy contains a number of key deliverables for the period 2020-25, including:

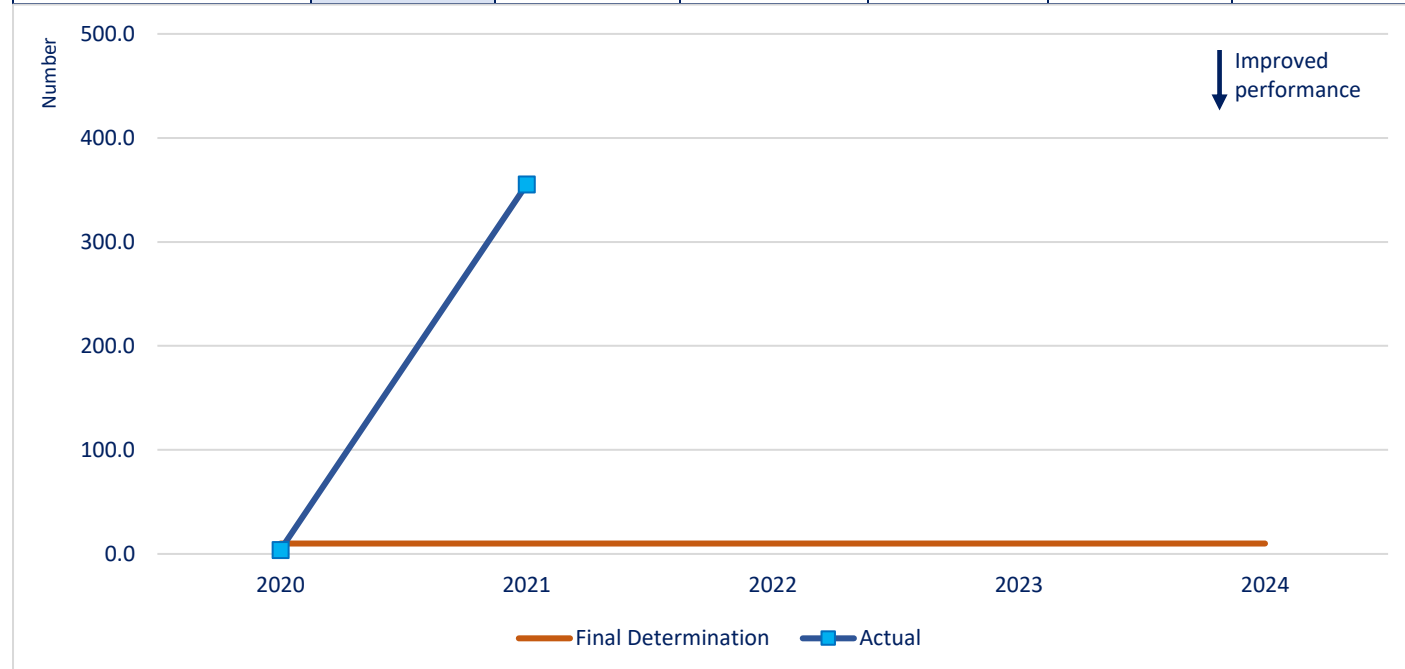
- further investment in drinking water catchments;
- further investment at water treatment works to reduce the levels of Manganese going into supply;
- continuation of our Zonal Studies Programme to clean and replace cast iron pipes and investment;
- improved use of data to inform decision making and improvements to operational responses; and
- the outsourcing of standpipe hire to reduce the impact of third party users.

Wt6 – Tap water quality event risk index (ERI)

Reputational

Summary Performance

	2019	2020	2021	2022	2023	2024
Actual	25.881	3.903	355.169	n/a	n/a	n/a
Final Determination		10.000	10.000	10.000	10.000	10.000



Definition

The Event Risk Index (ERI) is a measure of the risk arising from water quality events, as defined by the Drinking Water Inspectorate (DWI). This measure is reported on a calendar year basis.

Commentary

During 2021 we had 20 events, giving us a provisional ERI score of 431.000 compared to 11 events in 2020 which gave us a score of 3.903 (the 2020 score was confirmed by DWI in May 2022). All notifiable events have been reported in line with the Water Industry (Suppliers' Information) Direction 2020 and the DWI Guidance on the Notification of Events

Our Performance of 431.000 is worse than 2020 (3.903). This is attributable to three significant events:

1. An event affecting taste and odour on water supply in Monmouth in June 2021. We are awaiting the assessment of the ERI score from DWI. Based on worst case we assess an ERI score of 417.000
2. A discolouration event in Abergavenny in September 2021 – ERI Score of 4.022
3. A large Loss of Supply event in Penarth in September 2021 – ERI Score of 4.871

The above figure (431.000) is an estimate based on worse case scenario for outstanding assessment for 2021. The ERI score for the calendar year 2021 will remain provisional until confirmation by DWI in May 2023.

Update – 20 July 2022. The Drinking Water Inspectorate have now published final ERI scores for 2021. Our performance for the year was 355.169 .

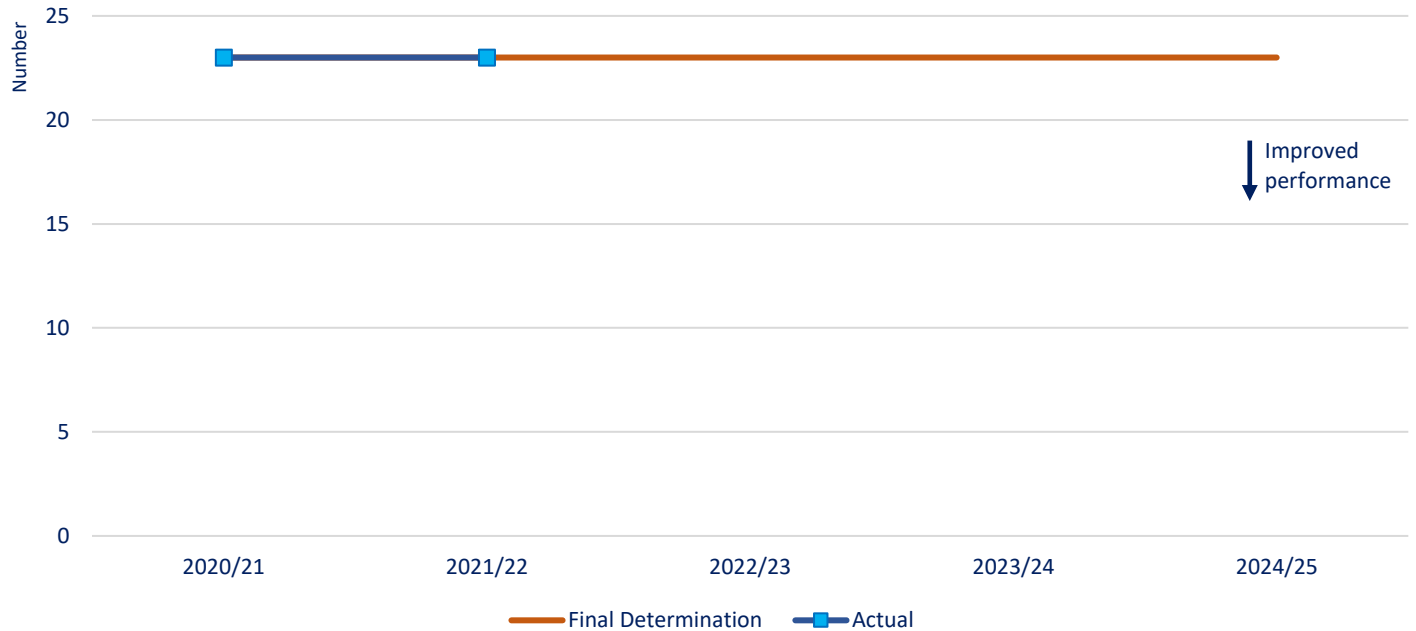
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Wt7 – Water catchments improved

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	23	23	n/a	n/a	n/a
Final Determination	23	23	23	23	18



Definition

The number of water treatment works with catchments designated as Safeguard Zones under the Water Framework Directive (WFD) as in effect at the time of the Ofwat Final Determination publication.

Drinking Water Safeguard Zones are designated areas where raw water quality has been deemed to be 'at risk' of deterioration.

Commentary

The de-designation of the five Safeguard Zones will be by agreement from Natural Resources Wales and the Environment Agency, following the successful submission of evidence that demonstrates catchment improvements have been achieved by 2024/25.

As stated in our Final Determination we have published a standalone annual progress report alongside this document.

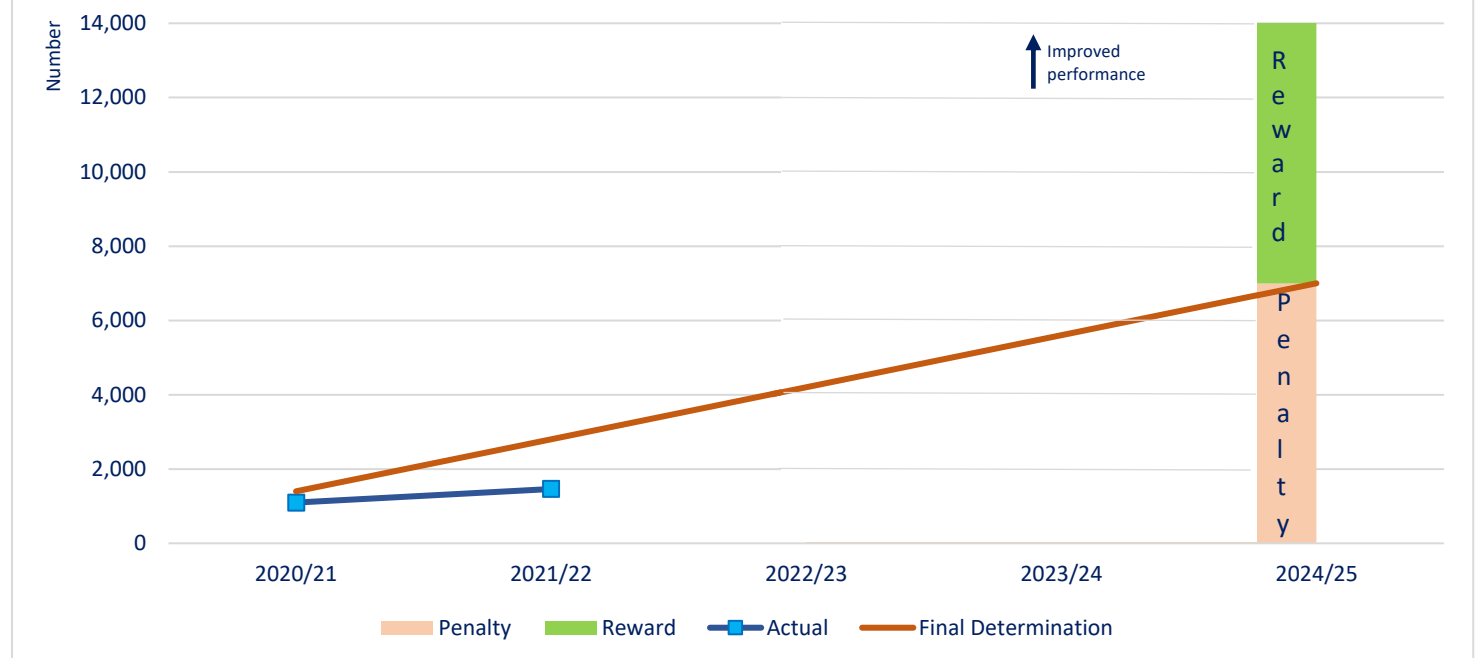
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Wt8 – Lead pipes replaced

ODI Reward & Penalty

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	1,097	1,462	n/a	n/a	n/a
Final Determination	1,400	2,800	4,200	5,600	7,000
ODI Reward/Penalty (£m)	Calculated on 31 March 2025				



Definition

This performance commitment measures number of lead pipes replaced by the Company. The number of pipes reported as replaced is cumulative over the period 2020/25. The financial implications associated with underperformance or outperformance with this Performance Commitment will be assessed in 2025, which is the end of this five year reporting cycle.

Commentary

Our performance for the year was 1,462 lead pipe replacements which is worse than the Final Determination target of 2,800.

As part of compiling the data for 2021/22 we have identified that the 2020/21 figure should have been reported as 1,099 and not 1,097. It was identified that two of the 365 replacements identified in 2021/22 were completed in 2020/21. As this Performance Commitment is reported as cumulative figure over the AMP (2020/25), the two replacements have been added to the 2021/22 reportable number.

There is no impact on ODI reward/penalty as this is calculated at the end of the AMP.

The residual impact from Covid 19 has impacted performance on this measure this year.

We are committed to achieving the FD target of 7,000 lead replacements by the end of the AMP where we will see an increase in delivery over years 3, 4 and 5 through developing and understanding the most efficient way to deliver the programme.

We have utilised the override function within the Ofwat ODI model so that any associated out or under performance payments are calculated on 31 March 2025.

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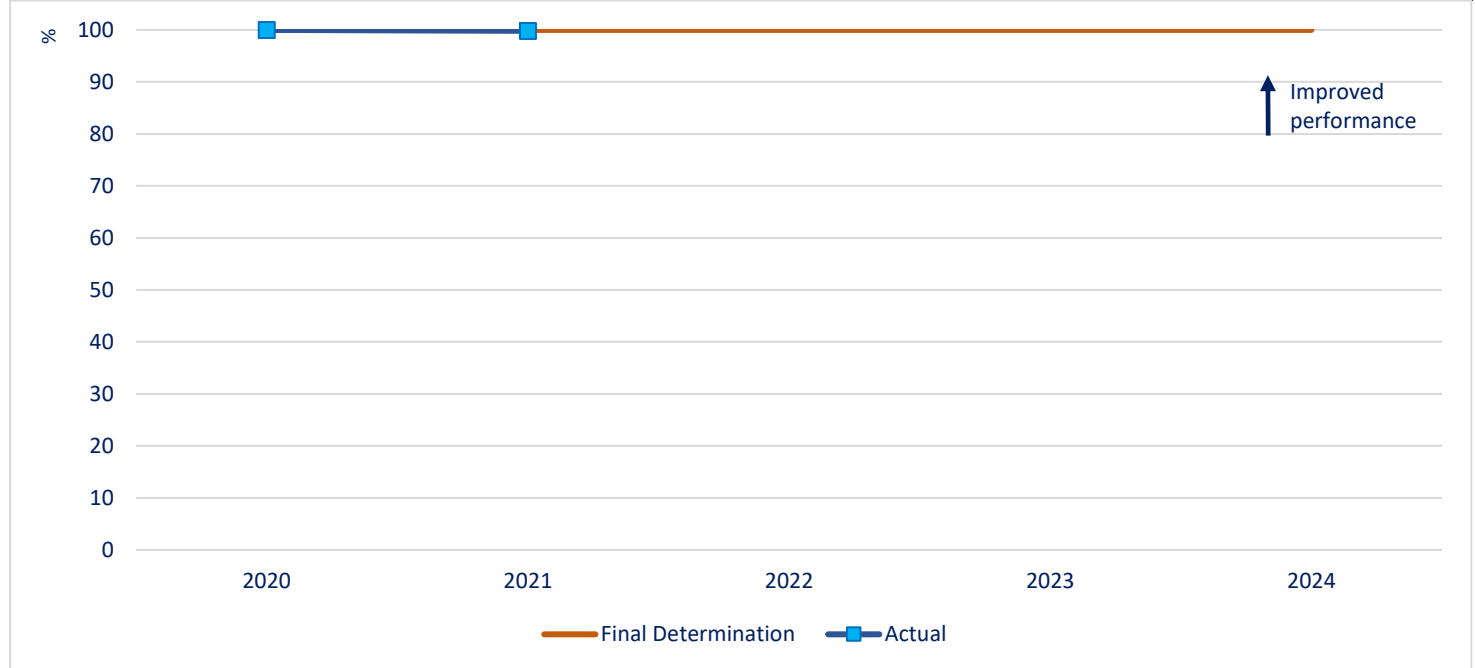
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En2 – Wastewater treatment works ‘look-up table’ compliance %

Reputational

Summary Performance

	2020	2021	2022	2023	2024
Actual	100	99.82	n/a	n/a	n/a
Final Determination	100	100	100	100	100



Definition

Percentage of wastewater treatment works that comply with the following:

- Sanitary Look Up Table limits on permits for Biological Oxygen Demand (BOD), Total suspended solids (TSS) and ammonia.
- Annual average Phosphorus limits.
- Urban Wastewater Treatment Directive (UWWTD) Look up table limits for BOD and Chemical Oxygen Demand (COD).
- UWWTD annual average Phosphorus limits.
- UWWTD annual average Nitrogen limits.

These are set by Natural Resource Wales or the Environment Agency as appropriate.

This measure is reported on a calendar year basis.

Commentary

Our performance for the year was 99.82% which is worse than the Ofwat Final Determination target of 100%. There was one failure at Clehonger WwTW out of 562 permitted WwTWs.

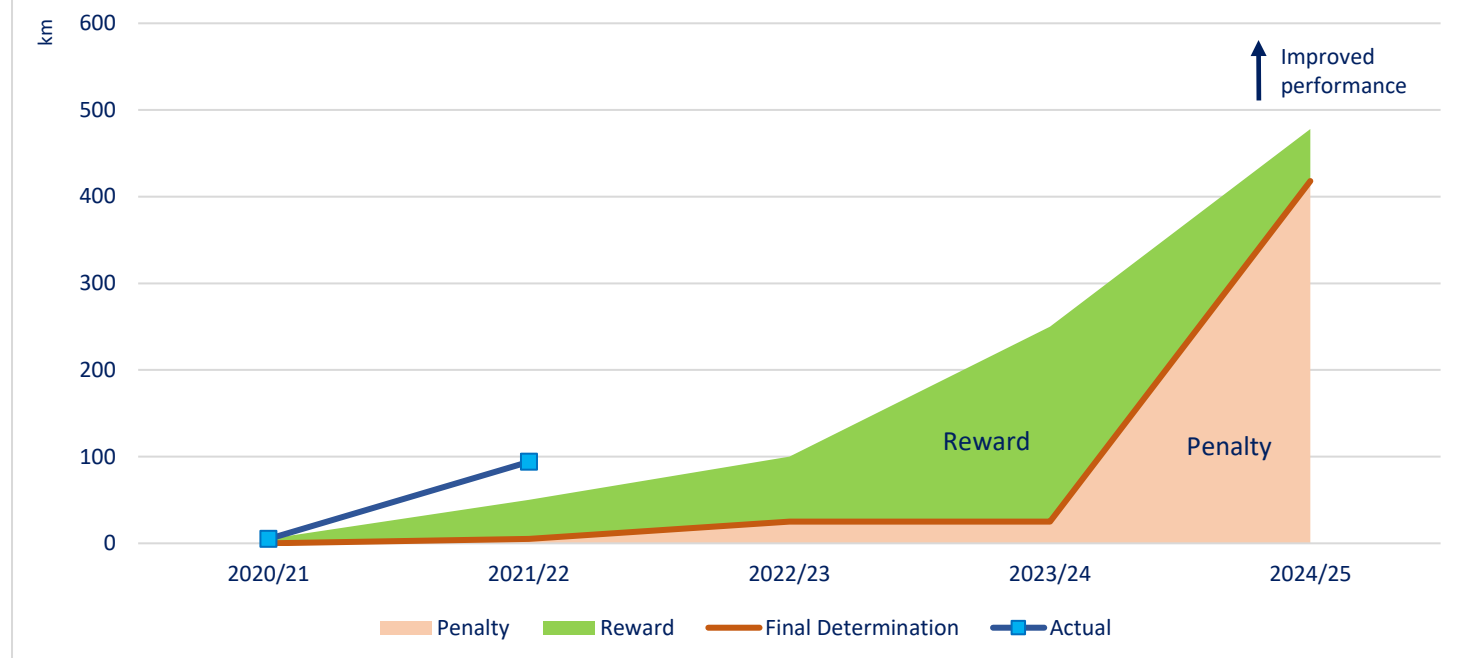
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En6 – Km of river improved

ODI Reward & Penalty

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	5	94	n/a	n/a	n/a
Final Determination	0	5	25	25	418
ODI Reward/Penalty (£m)	Calculated on 31 March 2025				



Definition

The cumulative length of river improved as a result of the Company's action and as a consequence of regulatory and legislative drivers. The length can only be counted once the Environment Agency and/or Natural Resources Wales has agreed all schemes to achieve the improvement have been delivered and each scheme meets the requirements.

The measure is defined as the length (in km) of river with improved water quality, as a result of Welsh Water action. The financial implications associated with underperformance or outperformance with this Performance Commitment will be assessed in 2025, which is the end of this five year reporting cycle.

Commentary

Our cumulative performance reported this year is 94 km of river improved which is better than the Ofwat Final Determination target of 5 km.

The measure includes improvements resulting from Water Industry National Environment Program (WINEP)/National Environment Programme (NEP) Water Quality and Water Resources schemes.

Natural Resources Wales have issued a business performance letter dated 10 June 2022 confirming our reported performance of 89km of river improved during 2021/22 (cumulative 94km).

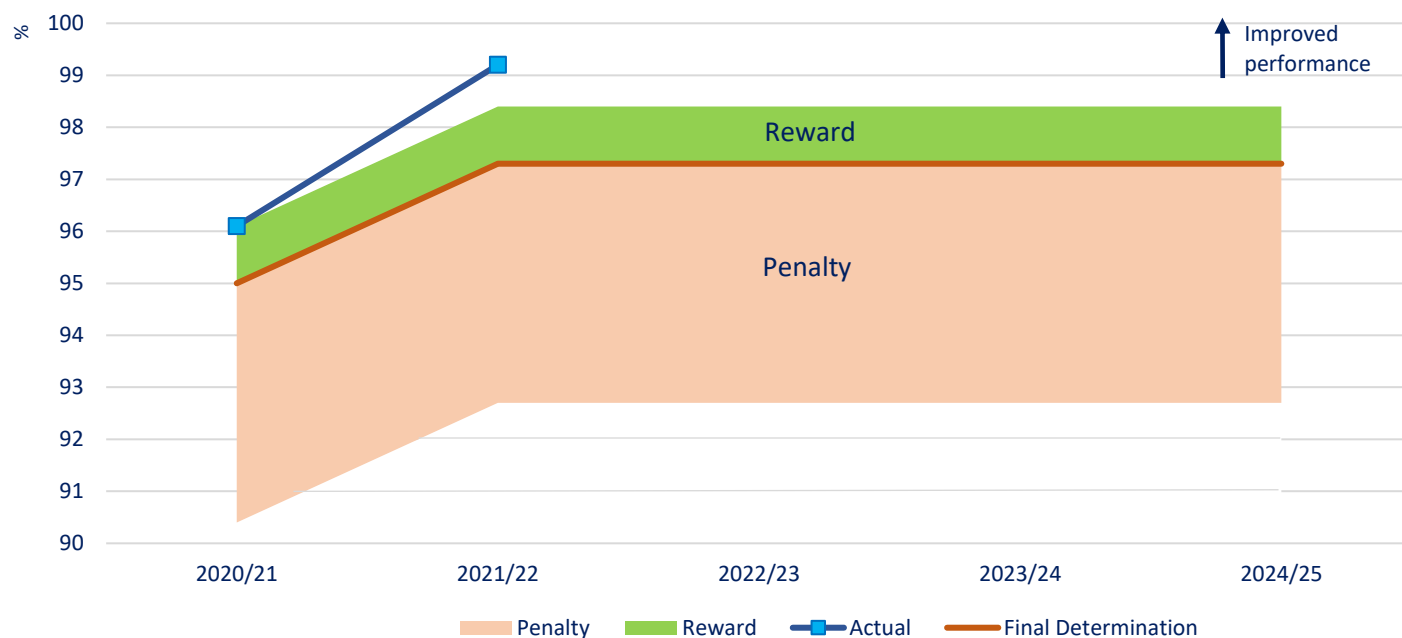
Annual Performance Report 2021/22

En7 – Bioresources product quality %

ODI Reward & Penalty

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	96.1	99.2	n/a	n/a	n/a
Final Determination	95.0	97.3	97.3	97.3	97.3
ODI Reward/Penalty (£m)	£0.454	£0.454			



Definition

Percentage of total wastewater sludge treated that is processed through Advanced Anaerobic Digestion facilities and recycled to land meeting certification requirement of the Biosolids Assurance Scheme. Any sludge imported from third parties will be included within the measure.

Commentary

Our performance for the year was 99.2% which is better than the Ofwat Final Determination target of 97.3%. All sludge is processed through our four Advanced Anaerobic Digestion sites at Cardiff, Afan (Port Talbot), Cog Moors (Dinas Powys) and Five Fords (Wrexham).

A small percentage of sludge was unable to be processed due to limitations in the capacity as a result of downtime for maintenance and reactive repairs. This was sent to a third-party contractor for lime treatment and recycling.

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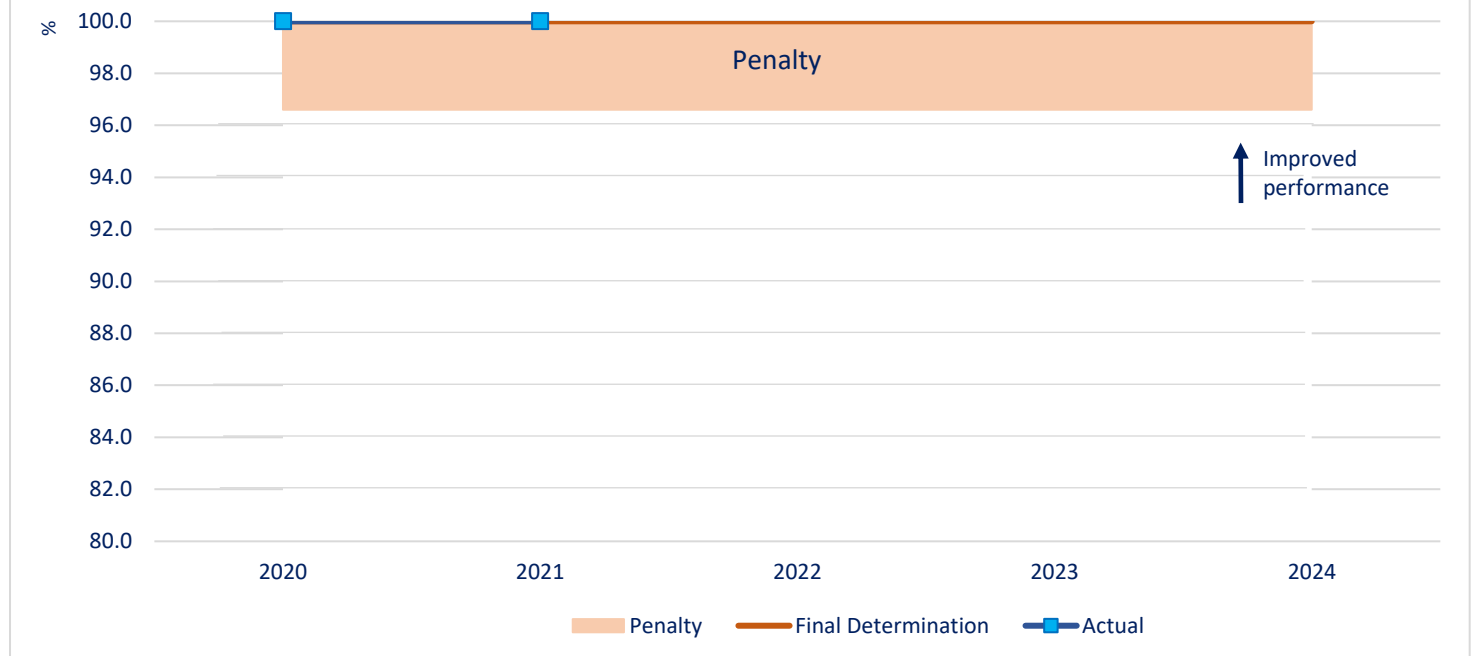
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En8 – Bioresources disposal compliance %

ODI Penalty

Summary Performance

	2020	2021	2022	2023	2024
Actual	100	100	n/a	n/a	n/a
Final Determination	100	100	100	100	100
ODI Penalty (£m)	£0	£0			



Definition

The overall percentage of company sludge satisfactorily used or disposed of in line with version 3 of the Natural Resource Wales and Environment Agency's Environmental Performance Assessment methodology (published November 2017). This measure is reported on a calendar year basis.

Commentary

Our performance for the year was 100% which meets the Ofwat Final Determination target.

During the year, any Biosolids which fail to meet the standards are not recycled to agriculture and are placed in quarantine and retreated prior to disposal.

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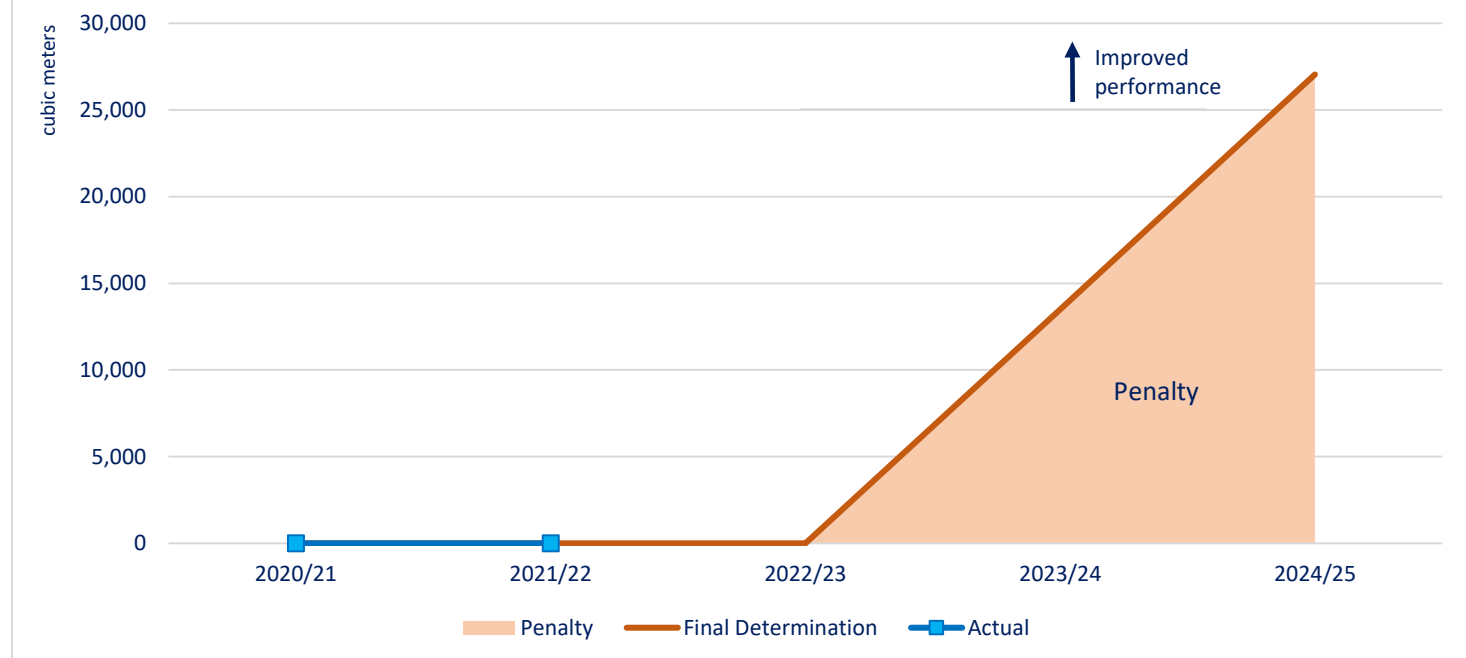
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En9 – Combined sewer overflow storage systems

ODI Penalty

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	0	0	n/a	n/a	n/a
Final Determination	0	0	0	13,500	27,049
ODI Penalty (£m)	Calculated on 31 March 2025				



Definition

The cumulative additional effective volume of storage delivered by the Company under the National Environment Programme (NEP) obligations. The financial implications associated with underperformance or outperformance with this Performance Commitment will be assessed in 2025, which is the end of this five year reporting cycle.

Commentary

During the year we have not delivered any schemes to increase combined sewer overflow storage systems which is in line with the Ofwat Final Determination target.

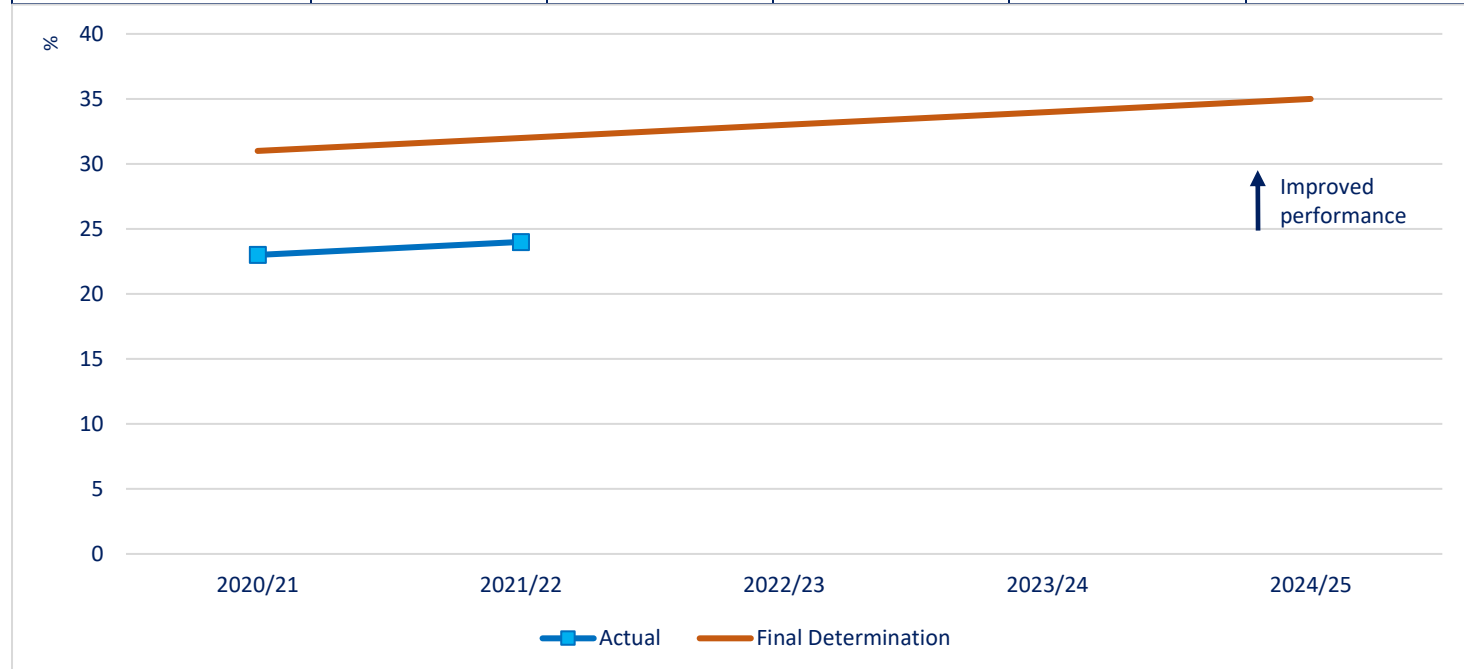
We have utilised the override function within the Ofwat ODI model so that any associated under performance payments are calculated on 31 March 2025.

Ft3 – Energy self-sufficiency %

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	23	24	n/a	n/a	n/a
Final Determination	31	32	33	34	35



Definition

Electricity generated and gas injected to grid as a percentage of all electricity and gas consumed by the company, with gas being presented as a gigawatt hours (GWh) equivalent.

Commentary

Our performance for the year was 24% which is worse than the Ofwat Final Determination target of 32%. This was impacted by the following key factors:

- Comparatively low rainfall reduced hydro-electric generation by around 5 GWh;
- Reactive issues with combined heat and power (CHP) engines, particularly at Cardiff WwTW;
- There remain two Solar PV projects delayed by Covid-19 which are due for completion in 2022/23; and
- The new Hydro schemes at Cantref and Grwyne Fawr were also constructed in 2021/22 and will commence full operation in 2022/23.

For transparency petrol / diesel consumption is not included within the calculation, or the Ofwat Final Determination definition, of this bespoke performance commitment.

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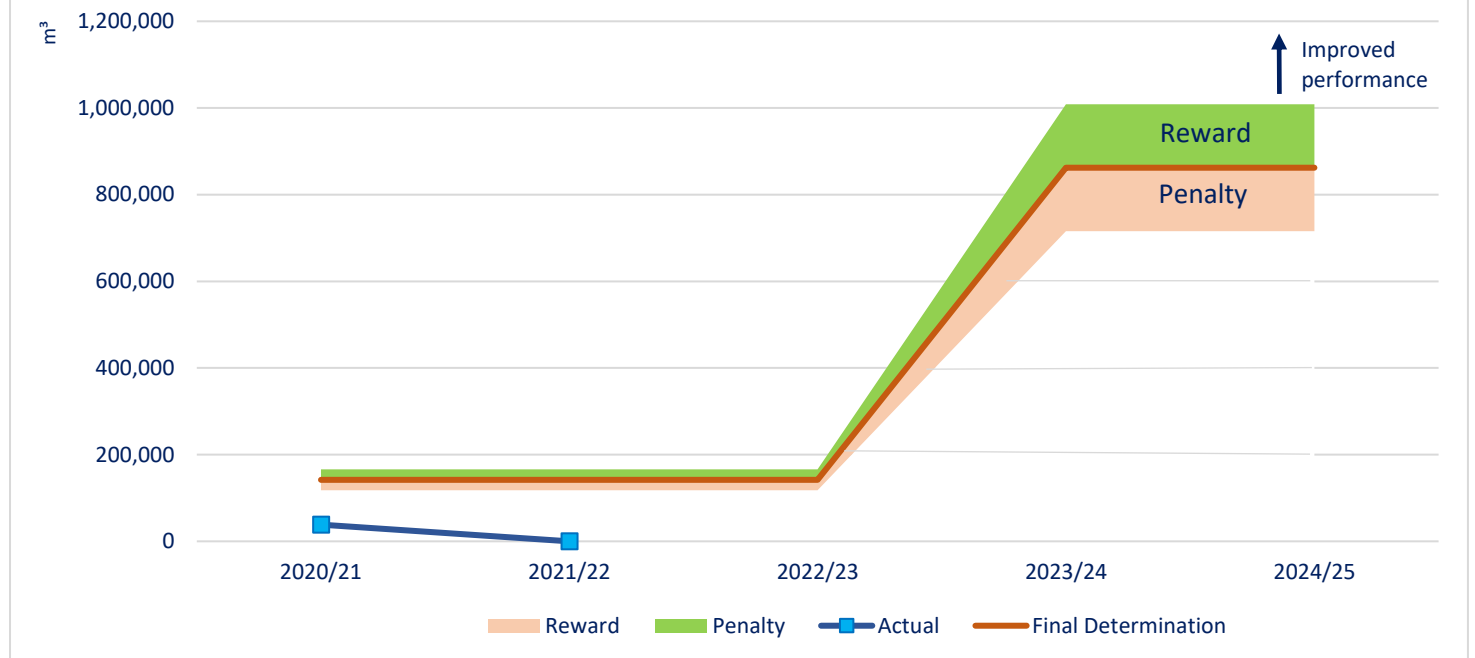
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Ft4 – Surface water removed from sewers (m³)

ODI Reward & Penalty

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	38,473	0	n/a	n/a	n/a
Final Determination	141,900	141,900	141,900	862,150	862,150
ODI Reward/Penalty (£m)	£0.050	£0.050			



Definition

Reduction in volume (m³) of surface water entering the surface or combined sewer network through sustainable urban drainage approaches. Solutions include sustainable urban drainage approaches to slow down and reduce the volume of water entering the network.

Commentary

Our performance for the year was 0m³ which is worse than the Ofwat Final Determination target of 141,900m³.

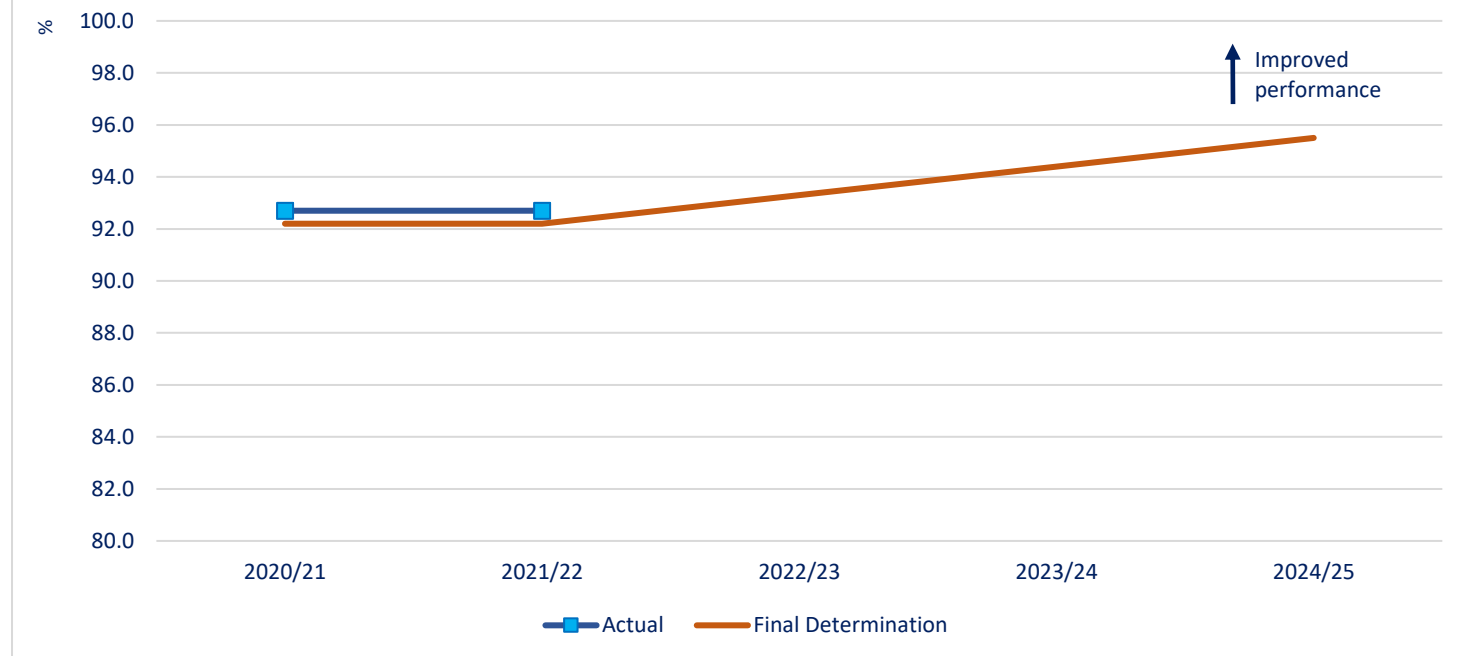
This year, the major schemes delivered to address sewer incapacity have had no viable opportunities to remove surface water. We are continuing to explore opportunities in future years.

Ft5 – Asset resilience (reservoirs) %

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	92.7	92.7	n/a	n/a	n/a
Final Determination	92.2	92.2	93.3	94.4	95.5



Definition

This performance commitment is defined as a resilience score for critical impounding reservoirs based on a defined resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.

Commentary

Our performance for the year was 92.7% which is better than the Ofwat Final Determination target of 92.2%.

For the year, 39 of our reservoirs were categorised as critical assets with no change in the failure resilience score.

Improvement work has commenced at the two reservoirs below. This work is being carried out as a result of statutory safety measures under the Reservoirs Act 1975 (as amended). On completion of this work it is expected these will deliver improved resilience scores.

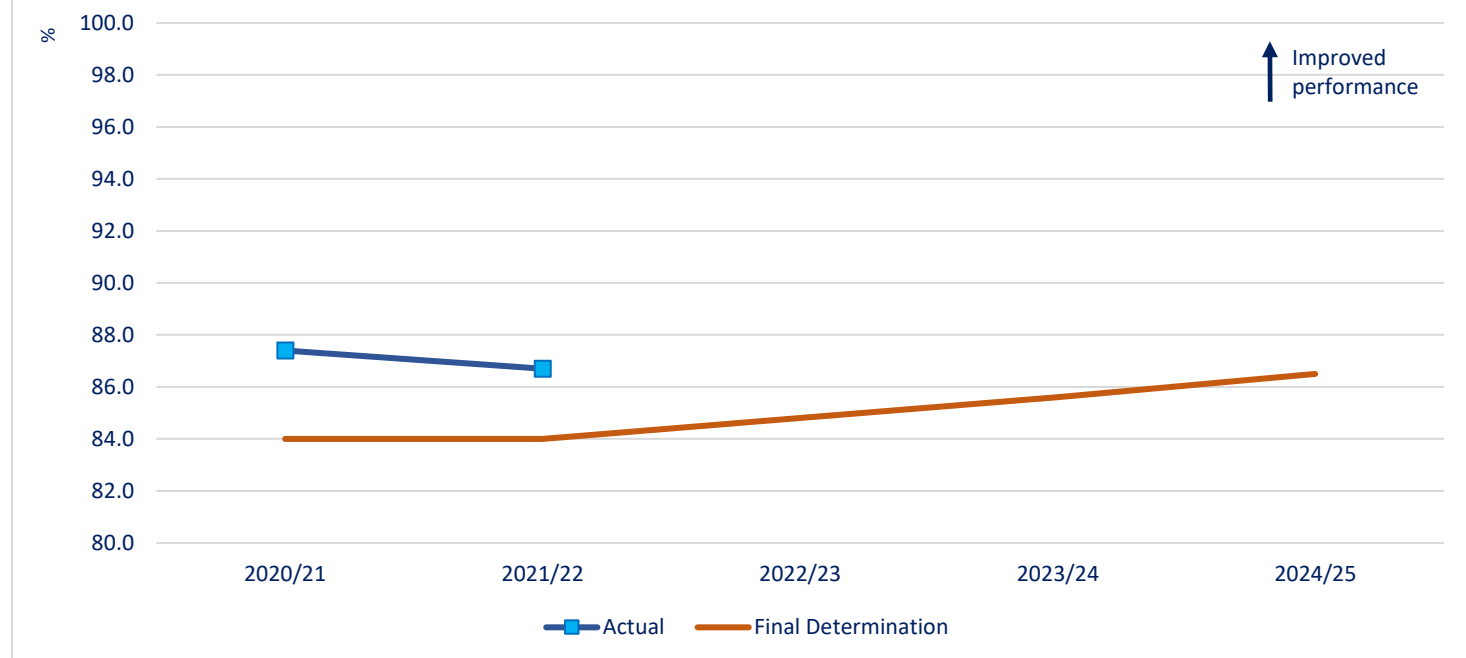
- Llandegfedd reservoir which involves concrete repair work and improvements to drawdown capacity following recent changes in industry guidance.
- Upper Carno reservoir which involves major rehabilitation of the dam, pipework, and valves.

Ft6 – Asset resilience (water network+ above ground) %

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	87.4	86.7	n/a	n/a	n/a
Final Determination	84.0	84.0	84.8	85.6	86.5



Definition

This performance commitment is defined as a resilience score for critical water network plus above ground assets based on a defined resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.

Commentary

Our performance for the year was 86.7% which is better than the Ofwat Final Determination target of 84.0%.

This has primarily been due to the addition of lower scoring assets and some movement in criteria categories, however there were no notable changes against any particular criteria that raised specific concerns.

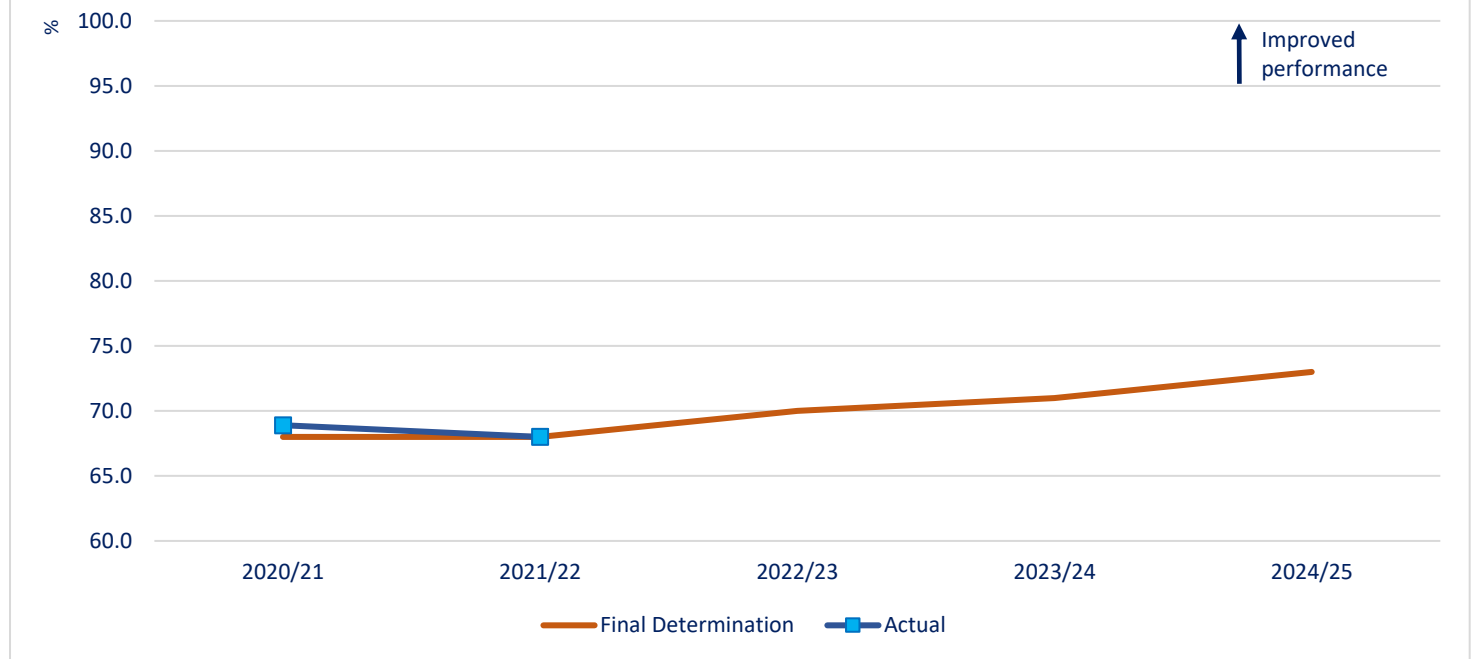
During 2021/22 a total of 13 assets have been removed that no longer meet the criteria of this performance commitment. A total of nine assets have been added to the asset list that now meet the criteria. This provides a new total of 36 assets - a reduction of four assets from the 40 reported during 2020/21.

Ft7 – Asset resilience (water network+ below ground) %

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	68.9	68.0	n/a	n/a	n/a
Final Determination	68.0	68.0	70.0	71.0	73.0



Definition

This performance commitment is defined as a resilience score for critical water network plus below ground assets based on a defined resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.

Commentary

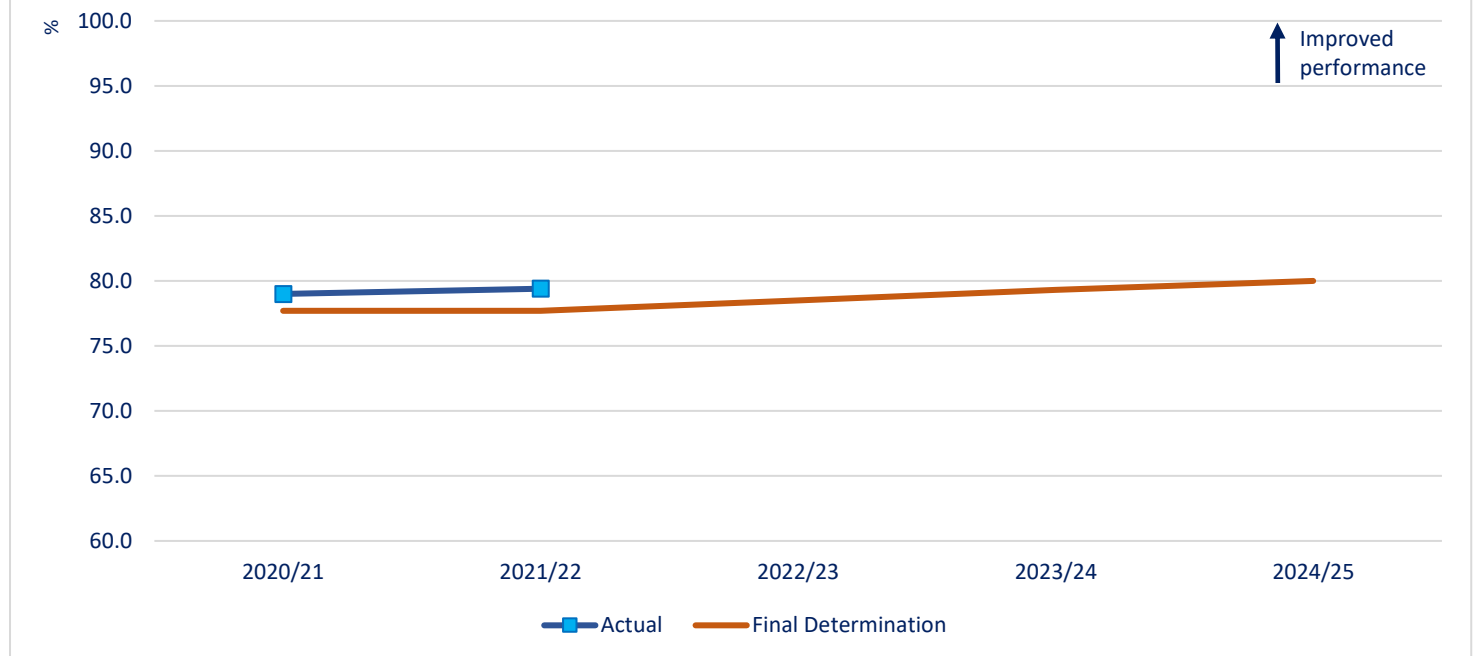
Our performance for the year was 68.0% which meets the Ofwat Final Determination target of 68.0%.

The influencing factors that triggered the most notable asset score movement during 2021/22 related to Asset Storage and Temporary Works. The reduction was in part due to changes in the network configuration in the Central area whereby several service reservoirs have been out of use for cleaning, resulting in less storage resilience available in the network. A change in temporary works was also observed due to increased issues locating spares and fittings for larger diameter mains within a 12-hour period.

There has been no change to the asset list during 2021/22.

Ft8 – Asset resilience (wastewater network+ above ground) %**Summary Performance**

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	79.0	79.4	n/a	n/a	n/a
Final Determination	77.7	77.7	78.5	79.3	80.0

**Definition**

This performance commitment is defined as a resilience score for critical waste network plus above ground assets based on a defined resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.

Commentary

Our performance for the year was 79.4% which is better than the Ofwat Final Determination target of 77.7%. The scores for each asset were reviewed and updated to reflect any changes in the year.

The main reasons for our improvement this year are:

- security improvements at four of our critical assets;
- failure resilience at three critical assets which have been improved as a result of schemes that have taken place.

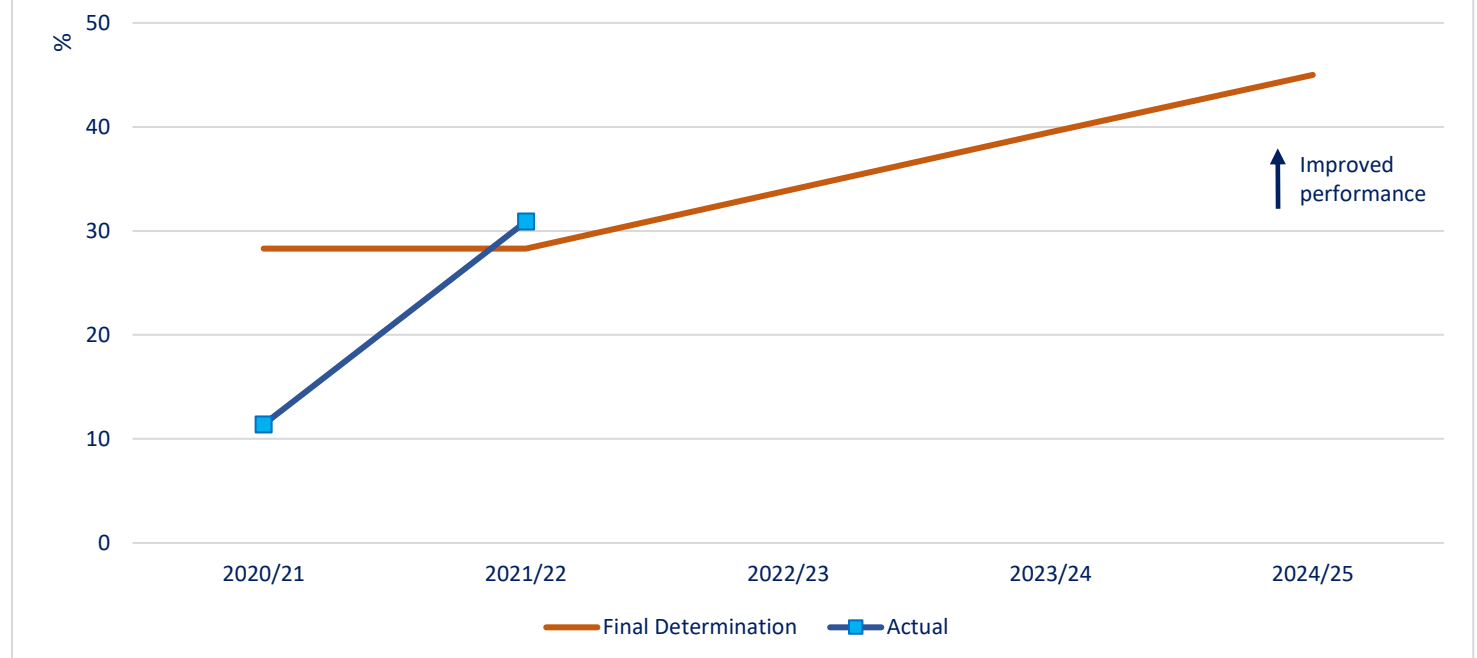
There has been a reduction in the asset resilience scores for some of our sites which was mainly caused by members of the public blocking site access gates therefore stopping our vehicles accessing the sites.

Ft9 – Asset resilience (wastewater network+ below ground) %

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	11.4	30.9	n/a	n/a	n/a
Final Determination	28.3	28.3	33.9	39.5	45.0



Definition

This performance commitment is defined as a resilience score for critical water network plus below ground assets based on a defined resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.

Commentary

Our performance for the year was 30.9% which is better than the Ofwat Final Determination target of 28.3%, and an improvement on our 2020/21 performance of 11.4%.

During 2021/22, we appointed Consultants to undertake a project to develop a tool that calculates how long DCWW have to respond to a failure of an identified critical asset, giving the number of hours before there is a spill/escape from the sewer. This has enabled us to accurately score the Flow Management criteria for each critical asset via a modelled assessment.

We had 369 assets reported within this performance commitment that are deemed Critical (345) or Unknown (24) when assessed against the criticality definition.

The process of validating existing scores and assessing the new additions to the refreshed dataset for 2020/25 will continue into 2022/23 with site visits and the collation of the supporting evidence documentation. In addition, we will be looking to further assess the asset condition by releasing a programme of works to CCTV a selection of the identified critical assets.

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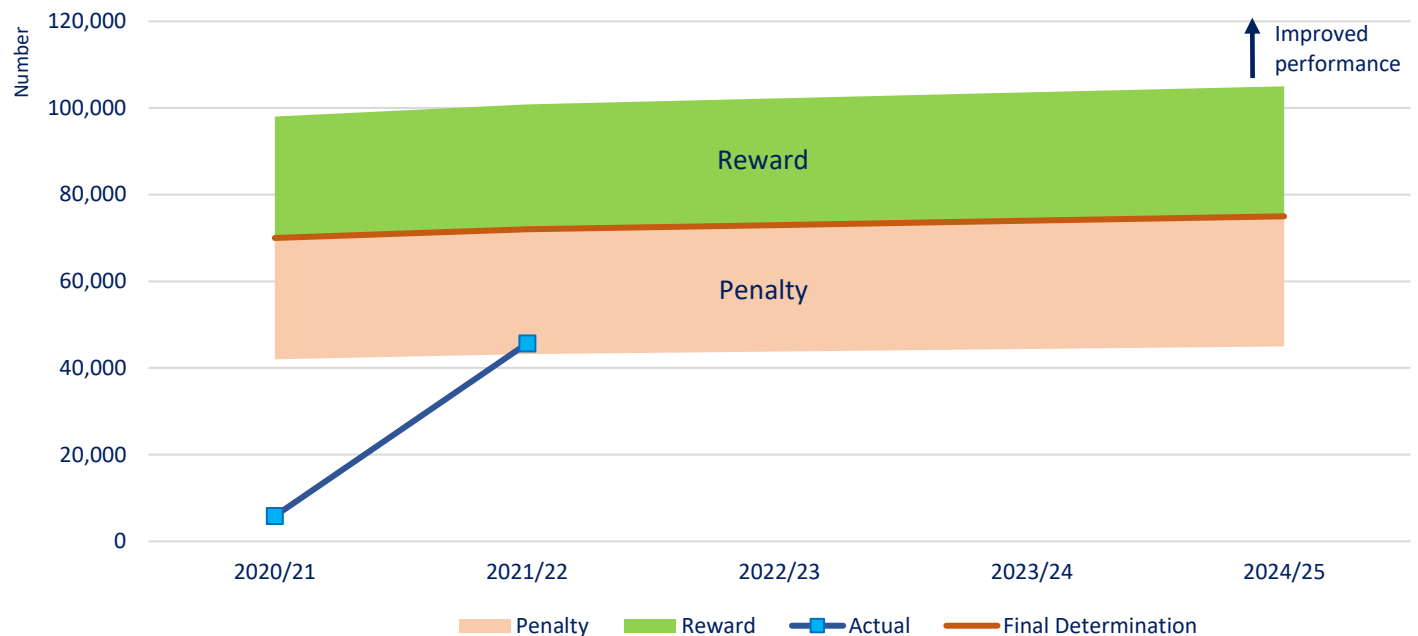
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Ft10 – Community education

ODI Reward & Penalty

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	5,834	45,655	n/a	n/a	n/a
Final Determination	70,000	72,000	73,000	74,000	75,000
ODI Reward/Penalty (£m)	£0.112	£0.105			



Definition

The total number of children and adults who have participated in the Company's educational programme each year.

Commentary

Our performance for the year was 45,655 which is worse than the Ofwat Final Determination target of 72,000.

We pride ourselves on delivery of a sustainable programme of education, which has supported around 600,000 pupils through direct delivery over the past 25 years. Although Covid-19 restrictions prevented face-to-face delivery education provision during the early stages of the year, virtual and digital delivery methods allowed us to continue to support schools and pupils. A return to face-to-face education delivery from September 2021, allowed the team to deliver a wider programme, closer in line with our traditional approach.

Further insight into our delivery over the past year can be found at our bespoke education Twitter profile @DiscoverDwr.

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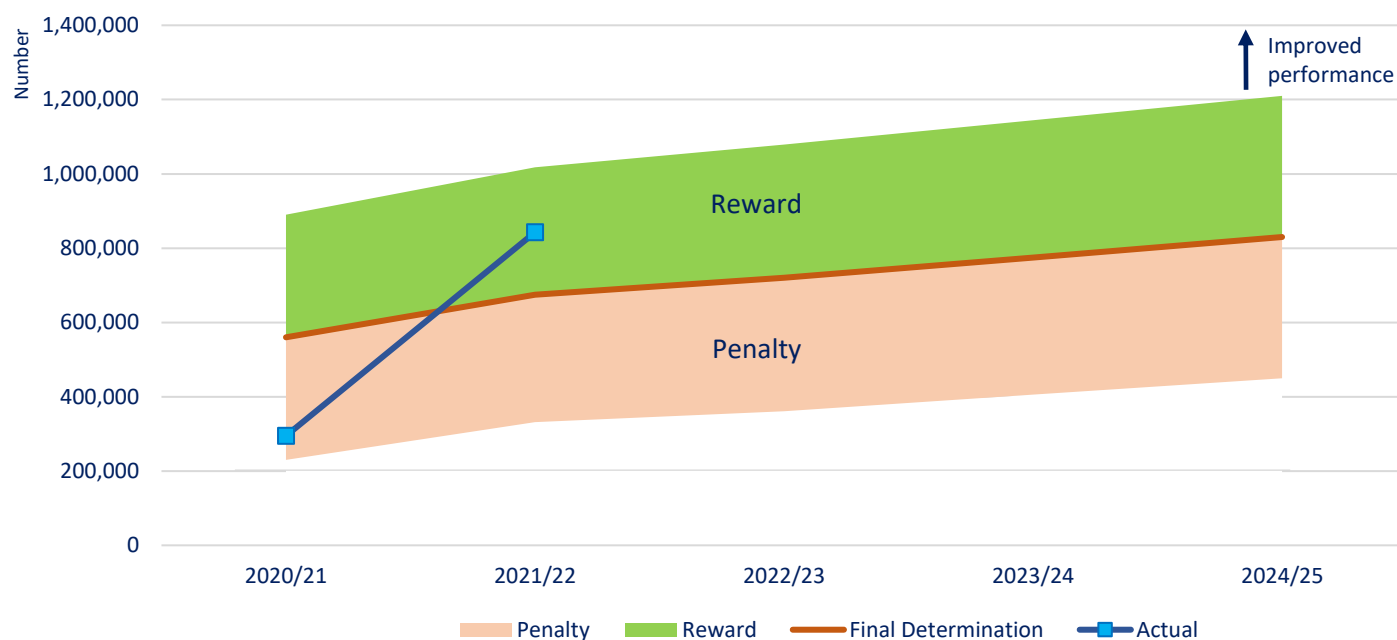
Annual Performance Report 2021/22

Ft11 – Visitors to recreational facilities

ODI Reward & Penalty

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	294,763	842,701	n/a	n/a	n/a
Final Determination	560,000	675,000	720,000	775,000	830,000
ODI Reward/Penalty (£m)	£0.530	£0.168			



Definition

The total number of visitors to the Company's recreational sites each year.

The Company's recreational sites are Llyn Brenig, Elan Valley, Llandegfedd and Llys y Fran. A new visitor centre is planned at the site of Lisvane and Llanishen reservoirs in North Cardiff. Any further recreational sites developed during the 2020/25 period will be included within this measure.

Commentary

Our performance for the year was 842,701 which is better than the Ofwat Final Determination target of 675,000.

We saw 842,701 visitors to our four visitor centres at Llyn Brenig in north Wales, Elan Valley in mid Wales, Llandegfedd in south east Wales, Llys y Fran in the west, as well as two sites where recreational access has been improved at Lliw and Swiss Valley Reservoirs also in the west.

Visitor numbers by site:

Site	Number of visitors
Elan Valley	193,080
Llyn Brenig	151,102
Llandegfedd	224,999
Llys Y Fran	101,460
Lliw	79,501
Swiss Valley	92,559
Total	842,701

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Continued Commentary

Three new sites included this year:

- **Llys Y Fran Visitor Attraction** – Opened 18 June 2021 following delays due to Covid-19 impacts and collapse of main contractor.
- **Swiss Valley and Lliw Reservoir** – The Ofwat PR19 Final Determination definition allows additional sites developed during the 2020/25 period to be included. Both sites were developed since 2020 and visitor numbers have been included from 1 April 2021.

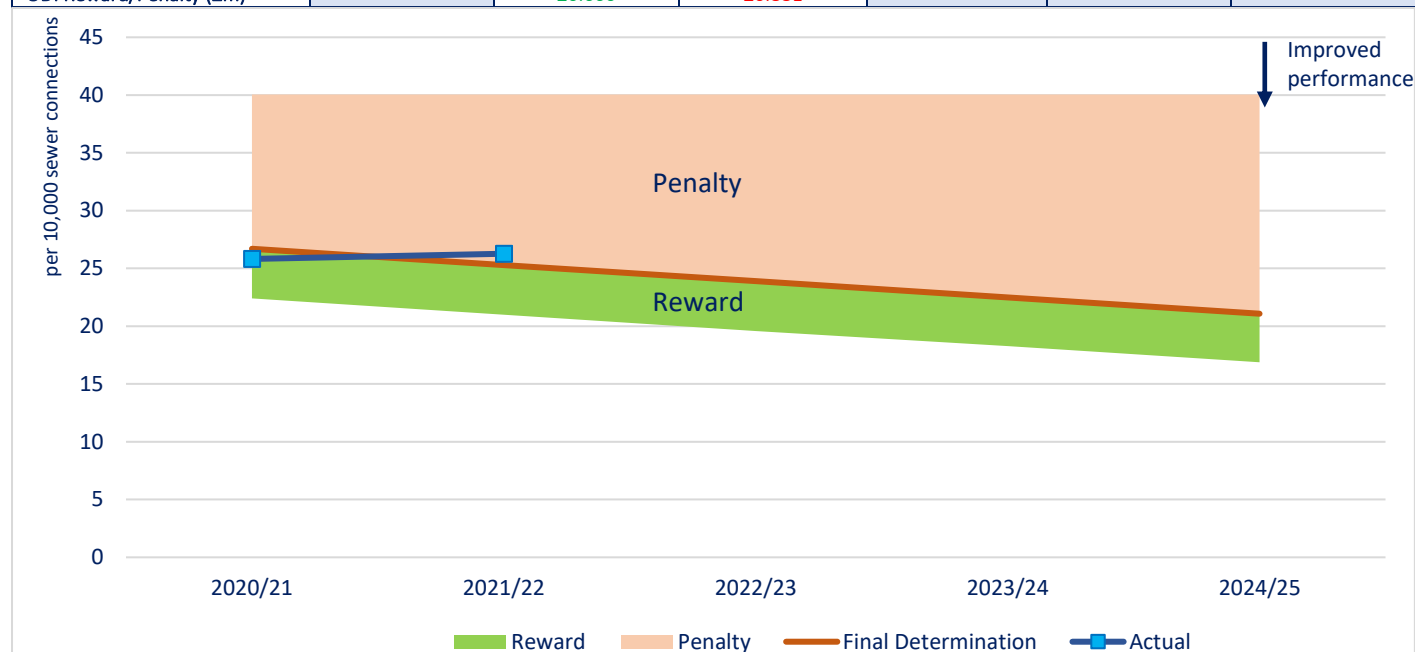
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Rt2 – Sewer flooding on customer property (external)

ODI Reward & Penalty

Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	30.85	25.82	26.27	n/a	n/a	n/a
Final Determination		26.70	25.29	23.89	22.48	21.08
ODI Reward/Penalty (£m)		£0.660	£0.881			



Definition

The measure is calculated as the number of external sewer flooding incidents normalised per 10,000 sewer connections including sewer flooding due to severe weather events. External flooding incidents are those that have occurred within the boundary of residential or non-residential properties.

Commentary

We are reporting a total of 3,889 external flooding incidents in 2021/22 which is a rate of 26.27 per 10,000 sewer connections which is worse than the Ofwat Final Determination target of 25.29. This compares to a total of 3,806 (25.82 per 10,000) in 2020/21.

We will continue to focus on the completion of Look-See CCTV inspections following repeat blockages which will identify additional issues such as defects that can be reactively repaired or maintained to prevent flooding from occurring. The strategy to reduce the risk of repeat incidents, through improved understanding of our networks, better data, and first-time fix of issues identified following incident investigation, has led to a focused approach to preventing internal sewer flooding and managing the risk of external flooding occurring. By utilising better data, we can better manage our network through alarms, maintenance, and predictive data models. We will be delivering a larger capital investment programme to reduce both internal and external flood-risk in 2022/23 and for the remainder of the five year period to 2024/25.

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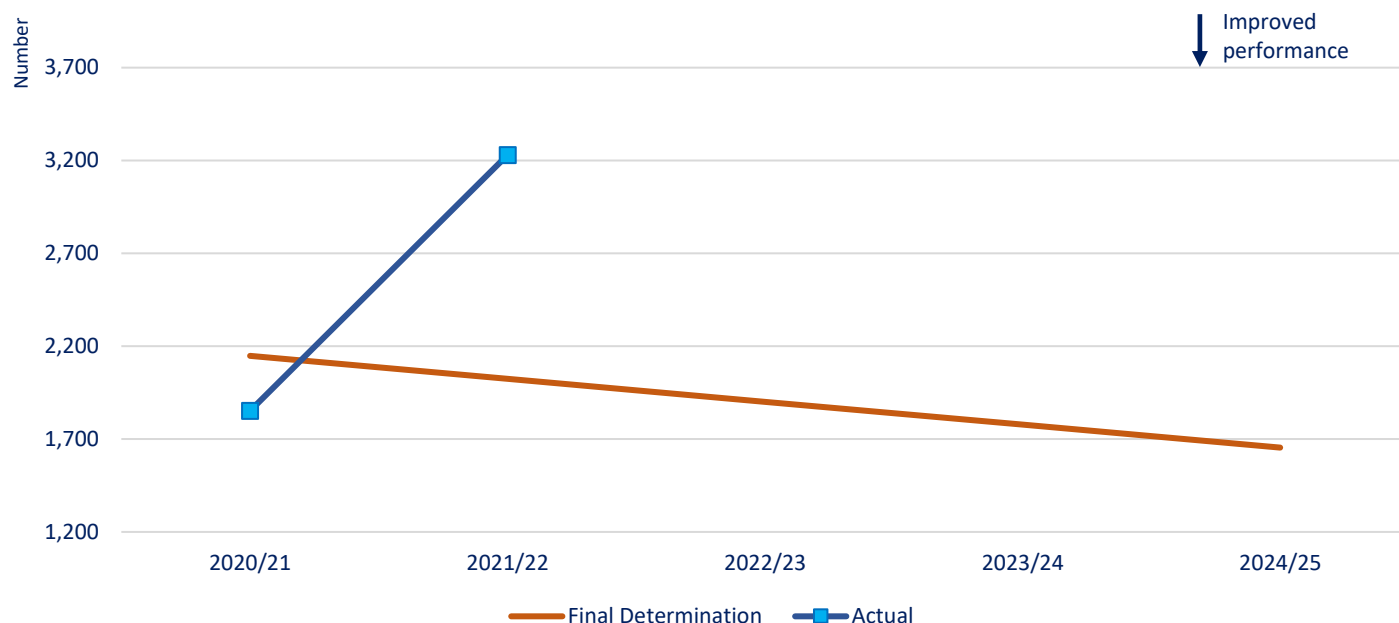
Rt4 – Total complaints					
Summary Performance					
	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	122.1	28.2	n/a	n/a	n/a
Final Determination	86.5/UQ	UQ	UQ	UQ	UQ
ODI Reward/Penalty (£m)	£0.054	£0.000			
Definition					
<p>The total complaints by household customers received by the Company per 10,000 connections. It includes the combined total of unwanted contacts (i.e. telephone complaints), written complaints (letter and email), and contacts via new contact channels (such as social media or webchat).</p> <p>This aligns with the data submitted and published by the Consumer Council for Water (CCW) in its annual reports on household complaints.</p>					
Commentary					
<p>As the CCWater reporting requirements have changed, with regards to the removal of chase contacts being allocated to non-written complaint volumes, the volume of complaints reported has reduced from 122.1 in 2020/21 to 28.2 in 2021/22 per 10,000 connected household properties. Discussions with Ofwat have taken place throughout the reporting year and it has been agreed to report the total number of complaints in line with the Final Determination and CCW's 2021/22 guidance (i.e. removing chase contacts).</p> <p>As the target and performance level are not aligned, an outperformance payment will not be claimed; we have used the override function within the Ofwat ODI model to reflect this.</p> <p>During the year we reported 4,181 total complaints from household customers, which equates to 28.2 per 10,000 connections. Written household complaints totalled 2,190 and non-written, telephone, web chat and social media, totalled 1,991.</p>					

Rt5 – Worst served customers for water service

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	1,852 *	3,230	n/a	n/a	n/a
Final Determination	2,148	2,025	1,901	1,778	1,654



Definition

This measure identifies those properties (household or non-household) who consistently receive a poor level of service.

The measure consists of three elements:

1. Properties that have had their water supply repeatedly interrupted over a 2 year period. Those properties who have had their water supply interrupted at least once in year one and experienced more than two interruptions in year two.
2. Properties that have had their water supply repeatedly interrupted over a 3 year period. Those properties who have had their water supply interrupted at least once in year one, year two and year three.
3. Properties that received low pressure below the agreed level of service for 3 years or more. Those properties are captured on the Low Pressure longstanding register.

Commentary

Our performance for the year was 3,230 properties which is worse than the Ofwat Final Determination target of 2,025 properties. The breakdown of the three elements of this measure is shown below.

Worst Served	2020/21 Performance	2021/22 Target	2021/22 Performance
1. Interruptions (over a 2 year period)			852
2. Interruptions (over a 3 year period)			2,337
3. Low Pressure			41
Water Services (Total)	1,852 restated to 1,771 (81 subsequently identified as not reportable) *	2,025	3,230**

* Revised numbers following verification of the property data as part of the Waterfair process. We intend to improve the process and undertake further verification for future years.

** In addition, we have 190 properties where investigations are still ongoing. On completion of the review we may find that the performance figure for this measure will be further reduced, however until we complete our investigations, we have retained all 190 within our reported 2021/22 performance.

We intend to improve the process and undertake further verification for future years.

All customers deserve a good level of service, and we are working towards this goal over the long term. At present, the disproportionate cost of solutions to address problems for very small numbers of customers is an obstacle to progress, especially in the face of wider

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Continued Commentary

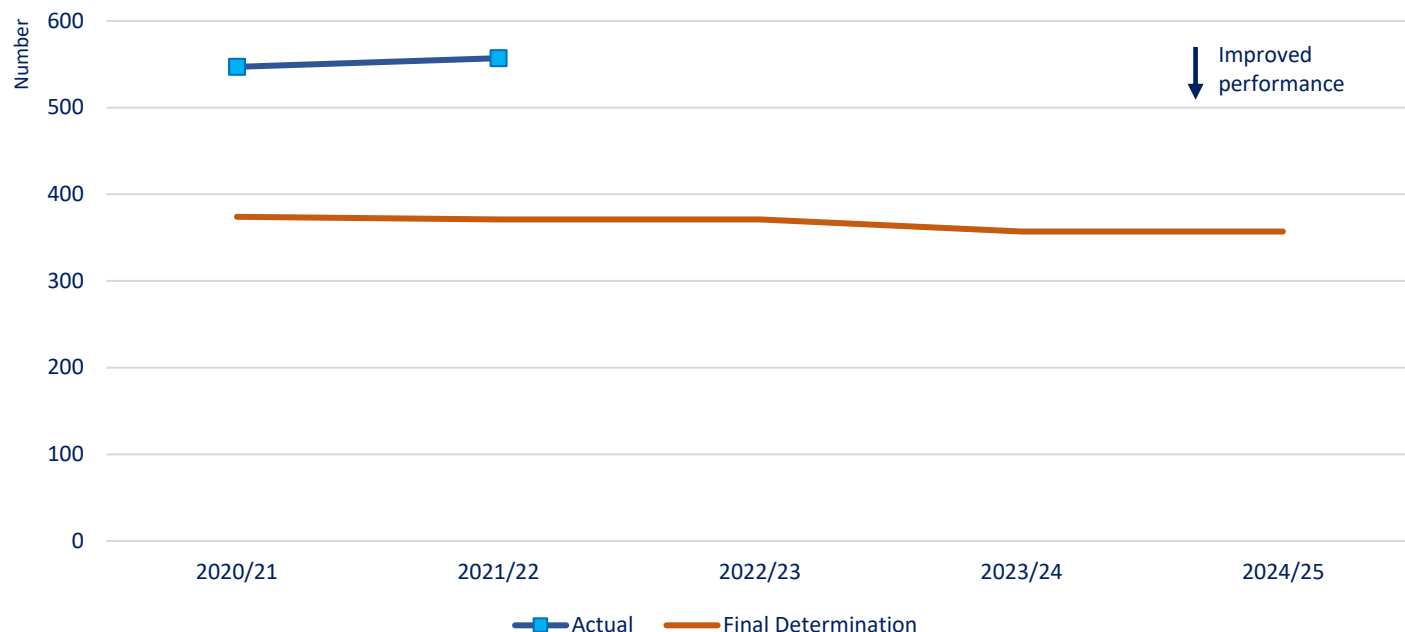
challenges. We continue to engage with customers and stakeholders on striking an appropriate balance between competing priorities. Our 'WaterFair' scheme provides discounts on bills for customers who remain on our worst served registers.

Rt6 – Worst served customers for wastewater service

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	547	557	n/a	n/a	n/a
Final Determination	374	371	371	357	357



Definition

This measure identifies those properties (of household or non-household customers) that consistently receive a poor level of service and experience repeat sewer flooding incidents i.e. 'worst-served' customers. The measure is comprised of the four categories, outlined below. Two of the categories relate to sewer flooding due to hydraulic overload (HO) and two relate to flooding due to other causes (OC).

1. Properties recorded as being at active risk of flooding internally due to hydraulic overload in the 2-in-10 year risk category (expected probability that sewer flooding will occur two or more times in ten years).
2. Properties recorded as being at active risk of Serious External Flooding due to hydraulic overload in the 2-in-10 year risk category.
3. Properties which have flooded internally more than once in the ten years prior to 31 March in the reporting year due to 'other causes'.
4. Properties which have suffered, on average, more than one Serious External Flooding due to 'other causes' in the three years prior to 31 March in the reporting year.

Commentary

Our performance for the year was 557 properties which is worse than the Ofwat Final Determination target of 371 properties. The breakdown of the four elements of this measure is shown below.

Worst Served	2020/21 Year end	2021/22 Year end
1. Internal Flooding (hydraulic overload)	104	108
2. Serious External Flooding (hydraulic overload)	276	280
3. Internal Flooding (other causes)	170	172
4. Serious External Flooding (other causes)	0	0
Waste Services (Total)	547*	557**

Note

* Note three properties at year-start qualify under both hydraulic overload and other cause categories, but each is only counted once in the overall total.

** Note three properties at year-end qualify under both hydraulic overload and other cause categories, but each is only counted once in the overall total.

Wet weather and named storms have driven additions to the worst served register.

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Continued Commentary

During the year we have completed one capital scheme to resolve a high risk of external flooding in Aberdare.

Our capital investment programme to remove worst-served customers increases in 2022/23, with a major scheme currently on site at Cardigan.

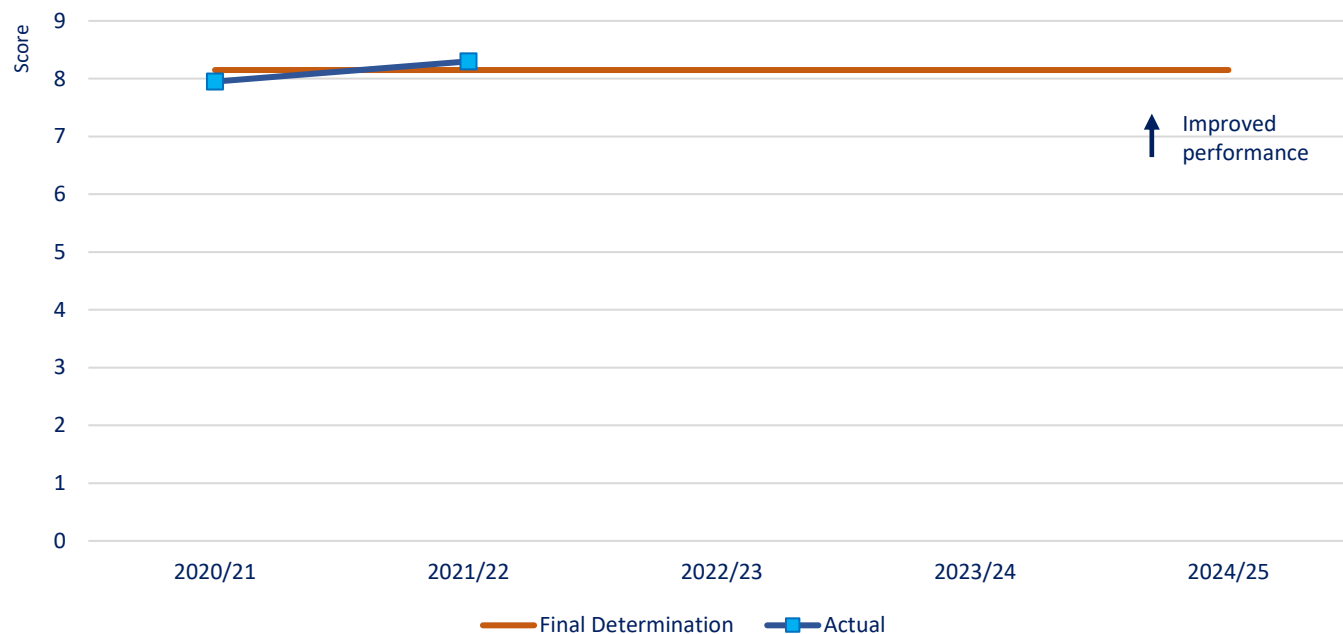
All customers deserve a good level of service, and we are working towards this goal over the long term. At present, the disproportionate cost of solutions to address problems for very small numbers of customers is an obstacle to progress, especially in the face of wider challenges. We continue to engage with customers and stakeholders on striking an appropriate balance between competing priorities. Our 'WaterFair' scheme provides discounts on bills for customers who remain on our worst served registers.

Sv3 – Customer Trust

Reputational

Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	8.20	7.95	8.30	n/a	n/a	n/a
Final Determination		8.15	8.15	8.15	8.15	8.15



Definition

The average score of customers asked the question ‘How much do you trust your water and sewerage company?’ The response is on a scale of one to ten with one being ‘do not trust them at all’ and ten being ‘trust them completely’.

This performance commitment is calculated from the Consumer Council for Water’s (CCWater) survey.

This performance commitment will cease to apply if CCWater discontinues its annual question on the level of trust in water companies.

The CCWater “Water Matters” report is published in July annually. This means that the results will not be available for that year’s Annual Performance Report and the company will instead report the previous year’s result.

Commentary

Each year CCWater undertakes a survey asking customers for feedback on their water and sewerage company. This report is the Water Matters report and is usually published in July each year. Our performance reported for the year was 8.30 (July 2021 CCWater report) which placed us second out of the water and sewerage companies and is better than the Ofwat Final Determination target of 8.15.

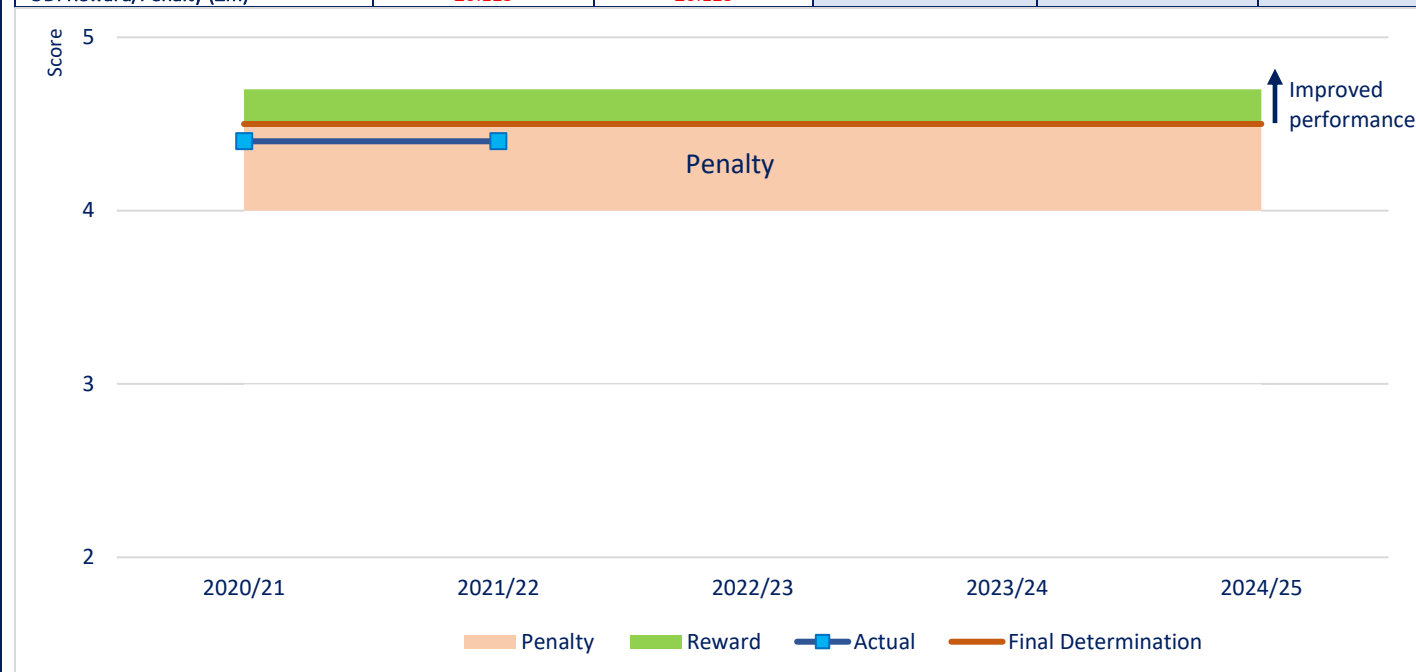
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Sv4 – Business customer satisfaction

ODI Reward & Penalty

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	4.4	4.4	n/a	n/a	n/a
Final Determination	4.5	4.5	4.5	4.5	4.5
ODI Reward/Penalty (£m)	£0.125	£0.125			



Definition

This performance commitment measures the average customer score out of five from four quarterly business customer satisfaction surveys.

The Company will undertake a survey of 250 business customers per quarter (1,000 in total per year). It will survey a sample from all customers, not just those who have contacted the company.

Commentary

Our performance for the year was 4.4 (equivalent to 88% customer satisfaction) which is worse than the Ofwat Final Determination target of 4.5.

Our focus is to continue to improve the customer service for our customers and some planned improvements are:

- Enhancing the Business Customer Satisfaction Survey format and content to generate better data and insight for relevant teams across Welsh Water (water, wastewater and retail) to develop specific service improvement plans;
- In depth review of key business customer Retail journeys to identify pain-points and implementation of corresponding improvement opportunities; and
- Continually improve the delivery of account management services and extend the range of value-adding services that we offer to our business customers, where appropriate, in 2022/23.

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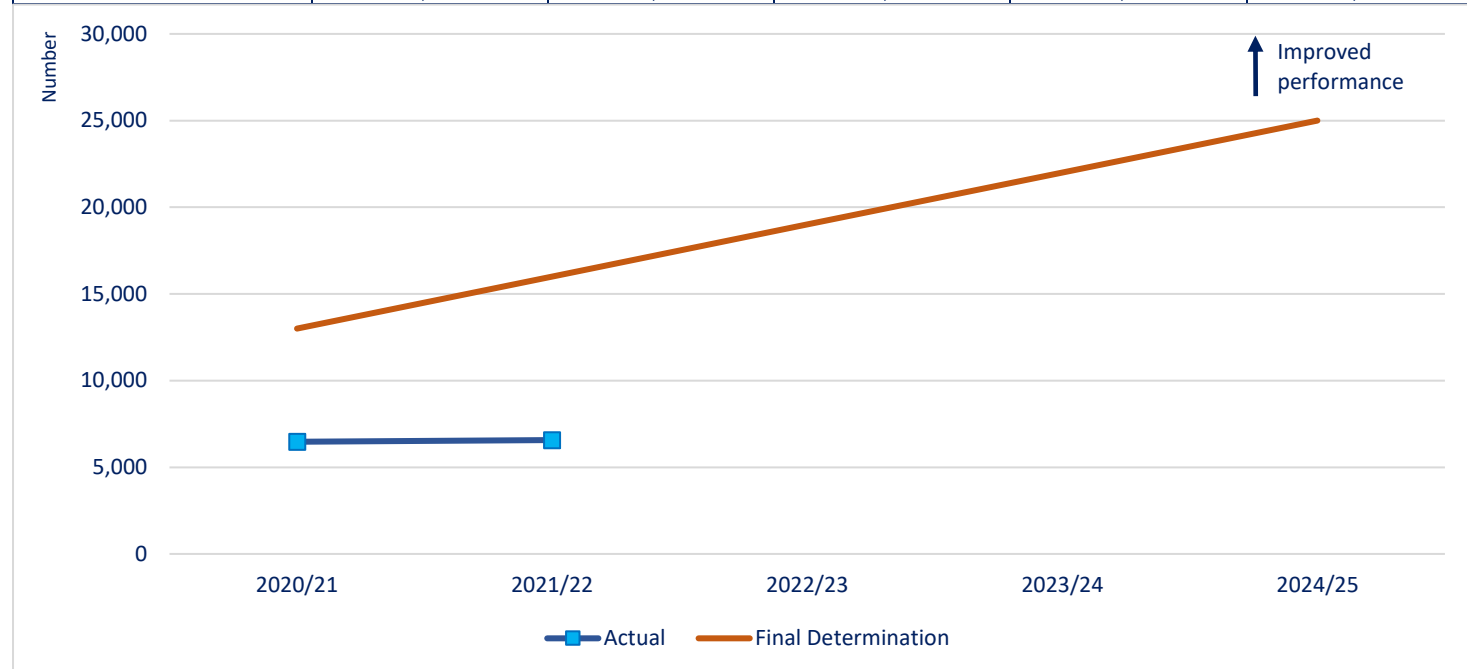
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Sv6 – Customers on Welsh language register

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	6,472	6,568	n/a	n/a	n/a
Final Determination	13,000	16,000	19,000	22,000	25,000



Definition

The number of customers registered for our Welsh language preference service.

Commentary

Our performance for the year was 6,568 which is worse than the Ofwat Final Determination target of 16,000. This is an increase of 96 compared to 2020/21.

In addition to this performance commitment we offer a range of other Welsh language services (e.g. telephony, webchat, email and website services) which gives the overall picture of customers using our Welsh services.

We had 4,989 customers contact us in Welsh via another contact channel e.g. Webchat and on average, 6,316 customers visited the Welsh area of our website every month.

BI1 – Change in average household bill

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	-0.0%	-1.5%	n/a	n/a	n/a
Final Determination	<CPIH	<CPIH	<CPIH	<CPIH	<CPIH

Definition

The percentage increase in the average household bill from the bill in 2019/20.

The Company has committed to keeping bill increases below inflation as measured by the CPIH (Consumer Price Index including owner occupiers' housing costs).

Commentary

For 2021/22 our average bill increased below the rate of inflation.

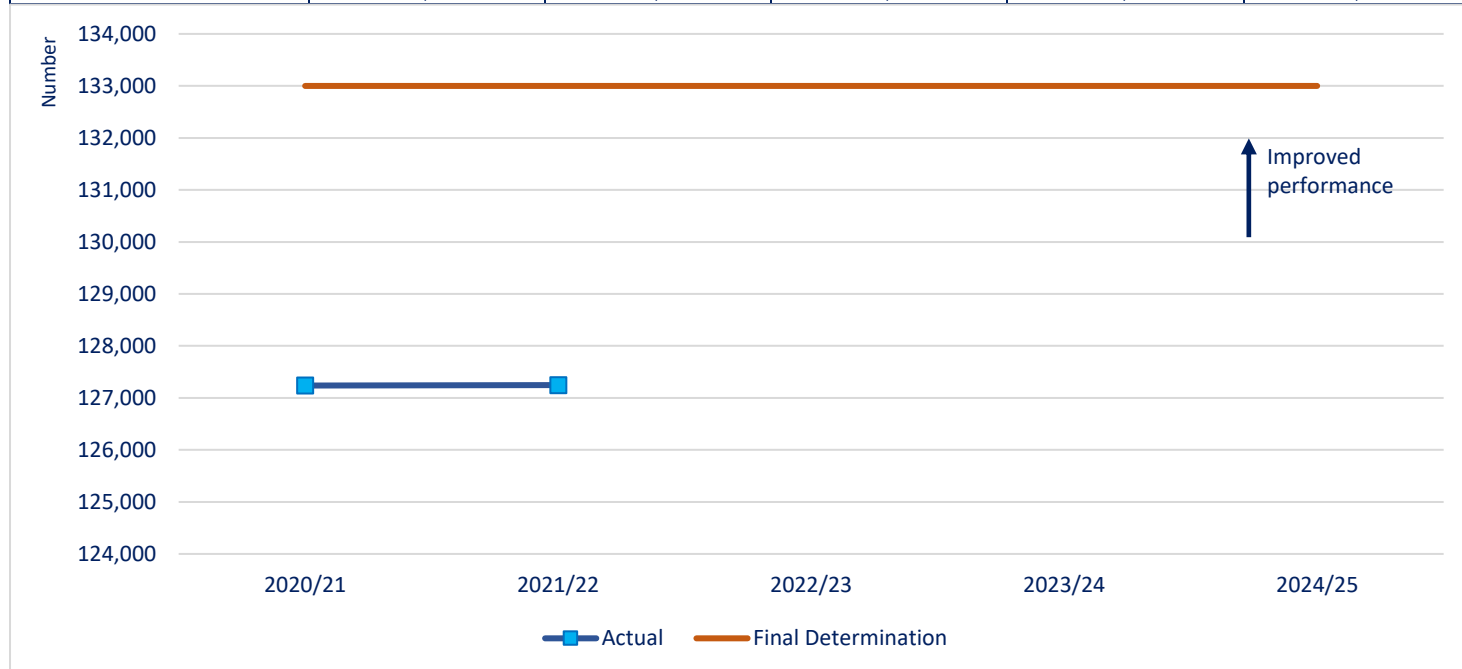
This measure is the percentage change since 2019/20 in the average household combined bill before inflation is taken into account. The average household bill is calculated using the same methodology as used when reporting the Ofwat Average Household Bill template, summing water and wastewater to form a combined bill, as published on the Discover Water website.

BI2 – Vulnerable customers on social tariffs

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	127,238	127,247	n/a	n/a	n/a
Final Determination	133,000	133,000	133,000	133,000	133,000



Definition

The number of residential customers on social tariffs as at 31 March each year. This includes both the HelpU social tariff scheme and the WaterSure scheme.

Customers benefiting from Water Collect, Customer Assistance Fund and Water Direct customers are excluded from this measure unless they are also on a social tariff.

Commentary

Our performance for the year was 127,247 which is worse than the Ofwat Final Determination target of 133,000. At the 31 March there were 95,214 customers on HelpU and 32,033 customers on WaterSure (includes customers on Welsh Water Assist as these tariffs have previously been combined).

During the year, we have accepted 16,663 customers onto a social tariff. Through natural attrition (e.g. customer moves where the applicant no longer qualifies, deceased customers and the new re application process) we have also removed 16,654 giving us a net increase of nine.

We will continue to audit customers benefiting from social tariffs to ensure eligibility and will remove customers who are no longer eligible.

Plans to ensure we reach our target next year include:

- Promotion of our social tariffs through our existing partners and relevant agencies;
- Our mobile Community Hub activities are all about hyperlocal communications; taking a deep dive into local communities to raise awareness of our free support services for people in vulnerable circumstances;
- We have identified areas of high deprivation and are collaborating with communities there, hosting face-to-face pop-up sessions, and partnering with local representatives from organisations like Citizens Advice and Warm Wales; and
- We have also created a Stakeholder toolkit which we share with local organisations ahead of our work in the community inviting them to help us raise awareness of our presence through their own communications channels.

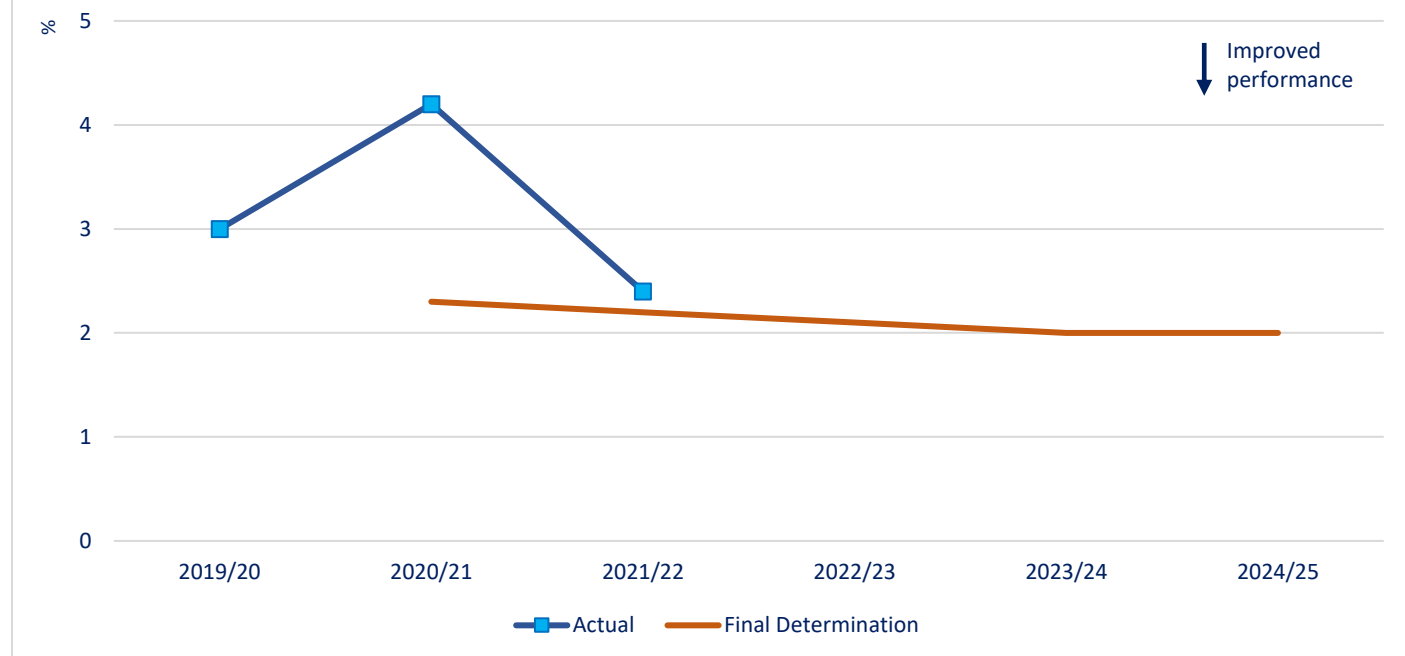
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BI3 – Company level of bad debt %

Reputational

Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	3.0	4.2	2.4	n/a	n/a	n/a
Final Determination		2.3	2.2	2.1	2.0	2.0



Definition

The Company level of bad debt is a measure of the total unpaid water and wastewater bills that are deemed uncollectable as a proportion of the total revenue billed in each reporting year.

Commentary

Our performance for the year is 2.4% which is worse than the Ofwat Final Determination target. The bad debt metric has been calculated based on the retail element of the bad debt charge (Annual Performance Report (APR) Table 2C, Line 3: £19.1m) as a proportion of total appointed revenues (APR Table 1A, Line 1: £793.2m).

Cash collection rates have remained consistent throughout the 12 months to 31 March 2022, exceeding expectations. Our bad debt charge has reduced compared to prior years representing a release of the bad debt provision as a result of anticipated bad debt charges associated with the Covid-19 pandemic not materialising during the year.

We have factored in a £2m increase to our 31 March 2022 year-end provision for bad debt, equivalent to 1% deterioration in cash collection rates, providing for the current economic situation around the cost-of-living crisis.

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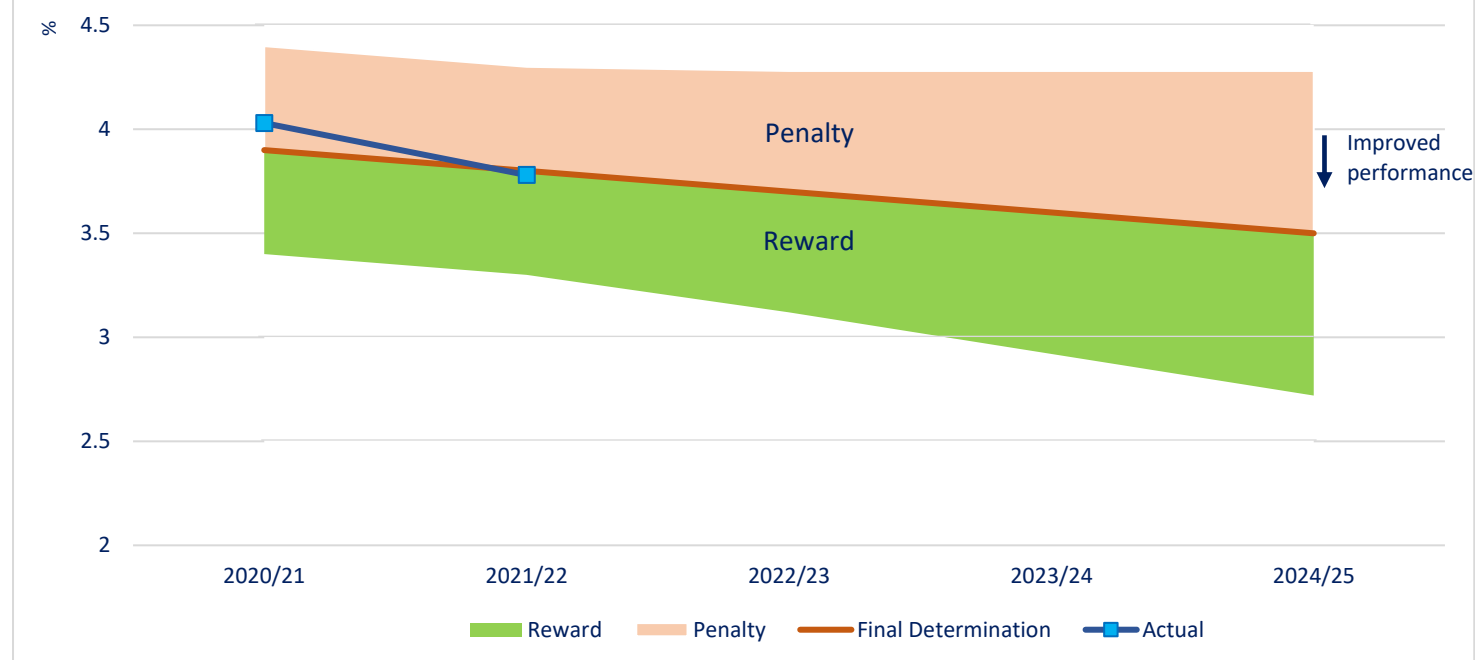
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BI4 – Unbilled properties (Voids) %

ODI Reward & Penalty

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	4.03	3.78	n/a	n/a	n/a
Final Determination	3.90	3.80	3.70	3.60	3.50
ODI Reward/Penalty (£m)	£0.340	£0.052			



Definition

The number of household and non-household properties classified as void as a percentage of the total number of household and non-household properties served by the Company.

Void properties are defined as properties, within the company's supply area, which are connected for either a water service only, a sewerage service only or both services but do not receive a charge. This measure includes properties where other companies bill on our behalf.

Commentary

Our performance for the year was 3.78% which is better than the Ofwat Final Determination target of 3.80%.

As of 31 March 2022, through our proactive activities to bill non-registered occupiers or non-occupying owners who have failed in their legal requirements to provide occupier details, we placed 11,957 customers into charge, thereby positively impacting the performance commitment.

Proactive void investigation and billing is designed to keep the total voids number from increasing beyond thresholds.

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BI5 – Financial resilience

Reputational

Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	High	High	High	n/a	n/a	n/a
Final Determination	-	High	High	High	High	High

Definition

This performance commitment indicates the financial resilience of the company as reflected in the credit ratings for senior class bonds, given by the three main credit rating agencies: Standard & Poor's (S&P), Moody's and Fitch. A score of 'High' represents a strong investment grade credit rating from at least two of the three credit rating agencies. A strong investment grade rating is defined as: Moody's: A3 or better, S&P: A- or better, Fitch: A- or better.

Commentary

As at 31 March 2022 our senior bonds were rated A-/A3/A by S&P, Moody's and Fitch and we are amongst the highest rated water companies in the sector.

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BI6 – Delivery of our reservoirs enhancement programme

ODI Penalty

Summary Performance

APR reporting year	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Final Determination - cumulative number of schemes	0	8	13	17	26	29
Expected delivery date of schemes	2020	2021	2022	2023	2024	2025
Actual number of schemes	2	8				
ODI Penalty £m	£0	£0				

Definition

Cumulative number of schemes delivered in the 2020/25 period against the regulatory programme of work for enhancing the safety of our reservoir assets. Work at each site will comprise:

- Reduction in 'Estimating Annual Probability of Dam Failure' due to works completed; and/or
- Completion of Section 10 measures in the interest of safety.

This will be assured by a third party All Reservoirs Panel Engineers.

Commentary

We have delivered eight schemes this year, both of which appear in the Ofwat Final Determination programme list.

The improvements have been successfully completed at the following sites:

Dam/ Reservoir	Expected Delivery Date	Revised Delivery Date	Progress
Alwen	2021/22	2021/22	Completed
Lluest Wen	2021/22	2021/22	Completed
Lower Neuadd	2021/22	2020/21	Completed
Wentwood	2021/22	2021/22	Completed
Ynys Y Fro Upper	2021/22	2021/22	Completed
Ystradfellte	2021/22	2021/22	Completed
Marchlyn Bach	2024/25	2021/22	Completed
Rosebush	2024/25	2020/21	Completed

These works followed Section 10 inspections under the Reservoirs Act 1975, which stipulated the work that was required at each site.

Since our Business Plan submission in 2018 our reservoir safety programme has been updated to reflect the latest risk information from ongoing investigations, working with our regulators. We will continue to ensure the programme is prioritised to maximise the benefit in terms of improvements in safety in line with legal requirements. Over the AMP period the programme will deliver the same (at least) overall benefit as the original programme approved by Ofwat at PR19, and our expenditure on the programme will be at least as much as the figure stipulated at the price review. We will provide evidence to confirm these facts in future Annual Performance Report submissions to Ofwat.

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BI8 – Delivery of our water network improvement programme

ODI Penalty

Summary Performance

	Units	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	nr	0	2	n/a	n/a	n/a
Final determination	nr	0	0	0	0	17
ODI Penalty	£m	£0	£0			

Definition

Cumulative number of schemes delivered to milestone 3 (completed programme of works) over the 2020 to 2025 period. This performance commitment captures the Company's obligations to meet the 17 notices served on it by the Drinking Water Inspectorate (DWI) in force as at 1 April 2020 to address concerns about discolouration of water. The financial implications associated with underperformance this performance commitment will be assessed in 2025, which is the end of this five year reporting cycle.

Commentary

We have delivered two schemes this year, which is better than the Ofwat Final Determination target.

We are investing to improve the appearance of drinking water supplied to our customers in 17 Water Quality Zones during the five year reporting period. Construction activities have been completed this year in two zones (Bridgend Pencoed and Cardiff Ely/Radyr). We have a further four zones which are currently planned to complete construction activities in 2022/23.

BI10 – Delivery of our South Wales Grid water supply resilience scheme

ODI Penalty

Summary Performance

	Units	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	%	0	0	n/a	n/a	n/a
Final determination	%	0	3	10	95	100
ODI Penalty	£m	£0	£0			

Definition

Cumulative proportion of total expenditure (to zero decimal places) spent to deliver the South Wales Grid water supply resilience scheme over the 2020 to 2025 period. The financial implications associated with underperformance this performance commitment will be assessed in 2025, which is the end of this five year reporting cycle.

Commentary

During the year, £47,000 expenditure has been incurred which equate to 0.2% for this performance commitment which is worse than the Final Determination target.

The programme delivery will provide bi-directional transfer of 30 MI/d between the West (TCUS) and East (SEWCUS) conjunctive use systems.

Hydraulic modelling is being finalised and expenditure will start during 2022/23.

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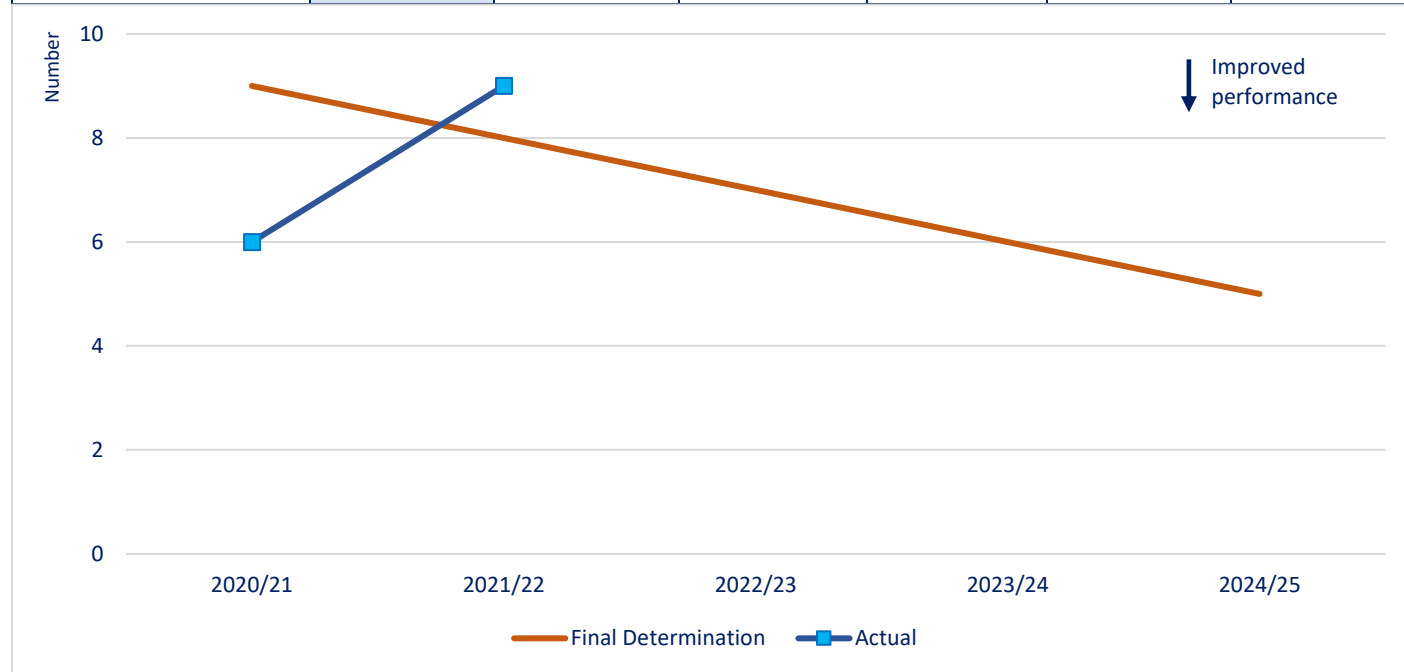
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Co1 – Reportable injuries

Reputational

Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	8	6	9	n/a	n/a	n/a
Final Determination		9	8	7	6	5



Definition

The number of individual injuries reported to the Health and Safety Executive under RIDDOR per annum.

Commentary

Our performance for the year was nine which is worse than the Ofwat Final Determination target of eight. This is an increase on our performance of six last year.

Six of the nine RIDDORs were slip, trip, falls with the others being due to manual handling, or being struck by objects.

Five of the injuries were incurred by contractors. We will continue to work with our operational contract partners to share learning and best practice to help prevent injuries.

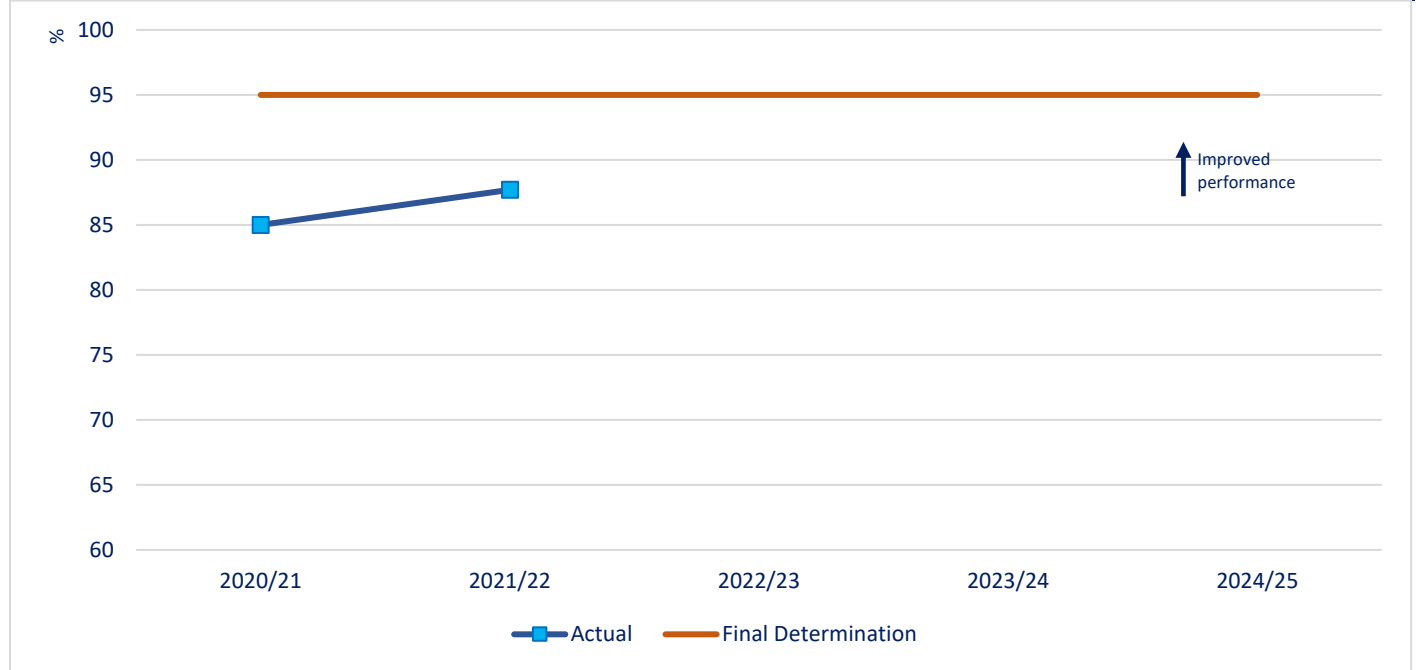
The analysis of the number of Reported Injuries against other companies is not a good comparator, as the number of colleagues will vary and not all employers include within their reported figures incidents involving colleagues of contractor organisations.

Co2 – Employee training and expertise %

Reputational

Summary Performance

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	83.0	85.0	87.7	n/a	n/a	n/a
Final Determination		95.0	95.0	95.0	95.0	95.0



Definition

The percentage of the Company's employees that are evaluated as having the necessary skills, experience and knowledge to carry out their specific role safely.

Commentary

Our performance for the year was 87.7% which is worse than the Ofwat Final Determination target of 95.0%. This is better than our performance of 85.0% last year.

Our ability to meet the Final Determination performance level for this measure for 2021/22 was impacted due Covid-19 restrictions. The restrictions of only four attendees, 2 metre social distancing and covid absence impacted on the number of colleagues attending training.

We remain committed to achieving our target. To help achieve this we have removed social distancing and increased the number of attendees on training courses. We have put other additional measures in place, such as a new confined space rig to allow for extra training capacity. We have brought in a trainer to deliver some courses, and we are using external contractors to support with Confined Space training.

Co3 – Employee engagement %

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	n/a	69	n/a	n/a	n/a
Final Determination	80	80	80	80	80

Definition

This performance commitment is designed to incentivise the company to maintain the employee engagement score derived from an annual survey of colleague sentiment.

Commentary

Our performance for the year was 69% which is worse than the Ofwat Final Determination target of 80%.

In August 2021 Qualtrics was the new appointed provider. Following this, Qualtrics reviewed the questions previously included in the survey and proposed changes to the questions to improve the feedback on employee sentiment and facilitate benchmarking against other companies. The intention of changing the questions was solely to facilitate more useful information and more meaningful benchmarking comparisons based on expert advice.

The process of changing the questions went through an Ofwat change control.

Our engagement is measured using four questions.

- I am proud to work for Welsh Water;
- I would recommend Welsh Water to people I know as a great place to work;
- I rarely think about looking for a new job with another company; and
- Welsh Water motivates me to go the extra mile.

Once the surveys are completed, Qualtrics provide the percentage positive score for each of those questions and calculate an average to create the engagement score for Welsh Water.

We set a response rate for this measure of 75%. Our response rate improved this year and arrived at 85%.

Our plans to improve performance for next year include:

- engagement feedback, presentations on overall performance and conclusions were given to the future focus group;
- two executives led a meeting with all engagement champions to discuss and determine their responsibilities with regard to the survey and expectations were set;
- discussions have been held across the business with managers and the engagement champions to discuss results and plans actions;
- sharing best practice and team engagement stories through our 'We Said, We Did'; and
- pulse survey in May to share individual commitments to improve engagement.

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DCP01 – Direct procurement for customers: Cwm Taf Water supply strategy scheme (Underperformance)

ODI Penalty

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	0	0	n/a	n/a	n/a
Final determination	TBA	TBA	TBA	TBA	TBA
ODI Penalty £m	£0	£0			

Definition

The performance commitment measures successful and timely delivery of key direct procurement for customer control points, the Outline Business Case submission, and the Full Business Case submission.

Commentary

We were required to submit for the Cwm Taf Water Supply Strategy a Strategic Outline Case (SOC) by no later than 31 December 2020; this was submitted on 18 December 2020.

We were required to submit dates for performance commitments within the SOC, these are listed below.

We have used the override function within the Ofwat ODI model as this is an end of period Performance Commitment.

Commitment	Date
Delivery of the Outline Business Case	31 October 2022
Delivery of the Full Business Case	31 July 2024

DCP02 – Direct procurement for customers: Cwm Taf Water supply strategy scheme (Outperformance)

ODI Reward

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	TBC	TBC	n/a	n/a	n/a
Final determination	TBA	TBA	TBA	TBA	TBA
ODI Reward £m	£0	£0			

Definition

Where DCWW successfully completes an agreed procurement process and, following approval by Ofwat, awards the Cwm Taf Water supply strategy scheme to a competitively appointed provider such that the contract is signed and fully effective in accordance with its terms.

Commentary

We were required to submit for the Cwm Taf Water Supply Strategy a Strategic Outline Case (SOC) by no later than 31 December 2020; this was submitted on 18 December 2020.

We were required to submit dates for performance commitments within the SOC, this is listed below.

We have used the override function within the Ofwat ODI model as this is an end of period Performance Commitment.

Commitment	Date
Competitive appointment of a third-party provider in circumstances where the direct procurement for customers scheme meets the qualifying criteria.	31 October 2024

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VIS01 – Delivery of a new visitor centre

ODI Penalty

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	n/a	n/a	n/a	n/a	n/a
Final determination	n/a	n/a	n/a	n/a	Delivered
ODI Penalty £m	£0	£0			

Definition

The performance commitment measures successful delivery of the project to construct a new visitor centre at the Llanishen/Lisvane reservoirs site. The financial implications associated with underperformance this performance commitment will be assessed in 2025, which is the end of this five year reporting cycle.

Commentary

Work is progressing well to deliver a new visitor centre at Llanishen/Lisvane, the project remains on track to be delivered by 2025.

Construction of the visitor centre started in January 2022 and the site is currently programmed to open to the public in Spring 2023.

We have used the override function within the Ofwat ODI model as this is an end of period Performance Commitment.

DWMPs – Drainage and wastewater management plans

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	0	0	n/a	n/a	n/a
Final determination	0	0	100	100	100

Definition

The cumulative percentage of catchments in which Welsh Water operates, the company implements the Level 1 water company DWMP in accordance with the guideline: A framework for the production of Drainage and Wastewater Management Plans, published September 2018 and updated May 2019.

Commentary

This measure was designed to develop voluntary drainage and wastewater management plans. Our plan will identify how we will extend, improve and maintain a robust and resilient drainage and wastewater system in light of facing the pressures of climate change, population growth and growing customer expectations.

The Strategic environmental Assessment and the Habitats regulations assessment have now been completed and the post Environmental assessment impact on the preferred plan has been concluded.

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NEP01 – Delivery of Environment programme requirements

Reputational

Summary Performance

	2020/21	2021/22	2022/23	2023/24	2024/25
Actual	met	met	n/a	n/a	n/a
Final determination	met	met	met	met	met

Definition

This measure tracks the completion of required schemes in each year, as per the latest WINEP/NEP programme published by DEFRA and Natural Resources Wales.

Has the Company 'met' or 'not met' all of its requirements for Water Industry National Environment Program (WINEP)/National Environment Program (NEP), in the reporting year.

Commentary

Performance for 2021/22 is 'Met'. The table below shows the claims across the three drivers.

Natural Resources Wales have issued a business performance letter dated 10 June 2022 confirming our reported performance. The Environment Agency has provided sign off via the DEFRA SharePoint site for measures that contribute towards this Performance Commitment.

Regulator	Schemes	Monitors	Investigations	Water Resources
EA	0	30	2	0
NRW	16	4	30	3
Total of 85 claims				

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3. Assurance

3.1 Assurance processes adopted in preparing this report.

The Company has established appropriate processes and systems of control that provide the necessary assurance in respect of the information contained within and underpinning this report. The following paragraphs summarise the processes and systems of control in place.

Policies and Procedures

- Key processes and systems of control are documented, and the quality of systems used for generating regulatory information are continually assessed. These processes have been followed to produce this part 3 of the Annual Performance Report. Although we are no longer required to produce a June Return, we have used the same processes as in previous years and retained the concept of 'data ownership'.
- Methodology Statements are in place for performance commitments reported in this part of the Annual Performance Report and these have either been assessed by the Reporter or subjected to internal review within the year.
- As part of targeted due diligence, each data owner was required to confirm that they had completed the relevant table in accordance with the relevant Methodology Statement. Any changes to the procedures are kept up to date and are published on our intranet Source.
- We have in place a policy document which outlines the formal process to be undertaken and, inter alia, the roles and responsibilities of key people including data owners, the Regulation Department, Dŵr Cymru Executive Directors (collectively and individually), the Audit Committee and the Board.
- A 'Code of Conduct' detailing the behavioural framework required around regulatory data and whistle-blowing was issued in 2014, with updated versions issued in 2018 and 2020.
- Ownership and responsibility for each relevant data item has been clearly defined. Each individual was responsible for adhering to all appropriate Ofwat guidance in the compilation of accurate and complete data, providing associated commentary and arranging colleague / management checks. This also involved formal 'sign off' by the individual, verifying that the data had been completed in line with the latest Methodology Statement. In addition, confirmation was required that any material judgements or assumptions had been highlighted and documented, ensuring a robust and transparent audit trail, with a review of confidence grades also carried out where applicable.
- Ownership and responsibility is also allocated to the Head of Service, who is also involved in the formal 'sign off' to confirm that they are satisfied the data owner has completed the process and that they have carried out relevant checks to ensure the integrity and accuracy of the data submitted.
- Allocation of overall responsibility for individual data items and associated commentaries was also assigned to the appropriate member of the Dŵr Cymru Executive (DCE). Each was responsible for the review and 'sign off' of their own data items at the DCE APR review meetings.
- A large proportion of the data processing is covered by our internal Integrated Management System which has accreditation to various ISO standards.

Implementation and Internal Review

- Production of training pack/slides by the Regulation Department ensured that all data owners had a single point of reference for all information necessary to undertake their specific responsibilities. These 'packs' included a video introduction by the Director of Strategy and

Regulation on the importance of regulatory data being reliable and accurate. Guidance was included on how to process the relevant data and populate tables, updates required to commentaries, methodology statements and risk matrices, information on confidence grades and details of where to locate previous Reporter's reports.

- All of the information included within the training packs (described above) was made available on our intranet Source.
- Several informal question and answer sessions were held virtually for data owners between February and April 2022, where data owners were given the opportunity to raise any questions on the processes.
- Regular communication between the Regulation Department and all data owners was undertaken prior to and during the preparation of this report.
- There was regular reporting of key performance indicators to the Board, the Quality and Environment Committee (QEC) and the Dŵr Cymru Executive Directors throughout the year.
- A rigorous process of internal due diligence meetings was undertaken by the Regulation Department during April and May 2022 to challenge information, judgements and assumptions made and to ensure compliance with the relevant guidance.
- A review was undertaken by the Regulation Department to ensure consistency between the Annual Performance Report and the individual data items and the relevant commentaries.
- A management review meeting of non-financial measures reported in the Annual Performance Report, involving the Dŵr Cymru Executive Directors, took place on 24 May 2022 and 14 June 2022. This was also attended by the Reporter, an Internal Audit team member and data owners, where relevant. For each performance commitment, a summary containing current year's performance, historical performance (where relevant) and data owner and reporter issues was produced and formed the basis of the discussions. Material issues were highlighted and discussed.

External Review and Board Engagement

- The Reporter carried out a formal review and certification of all non-financial measures and provided a detailed report commenting on compliance with reporting requirements and highlighted any issues with the reported figures.
- The Director of Strategy and Regulation reviewed and approved publication of Our Assurance Activities, which was published in April 2022.
- The Audit Committee received papers detailing the processes in place at meetings held on 2 February and 19 May 2022. Further progress updates were provided to the Audit Committee on 29 June 2022.
- As part of the external review of data, the Reporter also reviewed performance against the PR19 Final Determination Outcomes and Performance Commitments. The Reporter also attended the Dŵr Cymru Executive Directors meetings on the 24 May 2022 and 14 June 2022, the Audit Committee meetings on the 19 May 2022 and 29 June 2022 (where they provided verbal updates) and the Board meeting on 7 July 2022.
- The Internal Audit Team undertook a high-level review of governance processes put in place to ensure the accuracy and completeness of non-financial data reported in the Annual Performance Report for 2021-22. The report concluded that there was an effective governance framework for the completion, review and approval of Data Tables and assigned an overall rating of "Full Assurance".

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- The Board meeting on 7 July 2022 reviewed the overall process, the operation of the systems of internal and external controls and reviewed the key judgements required in compiling the Annual Performance Report.
- Some of our key stakeholders (e.g. Natural Resources Wales, the Drinking Water Inspectorate and CCWater) also carry out audits and scrutiny of our data.



APR22 Part 3 Assurance Letter

Revision no: 0.3

Dŵr Cymru Welsh Water

Non-financial Assurance Services Framework
7 July 2022



Annual Performance Report 2021/22

Appendix 1 - Performance Commitments Definitions.

Performance Commitment		Definition
Wt1	Water quality compliance (CRI)	A Compliance Risk Index (CRI) score is calculated for every individual compliance failure at water supply zones, supply points and treatment works, and service reservoirs. The annual CRI for a company, for any given calendar year, is the sum of the individual CRI scores for every compliance failure reported during the year.
Wt2	Water Supply Interruptions	The average number of minutes that customers are without water within our supply area (includes both planned and unplanned interruptions). It is calculated as the average number of minutes lost per customer for the whole customer base for interruptions that lasted three hours or more.
Wt3	Acceptability of drinking water	The number of times the company is contacted by consumers due to the taste and odour of drinking water, or due to drinking water not being clear, reported per 1,000 population. This measure is reported on a calendar year basis.
Wt4	Mains Repairs	This 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).
Wt5	Unplanned outage %	This measure is a means of assessing asset health (primarily for above ground assets), for water abstraction and water treatment activities. It is defined as the annualised unavailable flow, based on the peak week production capacity. This measure is proportionate to both the frequency of asset failure as well as the criticality and scale of the assets that are causing an outage.
Wt6	Tap water quality event risk index (ERI)	The Event Risk Index (ERI) is a measure of the risk arising from water quality events, as defined by the Drinking Water Inspectorate (DWI). This measure is reported on a calendar year basis.
Wt7	Water catchments improved	The number of water treatment works with catchments designated as Safeguard Zones under the Water Framework Directive (WFD) as in effect at the time of the Ofwat Final Determination publication. Drinking Water Safeguard Zones are designated areas where raw water quality has been deemed to be 'at risk' of deterioration.
Wt8	Lead pipes replaced	This performance commitment measures number of lead pipes replaced by the Company. The number of pipes reported as replaced is cumulative over the period 2020-25. The financial implications associated with underperformance or outperformance with this Performance Commitment will be assessed in 2025, which is the end of this five year reporting cycle.
En1	Treatment works compliance %	For our water and wastewater treatment works there is a permit which regulates the quality of wastewater the Company is allowed to discharge into rivers and coastal waters, which is 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.
En2	Wastewater treatment works 'look-up table' compliance	Percentage of wastewater treatment works that comply with the following:

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		<ul style="list-style-type: none"> Sanitary Look Up Table limits on permits for Biological Oxygen Demand (BOD), Total suspended solids (TSS) and ammonia. Annual average Phosphorus limits. Urban Wastewater Treatment Directive (UWWTD) Look up table limits for BOD and Chemical Oxygen Demand (COD). UWWTD annual average Phosphorus limits. UWWTD annual average Nitrogen limits. <p>These are set by Natural Resource Wales or the Environment Agency as appropriate.</p> <p>This measure is reported on a calendar year basis.</p>
En3	Pollution incidents (Per 10,000km of sewer)	<p>The total number of 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.</p> <ul style="list-style-type: none"> Category 1 - are the most severe and have a major or serious impact on the environment, people or property. Category 2 - significant impact or effect on the environment, people or property. Category 3 - minor or minimal impact on the environment, people or property. <p>This measure is reported on a calendar year basis.</p>
En4	Leakage (% reduction) – 3 year average	The percentage reduction of three year average leakage in megalitres per day (ML/d) from the 2019/20 starting baseline.
En5	Per Capita Consumption (% reduction) – 3 year average	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 % reduction of our three year average PCC from the 2019/20 starting baseline.
En6	Km of river improved	<p>The cumulative length of river improved as a result of the Company's action and as a consequence of regulatory and legislative drivers. The length can only be counted once the Environment Agency and/or Natural Resources Wales has agreed all schemes to achieve the improvement have been delivered and each scheme meets the requirements.</p> <p>The measure is defined as the length (in km) of river with improved water quality, as a result of Welsh Water action. The financial implications associated with underperformance or outperformance with this Performance Commitment will be assessed in 2025, which is the end of this five year reporting cycle.</p>
En7	Bioresources product quality	Percentage of total wastewater sludge treated that is processed through Advanced Anaerobic Digestion facilities and recycled to land meeting certification requirement of the Biosolids Assurance Scheme. Any sludge imported from third parties will be included within the measure.
En8	Bioresources disposal compliance	The overall percentage of company sludge satisfactorily used or disposed of in line with version 3 of the Natural Resource Wales and Environment Agency's Environmental Performance Assessment methodology (published November 2017). This measure is reported on a calendar year basis.
En9	Combined sewer overflow storage systems	The cumulative additional effective volume of storage delivered by the Company under the National Environment Programme (NEP) obligations. The financial implications associated with

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		underperformance or outperformance with this Performance Commitment will be assessed in 2025, which is the end of this five year reporting cycle.
NEP01	Delivery of Environment programme requirements	This measure tracks the completion of required schemes in each year, as per the latest WINEP/NEP programme published by DEFRA and Natural Resources Wales. Has the Company 'met' or 'not met' all of its requirements for Water Industry National Environment Program (WINEP)/National Environment Program (NEP), in the reporting year.
DWMPs	Drainage and wastewater management plans	The cumulative percentage of catchments in which Welsh Water operates, the company implements the Level 1 water company DWMP in accordance with the guideline: A framework for the production of Drainage and Wastewater Management Plans, published September 2018 and updated May 2019.
Sv1	C-MeX	C-MeX is a customer measure of experience and customer satisfaction. It is comprised of two survey elements: <ul style="list-style-type: none"> Customer Experience Survey – a customer satisfaction survey amongst a random sample of the water company's customers; and Customer Service Survey – a customer satisfaction survey amongst a random sample of those customers who have contacted their water company. The scores of each of the two surveys are weighted equally to produce the combined C-MeX measure.
Sv2	D-MeX	D-MeX is a measure of customer satisfaction for Developer Services. The D-MeX score is calculated from two components that contribute equally: <ul style="list-style-type: none"> Qualitative D-MeX score, based on the ratings provided by developer services customers who transacted with the company throughout the reporting year to a customer satisfaction survey; and Quantitative D-MeX score, based on the company's performance against a set of selected Water UK performance metrics throughout the reporting year.
Sv3	Customer Trust	The average score of customers asked the question 'How much do you trust your water and sewerage company?' The response is on a scale of one to ten with one being 'do not trust them at all' and ten being 'trust them completely'. This performance commitment is calculated from the Consumer Council for Water's (CCWater) survey. This performance commitment will cease to apply if CCWater discontinues its annual question on the level of trust in water companies.
Sv4	Business customer satisfaction	This performance commitment measures the average customer score out of five from four quarterly business customer satisfaction surveys. The Company will undertake a survey of 250 business customers per quarter (1,000 in total per year). It will survey a sample from all customers, not just those who have contacted the company.
Sv5	Priority Services for Customer in Vulnerable Circumstance	We provide special assistance to those customers in vulnerable circumstances who are registered on our Priority Services Register (PSR).

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Performance Commitment		Definition
		This measure reports on the number of households on the Company's PSR as a proportion of all households in the Company's region.
Sv6	Customer on Welsh language register	The number of customers registered for our welsh language preference service.
Rt1	Internal sewer flooding (per 10,000 sewer connections)	The measure is calculated as the number of internal sewer flooding incidents normalised per 10,000 sewer connections including sewer flooding due to severe weather events.
Rt2	Sewer flooding on customers property (external)	The measure is calculated as the number of external sewer flooding incidents normalised per 10,000 sewer connections including sewer flooding due to severe weather events. External flooding incidents are those that have occurred within the boundary of residential or non-residential properties.
Rt3	Sewer collapses (Per 1,000 km of sewers)	The number of sewer collapses per 1,000 kilometres of all sewers causing an impact on service to customers or the environment. A sewer collapse is where a structural failure has occurred to the pipe that results in a service impact to a customer or the environment and where action is taken to replace or repair the pipe to reinstate normal service.
Rt4	Total Complaints	The total complaints by household customers received by the Company per 10,000 connections. It includes the combined total of unwanted contacts (i.e. telephone complaints), written complaints (letter and email), and contacts via new contact channels (such as social media or webchat). This aligns with the data submitted and published by the Consumer Council for Water (CCW) in its annual reports on household complaints.
Rt5	Worst served customers for water service	This measure identifies those properties (household or non-household) who consistently receive a poor level of service. The measure consists of three elements: <ol style="list-style-type: none"> 1. Properties that have had their water supply repeatedly interrupted over a 2 year period. Those properties who have had their water supply interrupted at least once in year one and experienced more than two interruptions in year two. 2. Properties that have had their water supply repeatedly interrupted over a 3 year period. Those properties who have had their water supply interrupted at least once in year one, year two and year three. 3. Properties that received low pressure below the agreed level of service for 3 years or more. Those properties are captured on the Low Pressure longstanding register.
Rt6	Worst served customers for wastewater service	This measure identifies those properties (of household or non-household customers) that consistently receive a poor level of service and experience repeat sewer flooding incidents i.e. 'worst-served' customers. The measure is comprised of the four categories, outlined below. Two of the categories relate to sewer flooding due to hydraulic overload (HO) and two relate to flooding due to other causes (OC). <ol style="list-style-type: none"> 1. Properties recorded as being at active risk of flooding internally due to hydraulic overload in the 2-in-10 year risk category (expected probability that sewer flooding will occur two or more times in ten years).

Performance Commitment		Definition
		<ol style="list-style-type: none"> Properties recorded as being at active risk of Serious External Flooding due to hydraulic overload in the 2-in-10 year risk category. Properties which have flooded internally more than once in the ten years prior to 31 March in the reporting year due to 'other causes'. Properties which have suffered, on average, more than one Serious External Flooding due to 'other causes' in the three years prior to 31 March in the reporting year.
Ft1	Risk of severe restrictions in a drought %	The overall metric is the percentage of the customer population at risk of experiencing severe restrictions in a 1-in-200 year drought, on average, over 25 years.
Ft2	Risk of sewer flooding in a storm %	This measure will record the percentage of the region's population at risk from internal hydraulic sewer flooding from a 1 in 50-year storm, based on modelled predictions.
Ft3	Energy self-sufficiency	Electricity generated and gas injected to grid as a percentage of all electricity and gas consumed by the company, with gas being presented as a gigawatt hours (GWh) equivalent.
Ft4	Surface water removed from sewers	Reduction in volume (m ³) of surface water entering the surface or combined sewer network through sustainable urban drainage approaches. Solutions include sustainable urban drainage approaches to slow down and reduce the volume of water entering the network.
Ft5	Asset resilience (reservoirs)	This performance commitment is defined as a resilience score for critical impounding reservoirs based on a defined resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.
Ft6	Asset resilience (water network+ above ground)	This performance commitment is defined as a resilience score for critical water network plus above ground assets based on a defined resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.
Ft7	Asset resilience (water network+ below ground)	This performance commitment is defined as a resilience score for critical water network plus below ground assets based on a defined resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.
Ft8	Asset resilience (wastewater network+ above ground)	This performance commitment is defined as a resilience score for critical waste network plus above ground assets based on a defined resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.
Ft9	Asset resilience (wastewater network+ below ground)	This performance commitment is defined as a resilience score for critical water network plus below ground assets based on a defined resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.
Ft10	Community Education	The total number of children and adults who have participated in the Company's educational programme each year.
Ft11	Visitors to recreational facilities	The total number of visitors to the Company's recreational sites each year. The Company's recreational sites are Llyn Brenig, Elan Valley, Llandegfedd and Llys y Fran. A new visitor centre is planned at the site of Lisvane and Llanishen reservoirs in North Cardiff. Any

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Performance Commitment		Definition
		further recreational sites developed during the 2020-25 period will be included within this measure.
Bl1	Change in average household bill	The percentage increase in the average household bill from the bill in 2019/20. The Company has committed to keeping bill increases below inflation as measured by the CPIH (Consumer Price Index including owner occupiers' housing costs).
Bl2	Vulnerable customers on social tariffs	The number of residential customers on social tariffs as at 31 March each year. This includes both the HelpU social tariff scheme and the WaterSure scheme. Customers benefiting from Water Collect, Customer Assistance Fund and Water Direct customers are excluded from this measure unless they are also on a social tariff.
Bl3	Company level of bad debt	The Company level of bad debt is a measure of the total unpaid water and wastewater bills that are deemed uncollectable as a proportion of the total revenue billed in each reporting year.
Bl4	Unbilled properties	The number of household and non-household properties classified as void as a percentage of the total number of household and non-household properties served by the Company. Void properties are defined as properties, within the company's supply area, which are connected for either a water service only, a sewerage service only or both services but do not receive a charge. This measure includes properties where other companies bill on our behalf.
Bl5	Financial resilience	This performance commitment indicates the financial resilience of the company as reflected in the credit ratings for senior class bonds, given by the three main credit rating agencies: Standard & Poor's (S&P), Moody's and Fitch. A score of 'High' represents a strong investment grade credit rating from at least two of the three credit rating agencies. A strong investment grade rating is defined as: Moody's: A3 or better, S&P: A- or better, Fitch: A- or better.
Bl6	Delivery of our reservoir's enhancement programme	Cumulative number of schemes delivered in the 2020/25 period against the regulatory programme of work for enhancing the safety of our reservoir assets. Work at each site will comprise: <ul style="list-style-type: none"> Reduction in 'Estimating Annual Probability of Dam Failure' due to works completed; and/or Completion of Section 10 measures in the interest of safety. This will be assured by a third party All Reservoirs Panel Engineers.
Bl8	Delivery of our water network improvement programme	Cumulative number of schemes delivered to milestone 3 (completed programme of works) over the 2020 to 2025 period. This performance commitment captures the Company's obligations to meet the 17 notices served on it by the Drinking Water Inspectorate (DWI) in force as at 1 April 2020 to address concerns about discolouration of water. The financial implications associated with underperformance this performance commitment will be assessed in 2025, which is the end of this five year reporting cycle.
Bl10	Delivery of our South Wales grid water supply resilience scheme	Cumulative proportion of total expenditure spent to deliver the South Wales Grid water supply resilience scheme over the 2020 to 2025 period. The financial implications associated with underperformance this performance commitment will be assessed in 2025, which is the end of this five year reporting cycle.

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Co1	Reportable injuries	The number of individual injuries reported to the Health and Safety Executive under RIDDOR per annum.
Co2	Employee training and expertise	The percentage of the Company's employees that are evaluated as having the necessary skills, experience and knowledge to carry out their specific role safely.
Co3	Employee engagement	This performance commitment is designed to incentivise the company to maintain the employee engagement score derived from an annual survey of colleague sentiment.
VIS01	Delivery of our new visitor's centre	The performance commitment measures successful delivery of the project to construct a new visitor centre at the Llanishen/Lisvane reservoirs site. The financial implications associated with underperformance this performance commitment will be assessed in 2025, which is the end of this five year reporting cycle.
DCP01	Direct procurement for customers: Cwm Taf Water supply strategy scheme (Underperformance).	The performance commitment measures successful and timely delivery of key direct procurement for customer control points, the Outline Business Case submission, and the Full Business Case submission.
DCP02	Direct procurement for customers: Cwm Taf Water supply strategy scheme (Outperformance).	Where DCWW successfully completes an agreed procurement process and, following approval by Ofwat, awards the Cwm Taf Water supply strategy scheme to a competitively appointed provider such that the contract is signed and fully effective in accordance with its terms.

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Appendix 2 – Common performance measures – Compliance Checklists

i. Leakage

	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
1	Coverage	Green			A1
1a	95% of all properties have continuous night flow monitoring through the year		Green		
2	Availability	Green			A1
2a	At least 90% of all properties within continuous night flow monitoring networks available for reporting night flow data through the year		Green		
3	Properties	Green			A2
3a	All properties mapped to defined zones or DMAs using geo-location or similar methods		Green		
3b	Consistency of property numbers contained within DMAs or zones with company billing system. Valid differences explained		Green		
3c	Properties that are defined as void excluded from night use allowances unless evidence for use or losses from illegal occupation is available		Amber	Void properties are allocated the normal allowance. Evidence from a void property study.	
3d	Leakage allowance applied for properties not within DMAs or monitored zones consistent with other leakage estimates		Green		
3e	Property data updated at least annually		Green		
4	Night flow period and analysis	Green			A2
4a	Night flow data frequency at least every 15 minutes		Green		
4b	Leakage derived from a fixed period during the night of at least a one		Green		

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	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
	hour period and up to two hours				
4c	If the fixed period is varied during the year for some or all DMAs or zones to address significant changes to night use patterns such as during Ramadan evidence for this is provided		Green		
4d	Leakage allowance applied for properties not within DMAs or monitored zones consistent with other leakage estimates		Green		
4e	Data infilling for a single DMA or zone does not use more than six months of historic data before moving to area average		Green		
4f	Data infilling where historic data is not available uses the area average in which the DMA is located		Green		
4g	When a DMA is restored to operability, the subsequent leakage data is used to retrospectively update the data infilling interpolating between pre- and post- data over at least one month		Green		
4h	Where NHH properties are continuously monitored, the actual values of flow over the night flow period are used in place of estimates within the night flow analysis		Green		
4i	Weekly leakage estimates are used for annual reporting with no exclusions for summer months		Green		
4j	Negative leakage values are used in compiling values of annual average leakage		Green		

	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
4k	The reasons for any prolonged periods of negative leakage are investigated and explained		Green		
5	Household night use	Red			B2
5a	The time period for HHNU is the same time period as used for night flow and NHHNU		Green		
5b	Own data or shared data with proximate companies is used for HHNU		Green		
5c	Plumbing losses are included and based on own data		Green		
5d	Evidence that survey is representative (based on demography, property type or other factors) of the company as a whole		Red	The occupancy levels within the small area monitor sites from which household night use is derived is not representative of the total cohort. Corrections are made to account for tourism and occupancy levels. The suitability of the SAM will be reviewed in the overall Water Balance Review.	
5e	Sample size is sufficient to capture continuous and intermittent night use with reasonable confidence		Green		
5f	Continual monitoring and maintenance of IHMs (individual household monitors) and SAMs (small area monitors)		Green		
5g	HHNU is derived daily with regular, adjustment of values on a weekly or monthly frequency to reflect actual seasonal use. This may be done retrospectively		Green		
6	Non-household night use	Red			B2
6a	The time period for NHHNU is the same time		Green		

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	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
	period as used for night flow and HHNU				
6b	Own data or shared data with proximate companies is used for NHHNU		Green		
6c	1999 UKWIR methodology with the appropriate time window as used for the night flow and the published outcome of further methodology development is applied		Green		
6d	Stratification of non-households to a number of groups and consumption bands is representative of the varying characteristics of commercial and industrial properties		Green		
6e	Sample size is sufficient to capture night use by stratification with reasonable confidence		Green		
6f	Reliable and representative average billed volume (ABV) model based on data logging of the representative sample sufficient to capture demand variations with further seasonal logging where relevant. Continuously logged properties not part of the sample.		Green		
6g	ABV model linked to billing system or replacement database of billed volumes. Average billed volumes updated at least annually		Red	New Zero Gamma Adjusted Model to be implemented to derive dynamic coefficients from 1,000 logged samples. Project delayed due to changes brought about by Covid-19. To be reviewed as part of Water Balance Review.	
6h	Continuous monitoring of selected non-households		Green		

	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
	is carried out where average demand of an individual non-household has a material impact on the ability for a DMA or zone to provide valid and consistent data within operability limits				
7	Hour to day conversion	Green			B2
7a	The hour-to-day factor is derived separately for each DMA or zone using pressure logging within each DMA or zone. The factors are updated at least annually or where there are any significant changes to pressure regimes		Green		
7b	As an alternative, hydraulic models reflecting latest network configuration and pressure changes, are used if they dis-aggregate in sufficient detail at sub-zone level		Green		
7c	Evidence based N1 value used. Expected range is 1.0 to 1.20		Amber	N1 value (0.8) is outside expected range (1.0 to 2.0). Whilst this is not significant overall, a field-based study will be undertaken to determine N1 factors based upon material type and age.	
8	Annual distribution leakage	Green			A2
8a	Average weekly data is derived from valid daily values of leakage using data points which are representative of the week. Backfilling using the methods described in Section 5.4 – night flow analysis - is done when valid data is not available		Green		

	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
	for three or more data points				
8b	The annual value of leakage expressed as MI/d is be derived from an average of the 52 week data		Green		
9	Trunk main losses	Red			B4
9a	Company-specific data is used to assess the value of trunk main leakage		Green		
9b	Proactive leakage monitoring approach applied where trunk main losses form a significant element of total leakage or the MLE water balance gap is greater than +/-2%		Green		
9c	If trunk main losses greater than 5% of total leakage estimates reviewed annually		Red	The company report trunk mains losses using estimates not updated in the year. Whilst dynamic flow balances are calculated for 12 zones these changes have not been applied pending the overall Water Balance Review.	
10	Service reservoir losses	Red			B4
10a	Company-specific data is used to assess the value of service reservoir losses;		Red	The data used in this assessment needs to be updated and a programme of work will be derived from the Water Balance Review	
10b	Reservoirs with known high leakage, structural deficiencies or at risk of water quality failures are investigated on an individual basis		Green		
10c	Drop tests (12 hour duration depending on size) carried out every five or ten years. All valves checked for tight close; and losses through overflows investigated. Appropriate monitoring		Green		

	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
	arrangements in place to control and minimise overflow events.				
11	Distribution input	Green			A2
11a	Distribution input to the system is metered with at least daily readings at all defined locations		Green		
11b	Meters are appropriate size for the flow to be measured and located at appropriate inputs to the network confirmed by record plans. Any treatment works take-off downstream of a meter are excluded from the DI calculations		Green		
11c	Data validity checks are carried out at least monthly		Green		
11d	Missing data is infilled using both pre- and post-data for the location over at least one month, extrapolated from pump hours or use of upstream or downstream meters		Green		
11e	The data transfer systems from meter output to central database are checked and validated on a risk-based frequency from one up to two years		Green		
11f	Flow checks are carried out on DI meters consistent with the principles of the document 'EA Abstraction Good Metering Guide' and in particular the frequency of flow checking defined in table 6.2 of the EA guide		Green		
12	Measured consumption	Green			A2
12a	Metered data is derived from own billing system or from CMOS for non-households		Green		

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	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
12b	Estimate of supply pipe losses is included for internally metered properties consistent with own current assumption of supply pipe losses		Green		
12c	Inclusion of any leakage allowance is included where a rebate has been applied to a customer's bill		Green		
12d	Meter under-registration (MUR) is applied consistent with own estimates. Evidence of MUR available especially for MUR above 3%.		Green		
12e	Meter replacement consistent with own replacement programme		Green		
13	Unmeasured consumption	Red			B2
13a	Monitors follow principles set out in the UKWIR Report 'Best Practice for unmeasured per-capita consumption monitors 1999' and the more recent report 'Future Estimation of Unmeasured Household Consumption', UKWIR 2017		Green		
13b	Consumption is derived from own individual household monitor or small area surveys		Green		
13c	Evidence that survey is representative (based on demography, property type or other factors) of the company as a whole; valid data available from at least 80% of monitors as an annual average measure		Red	The occupancy levels within the small area monitor sites from which household night use is derived is not representative of the total cohort. Corrections are made to account for tourism and occupancy levels. The suitability of the SAM will be reviewed in the	

	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
				overall Water Balance Review.	
13d	<p>For companies using SAMs – SAM (small area monitor) comprises a representative sample of customer' characteristics. The sample size is sufficient to provide a statistically representative sample after allowing for outages. Where the proportion of metered properties in an area exceeds 50% of total properties then further data validity tests are applied.</p> <p>For companies using IHMs – IHM (individual household monitor) comprises representative sample of customer characteristics. The sample is at least 1000 properties.</p>		Green		
13e	Uncertainty allocated to unmeasured household consumption is estimated and justified		Green		
13f	There is continual monitoring and maintenance of IHMs and SAM monitors		Green		
13g	Meters are selected to provide sufficient granularity to detect low continuous flows indicative of plumbing losses or leakage short duration flow variations. The value of meter under registration is less than the company's average meter stock		Green		
13h	Estimate of plumbing losses is based on own data		Green		

	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
13i	Where unmeasured non-household reported volume is less than 2% of total non-household demand, data from a per property consumption study is refreshed every five years		Green		
13j	Where unmeasured non-household reported volumes are greater than 2% of non-household demand, data from a property study is refreshed every two years		Green		
14	Company own water use	Green			B2
14a	All sewage treatment sites and other sites and assets supplied downstream of the DI meters using greater than 10 m ³ /d (0.01 MI/d) are metered		Green		
14b	An estimate of total company own use is included in the water balance, based on a clear methodology and actual data		Green		
14c	Estimate of distribution operational use is evidence based and not greater than 0.6% of distribution input		Amber	Operational use is currently greater than 0.6% of DI at 1.18%. This will be reviewed in the Water Balance Review.	
15	Other water use	Green			B2
15a	Other use components are based on own data		Green		
15b	Estimate of water delivered unbilled (legally and illegally) is evidence based and not greater than 1.8% of distribution input		Green		
15c	Estimates are updated when there is a material increase or decrease to volumes		Green		
16	Water balance and MLE	Red			B2

	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
16a	Fully measured components have a range from 2% to 4%		Amber	A statistical review of the uncertainty in each element of the water balance will be undertaken as part of the Water Balance Review.	
16b	Mainly measured with some estimated adjustments have a range from 2.5% to 5%		Red	A statistical review of the uncertainty in each element of the water balance will be undertaken as part of the Water Balance Review.	
16c	Estimated using detailed and reliable methods have a range from 8% to 12%		Red	A statistical review of the uncertainty in each element of the water balance will be undertaken as part of the Water Balance Review.	
16d	Broad estimates not fully detailed or reliable have a range from 20% to 50%		Red	A statistical review of the uncertainty in each element of the water balance will be undertaken as part of the Water Balance Review.	
16e	Water balance discrepancy: <2% = Green >2% and <3% = Amber >3% = Red		Green	Water Balance is +1.96%	

ii. Supply Interruptions

	Component	Compliant (R/A/G)	Reason for any non-compliant components	Confidence Grade
1	Property Counts	Green		A2
2	Start Time	Green		A2
a	Evidence to support start time	Green		A2
b	Treatment of 3m pressure definition	Green		A2
c	Treatment of blocks of flats	Amber	As we get our data through ordinance survey, heights of an individual block of flats aren't provided. As a result, any interruption identified relating to a single flat will mean all flats fed from the same supply will be assumed as being without water (as per precautionary principle). Further investigation has been carried out in identifying a governed method for reporting this element and we have reached out to other water companies but to no avail as yet. Challenges such as; not being able to determine the number of flats in a multistorey building (even if the height of the property itself could be captured – such as LIDAR), understanding which flats are controlled via private pumps and those fed through pressure at the main has caused a stumbling block on this element and consequently we are unable to improve on the Amber rating at this point. As of August 2021 the compliance team have joined data science where this element will be included in the forthcoming scope of works for exploring a solution.	B3
3	Stop Time	Green		A2
a	Evidence to support stop time	Green		A2
b	Treatment of 3m pressure definition	Green		A2

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	Component	Compliant (R/A/G)	Reason for any non-compliant components	Confidence Grade
c	Treatment of blocks of flats	Amber	As per 2c	B3
4	Short Term Restoration of Supply	Green		A2
5	Exclusions	Green		A2
6	Calculation of Performance	Green		A2
7	Application of Precautionary Principle	Green		A2
8	Records	Green		A2
9	Properties affected >1 interruption in year	Green		A2

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iii. Mains Repairs

	Component	Compliant (R/A/G)	Reason for any non-compliant components	Confidence Grade
1	Mains bursts repair work	Green		A2
2	Mains Length	Green		A2
3	Records	Green		A2
4	Methodology Statement	Green		A2

iv. Unplanned Outages

	Component	Compliant (R/A/G)	Reason for any non-compliant components	Confidence Grade
1	Peak Week Production Capacity (PWPC)	Green	The Company has a defined process. This is implemented, with a methodology to derive PWPC, which is compliant with guidance. PWPCs for each treatment works assemblies and compared to peak capacity from Water Resource Plan, 1 to 2% difference as a total across all works indicating reasonableness of the outputs. The annual assessment of PWPC factors any long term changes greater than 1 year to the calculation from either planned work or change in use, these would be evidenced and reported. The Company has refined its working subset giving a grading of A2.	A2
1a	PWPC Annual review	Green	<p>Due to weather events of 2018, 2019 and 2020, as well as additional Covid-19 demand, peak output was required to meet demand. This effectively evidenced the requirement of the five-year physical test for many works.</p> <p>The model will be reviewed each year and a Governance process is in place for any changes to sub-asset data – data provider, with area manager, and head of service sign off as required.</p> <p>This modelling provides the PWPC figures and is the basis for deriving the impact of outage of individual assets at a site.</p> <p>The reporting for 2021/22 will be by expert knowledge, using the new manually assessed data, utilising accredited systems</p> <ul style="list-style-type: none"> • Manual event logging • Water Quality systems SAMS • Telemetry PRISM • IMS – POF020, POF007, POF013 	A2

	Component	Compliant (R/A/G)	Reason for any non-compliant components	Confidence Grade
			<ul style="list-style-type: none"> SAP data (works and asset maintenance register) 	
1b	PWPC by site	Green	Commentary as above	A2
1c	PWPC by water resource zone PWPC	Green	Commentary as above	A2
2	Asset failure / unplanned outage	Green	<p>DCWW utilised the following data sets.</p> <ul style="list-style-type: none"> Manual event logging – IMS POF007 SAP data (works and asset maintenance register) Water Quality systems SAMS Telemetry PRISM data <p>The data from these sources is aligned (largely through manual checks and controls currently) to determine what was an outage, what was less than 24hrs, what is a legitimate exclusion, or where PWPC is not needed due to demand (economic or selective outage).</p> <p>There is further work planned for 2022/23 to improve the automation of this through a programme to roll out across the company. This will improve the confidence grade.</p> <p>Whilst this identifies asset failure, tracking the duration and impact currently requires a manual process of determination.</p>	B3
2a	Source Data	Green	Commentary above	B3
3	Planned Outages	Green	<p>DCWW methodology is compliant with the guidance.</p> <p>SAP data includes all events, subsets of the data are derived to categories such as the type and duration. Then manual identification of any planned capital maintenance or routine maintenance.</p> <p>Capital programmes for the year is known and this is used to verify this data.</p> <p>The system for approval of capital works requires detailed planning and notifications.</p>	A3

	Component	Compliant (R/A/G)	Reason for any non-compliant components	Confidence Grade
			A confidence grade of A3 is achieved as all planned work is logged and managed through a risk-based system of approval.	
3a	Source data – programme of works	Green	See commentary for 3 above. Planned outages fall into three main categories. 1. Seasonal 2. < 24 Hrs 3. Water Quality related The reporting process for 2020/21 is by, management reporting and expert knowledge to manually assess SAP, PRISM, IMS and SAMS related documents and reports.	A3
4	Duration	Green	The events reported in the review for 2021/22 will be by manual assessment of data, identified in the methodology. IMS and SAP reports identify start and end times. End time is based on current guidance. Most outages are repaired and commissioned back into supply within 24 hours.	B3
4a	Start time	Green	Events were assessed following the guidance outlined	B3
4b	End time	Green	The events reported in the review for 2021/22 will be by a manual assessment of data, as identified in the methodology.	B3
4c	Rounding	Green	Events assessed in line with the guidance outlined (to the nearest whole day). Rounding occurs in line with the requirement within the software programme.	B2
5	Reduction in capacity	Green	PWPC look up tables created from the model described in 1, these are used to calculate the reduction in capacity, as outlined.	A3
5a	Reduced capacity	Green	As outlined above in 1 and 1a commentary.	A3
5b	Total outage	Green	As outlined above in 1 and 1a commentary.	A3
6	Exclusions	Green	Exclusions fall into two main categories. 1. < 24 Hrs 2. Water Quality related	A2

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	Component	Compliant (R/A/G)	Reason for any non-compliant components	Confidence Grade
			The reporting process for 2020/21 will be by, expert knowledge to manually assess IMS, PRISM, SAP and SAMS related documents and reports to identify these events. The data sources are robust corporate systems used in reporting Management Information.	
6a	Outside normal water quality band	Green	DCWW methodology is consistent with guidance, operating procedures and mitigation of water quality events by some manual assessment of the data and triggers.	A2
6b	Evidence of water quality events	Green	Water quality events are logged and tracked through existing company reporting procedures, (Customer contacts, IMS, and sample data held on the SAMS system). Assessment and reporting are an established process by Water Quality teams. Data is used to primarily support evidence for outage events.	A2

Overall, we envisage reporting performance commitment wt5, at a confidence grade of B2 for 2021/22

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v. Per Capita Consumption

	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
1	Household population estimates	Green			A2
1a	Household population derived using WRMP methodology		Green		
1b	Evidence for adjustments for clandestine population if any		Green		
1c	Household population updated annually		Green		
1d	Exclusion of non-household population in accordance with WRMP methods		Green		
2	Household property estimates	Green			A1
2a	Definition of household / non-household consistent with eligibility under market separation		Green		
2b	Evidence of void properties updated annually		Green		
2c	Property figures annually updated		Green		
3	Measured household consumption	Red			B2
3a	Metered data is derived from own billing system		Green		
3b	If leakage allowances are applied the process and evidence for this is clearly set out		Green		
3c	Average SPL (supply pipe leakage) deductions for externally metered households using company own data updated annually		Green		
3d	Company own estimate of MUR (meter under-registration) for revenue meters which is updated annually		Red	MUR has not been updated within the year. This will be reviewed in the wider Water Balance Review, although estimates are company specific.	

	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
3e	Meter replacement consistent with own replacement programme		Green		
4	Unmeasured household consumption	Red			B2
4a	Monitors follow principles set out in the UKWIR report 'Best Practice for unmeasured per-capita consumption monitors 1999' and the more recent report 'Future Estimation of Unmeasured Household Consumption', UKWIR 2017		Green		
4b	Consumption is derived from own IHM (individual household monitor) or SAM (small area monitor) or evidence to support other method appropriate for high meter penetration companies		Green		
4c	Evidence that survey is representative (based on demography, property type or other factors) of the company as a whole; Valid data available from at least 80% of monitors as an annual average measure		Red	The occupancy levels within the small area monitor sites from which household night use is derived is not representative of the total cohort. Corrections are made to account for tourism and occupancy levels. The suitability of the SAM will be reviewed in the overall Water Balance Review.	
4d	For companies using SAMs - SAM (small area monitor) comprises a representative sample of customer' characteristics. The sample size is sufficient to provide a statistically representative sample after allowing for outages. Where the proportion of metered properties in an area exceeds 50% of total properties then further		Green		

	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
	data validity tests are applied For companies using IHMs – IHM (individual household monitor) comprises representative sample of customer characteristics. The sample is at least 1000 properties.				
4e	Uncertainty allocated to unmeasured household consumption is estimated and justified		Green		
4f	There is continual monitoring and maintenance of IHM and SAM monitors		Green		
4g	Meters are selected to provide sufficient granularity to detect low continuous flows indicative of plumbing losses or leakage short duration flow variations. The value of meter under registration is less than the company's average meter stock		Green		
4h	Estimate of plumbing losses is based on own data		Green		
4i	Where unmeasured non-household reported volume is less than 2% of total non-household demand, data from a per property consumption study is refreshed every five years		Green		
4j	Where unmeasured non-household reported volumes are greater than 2% of non-household demand, data from a property study is refreshed every two years		Green		
4k	Company own estimate of MUR (meter under-registration) for monitor		Green		

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	Component / Element	Compliant (R/A/G)	Element (R/A/G)	Reason for any non-compliant components	Confidence Grade
	meters which is updated annually				
4l	Meter replacement consistent with own replacement programme		Green		

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vi. Sewer Collapses

	Component	Compliant (R/A/G)	Reason for any non-compliant components	Confidence Grade
1	Number of Collapses	Green	Guidance is consistent with DCWW methodology and has been applied.	B2
2	Sewer Length	Green	As per APR 4R lines 21 and 22, this is consistent with previous reporting.	B2
a	Length excluding transferred sewers	Green		B2
b	Length of sewers transferred under the Private Sewer Regulations 2011	Green		B2

vii. Internal and External Sewer Flooding

	Component	Compliant (R/A/G)	Reason for any non-compliant components	Confidence Grade
1	Assets causing flooding	Green	Guidance is consistent with DCWW methodology and has been applied. SAP functionality implemented to record flooding against transferred sewers and transferred pumping stations (also identifiable in GIS). No internal or external flooding incidents from transferred SPS reported in 2019/20.	B2
2	Severe weather	Green	Severe weather events are confirmed using Met Office FEH2013, applying to elements 2a and 2e below. There is no severe weather exclusion, and these are included in our reported performance.	N/A
a	Individual rainfall events > 1 in 20 years	Green		N/A
b	Multiple rainfall events	Green		N/A
c	Surface water run-off not originated from public sewer	Green	Guidance is consistent with existing DCWW methodology and has been applied; sub-categories reportable in SAP functionality.	B2
d	River levels > 1 in 100 year return period	Green	We can access river level data and analysis through NRW Hydrology team. There have been no events in our area in 2021/22 as yet confirmed under this category.	B2