

Annual Performance Report 2017/18

Part 3 - Performance Summary



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1. Introduction

Throughout the year, we monitor our performance against a wide range of indicators, including the following:

- the Measures of Success contained within Ofwat's 2014 Final Determination (FD);
- a small number of Measures of Success which were an integral part of our PR14 Business Plan but were nevertheless excluded from the FD. As these were part of the package that received overwhelming support from our customers, we have continued to monitor performance and have included them in this report;
- key measures of performance used by Natural Resources Wales (NRW) to judge environmental compliance;
- key measures of performance used by the Drinking Water Inspectorate (DWI) to judge drinking water quality compliance;
- measures contained within our "Performance Scorecard". This is an important tool which helps monitor performance and, whilst the scorecard does not include every single metric measured, achieving Scorecard targets set by the Board demonstrates that we are on track to deliver a performance overall that would represent one of the best in the industry; and
- financial measures such as gearing, credit ratings, post-tax return on capital and interest cover.

In this part of the Annual Performance Report we set out how we have performed against the non-financial measures. Performance against the key financial measures is contained within the Annual Report and Accounts and the regulatory accounts (Parts 1 and 2 of this Annual Performance Report). In Part 4 of this Annual Performance Report we include additional regulatory information.

In terms of presentation, we have grouped these together by reference to the six Customer-led Success Initiatives, (see section 2.1). These are:

- clean safe water for all;
- Safeguard the environment for future generations;
- a personal service that's right for you;
- put things right if they go wrong;
- fair bills for everyone; and
- a more sustainable and prosperous future for our communities.

A summary of overall performance on key measures is contained within section 2.2. In section 2.3 we set out the FD Measures of Success (colour coded by reference to the outcomes contained within the FD) and also showing to which part of the business they relate.

Performance against each individual metric is set out in section 2.4. Where we can, we have included details of historical performance and how our performance compares with other companies in the sector. Where we are behind our FD targets, we have provided a brief commentary explaining why this is the case and we also highlight the steps we are taking to improve. In addition, our performance is recorded on a website called Discover Water (www.discoverwater.co.uk) This is an industry dashboard, providing customers with the latest information about the water utility sector in England & Wales and how we are performing against other sector companies.

Some of the individual Measures of Success 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.

Table 3A and 3B, in section 3, contain information required by Ofwat on how we are performing against the Measures of Success targets contained within the FD. Table 3D provides a breakdown of the qualitative and quantitative elements of SIM. It should be noted that Table 3C (Abstraction Incentive Mechanism-AIM) does not apply to companies operating wholly or mainly in Wales.

In section 4, 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.

A statement provided by our Reporter, who audited aspects of this Annual Performance Report, is included in Appendix 1.

In Appendix 2, we include a Management Response on the small number of Reporter observations (relating to Parts 3 and 4 of the APR).



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2.1 Performance Measures- by reference to Customer Led Success (CLS) Promises

Customer Led Success

Key Performance Indicators

Final Determination Measures of Success

Clean safe water for all

A1 Mean Zonal Compliance	A2 Customer Acceptability	A3 Reliability of Supply
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A1a % Sample Compliance	A2a Customer Acceptability <small>(excl private contacts)</small>	Process Control Index	Disinfection Index	Reservoir Integrity index
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A more sustainable and prosperous future for our communities

B1 Water Abstractions	C1 Responding to Climate Change	C2 Carbon Footprint
F1 Serviceability	F2 Leakage	F3 Asset Resilience
B2 Treating wastewater	B3 Pollution incidents	

Serviceability-Water Infrastructure. Mains Bursts - Low Pressure - Iron non compliance - Interruptions to supply > 12hrs - Distribution Index - Customer contacts (discolouration)
Serviceability-Water Non-Infrastructure. WTW Bacti non compliance - Enforcements - Service Reservoir Bacti non compliance - Turbidity non compliance - Unplanned maintenance
Serviceability-Wastewater Infrastructure. Sewer Collapses - Sewer Blockages - Equipment Failures - Pollution incidents - Properties flooded (OC) - Properties flooded (HO)
Serviceability-Wastewater Non-Infrastructure Unplanned Maintenance - % PE in breach of consent - %WWTWs in breach of numeric consents

Safeguard the Environment for future generations

Personal service that's right for you

D3 Properties flooded	D4 Business Customer Satisfaction	D5 Earning the trust of customers
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Net Promoter Score	UKCSI score	G2 Competency of Staff
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Put things right if they go wrong

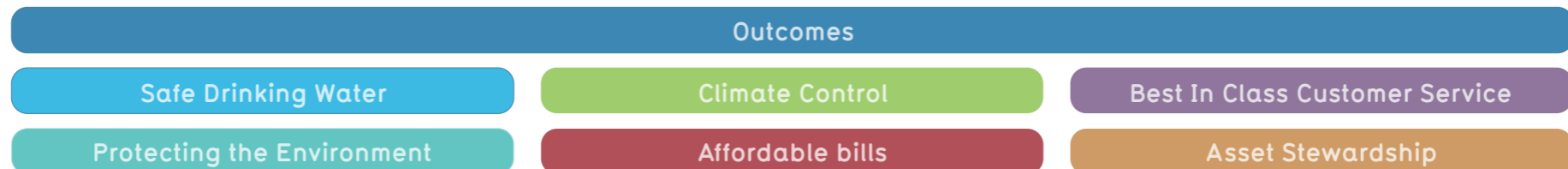
D1 SIM combined	D2 At risk customer service
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Unwanted calls	G1 H & S RIDDOR Incidents	Complaints
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Fair Bills for everyone

E1 Affordable Bills	E2 Help for Disadvantaged Customers
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Bad Debt	H2 Financing Efficiency
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2.2 Summary of Overall Performance

2017/18 Annual Performance	2016/17 Outturn	2017/18 Outturn	2017/18 Vs FD Target	2017/18 Vs IBP Target	2017/18 Vs Previous Year	RAG vs Sector	Page
A1(a): % sample Compliance (c)	99.99%	99.98%	n/a				8
A1(b): Mean Zonal Compliance (c)	99.97%	99.96%		n/a			9
A2(a): Customer Acceptability (c) (excluding private contacts)	2.9	2.79	n/a			n/a	10
A2(b): Customer Acceptability (c)	3.20	3.19 *1					11
A3: Reliability of Supply	12.15 mins	43.3 mins					12
B1: Abstraction for water	100%	100%					13
B2: Treating used water (c)	99.47%	98.21%					14
B3: Pollution Incidents (c)	111	112					15
C1: Responding to Climate Change	13,661	15,097				n/a	16
C2: Carbon Footprint-Water	37.49 GWh	42.38 GWh				n/a	17
C2: Carbon Footprint-Wastewater	49.01 GWh	55.51 GWh				n/a	17
D1: SIM	83	85	*2			*3	18
D2: At Risk - Customer Service	575	613				n/a	19
D3: Properties flooded in the year	242	221					20
D4: Business Customer Satisfaction	89%	87%		n/a		n/a	21
D5: Earning the Trust of Customers	85%	84%				n/a	22
E1: Affordable Bills	-1%	-2%				n/a	23
E2: Help for Disadvantaged Customers	65,461 *4	100,999				n/a	24

*1 This figure includes customer contacts relating to issues arising from customers' own private plumbing. If contacts resulting from issues with the customer's own internal pipes are excluded, the 2017 number is 2.79 contacts per 1,000 customers (2016: 2.9).

*2 Performance against FD target (i.e. upper quartile) will not be known until all companies publish their Annual Performance Reports in July 2018.

*3 In terms of the RAG comparison against the sector, the amber assessment is based on the qualitative element of SIM only.

*4 Both 2016/17 and 2017/18 outturn figure exclude those customers who benefit from our 'Water Collect' scheme. If 'Water Collect' customers benefitting from a social tariff/means of assistance are included, the 2017/18 number is 105,864.

C - Calendar year measure (all others are financial year measures)

FD - Final Determination

IBP - Internal Business Plan



2.2 Summary of Overall Performance

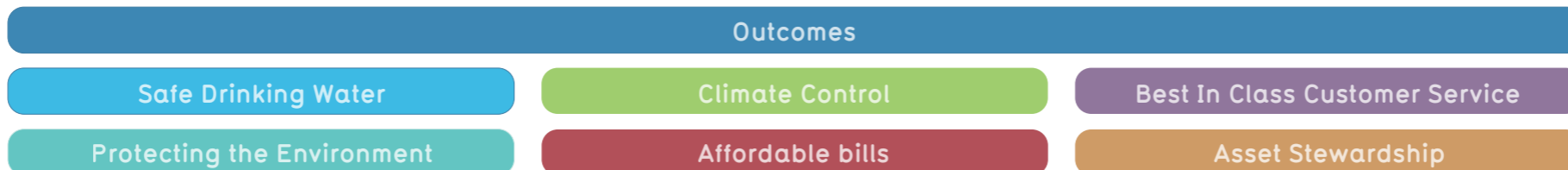
2017/18 Annual Performance	2016/17 Outturn	2017/18 Outturn	2017/18 Vs FD Target	2017/18 Vs IBP Target	2017/18 Vs Previous Year	* RAG vs Sector	Page
F1: Asset Serviceability	Stable x 4	Stable x 4	✓	✓	✓	n/a	25
F2: Leakage	175.43	172.85	✓	✓	✓	●	30
F3: Asset Resilience - Water	89.5%	90.4%* ₅	✓	✓	✓	n/a	31
F3: Asset Resilience - Wastewater	73.6%	77.5%* ₅	✓	✓	✓	n/a	32
G1: Health & Safety	12	14	n/a	✓	✗	n/a	33
G2: Competency for role	86.6%	82%	n/a	✗	✗	n/a	34
H2: Financing Efficiency	A/A2/A	A/A2/A	n/a	✓	✓	●	35
Net Promoter Score	55.4	63	n/a	✓	✓	n/a	36
Written Complaints	6,582	3,862	n/a	✓	✓	●	37
Bad Debt	£23.3m	£22.1m	n/a	✓	✓	n/a	38
UKCSI	76.5	76.8	n/a	✓	✓	n/a	39
Unwanted Calls	127,449	138,193	n/a	n/a	✗	n/a	40
Process Control Index	100%	99.998%	n/a	n/a	✗	●	41
Disinfection Index	99.998%	99.992%	n/a	n/a	✗	●	42
Reservoir Integrity Index	99.98%	99.99%	n/a	n/a	✓	●	43

Red/Amber/Green (RAG)	
* Industry comparison against the other water and sewerage companies	
●	Upper quartile performance
●	Average Performance
●	Lower quartile Performance

*₅ Both 2016/17 and 2017/18 outturn figures are based on the strategically important assets listed at the time of the 2014 FD. In addition, to reporting against this FD measure, we assess performance against the most up to date list of strategically important assets. On pages 31 and 32 we set out details of performance against both measures.



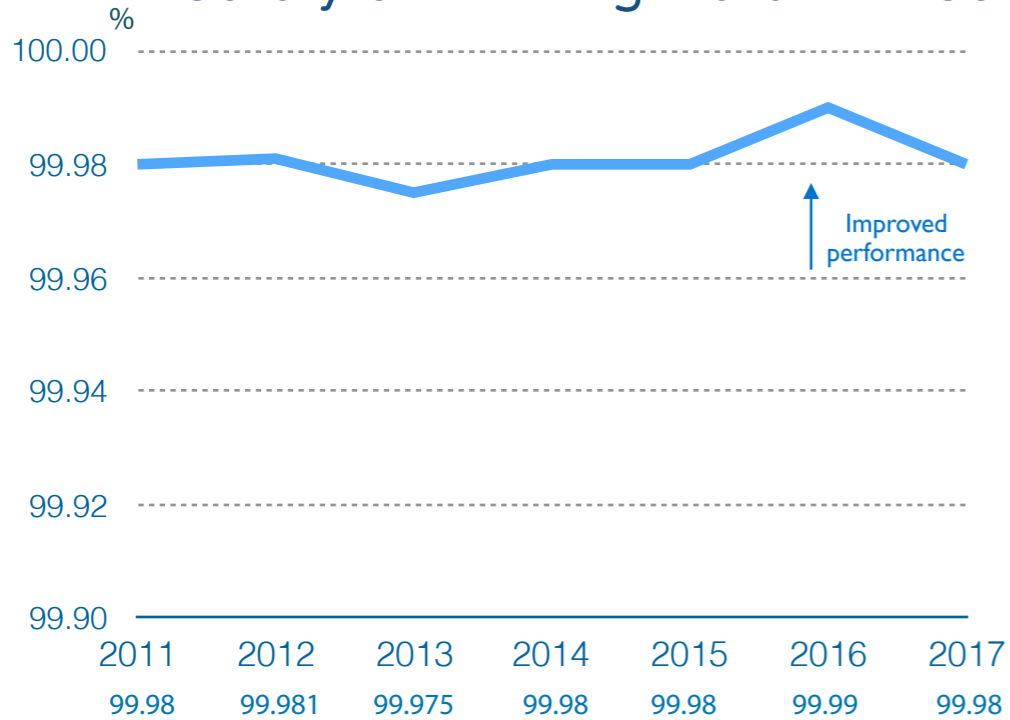
2.3 Performance Measures - by reference to Outcomes and PR14 Price controls





2.4 - Safety of Drinking Water - % Sample Compliance

Key Performance Indicator



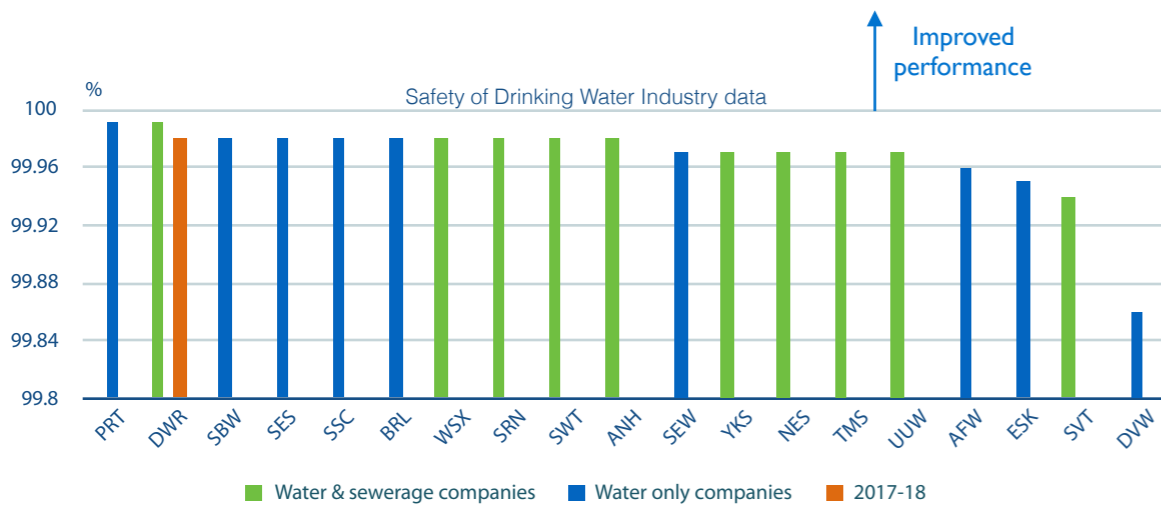
Summary Performance: The overall compliance of 99.98%, is a percentage of the total number of failures taken against the total number of tests.

In 2017, there were 46 failures out of 224,032 total tests taken, compared to 34 failures in 2016 (237,841 tests).

Customer Compensation: Our performance on this measure has not led us to making any direct payments of compensation to customers in the financial year 2017/18.

Definition: This measure (included within our scorecard) is the percentage of compliant samples taken at Water Treatments Works, Service Reservoirs and customer taps. This measure takes into account all the tests analysed as a percentage of those that have failed against European and National Standards and additional monitoring requirements as reported in DWI published data. This measure is much less volatile than the Mean Zonal Compliance (MZC) measure.

This measure is reported on a calendar year basis.

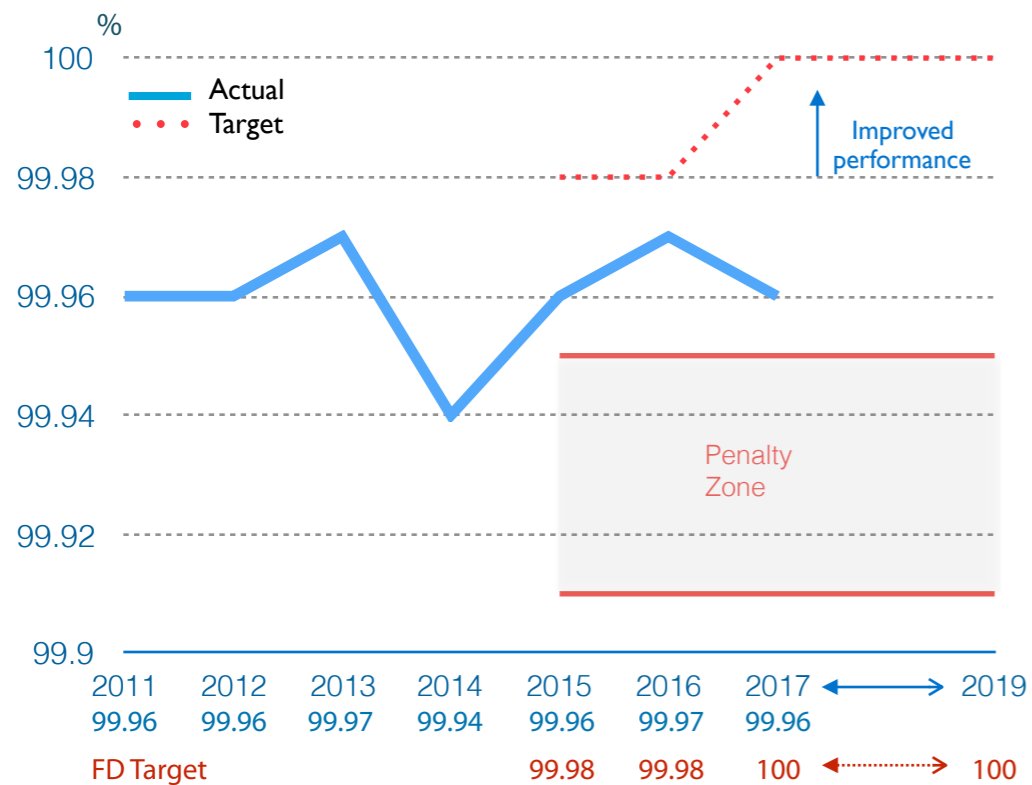




2.4 – MOS A1b – Safety of Drinking Water Mean Zonal Compliance (MZC)

Applicable to Price Control: **WHOLESALE WATER**

OFWAT MOS Penalty Only



Summary Performance: In 2017 our performance level was 99.96%. There were 32 failures out of 45,844 tests taken compared to 20 failures in 2016.

The highest number of failures was on the 'Iron' parameter.

Achieving 100% compliance target is challenging as a failure in zones serving very small populations will distort the overall picture. We nevertheless, continue to work towards achieving the FD Target through planned investment and improved operating procedures.

Planned Improvements: Amongst the many initiatives aimed at driving improvement in performance are the following:

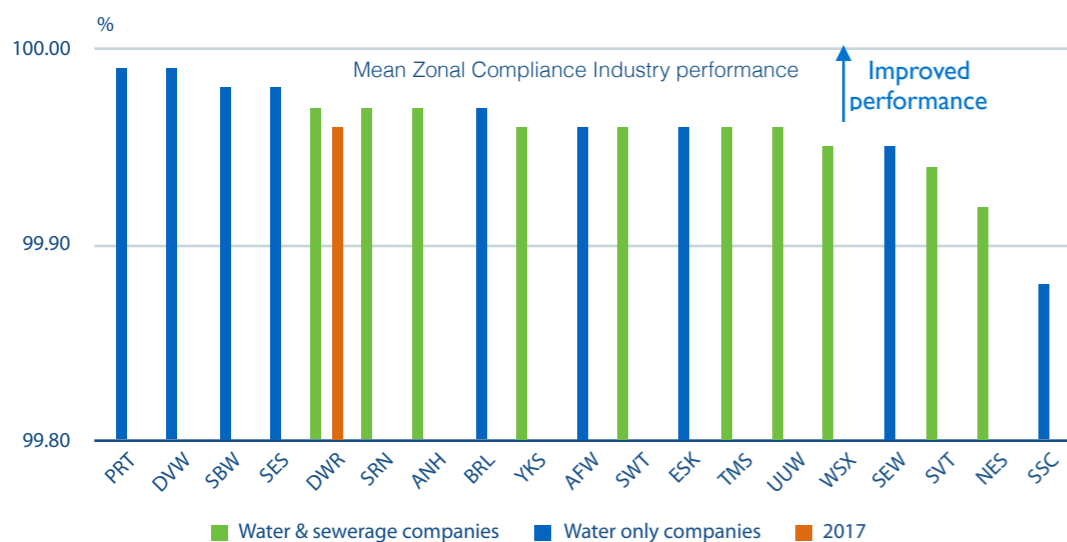
- zonal studies which target investment into cleansing and replacing those pipes that give rise to discolouration contacts, chiefly cast iron mains;
- operational strategy for Water Treatment Works (WTWs), in particular the taste and odour management strategy for the treatment of Geosmin and Methylisoborneol (MIB) that will reduce the risk of taste and odour compliance failures;
- lead strategy, including the replacement of both communication pipes and customer owned service pipes which in the long term will lead to a steady reduction in the risk of lead compliance failures;
- our disinfection strategy at WTWs and our three year cleansing and maintenance programme at our service reservoirs will improve the bacteriological quality of water supplied to customers; and
- we are working with the Water Regulations Advisory Scheme (WRAS) to help address issues that arise from work carried out by non-approved plumbers and the use of non-approved plumbing materials, which help eliminate future nickel failures.

Customer Compensation: Our performance on this measure has not led us to make any direct payments of compensation to customers in the financial year 2017/18.

Definition: MZC is published annually in the Chief Inspector's Report and is the primary measure used by DWI to compare overall water quality performance between water companies and regions of England and Wales. It comprises the average of the MZC % figures for 39 key chemical and biological parameters that are tested to establish the quality of water as received by customers.

There are regulatory standards for sampling frequency set for each of the 39 parameters depending on the size of the population being served from the water quality zone. We have 82 water quality zones with some serving very small populations.

This measure is reported on a calendar year basis.



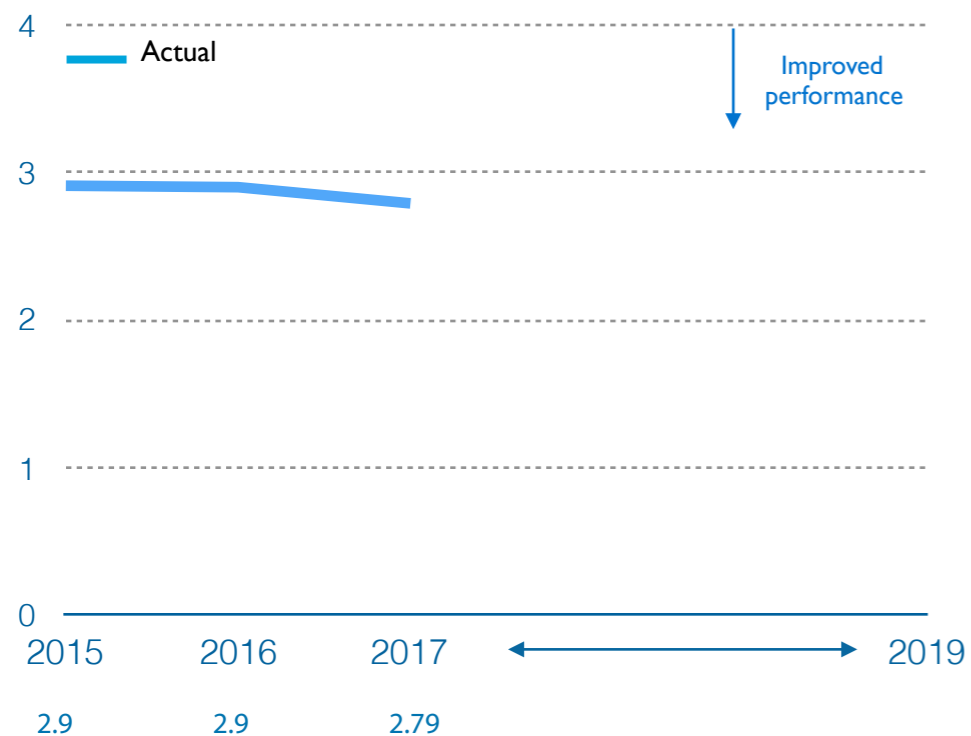


2.4 – MOS A2(a). Customer acceptability

(excluding contacts arising from issues with the customers own internal pipes)

Key Performance Indicator

Contacts per 1,000 population



Summary Performance:

Internally, we monitor and report those customer contacts that arise from problems associated with our assets, i.e. not including contacts which are linked to customers' own plumbing.

There were around 1,250 customer contacts that arose from issues with private plumbing in 2017. Adopting this approach and excluding the private plumbing contacts, our performance is 2.79 contacts per 1,000 population, compared to 2.9 per 1,000 population in 2016.

Customer Compensation

Payments on Customer Acceptability are reported on page 11.

Definition:

When customers are dissatisfied with the quality of their drinking water they may contact their water company. A record of the numbers of contacts received by water companies is sent to the DWI each year and published in the Chief Inspector's report.

This measure is the number of contacts received from customers in the calendar year regarding the appearance, taste or odour of drinking water expressed as a rate per 1,000 population served, but excluding contacts from issues with the customer's own internal pipes.

Since 2015, any contacts about illness have not been included within this measure.

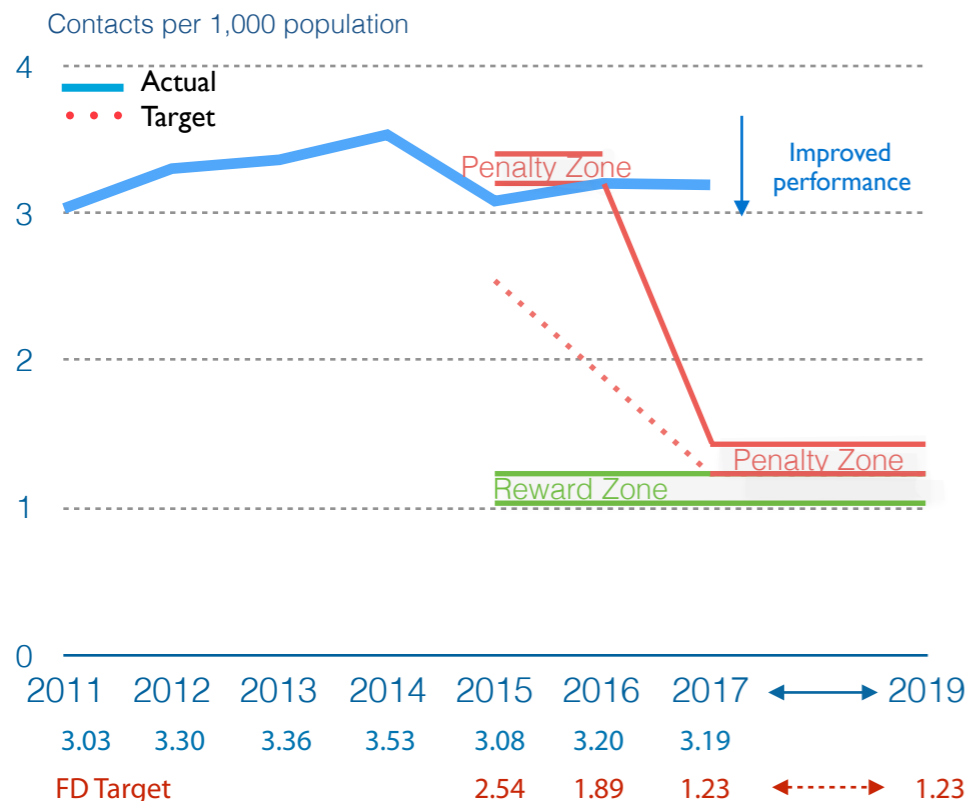
This measure is reported on a calendar year basis.



2.4 - MOS A2(b). Customer acceptability

Applicable to Price Control: WHOLESALE WATER

OFWAT MOS Reward & Penalty



Summary Performance:

Our 2017 performance on this measure is 3.19 contacts per 1,000 population. This is an improvement on last year's figure of 3.2 contacts per 1,000 population.

We are reporting all customer contacts (including those where the contacts from customers arose from customers own private plumbing) in line with data submitted to the DWI. We have used the latest available population figures and the 2017 population figure is used as the denominator in calculating this years performance.

Internally, we monitor and report those customer contacts that arise from problems associated with our assets, i.e. not including contacts which are linked to customers' own plumbing. There were around 1,250 customer contacts that arose from issues with private plumbing in 2017. (see page 10)

The targets set for the later years of this AMP period are very challenging. Whilst significant investment is planned, and management attention is focused on this key measure, we will struggle to achieve these targets. This year we have incurred a penalty of £1.86m.

Planned Improvements:

Amongst the many initiatives aimed at driving improvement in performance are the following:

- zonal studies which target investment into cleansing and replacing those pipes that give rise to discolouration contacts, chiefly cast iron mains;
- proactively tackling the impact of third parties' interference. This includes initiatives such as locking down hydrants (6,500 to date) and replacing warning signs on this apparatus, where appropriate;
- adopting innovative solutions - there are currently 44 innovation projects in place targeting improvements; and
- developing a Manganese Strategy comprising catchment management and process improvements, aimed at reducing the level of manganese from works, both in the short and long term.

As the Industry Performance graph on this page illustrates, we are an outlier in performance. Although we are taking steps to improve the position, there are underlying circumstances which are beyond our control, such as the quality of raw water, which affect this measure. We believe that the root cause of discolouration contacts being higher in Wales is related to the prevalent type of source water, which are typically soft and high in manganese.

Customer Compensation

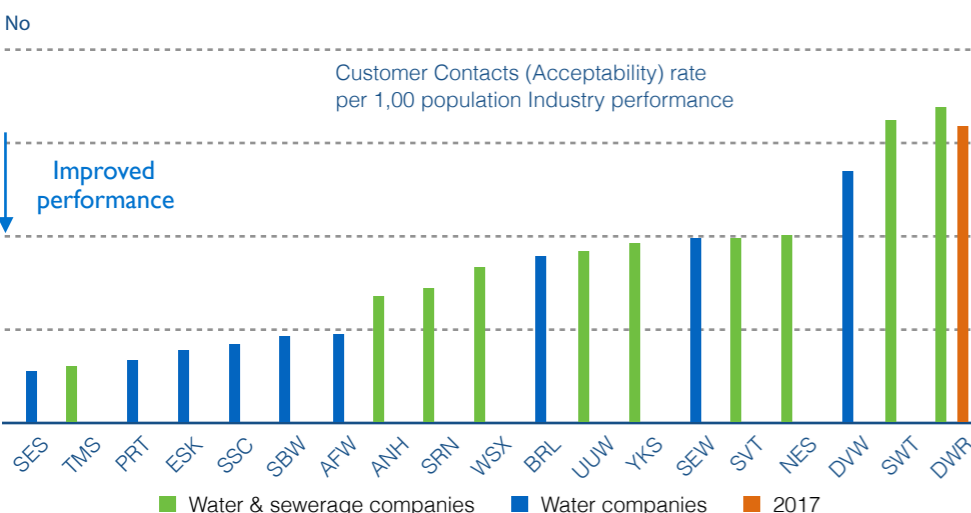
Our performance on this measure has led us to making a total of 268 payments to the value of £23,958 by way of direct payments of compensation to customers in the financial year 2017/18.

Definition:

When customers are dissatisfied with the quality of their drinking water they may contact their water company. A record of the numbers of contacts received by water companies is sent to the DWI each year and published in the Chief Inspector's report.

This measure is the number of contacts received from customers in the calendar year regarding the appearance, taste or odour of drinking water expressed as a rate per 1,000 population served. Since 2015, any contacts about illness have not been included within this MOS.

This measure is reported on a calendar year basis.



Source: Drinking Water Inspectorate - Annual Reports (2016 performance - includes Customer contacts relating to illness).

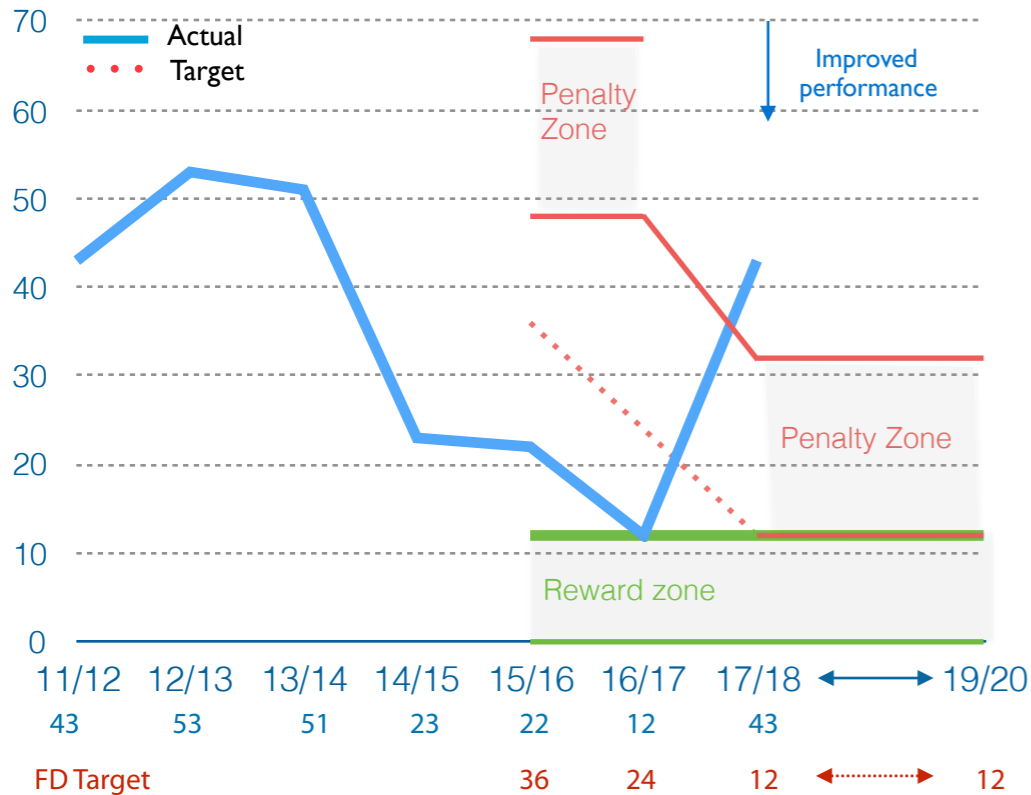


2.4 - MOS A3. Reliability of supply

OFWAT MOS Reward & Penalty

Applicable to Price Control: WHOLESALE WATER

Minutes lost per property



Summary Performance:

In the year, our performance on customer minutes lost (CML) is 43.3 minutes, compared to 12.15 minutes in 2016/17.

In early March 2018 we experienced extremely challenging weather conditions across our area. A Meteorological Office 'Red' warning was issued on 1 March which led to large volumes of snowfall impacting on much of our operating area. Although we did everything possible to minimise the disruption, the freeze thaw which followed added to the problem and, as a result, some 30,000 properties (approximately 2.8% of our customer base) were affected.

If this severe weather incident had not occurred, our performance would have been around 15 customer minutes lost.

This year we have incurred a penalty of £3.9m.

Planned Improvements:

Although this is an area upon which there is a great deal of management focus, there are specific weather related reasons why performance has deteriorated.

We continue to focus attention on improving performance and amongst the steps in place are:

- improved planning and delivery of work through the use of non-disruptive techniques;
- increasing the knowledge and awareness of staff through training;
- utilisation of and the increased use of the emergency planning fleet and equipment to help maintain supplies during operational incidents;
- the implementation of post incident reviews on all significant bursts to prevent recurrence;
- delivery of water mains repairs through a new Network Maintenance Alliance contract which will be in place by Autumn 2018. This will facilitate an innovative and collaborative approach aimed at minimising disruptions to customers and reducing customer minutes lost;
- strengthening the response capabilities of both our in house teams and our contracting partners; and
- implementing a Zonal study investment programme to address the high burst frequency on our mains, ensuring that the investment is targeted in those areas where the risk of interruptions is greatest.

Customer Compensation

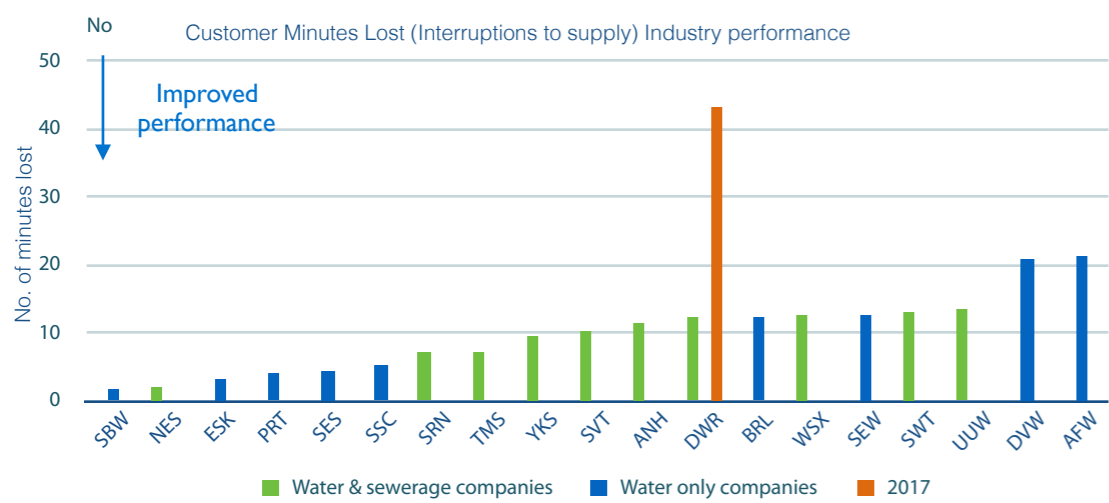
Our performance on this measure has led to us making a total of 23,717 payments to the value of £1,450,700 by way of direct payments of compensation to customers in the financial year 2017/18. Of these, 9,828 payments £301,140 have been made under the Guaranteed Service Standards (GSS) to which all companies must adhere.

Definition:

Interruptions to supply cause loss and inconvenience to individual customers and communities. They also cost money to manage and fix.

This measure reports the average minutes of supply interruption per property within our supply area (including both planned and unplanned interruptions).

This measure is reported on a financial year basis.



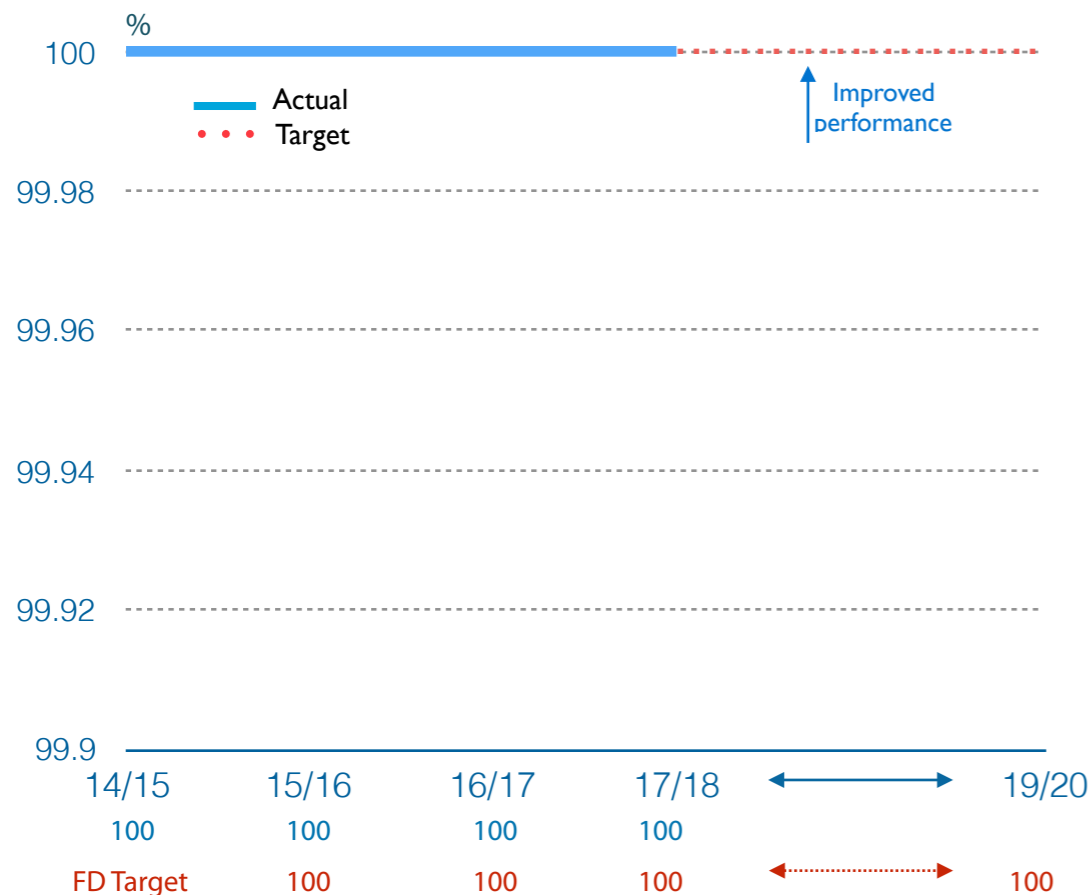
Source: Discover Water - 2016-17



2.4 – MOS B1. Water abstractions

Applicable to Price Control: WHOLESALE WATER

OFWAT MOS Reputational



Summary Performance:

One Category 3 non compliance occurred in the year. This lasted for one day only. A category 3 incident is one where a non-compliance could have a minor environmental effect. Having regard to this minor non-compliance occurrence, our % score on this measure is 99.998% (rounded to 100%).

Comparative information is not available.

Customer Compensation

Our performance on this measure has not led us to making any direct payments of compensation to customers in the financial year 2017/18.

Definition:

Compliance with abstraction licences is an essential part of environmental protection. We target (and generally achieve) 100% compliance with the substantive requirements of our abstraction licences. The methodology for abstractions performance has been agreed with NRW.

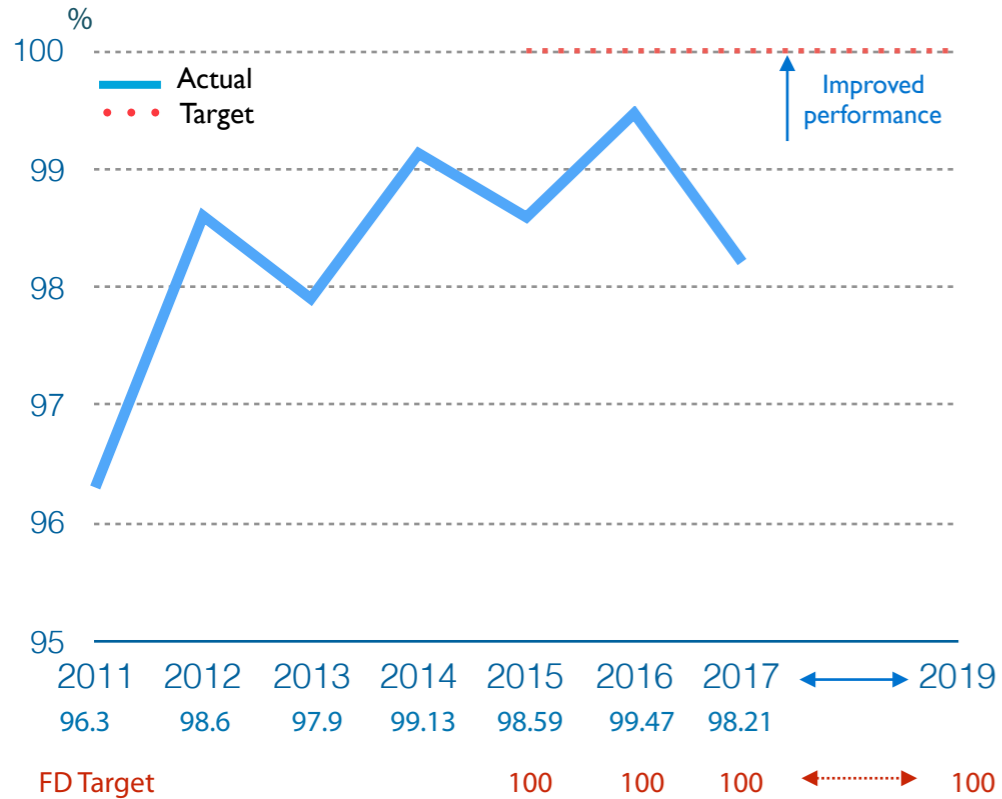
This measure is reported on a financial year basis.



2.4 - MOS B2. Treating Waste Water

Applicable to Price Control: **WHOLESALE WASTE WATER**

OFWAT MOS Reputational



Summary Performance:

Our performance for 2017 is 98.21% compared to 99.47% in 2016. This is based on Ten Waste Water Treatment Works (WWTWs) failing, out of a total of 559 WWTWs with numeric permits. This is the lowest number of total regulatory sample exceedances since 2012.

Five of the ten failures coincided with challenging weather conditions in April 2017 following a period of very dry weather. As a result, the concentration strength of the flow arriving at our WWTWs caused treatment and process difficulties in certain areas. These have been judged by NRW as not having any significant environmental impact.

Planned Improvements:

The current compliance strategy has delivered an improvement in performance in the last few years, particularly in operator competence and awareness, Ultra Violet (UV) compliance and Urban Wastewater Treatment Directive (UWWTD) compliance. However, the performance in 2017 has led to a comprehensive review of the strategy with the aim of achieving 100% WWTW compliance and our vision of "All works being compliant all of the time".

We will improve through:

- the use of our operational and maintenance data to identify deteriorating trends;
- the use of statistical analysis and predictive analytics to forecast potential sample exceedances;
- earlier intervention by process science teams aimed at preventing non-compliance;
- continuing to test and deploy temporary mobile treatment equipment when small WWTWs are struggling to perform;
- improving sludge handling and treatment to prevent sludge being held in process tanks;
- shared learning of what causes sample failures;
- targeted capital investment to tackle high priority challenges; and
- the adoption of Leading Edge Assets and People (LEAN) processes to realise efficiencies at WWTWs.

Customer Compensation

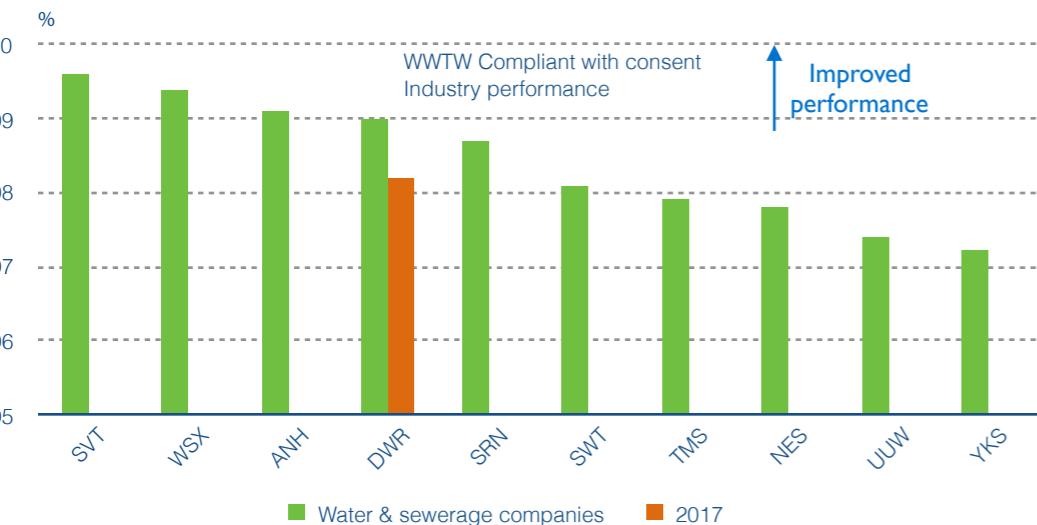
Our performance on this measure has not led us to making any direct payments of compensation to customers in the financial year 2017/18.

Definition:

For each of our WWTWs there is a permit which regulates the quality of wastewater the company is allowed to discharge into rivers and coastal waters. This is regulated by NRW. The measure is the percentage compliance against the discharge permits.

The total number of WWTWs is taken from the NRW's MD109 document.

This measure is reported on a calendar year basis.

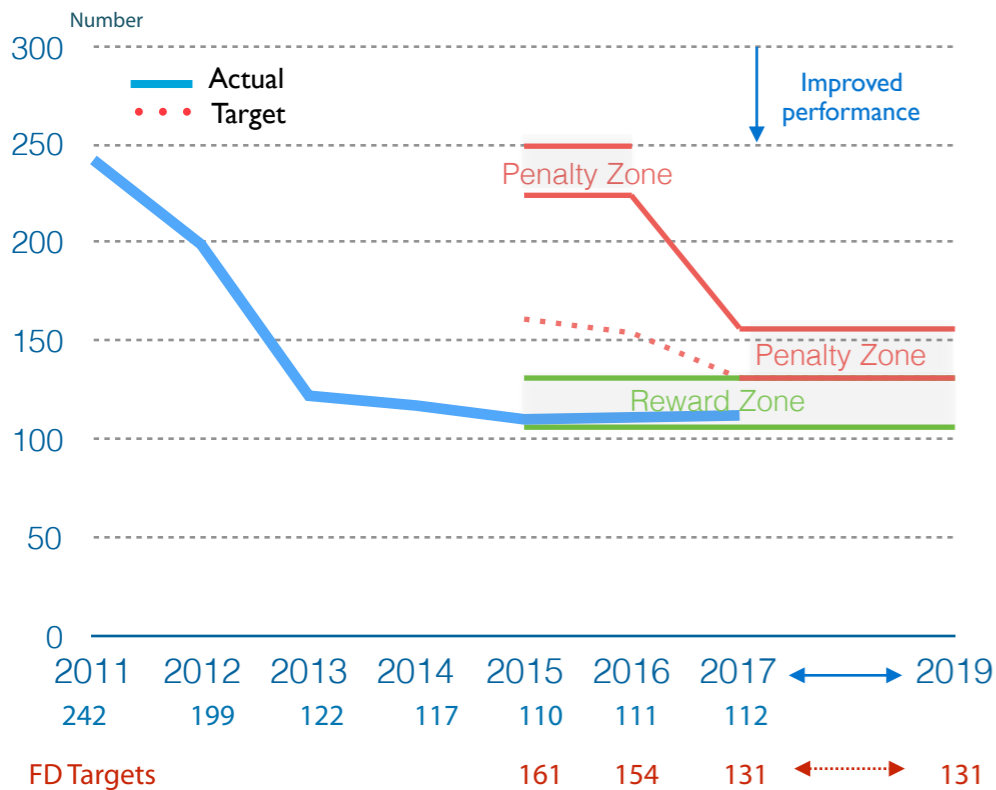




2.4 - MOS B3 Pollution Incidents (Category 3)

Applicable to Price Control: WHOLESALE WASTE WATER

OFWAT MOS Reward & Penalty



Summary Performance:

Overall, the total number of category 3 pollution incidents (low impact) during the year was 112 (last year 111).

In addition, there were two Category 2 incidents in the year and one Category 1 incident. The Category 1 incident was the result of silt from an excavation entering a watercourse whilst we were repairing a clean water mains burst in Neath in February 2017.

On 1 April 2017, NRW introduced a new incident Categorisation Guidance (which classifies incident by reference to their impact). This year, we have reported to NRW on this new basis. High Level incidents (major and significant) equate to what were regarded as Serious Incidents (Categories 1 and 2 respectively). Low Level incidents are equivalent to Category 3.

Our performance in the year has resulted in us earning a notional reward of £893k. In 2015/16 and 2016/17 the respective rewards earned were £987k and £940k. The cumulative reward for the first three years of the AMP6 period is £2.820m.

Planned Improvements:

- We have in place a number of initiatives to help reduce the risk of pollution, including:
- the implementation of an Event Duration Monitoring Project, ensuring that all intermittent assets will have some form of telemetry and allowing us to respond swiftly to operational incidents and take preventative measures;
 - a Water Pollution Improvement Plan has been developed. Outputs include a review of silt mitigation measures employed on site, updates to the Emergency Response plans and environmental awareness sessions;
 - pressure and condition monitoring to provide early warning of rising mains bursts, allowing us to rapidly respond and mitigate any impacts;
 - raising public awareness around the risks associated with sewer blockages including television and radio campaigns, open days at Waste Water Treatment Works and other local initiatives;
 - utilisation of the Smarthub telemetry and control team to support alarm management and ensure that we respond swiftly to potential issues; and
 - adoption of industry best practices to improve our understanding of asset performance.

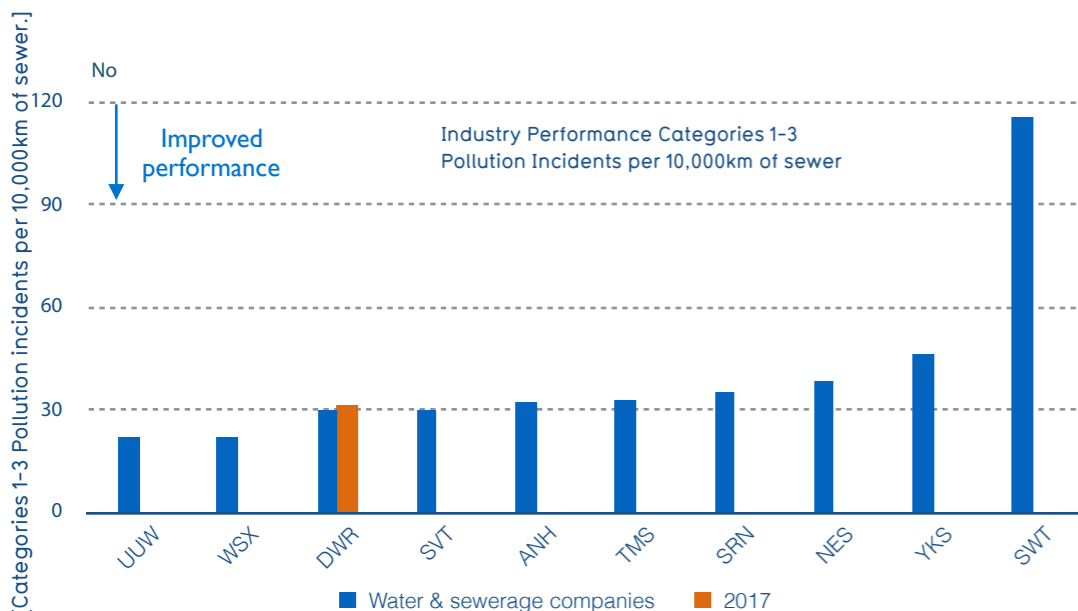
Customer Compensation

Our performance on this measure has not led us to making any direct payments of compensation to customer in the financial year 2017/18.

Definition:

Pollution incidents are classified into four categories. We report the highest three categories which are those which affect the environment, category 1 being the most serious.

This measure is the total number of category 3 pollution incidents associated with the water and wastewater business which we or members of the public identify and report to NRW annually.

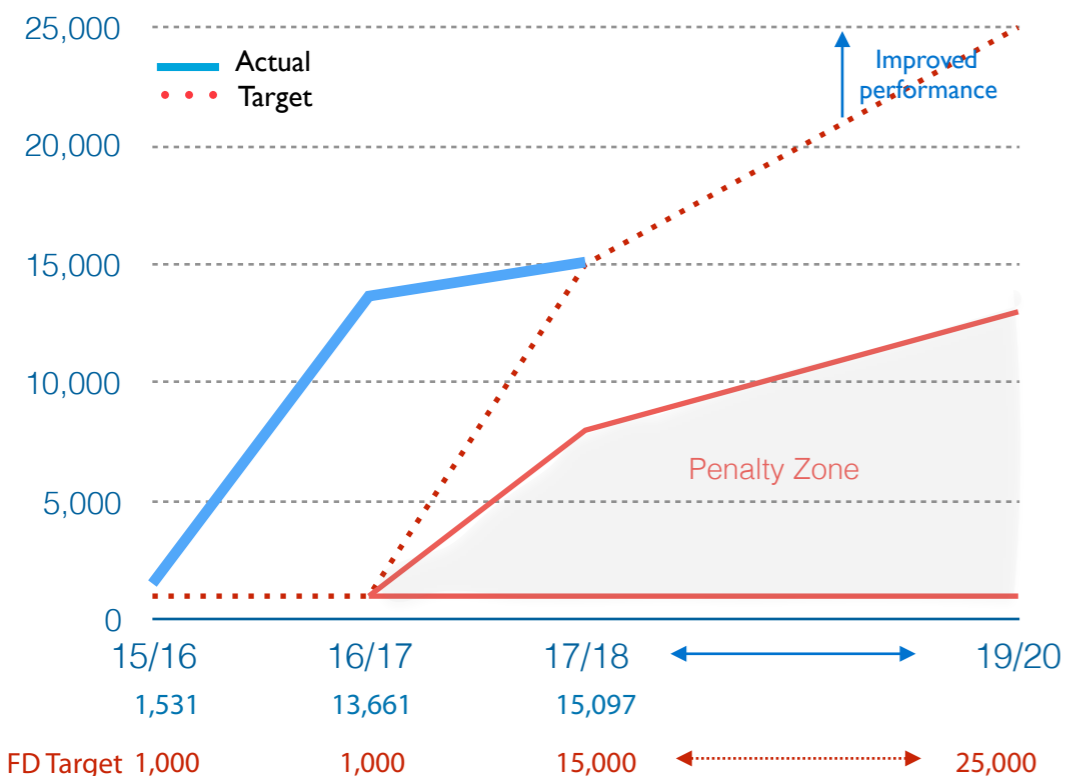




2.4 - MOS C1 Responding to climate change

Applicable to Price Control: WHOLESALE WASTE WATER

OFWAT MOS Penalty



Summary Performance:

During 2017-18, we delivered four RainScape schemes to remove surface water from our combined sewer systems, equivalent to 1,436 rooftops. This means that we have achieved the target set for the year.

Amongst the schemes completed in the year were the removal of an impermeable area and land drains connected to combined sewers at locations in the Pwll area of Llanelli. We also removed a land drain and roof drainage entering a trunk sewer at Trelewis, Merhyr Tydfil.

In making this calculation, there is inevitably an element of judgement and subjectivity. However, we believe that the basis of assessment is fundamentally sound. It was made whilst weather conditions were normal (i.e. not during a storm or drought period) and is therefore representative.

Planned Improvements:

We have a programme of investment, with identified schemes which will be delivered in 2018/19. This will contribute to achieving our target of removing the equivalent of water escaping from 25,000 roof tops by March 2020.

Comparative information is not available.

Customer Compensation

Our performance on this measure has not led us to making any direct payments of compensation to customers in the financial year 2017/18.

Definition:

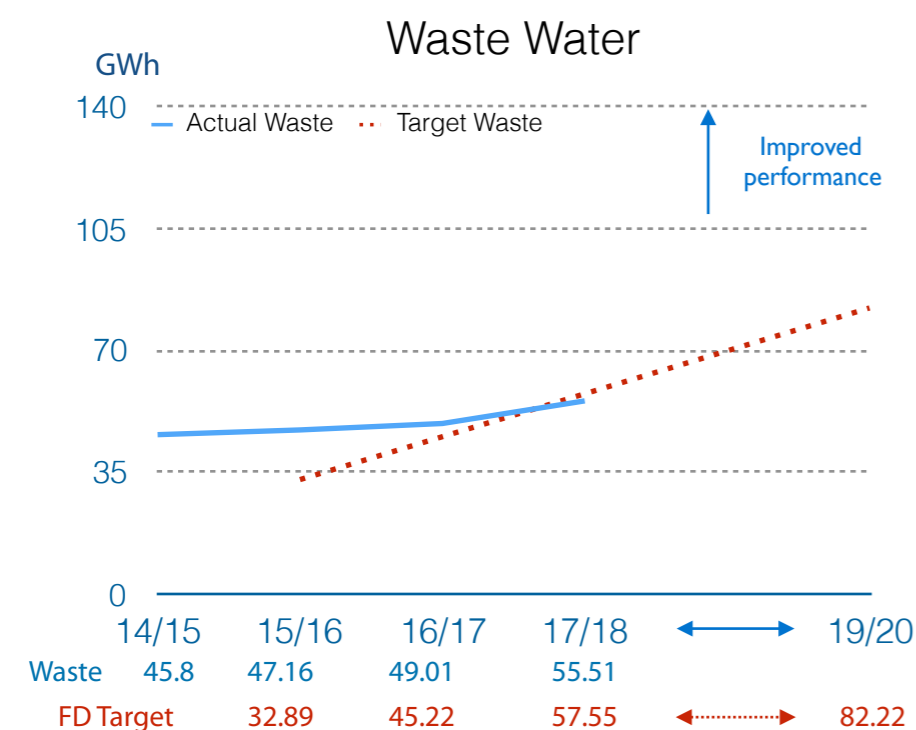
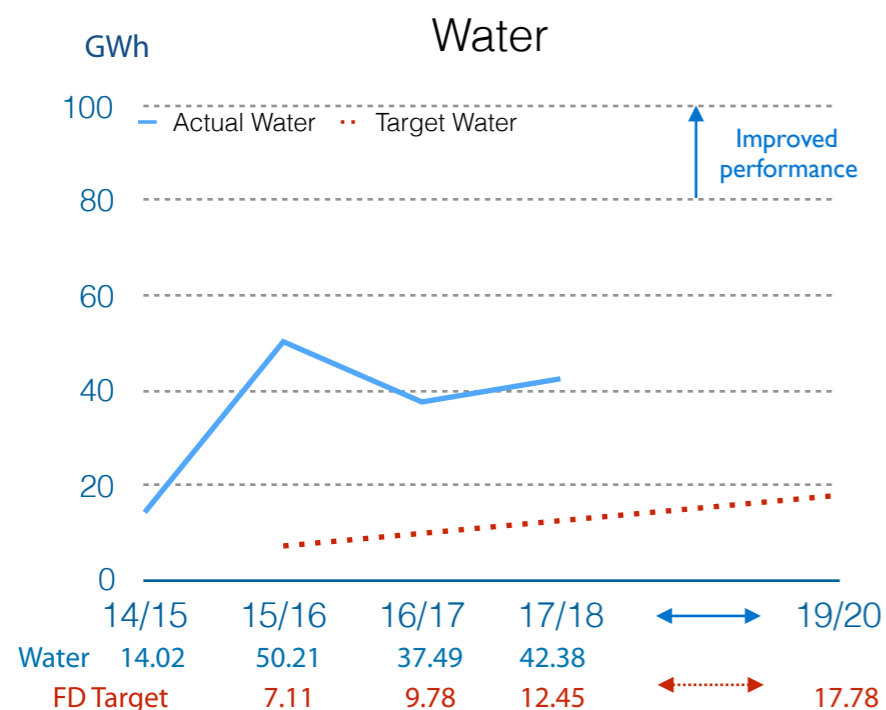
This measure reflects the completion of schemes to reduce the amount of surface water entering the company's systems. The measure is the volume of surface water removed from the system, expressed in the number of properties' equivalent, i.e. what runs off the roofs of properties. The 'property equivalent' volume is 100m³ p.a.

Our performance on this measure was reset to zero from the start of AMP6 and is then measured and reported on a cumulative basis.

This measure is reported on a financial year basis.



2.4 – MOS C2 Carbon Footprint



Applicable to Price Control:

WHOLESALE WATER

WHOLESALE WASTE WATER

OFWAT MOS Reputational

Summary Performance:

Our performance on this measure is 98 GWh of renewable energy generated (86 GWh in 2016/17), as against a combined target of 70 GWh.

The rise in generation on the water side of the business was from improved hydro generation, from 37 GWh to 42 GWh. Our first full year of wind energy generation resulted in an increase of 5 GWh.

On the wastewater side of the business, Anaerobic Digestion in total was unchanged. The increase from the new Organic Energy plant at Cardiff was offset by issues at Cardiff Waste Water Treatment Works (WWTW) (electricity network restrictions) and Afan WWTW (major engine maintenance). Both these issues are now resolved.

Planned Improvements:

Amongst the initiatives for 2018/19 are:

- an Advanced Anaerobic Digestion scheme at Five Fords WWTW, Wrexham. This is in the course of construction and will be in use in 2019; and
- a further phase of solar Photovoltaics installations which will more than double our installed solar capacity.

Comparative information is not readily available.

Customer Compensation

Our performance on this measure has not led us to making any direct payments of compensation to customers in the financial year 2017/18.

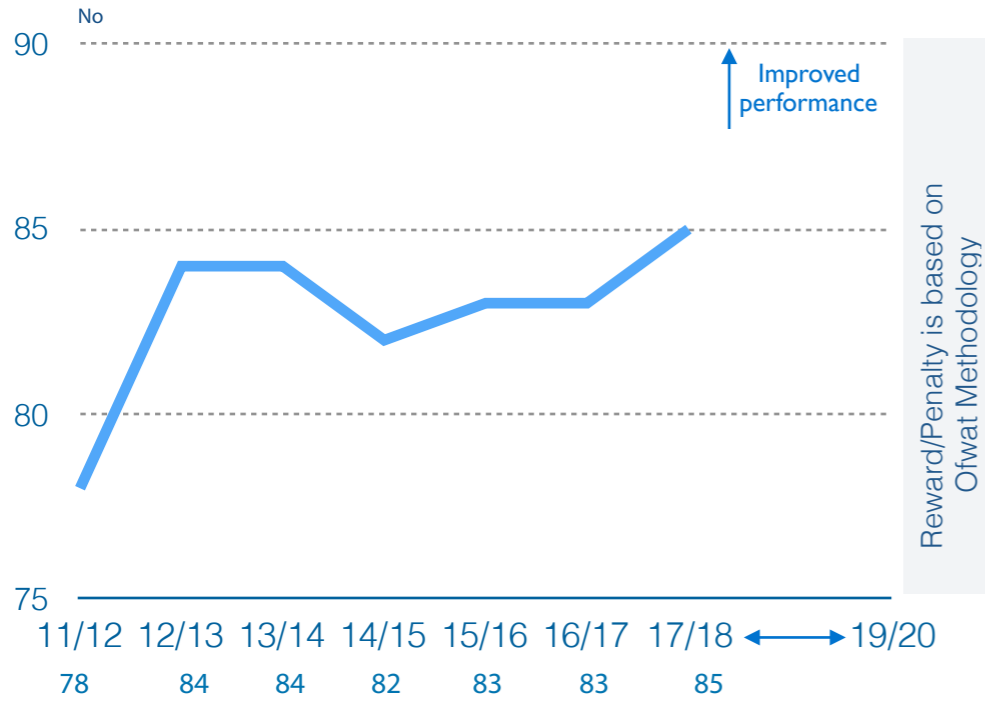
Definition:

The total GWh of renewable energy generated within the year.

This measure is reported on a financial year basis.



2.4 - MOS D1 - Service Incentive Mechanism (SIM)



Summary Performance:

Household SIM (This measure only applies to Household customers)
 By reference to the formula used to calculate the overall score, our SIM combined score for the year is 85, which is an improvement on last year's score of 83. On the qualitative element of the assessment, we were ranked fifth out of the ten Water and Sewerage companies.

The comparative analysis on this page applies to 2016/17 performance as we will not know our position for 2017/18 until such time as other companies publish their results. For 2016/17, we finished seventh out of the ten Water and Sewerage companies.

Non-Household SIM (This measure only applies to Non-Household customers)
 A separate non household SIM applies to companies operating wholly or mainly in Wales. We will not know the comparative position for 2017/18 until such time as other companies publish their results.

For 2016/17, we finished ninth out of the ten Water and Sewerage companies. The number of complaints from Non household customers has reduced by some 50% (1,152 to 574) in 2017/18.

We anticipate that this improvement in performance will have a significant effect on our ranking when comparative information becomes available later this year.

Planned Improvements:

- With a view to reducing the volume of complaints we are:
- launching a new system 'Customer Desk Top' platform which will allow us to view all customer contacts received and improve service;
 - continuing our Customer Led Success training programme. We will be reviewing how we use feedback from customers to ensure we improve service and reduce complaints; and
 - adopting an 'Own it, Sort it' culture to ensure that queries are resolved on the first contact, where possible.

Customer Compensation

Our performance on this measure has led us to making a total of 3,745 payments to the value of £357,297 by way of direct payments of compensation to customers in the financial year 2017/18. Of these, 1,808 payments (£37,480) have been made under the Guaranteed Service Standards (GSS) to which all companies must adhere.

Definition:

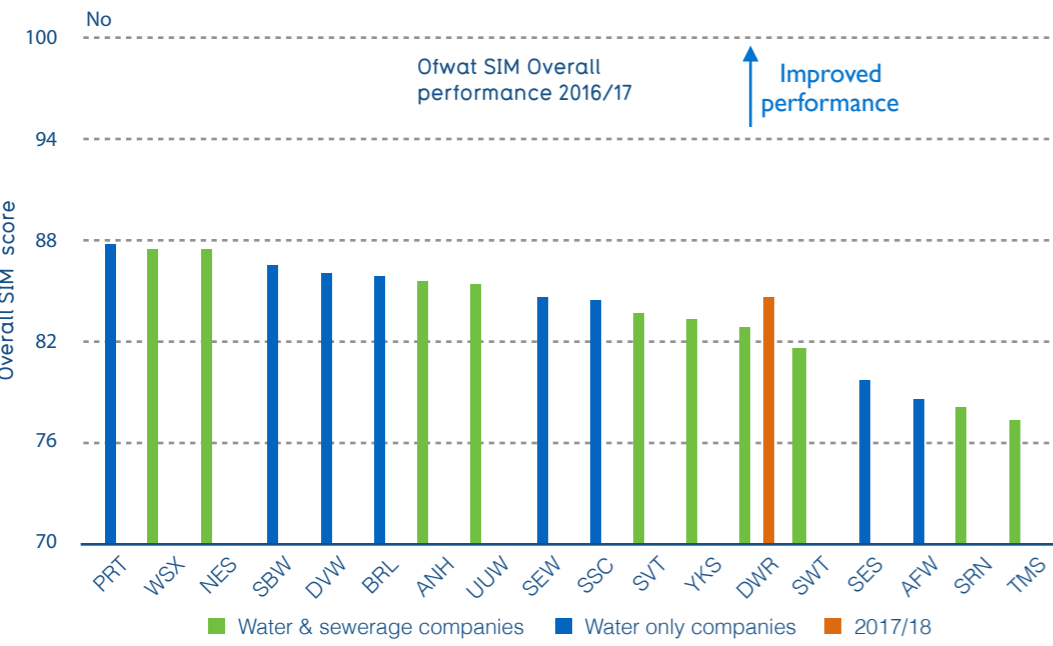
This is the combination of the SIM quantitative and SIM qualitative scores and is the overall score Ofwat uses to rank companies' service performance. The quantitative measures combines several elements, and each element is weighted to reflect the increasing impact on customers. It includes unwanted telephone calls, written complaints and CCWater investigations.

The qualitative indicator measures how satisfied customers are with the quality of the service they receive and is based on quarterly Ofwat surveys of a sample of customers who have had direct contact with companies during the year.

A revision to the Ofwat methodology has changed the respective weighting to 75% qualitative and 25% quantitative assessment.

This measure is reported on a financial year basis.

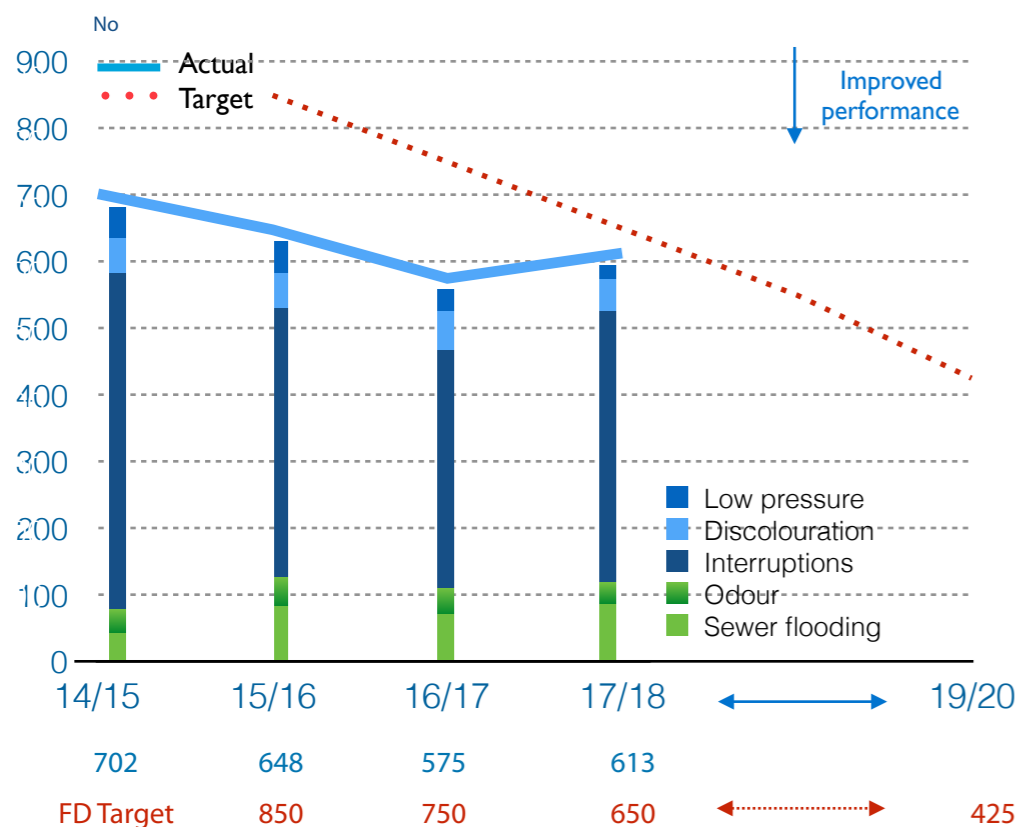
The non household SIM measure is derived from a comparative assessment of the volume of non household written complaints, escalated complaints and CCWater investigations received.



Source: Ofwat - SIM results



2.4 – MOS D2 At Risk Customer Service



Applicable to Price Control:

WHOLESALE WATER

WHOLESALE WASTE WATER

OFWAT MOS Reputational

Summary Performance:

We had 613 customers on our 'At Risk Register' at the end of the year. (575 in 2016/17)

Our performance on three of the five sub areas has improved this year.

The increase in the number of customers at risk of supply interruptions was largely due to the adverse weather conditions experienced in March 2018 (see page 12).

Sewer flooding has increased from 70 to 89 in the course of the year and the increase was largely due to the effects of an exceptional weather event in July 2017, affecting Rhyl, Abergele and Prestatyn.

Planned Improvements:

We are assessing assets in the Rhyl area with a view to providing greater catchment resilience to severe weather events and have also installed mitigation measures to protect properties in the Tywyn area of Rhyl, ahead of developing a permanent solution.

Comparative information for this measure is not available.

Customer Compensation

Any compensation to customers will have been made under MOS, A3, D1 and D3.

Definition:

This is a new measure aimed at reducing the number of 'repeat' contacts in a number of key areas and is the number of customers who are on our "At Risk Register" at the end of the financial year.

Customers are deemed to be at risk if their service has repeatedly fallen short in one of the following five areas:

- discolouration of water;
- interruptions to supply;
- low pressure;
- odour from wastewater assets; or
- sewer flooding.

On the sewer flooding element of this measure any incidents that arise from transferred private pumping stations are not included.

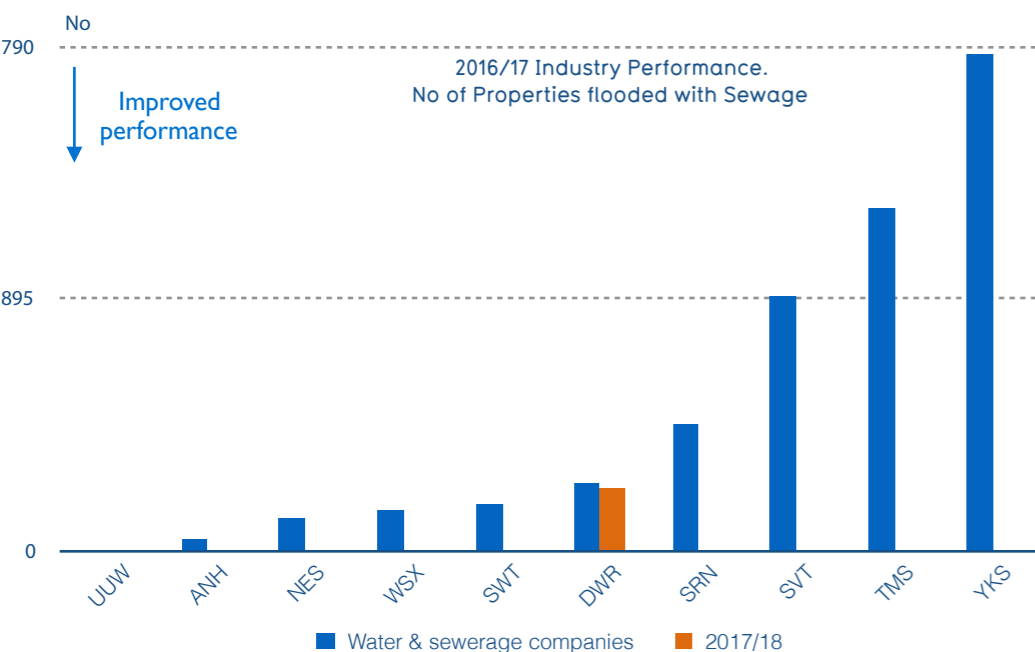
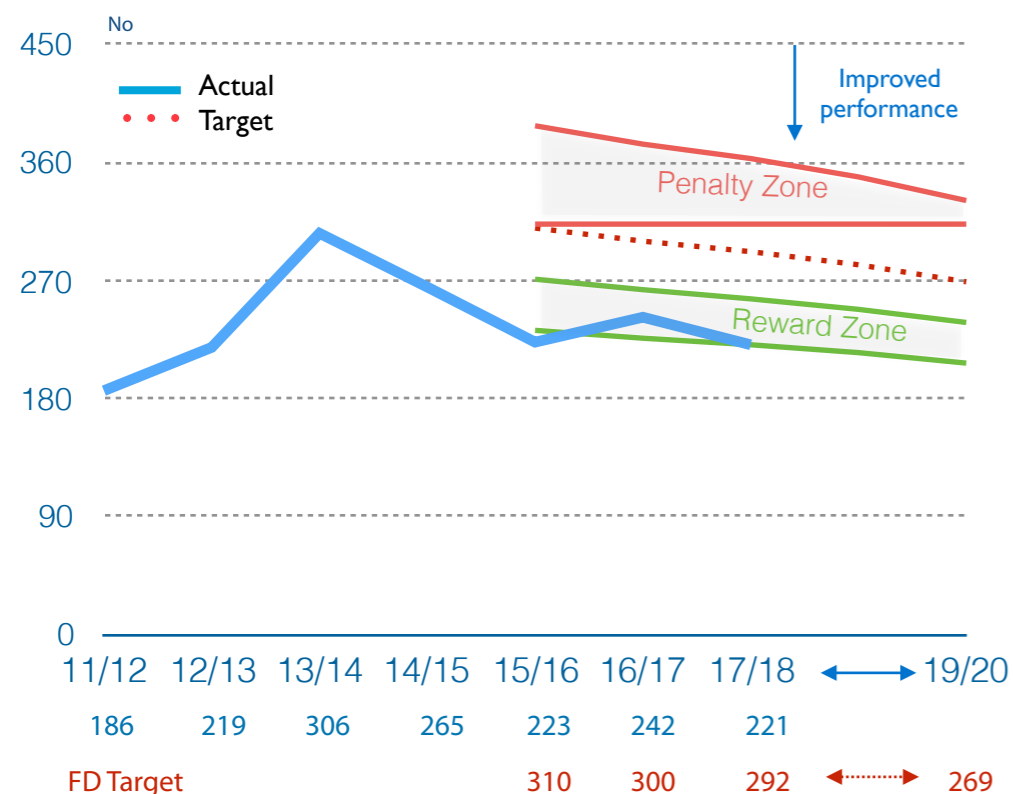
This measure is reported on a financial year basis.



2.4 - MOS D3 Properties flooded in the year

Applicable to Price Control: WHOLESALE WASTE WATER

OFWAT MOS Reward & Penalty



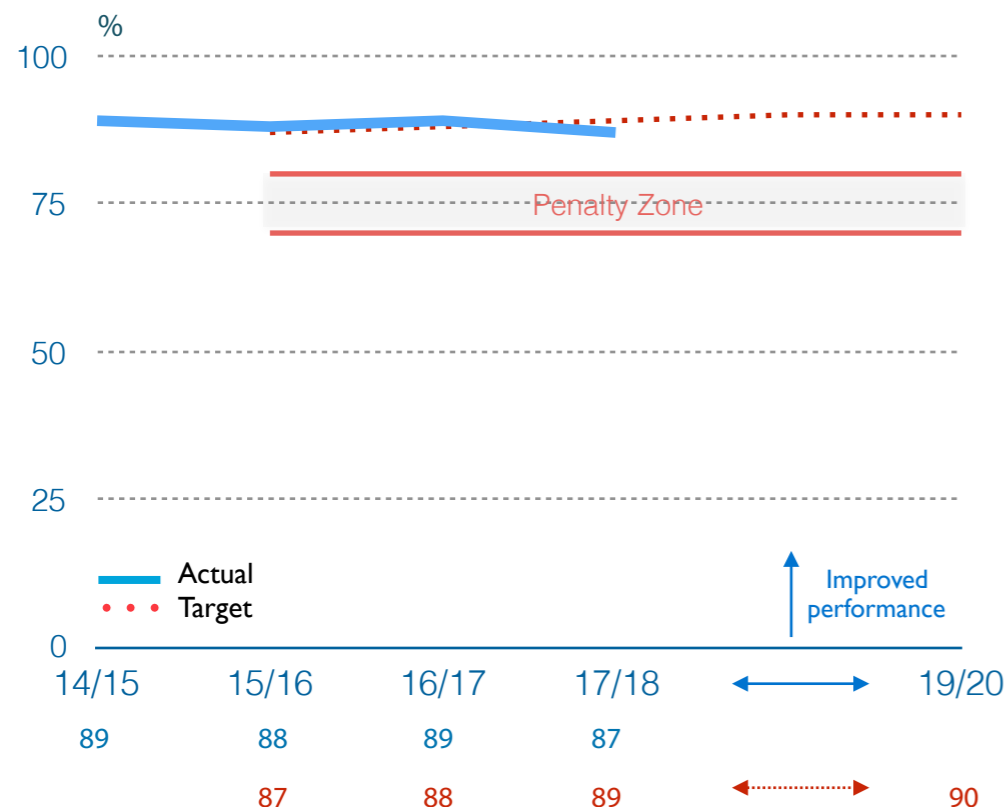
Summary Performance:	Our performance in the year has improved with 221 properties affected by sewer flooding, compared to 242 last year. Our performance over the last two years means that we have earned a notional reward of £1.488m.
Planned Improvements:	Amongst the initiatives aimed at tackling blockages, collapses and equipment failures and driving good performance are: <ul style="list-style-type: none"> ongoing capital investment, focusing on resolving problems where the risk of flooding is highest. By 2020 we will have spent some £37m across the sewer flooding programme; continuation of 'Project Resilience', improving the condition and reliability of our Sewage Pumping Stations; our 'Let's Stop the Block' communications campaign, increasing awareness of the role customers can play in helping reduce sewer blockages, flooding and pollution; and refurbishment of around 18km of gravity sewers, with a focus on preventing sewer flooding. <p>The comparative performance assessment on this page is measured by reference to sewer flooding incidents per 1,000km of sewer.</p>
Customer Compensation	Our performance on this measure has led us to making a total of 670 payments to the value of £236,401 by way of direct payment of compensation to customers in the financial year 2017/18. Of these, 457 payments (£106,149) have been made under the Guaranteed Service Standards (GSS) to which all companies must adhere.
Definition:	The number of properties suffering internal sewer flooding per year due to 'hydraulic overload' (HO) and 'other causes' (OC). The HO performance excludes flooding due to severe weather i.e. storms with a confirmed return period of 1 in 20 years. The OC flooding incidents generally arise from equipment failures, blockages, but can also result from collapses and equipment failures. Any properties affected by sewer flooding and attributable to the private sewers that transferred to the company in October 2011 are now included within this measure. Any sewer flooding incidents arising from transferred pumping stations are not included within this measure. This measure is reported on a financial year basis.



2.4 – MOS D4 Business Customer Satisfaction

Applicable to Price Control: NON-HOUSEHOLD

OFWAT MOS Penalty



Summary Performance:

Our performance of 87% on this MOS, is below the target of 89%.

Accent undertake a random sample of 500 satisfaction surveys for our non-household (NHH) customers every six months. The first survey took place in July/August 2017 and the second survey was in January/February 2018. The scores from these surveys were 4.39 and 4.35 respectively giving us a combined score of 4.37. The score for the year has been calculated by taking the average of the two surveys and then dividing by the maximum score of 5 to provide the satisfaction percentage for the year.

We recognise that there are likely to be fluctuations in customer satisfaction views and we have seen this with the survey undertaken in January/February 2018.

However, we believe that the score remains within the boundary of natural volatility, and is not symptomatic of a fundamental problem and this is confirmed in the latest Accent Report.

Although falling slightly short of the target, a score of 87% (average of 88% over the last four years) demonstrates a high degree of customer satisfaction and is well above the penalty zone.

Planned Improvements:

Our Customer Led Success strategy will continue to help ensure that NHH customers enjoy a very high level of customer service and we believe that this will be reflected in future satisfaction scores.

Amongst the initiatives are:

- a recent re-organisation which, for the first time, has provided a specific Director focus on our ineligible NHH customers;
- engaging with the NHH customers on a regular basis;
- the appointment of relationship managers for NHH customers who request a relationship management service;
- implementation of an electronic billing system for NHH customers; and
- an improved and expanded range of added value products and services to support our NHH customers.

Comparative information for this measure is not available.

Customer Compensation

Our performance on this measure has not led us to making any direct payments of compensation to customers in the financial year 2017/18.

Definition:

Our non household customers are surveyed every 6 months and rate their satisfaction on a 1 (very dissatisfied) to 5 (very satisfied) scale. The survey question asks customers “Taking everything into account, how satisfied or dissatisfied are you with the way that Welsh Water handles your account?”

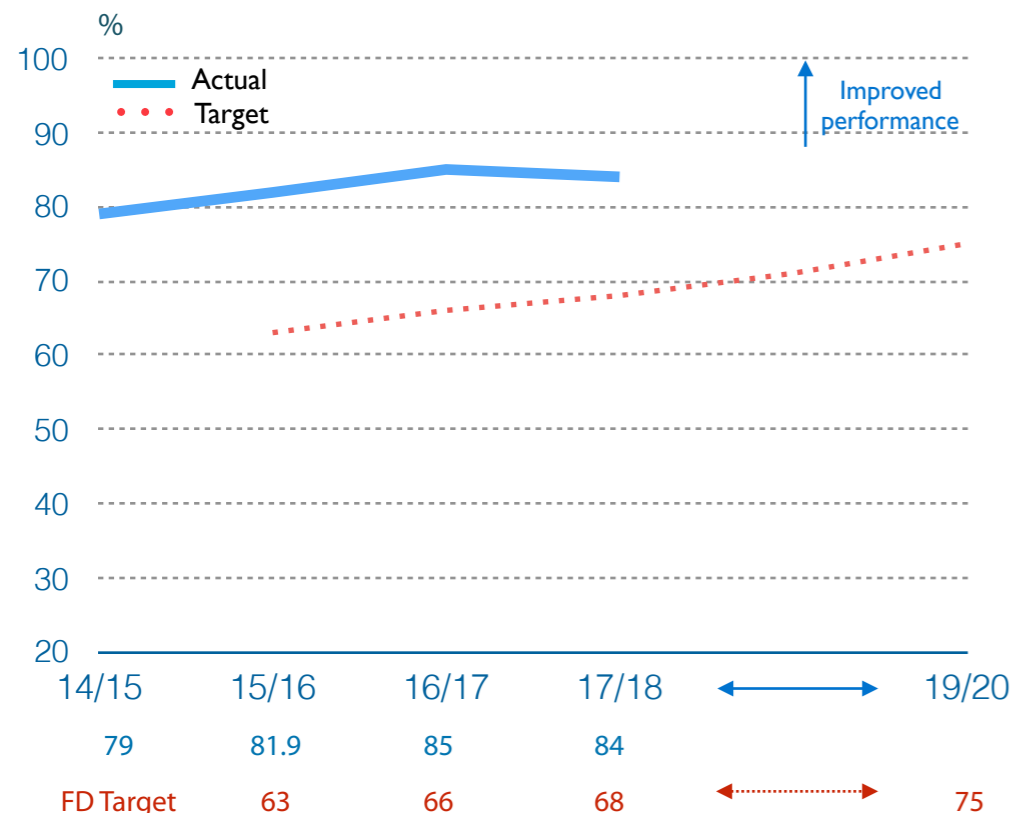
The average of these 1 to 5 scores provides the score out of 5. The average customer score (out of 5) is then converted into a percentage.

This is not the same as the non-household SIM measure.

This measure is reported on a financial year basis.



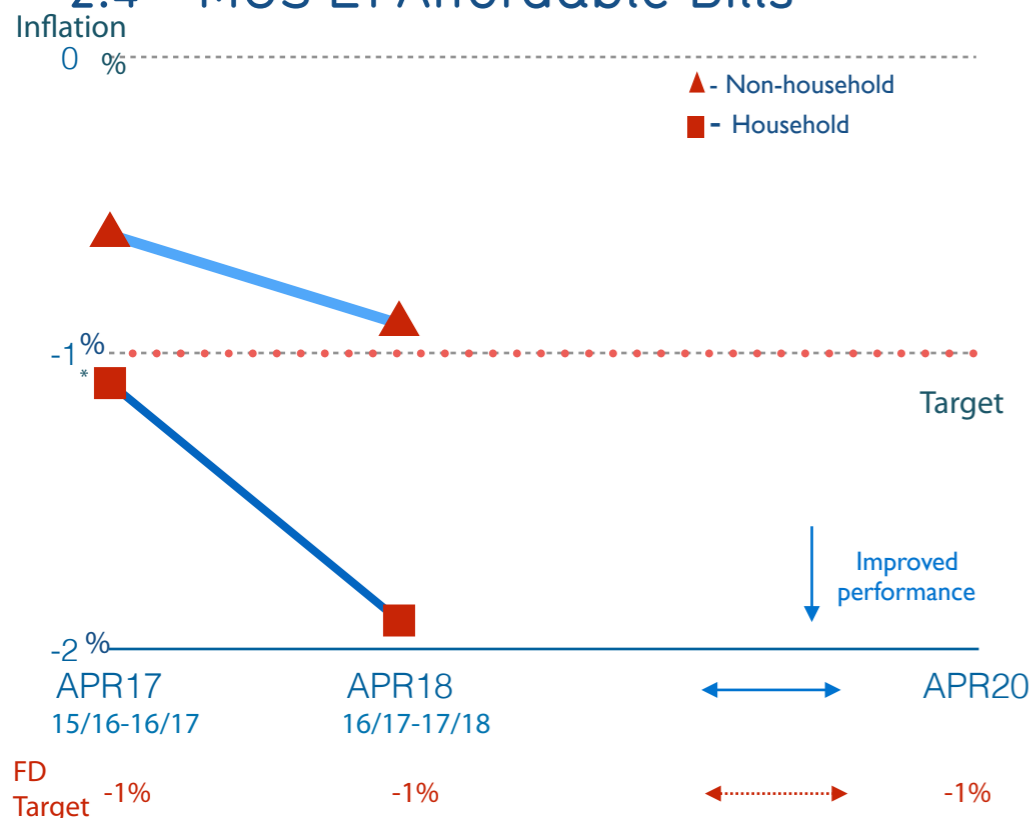
2.4 - MOS D5 Earning the Trust of Customers



Summary Performance:	<p>To understand the levels of trust of our customers, we have, during the year, undertaken a programme of research to survey both household and non-household customers.</p> <p>The research is undertaken through computer assisted telephone interviewing, conducted by Accent. Customers are asked a series of questions about Welsh Water and the services it provides - including a question asking customers if they “trust Welsh Water to do the right thing” which is used as the basis for this measure.</p> <p>Our performance of 84% (85% last year) is based on an annual survey undertaken in the year.</p>
Planned Improvements:	<p>Amongst the initiatives aimed at securing the trust of customers:</p> <ul style="list-style-type: none"> • further embedding ‘Customer Led Success’ within the culture, strategic thinking and operational work of the company; • regional roadshows and targeted events to showcase our impact on the region and our planned investment; • raising our profile through targeted media campaigns, including TV and radio advertising; and • developing our ‘On line community’ to engage more effectively with customers. <p>Comparative information for this measure is not available.</p>
Customer Compensation	<p>Our performance on this measure has not led us to making any direct payments of compensation to customers in the financial year 2017/18.</p>
Definition:	<p>The vision of the company is to “Earn the trust of customers every day”. Measuring the level of customer trust in the company provides an overall perception of both customer service received and the reputation of the company.</p> <p>This measure is derived from the output of two surveys of our customers during the year. The measure is the average percentage of customers who confirm that they trust us.</p> <p>The measure will be derived from the results of an annual survey. The annual survey is comprised of a number of surveys carried out over the year.</p> <p>This measure is reported on a financial year basis.</p>



2.4 - MOS E1 Affordable Bills

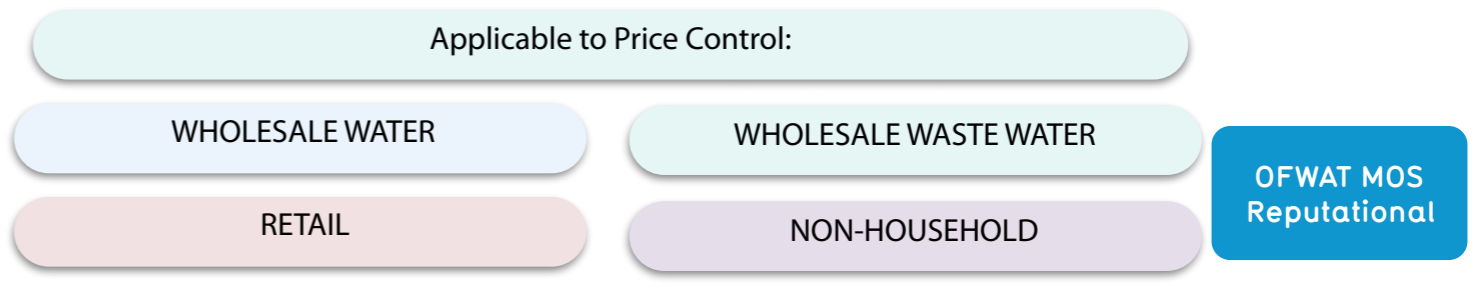


* The Non-household measure was introduced after PR16.

Table 1 - Price Controls covered by each Performance Commitment

Price control:	Wholesale		Retail				Performance Commitment
	Water	Wastewater	Household	Business (Customer Group 1)		Business (Customer Group 2)	
				Water <50MI	Waste water	Water >50MI	
Household Customers	✓	✓	✓				E1 (HH)
Non-Household (non-contestable) customers	✓	✓		✓	✓		E1 (NHH)
Contestable customers	✓					✓	N/A 1

1 In addition to the competitive pressure of Open Water on bills for contestable customers, further protection is provided through the retail business price control by the gross margin and the supplementary cap mechanism and through the wholesale water revenue control by early stakeholder engagement for significant changes to wholesale water charges and publication of indicative wholesale water charges both mandated by the wholesale charging rules for contestable customers.



Summary Performance: This measure is set at a company-wide basis and applies to the all four price controls. (see table 1).
 The change in average household bill set for the period covered by this report was 1.9% below inflation.
 The change in average non-household bill set for the period covered by this report was 0.9% below inflation.

Customer Compensation: Our performance on this measure has not led us to making any direct payments of compensation to customers in the financial year 2017/18.

Definition: The extent to which the Company will continue to make average customer bills more affordable. Our target is to keep increases in the average bill for customers not eligible to benefit from Open Water 1% below the rate of inflation calculated from the change in November RPI. This will be measured by two performance metrics where the average bill is defined as revenue divided by number of customers.

E1 (HH) Average Household Bill - Performance will be measured at the time that charges are set by reference to the percentage change from the provisional average household bill for the current year to the forecast average household bill expected to be recovered from the charges being set for the next charging year. The calculated change is compared to the rate of inflation determined by the percentage change in November RPI, the value used for charge setting purposes.

For the purposes of MoS E1 (HH) the average household bill is the sum of the average bill for unmeasured and measured supplies for water services and the average bill for unmeasured and measured supplies for sewerage services.

E1 (NHH) Average Non-household Bill - Performance will be measured by the same methodology to that used to calculate the average Household Bill. The measure will be calculated from the change in the average bill for business customers within the "customer group 1" classification from the Final Determination of business retail price controls made in December 2016. E1 (NHH) will be measured at the time that charges are set by reference to the percentage change from the provisional average customer group 1 bill for the current year to the forecast average customer group 1 bill expected to be recovered from the charges being set for the next charging year. The calculated change is compared to the rate of inflation determined by the percentage change in November RPI, the value used for charge setting purposes.

For the purposes of MoS E1 (NHH) the average customer group 1 bill is the sum of the average bill for unmeasured and measured supplies to the "<50 MI Water" customer type and the average bill for unmeasured and measured supplies to the "Sewerage" customer type. The measure is reported on a financial year basis.

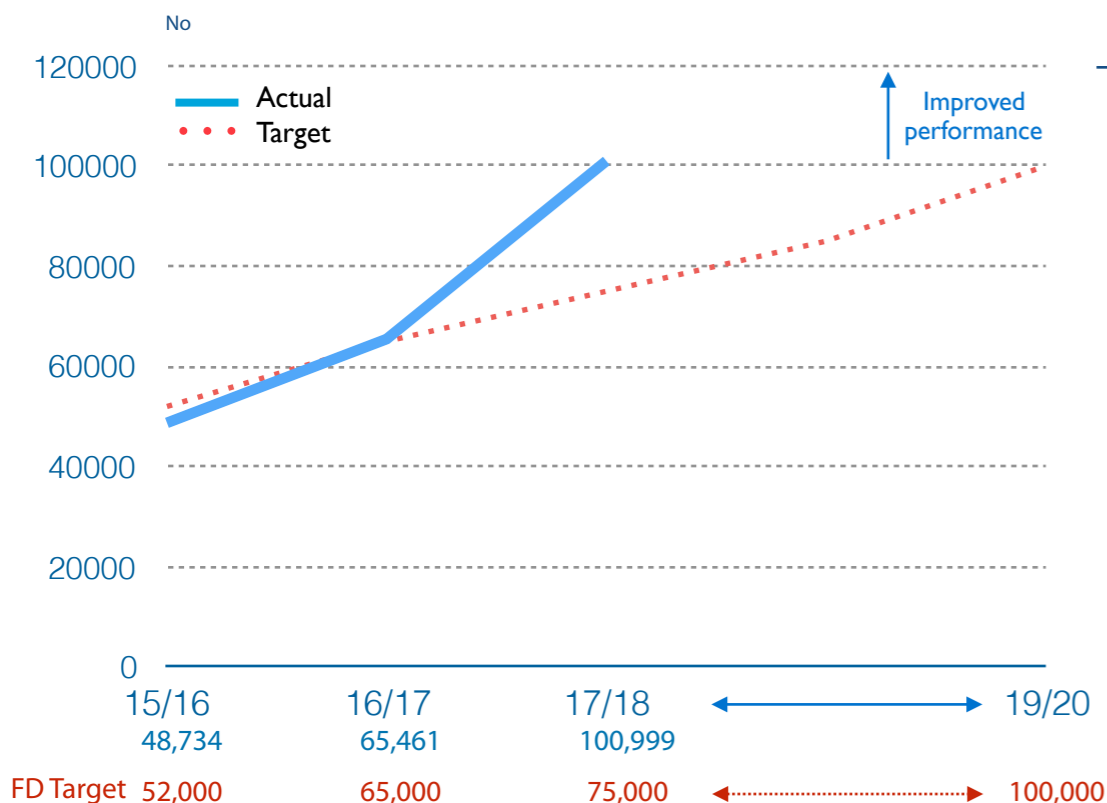
This historic numbers have been re-aligned so that the real change in average bill relates to the charges set for the reporting year.



2.4 – MOS E2 Help for Disadvantaged Customers

Applicable to Price Control: RETAIL

OFWAT MOS Reputational



Summary Performance:

Our 2017/18 performance is 100,999 as against a target of 75,000. This is an improvement on last year, when the figure was 65,461.

The 2014 FD target includes four of the five 'social tariffs/means of assistance'. Customers who benefit from 'Water Collect' are not included in the 2017/18 figure of 100,999.

If 'Water Collect' customers were added to the 100,999, the total number of customers benefitting from social tariffs/means of assistance would be 105,864.

The breakdown as between the different social tariffs/means of assistance is as follows:

	Total number of customers/schemes
HelpU	57,118
WaterSure Wales*	33,141
Water Direct	11,228
Customer Assistance fund	5,932
Water Collect	8,276
Total	115,695

*Welsh Water Assist and WaterSure Wales have now been combined.

Some customers benefit from more than one affordable tariff/means of assistance which explains why the figure of 105,864 differs from the 115,695 reported in the table above.

Comparative information for this measure is not available.

Customer Compensation

Our performance on this measure has not led us to making any direct payments of compensation to customers in the financial year 2017/18.

Definition:

The number of customers benefitting from social tariffs. The measure embraces all social tariffs and means of assistance and includes HelpU, WaterSure Wales, Water Direct, and the Customer Assistance Fund (but not Water Collect).

This measure is reported on a financial year basis.



2.4 – MOS F1 – Serviceability

Applicable to Price Control:

WHOLESALE WATER WHOLESALE WASTE WATER **OFWAT MOS Penalty**

F1 Asset Serviceability	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Actual Water - Infra	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Actual Water - Non Infra	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Actual Wastewater - Infra	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Actual Wastewater - Non Infra	Marginal	Stable	Stable	Stable	Stable	Stable	Stable

Summary Performance: The suite of indicators have been reviewed for each sub service and our conclusions are as follows:

- Water Infrastructure - Stable**
- Water Non Infrastructure - Stable**
- Wastewater Infrastructure - Stable**
- Wastewater Non Infrastructure - Stable**

Further details can be found on the next four pages.

Comparative information for this measure is not available.

Customer Compensation Our performance on this measure has not led us to making any direct payments of compensation to customers or any voluntary payments in the financial year 2017/18.

Definition: These are the assessments of the recent historical trend in serviceability to customers, as measured by movements in service and asset performance indicators. There are four separate sub-services, i.e. water infrastructure, water non-infrastructure, wastewater infrastructure and wastewater non-infrastructure. We make a judgement about the overall serviceability in each sub-service as one of the following:

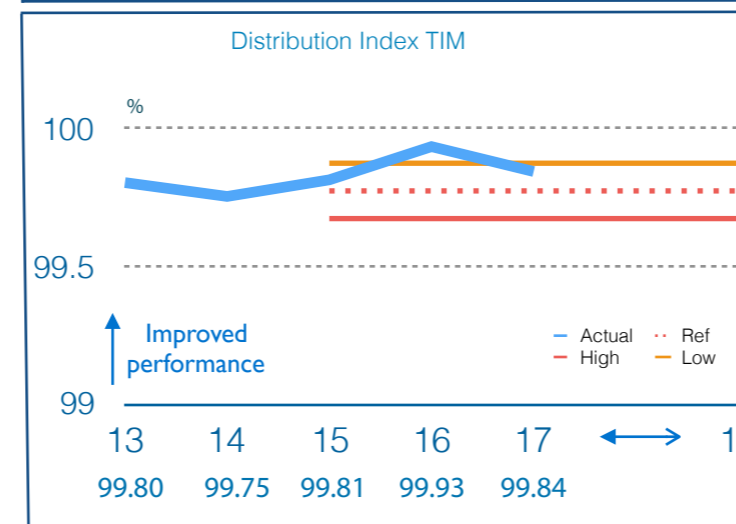
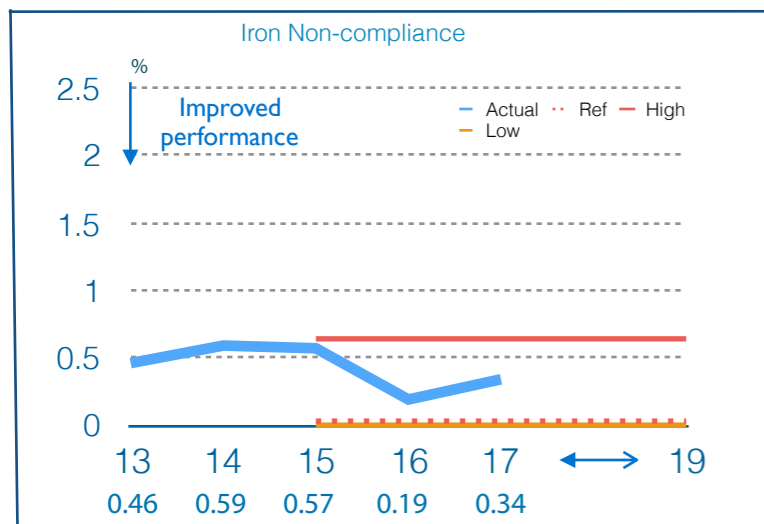
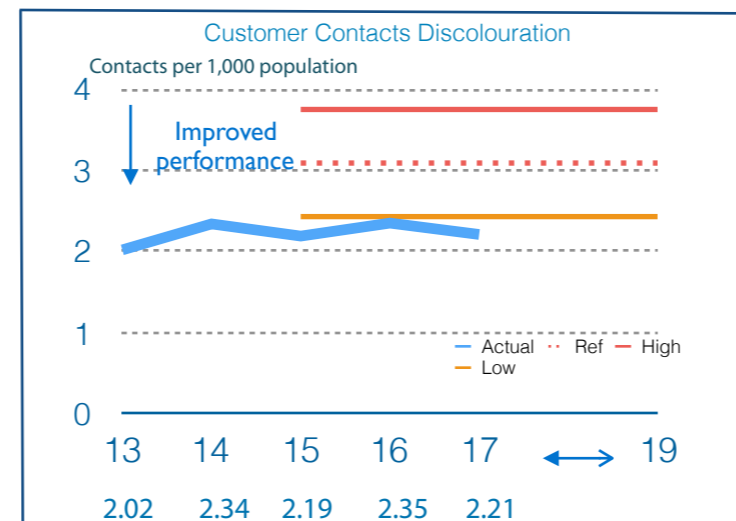
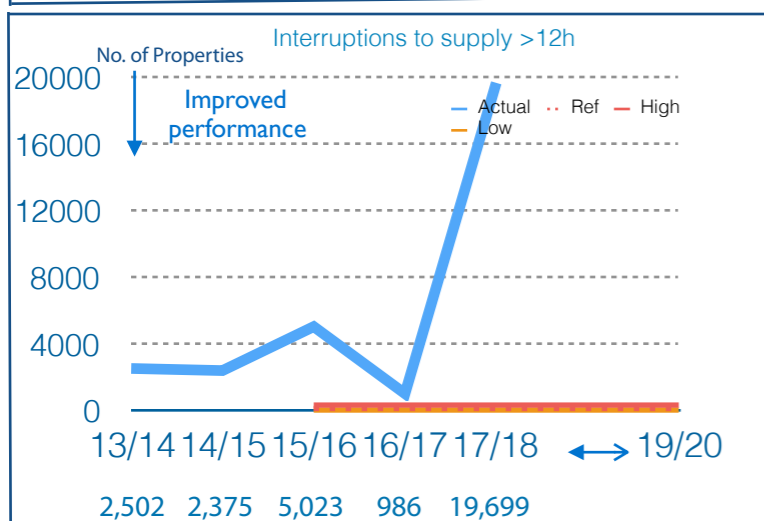
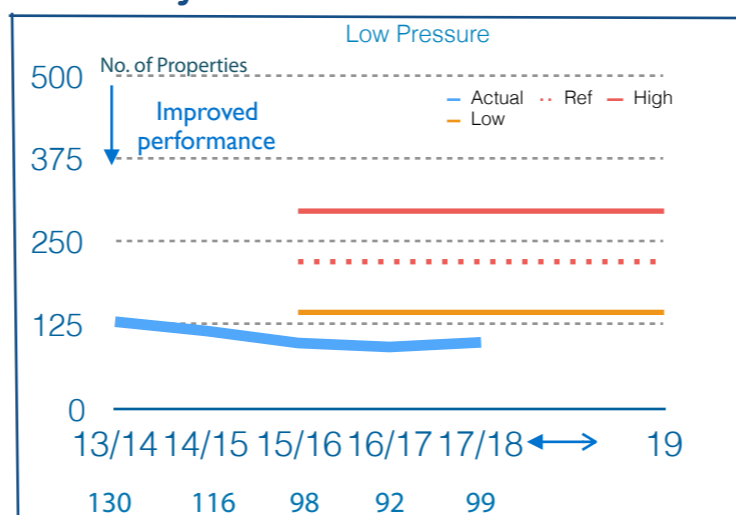
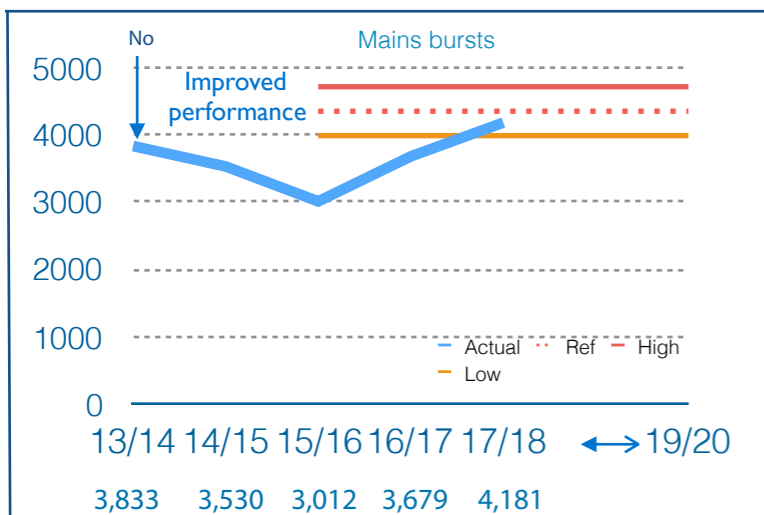
- Improving
- Stable
- Marginal
- Deteriorating

The serviceability assessment involves reviewing recent historical trends in a defined suite of asset performance indicators. Reference levels and control limits have been set for each indicator. An indicator is regarded as stable when its performance remains within the control limits and oscillates around the reference level year on year.

This measure is reported on a financial year basis.



2.4 - Water Infrastructure serviceability



Summary Performance:

Water Infrastructure - Our assessment of serviceability is "Stable".

Of the six indicators, the only one in which we are above the upper control limit is on the number of properties affected by supply interruptions of more than 12 hours duration.

The figure for supply losses above 12 hours in duration is a volatile measure that can be heavily influenced by single one-off events that are difficult to predict, e.g. trunk main bursts which can present some extremely challenging engineering and health and safety issues.

This year, the number has been greatly influenced by the impact of Storm Emma in March 2018. Further details are set out on page 12.

As we have indicated previously, we do not believe that the reference level set for this indicator is realistic, as it was based on performance in 2009, a year when there were only 40 customer properties affected by interruptions of more than 12 hours.

On two of the other indicators, discolouration contacts and properties on the low pressure register, our performance is below the lower control limit.

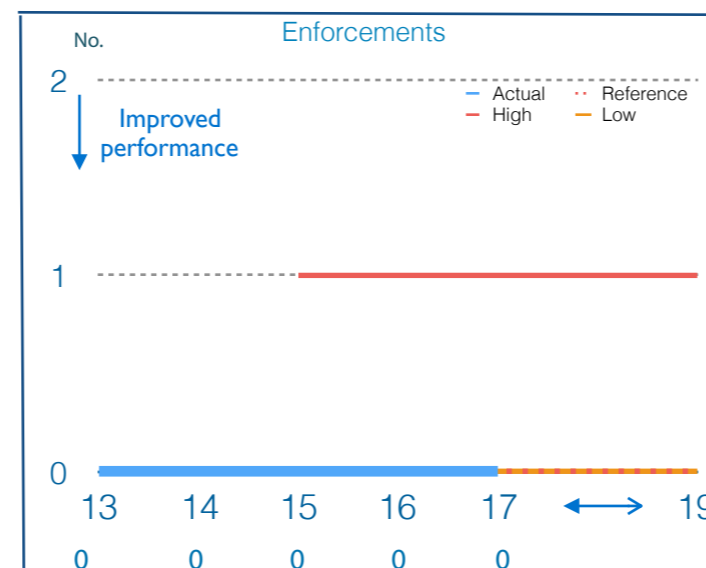
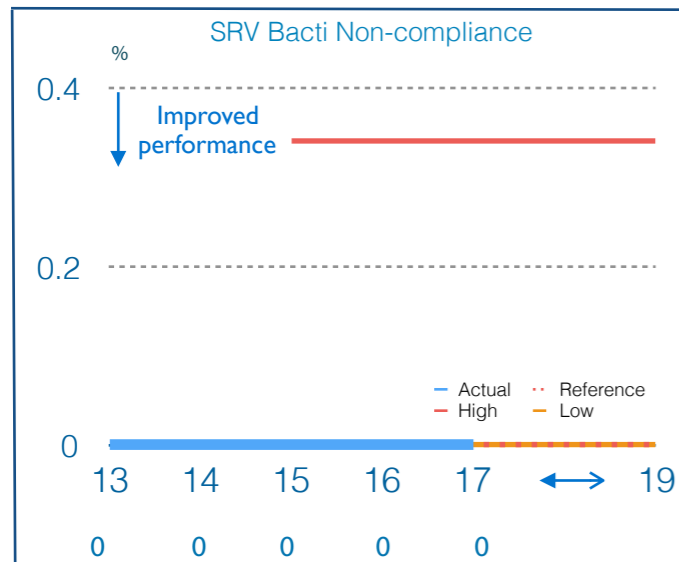
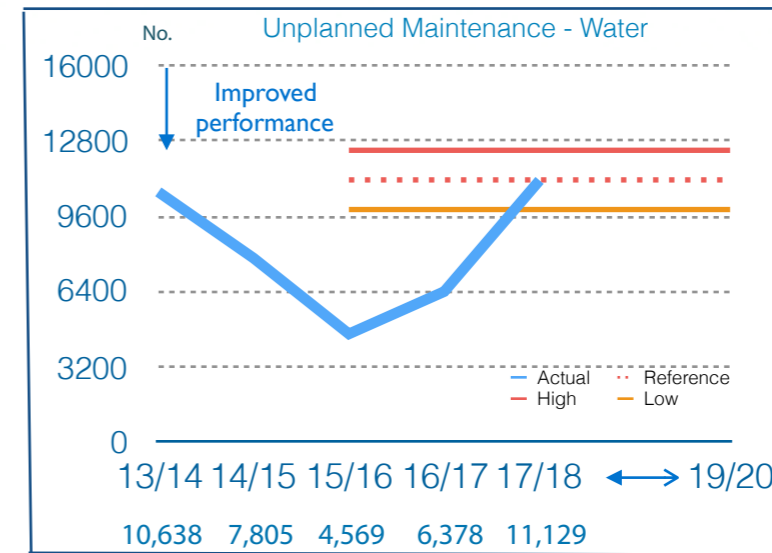
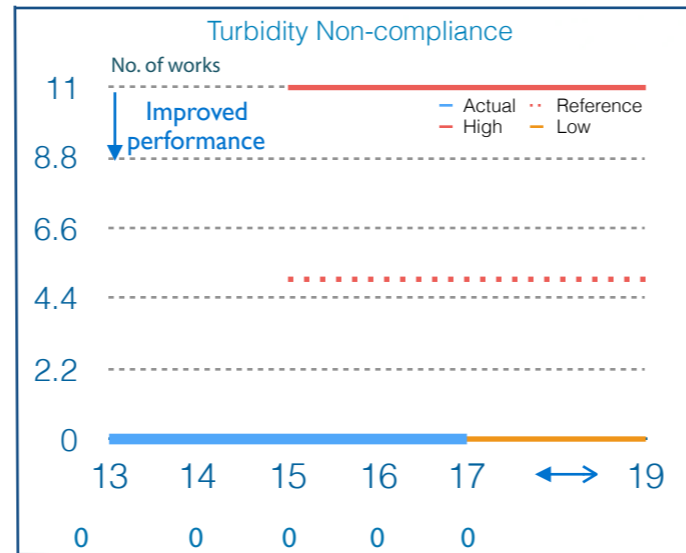
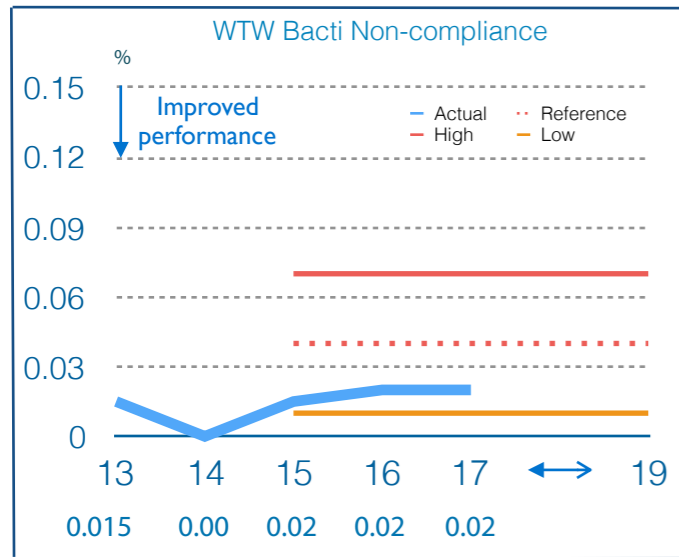
On bursts (which we regards as the primary indicator), Iron non-compliance and TIM non-compliance it can be seen that we are within the control limits.

Although the burst indicator remains below the reference level, there has been a slight increase in the numbers of bursts this year, but we believe that this is within the boundaries of natural volatility. However, we are continuing to target renewal activity and optimise pressure management activities to help achieve good performance on this indicator.

Comparative information is not available on all measures.



2.4 - Water non-infrastructure



Summary Performance:

Water Non Infrastructure - Our assessment of serviceability is "Stable".

All of the indicators are within or below the control limits.

Last year, we reported that in assessing the number of Unplanned Maintenance jobs we would (from 1 April 2017) be using an automated process to assess maintenance jobs which are unplanned. In doing so, we are removing an element of judgement in the way that these jobs are classified and the change will make the process more robust.

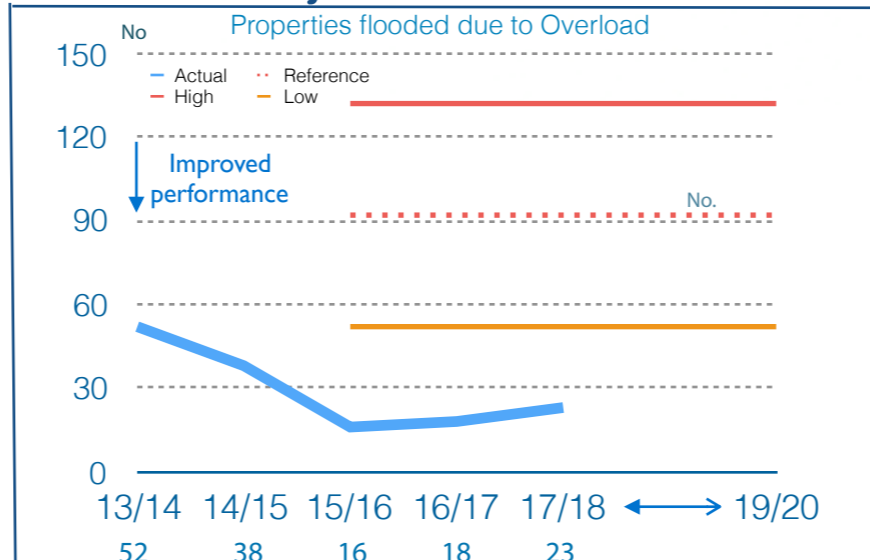
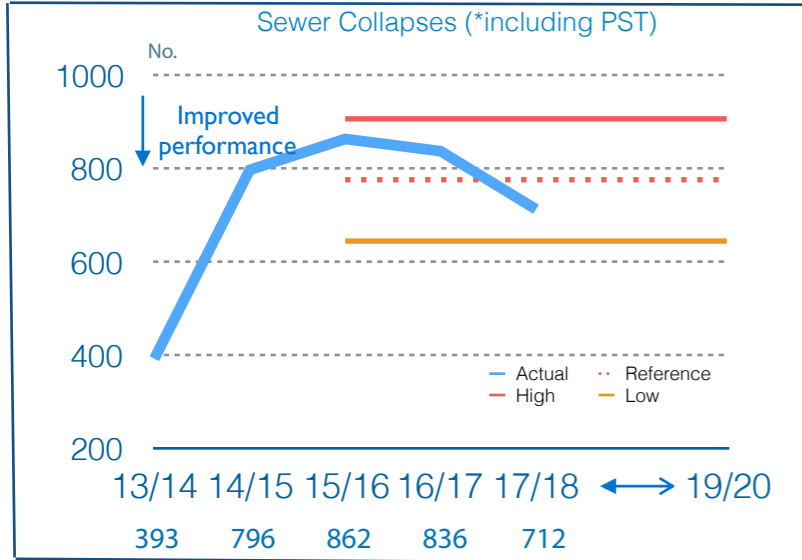
The increase in numbers was to be expected and our objective is to use the enhanced reporting tool as a means of driving improved performance. This is now in line with the process followed for reporting Unplanned Maintenance Wastewater.

The enhanced reporting of jobs will help improve our understanding of unplanned events and allow us to target positive intervention on critical assets in advance of equipment or asset failure.

Comparative information is not available on all measures.



2.4 - Wastewater infrastructure serviceability

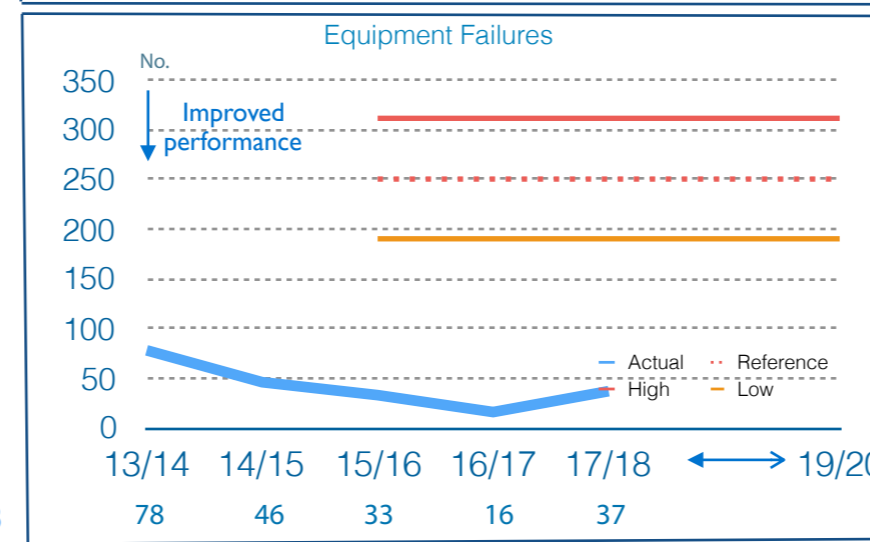
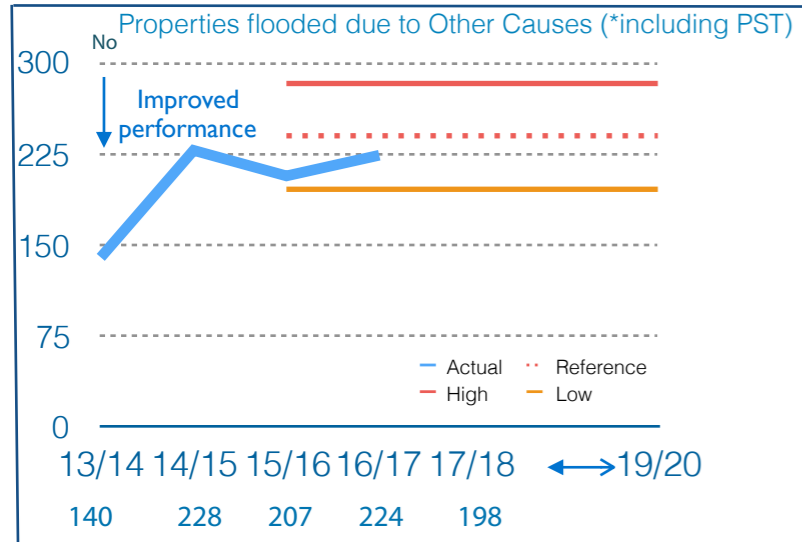
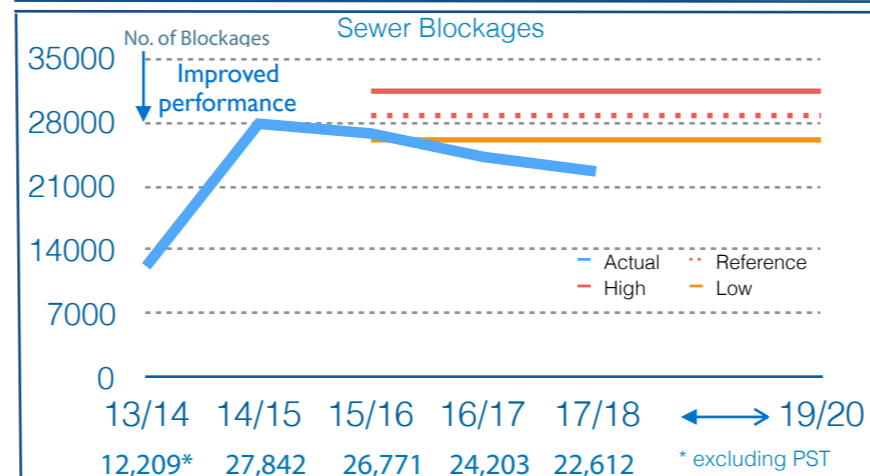
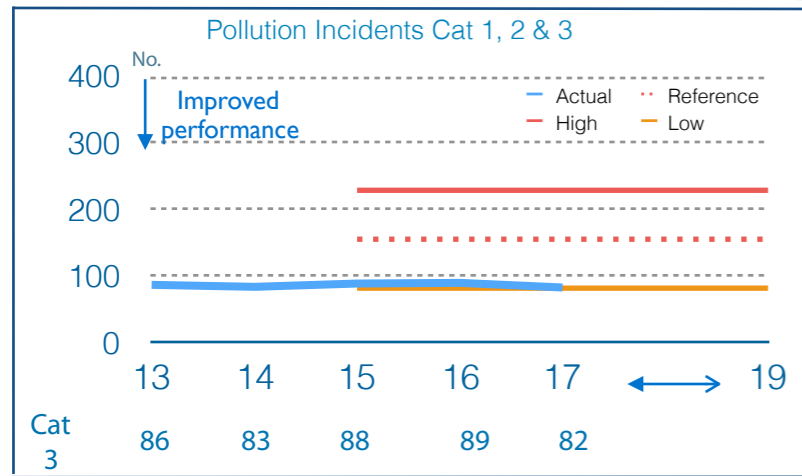


Summary Performance:

Wastewater Infrastructure - Our assessment of serviceability is "Stable".

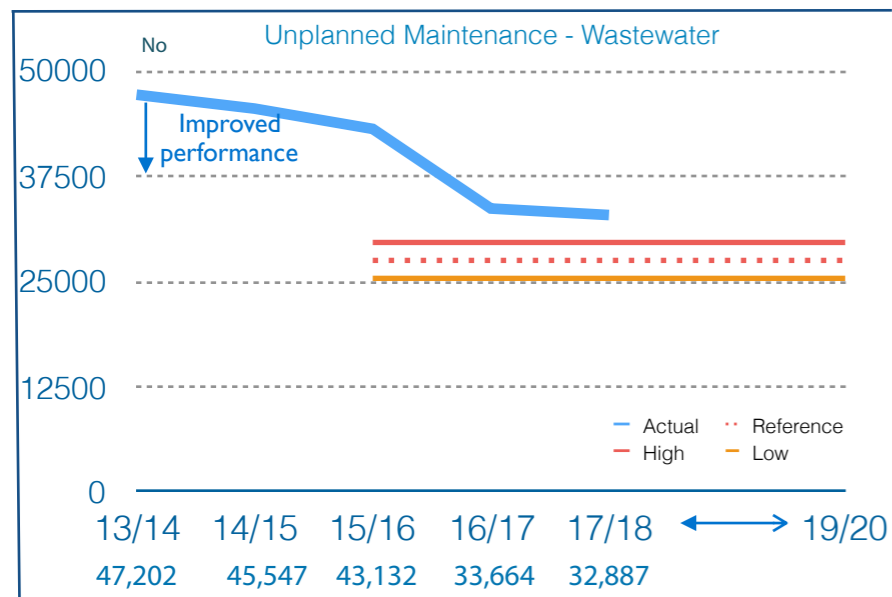
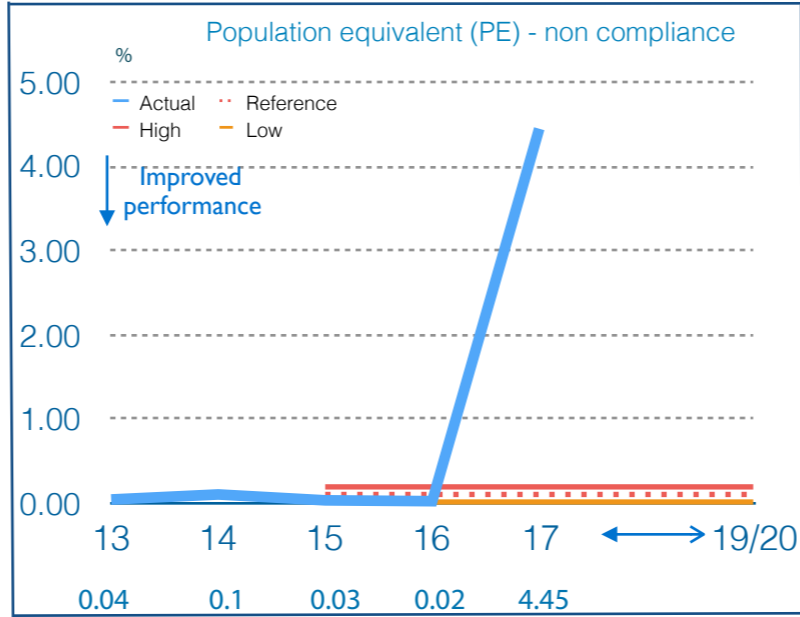
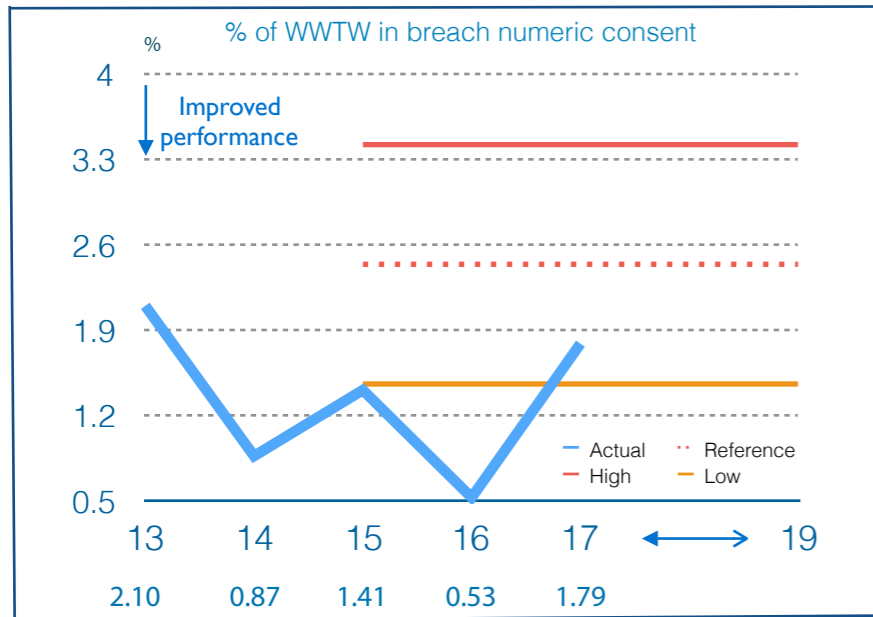
On all six measures we are within or below the control limits.

Comparative information is not available on all measures.





2.4 - Wastewater non-infrastructure serviceability



Summary Performance:

Wastewater Non-Infrastructure - Our assessment of serviceability is "Stable".

On one of the indicators, Waste Water Treatment Works (WWTWs) failing numeric consents (measured as a % of total works), we are well below the reference level.

On WWTWs Look-up Table consents (measured as a % of population equivalent served) there has been a deterioration in performance. This arose principally through a failure at Eign WWTW which serves a population of some 150,000. There were also failures at Leominster (circa 11,000 population) and Ross Lower Cleeve (circa 13,500 population). Due to the large population served by Eign WWTW and Leominster WWTW, performance on this indicator is significantly higher than in any year since 2010. We believe that this is an atypical failure, and on the basis that performance on this indicator has been consistently within the reference level tolerances in the last four years, we do not consider it to be a symptom of underlying asset deterioration.

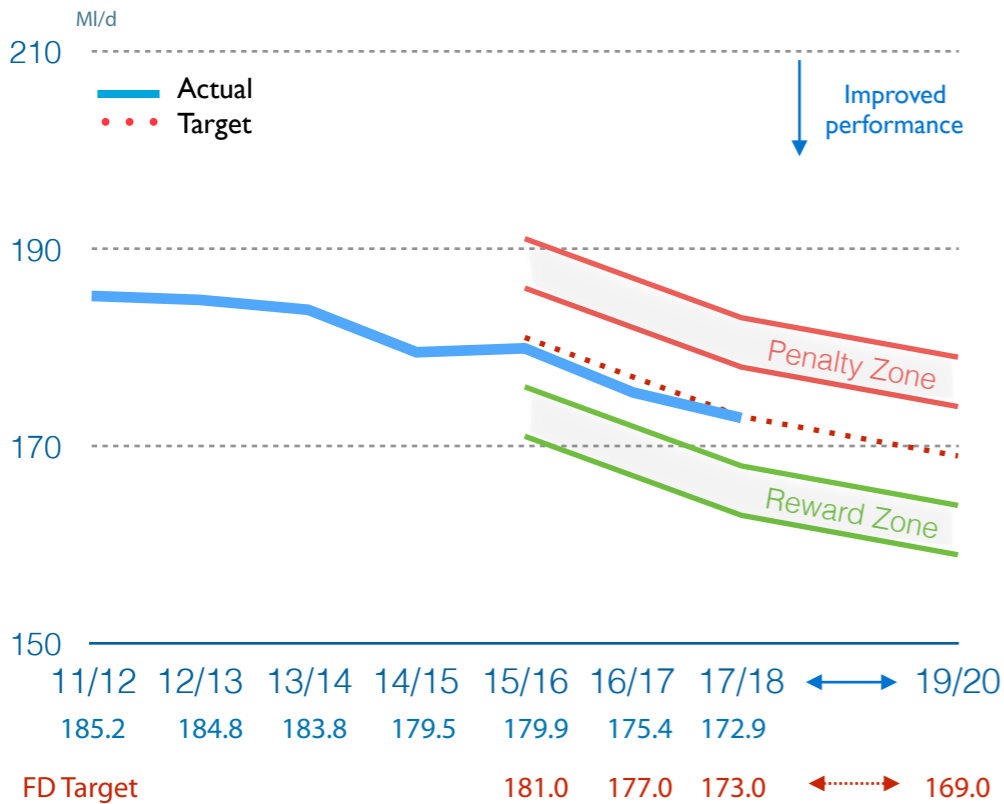
It should also be noted that we have one inlet (but two separate permits) serving both Eign WWTW and nearby Rotherwas WWTW. The Environment Agency are now considering merging these into a single permit and had this arrangement been in place already, we would have remained compliant at Eign WWTW.

Notwithstanding that there has been an improvement, our performance on unplanned maintenance continues to be above the upper control limit, with the number of unplanned jobs falling to 32,887 in the year. We have not seen an increase in the number of asset breakdowns and do not believe that being above the upper control limit is symptomatic of an underlying deterioration in asset performance.

Comparative information is not available on all measures.



2.4 - MOS F2 Leakage



Applicable to Price Control: **WHOLESALE WATER**

OFWAT MOS Reward & Penalty

Summary Performance:

Total Leakage has reduced in line with the AMP6 Business Plan target to deliver performance of 172.85 MI/d during 2017/18. In line with Business Plan commitments, improvements to date within our Water Balance have been made, specifically in the areas of:

- Meter Under Registration through robust testing of meter performance;
- Household Night Usage with the implementation of “Fast Logging” technology; and
- Operational Use where analysis of water used for water quality purposes have been undertaken.

We have also improved our Data Operability and the percentage of properties monitored in District Metered Areas (DMAs).

The reduction in leakage has also been achieved against a landscape of challenging weather conditions, including both increased temperatures over the summer period of 2017 and the severe weather impact of ‘Storm Emma’ during March 2018.

The performance of 172.85MI/d has delivered below the 2017/18 target of 173MI/d and is in line with the achievement of the overall AMP6 Sustained Economic Level of Leakage (SELL) glide path target reduction.

Although we have included industry performance in 2017/18 (principally to show how we have performed against other water and sewerage companies), this is not an accurate comparator as the figures for leakage are based on a company’s economic level of leakage, an assessment which is specific to each company.

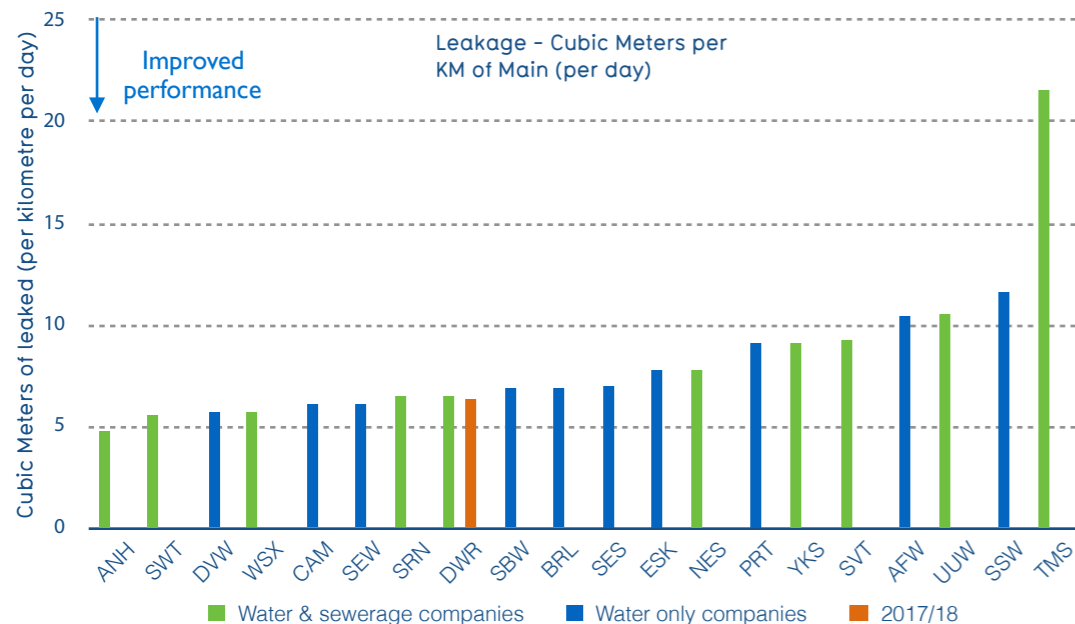
Customer Compensation

Our performance on this measure has led us to making 121 payment to the value of £39,719 by way of direct payment of compensation to customers in the financial year 2017/18.

Definition:

Total leakage measures the sum of distribution losses and supply pipe losses in megalitres per day (MI/d). It includes any uncontrolled losses between the Water Treatment Works and the customer’s stop tap. It does not include internal plumbing losses.

This measure is reported on a financial year basis.

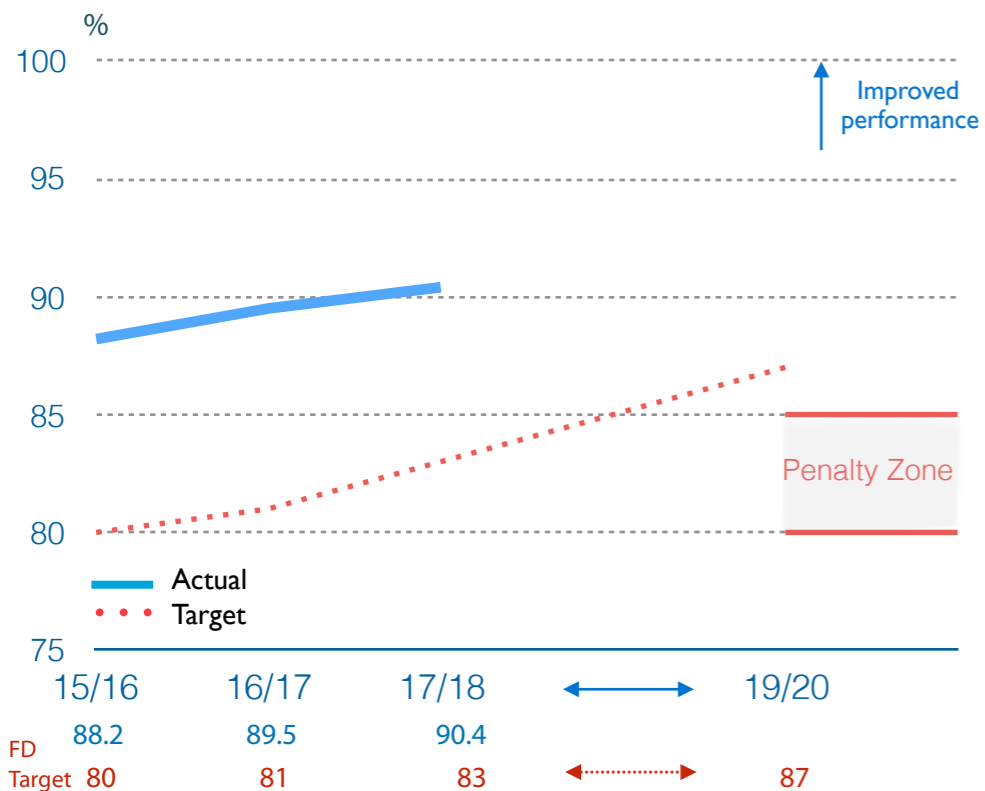


Source: Water UK and CCWater (Discover Water) - 2016/17 performance



2.4 – MOS F3 Asset Resilience – Water

Applicable to Price Control: WHOLESALE WATER **OFWAT MOS Penalty**



* Both 2015/16 and 2016/17 outturn figures are based on the strategically important assets listed at the time of the 2014 FD.

Summary Performance:

Our performance of 90.4% has improved in the year and we are ahead of the target for the year which was 83%.

This performance is based upon the list of critical assets included in our PR14 Business Plan which informed the 2014 FD.

In addition, we monitor and report internally on the updated list of critical assets, recognising that new and improved data is available to inform the definition of a critical asset. By way of illustration, the PR14 Business Plan included 91 assets. The current list of critical assets is now 111. The internally reported performance is 88.7% as against 87.8% last year.

Comparative information for this measure is not available.

Customer Compensation

Our performance on this measure has not led us to making any direct payments of compensation to customers in the financial year 2017/18.

Definition:

The percentage of critical assets that are resilient against a set of criteria. Critical assets are those where failure would have a major impact on service to customers or on the environment.

The list of critical assets is determined by reference to an agreed set of criteria. A resilience scorecard is used to assess critical designed to measure resilience against the following:

- Security and Emergency Measures Directive (SEMD) risk;
- Flood Risk;
- Coastal Erosion Risk;
- Loss of Power Risk;
- Loss of Remote Control ability
- Loss of any part of the treatment process;
- Loss of water or wastewater supply capacity; or
- Loss of access to the asset.

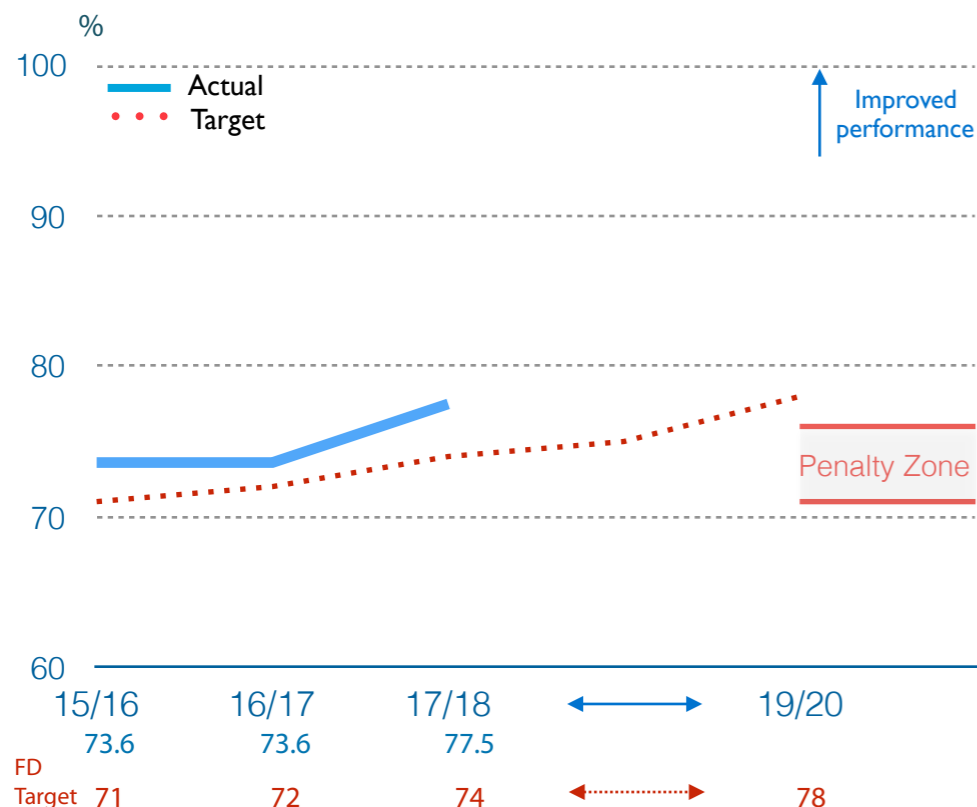
This measure is reported on a financial year basis.



2.4 – MOS F3 Asset Resilience – WasteWater

Applicable to Price Control: WHOLESALE WASTE WATER

OFWAT MOS Penalty



Summary Performance:	<p>The score for resilience of wastewater assets is 77.5% and ahead of the target for the year of which was 74%.</p> <p>This performance is based upon the list of critical assets included in our PR14 Business Plan which informed the 2014 FD.</p> <p>In addition we monitor and report internally on the updated list of critical assets, recognising that new and improved data is available to inform the definition of a critical asset. By way of illustration, the PR14 Business Plan included 35 assets. The current list of critical assets is now 48. The internally reported performance is 78.3% as against 74% last year.</p> <p>Comparative information for this measure is not available.</p>
Customer Compensation	<p>Our performance on this measure has not led us to making any direct payments of compensation to customers in the financial year 2017/18.</p>
Definition:	<p>The percentage of critical assets that are resilient against a set of criteria. Critical assets are those where failure would have a major impact on service to customers or on the environment.</p> <p>The list of critical assets is determined by reference to an agreed set of criteria. A resilience scorecard is used to assess critical assets against criteria designed to measure resilience against the following:</p> <ul style="list-style-type: none"> • Security and Emergency Measures Directive (SEMD) risk; • Flood Risk; • Coastal Erosion Risk; • Loss of Power Risk; • Loss of Remote Control ability • Loss of any part of the treatment process; • Loss of water or wastewater supply capacity; or • Loss of access to the asset.

* Both 2015/16 and 2016/17 outturn figures are based on the strategically important assets listed at the time of the 2014 FD.

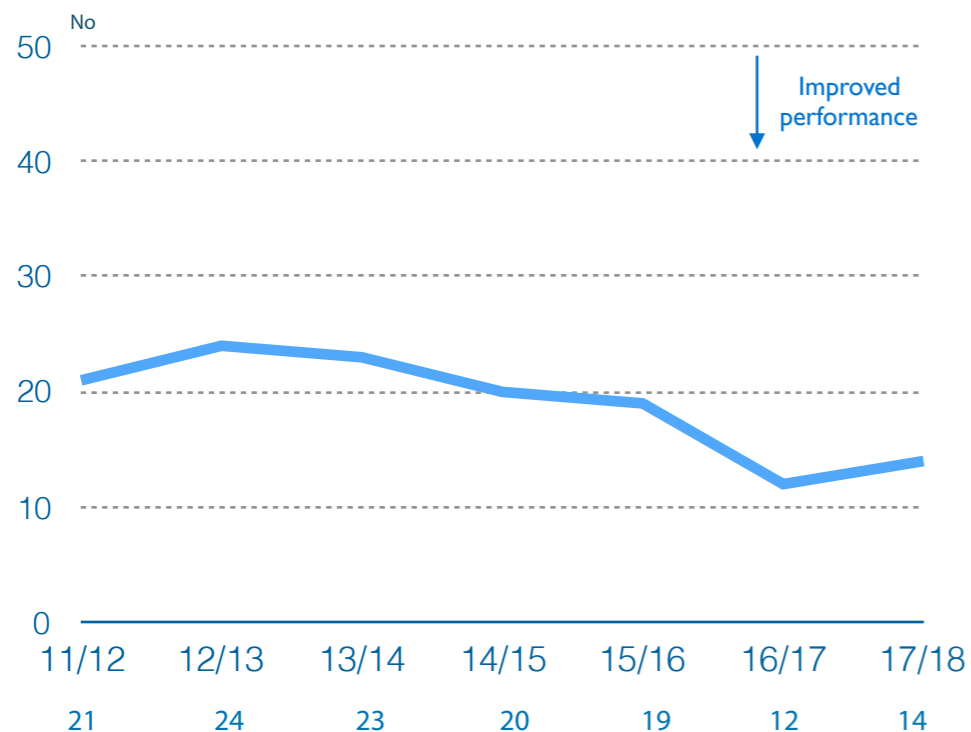
This measure is reported on a financial year basis.

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2.4 - G1 Health and Safety - RIDDOR

Key Performance Indicator



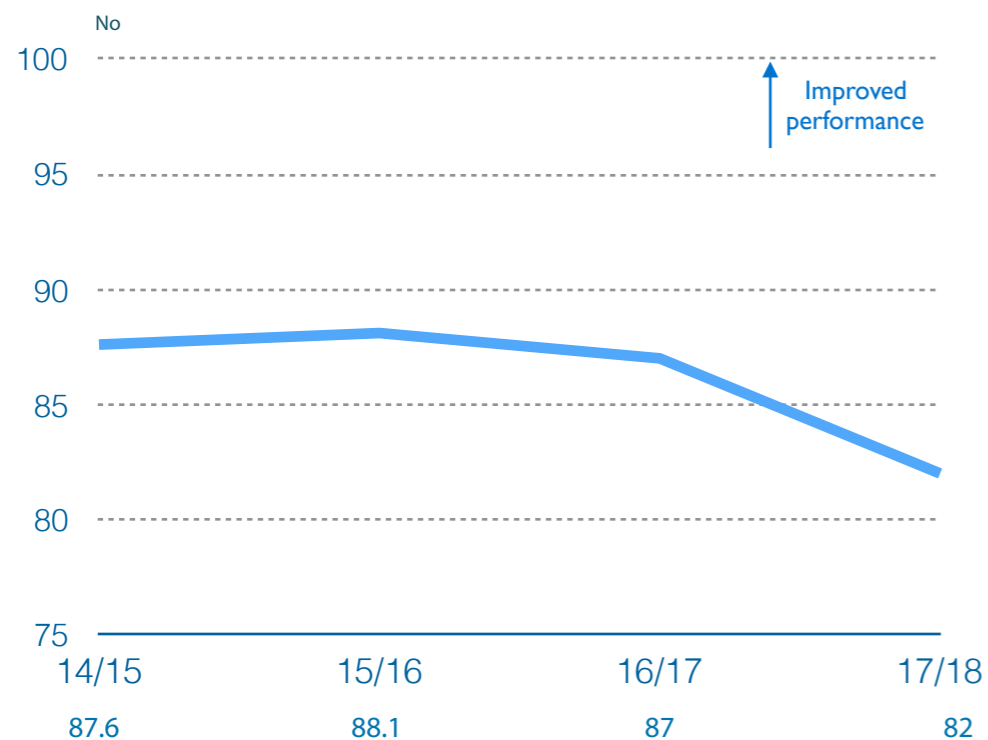
Summary Performance:	<p>The number of RIDDOR incidents in the year was 14.</p> <p>The analysis of the number of RIDDOR incidents against other companies is not a good comparator, as the number of employees will vary and not all employers include within their reported figures incidents involving employees of contractor organisations.</p>
Planned Improvements:	<p>These include:</p> <ul style="list-style-type: none"> • continuing to build a culture where health and safety is paramount for every job we do; • organising regular 'safety days' throughout the year to review best practice and improve health and safety procedures; and • operating a 'Safety Takes Every Person' ('STEP') and 'Take 5' approach (take 5 minutes) to assessing the safety of each job.
Customer Compensation	Not Applicable.
Definition:	<p>This is the total number of injuries reported each year to the Health and Safety Executive under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013. (RIDDOR)</p> <p>It includes injuries that occur across the wholesale and retail businesses as well as those involving our main contractors and capital partners.</p> <p>This measure is reported on a financial year basis.</p>

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2.4 - G2 Competence for Role

Key Performance Indicator



Summary Performance:	<p>Our objective is to have 95% of employees with outlined key roles fully competent for the particular role they fulfil by 2020. The 82% is lower than last year's figure of 87%.</p> <p>During the inclement weather at the tail end of 2017/18, all training courses across the business were cancelled and this contributed to the slight deterioration in performance. All training courses scheduled for March 2018 were rescheduled for the first quarter of 2018/19.</p> <p>This is also in part as a result of the time taken to bring new starters up to a level of competency and a delay in recruiting a new trainer.</p> <p>As there will always be turnover of employees, we assess the optimal figure for employee competence as being 95% at any one time.</p>
Planned Improvements:	<p>We regularly carry out reviews across the business to see whether the teams have the right skills to meet the challenges they will face. We are also committed to helping all of our people grow and thrive in their careers.</p>
Customer Compensation	<p>Not Applicable.</p>
Definition:	<p>We have a "Knowledge and skills framework" and have established clear role profiles that define key criteria which we can now use to assess and measure individuals' knowledge, skills and competence to undertake their respective roles.</p> <p>Our objective is that by 2020 (and beyond) 95% of employees performing the outlined key roles will be deemed competent (with the remainder being new starters in training).</p> <p>This is in respect of the wholesale business only and the inclusion of the retail business in this measure is under review.</p> <p>This measure is reported on a financial year basis.</p>



2.4 - H2 Financing Efficiency

Key Performance Indicator

As at 31 March 2018

H2 Financing	2014/15	2015/16	2016/17	2017/18
Actual	A/A3/A	A/A3/A	A/A2/A	A/A2/A
S&P / Moody's / Fitch				

Summary Performance: At year end (31 March 2018) we were rated A/A2/A by S&P, Moody's and Fitch and are the highest rated company in the sector. On 26 June S&P confirmed our credit rating at, A but on Negative outlook.

Customer Compensation: Not Applicable.

Definition: The rating ascribed by the three main rating agencies, S&P, Moody's and Fitch.

Company	Moody's	Fitch	Standard & Poor's
Anglian	A3 Neg	A	A - Neg*
DCWW	A2	A	A Neg*
Northumbrian	Baa1 Neg	Not Rated	BBB+
Severn Trent	A3 Neg	Not Rated	BBB+
Southern	Baa1 Neg	A-	A-
South West	Not Rated	Not Rated	Not Rated
Thames	A3 Neg	Not Rated	BBB+
United Utilities	A3	A-	A-
Wessex	A3 Neg	A-	BBB+
Yorkshire	Baa1 Neg	A	A-

Source: Bloomberg as of 4 June 2018

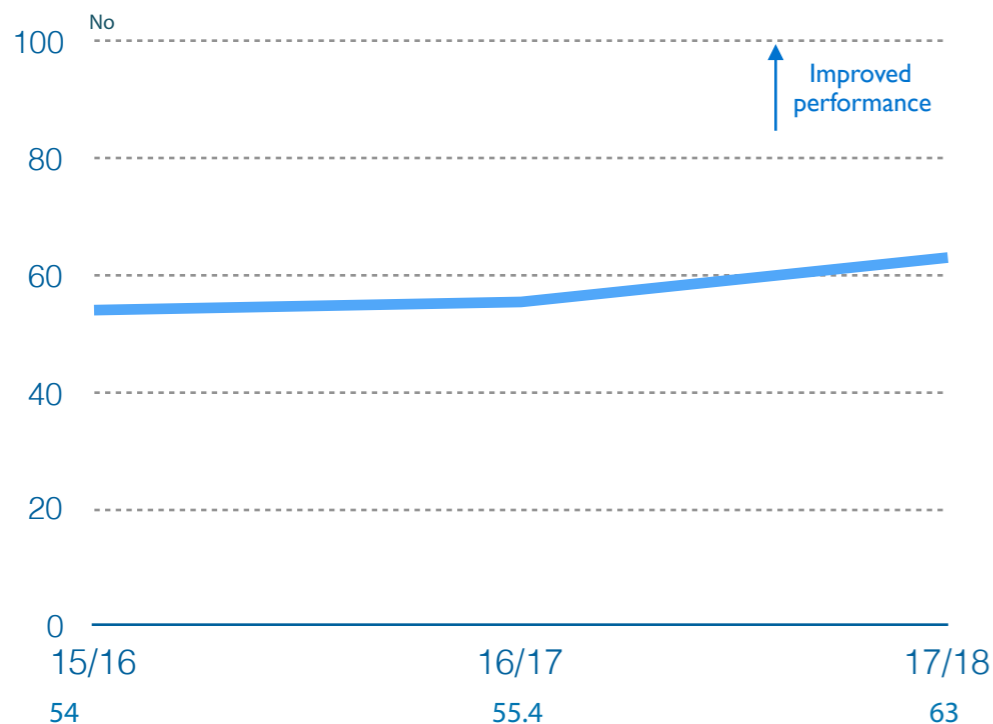
Note: Anglian, Southern, Thames and Yorkshire - Rating of senior bonds only.

*Source: Standard & Poor's 24 & 26 June 2018



2.4 – Net Promoter Score (NPS)

Key Performance Indicator



Summary Performance:

The Net Promoter Score has improved from 55.4 in 2016/17 to 63 in 2017/18.

Comparator NPS data for other water companies is not currently available.

A decision was made during “Storm Emma” not to send surveys between 2 and 8 March 2018 inclusive. This was due to an unprecedented operational issue affecting large parts of our operating area which required full business attention. It was deemed inappropriate to survey customers during this time and the decision was discussed and agreed by the Dwr Cymru Executive. It has been estimated that the potential implication to the annual score to be no more than 0.8.

Customer Compensation

Not Applicable.

Definition:

The NPS calculation is based on the assumption that customers can be divided into three categories: “Promoters”; “Passives”; “Detractors”. The NPS is calculated from the percentage of promoters (i.e. those scoring 9 and 10) minus the percentage of detractors (0-6).

The question answered is as follows:

“Based on your experience with us, how likely are you to recommend us to family and friends, Where 0 = very unlikely, 10 = very likely”.

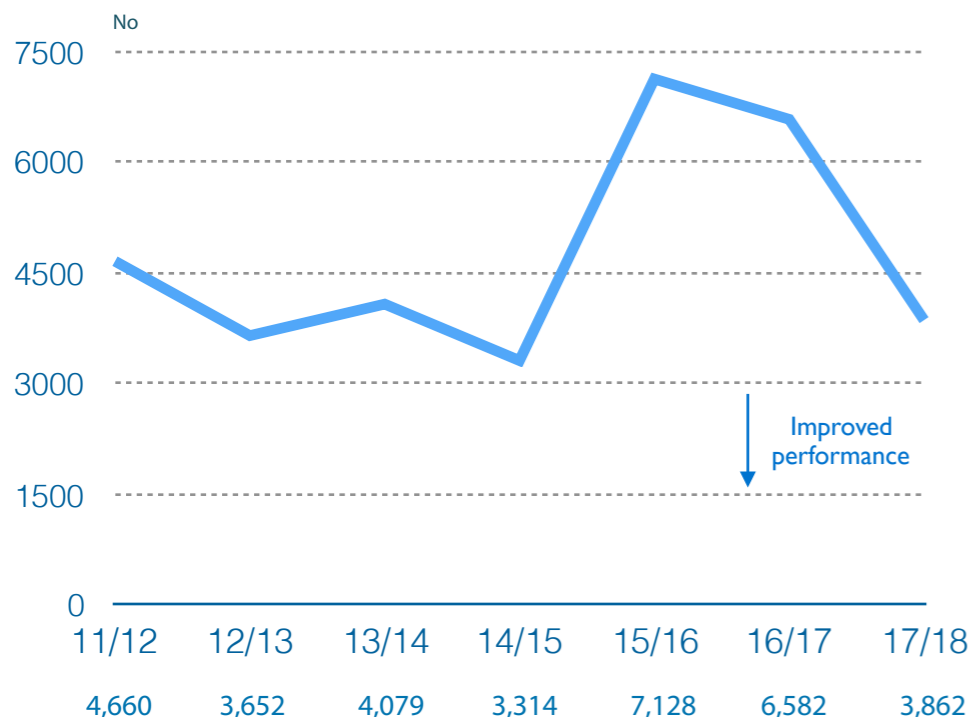
Customers are asked to go online to complete a survey that leads to the NPS.

This measure is reported on a financial year basis.



Key Performance Indicator

2.4 - Written Complaints



Summary Performance: The number of complaints received decreased during the year to 3,862 (6,582 last year).

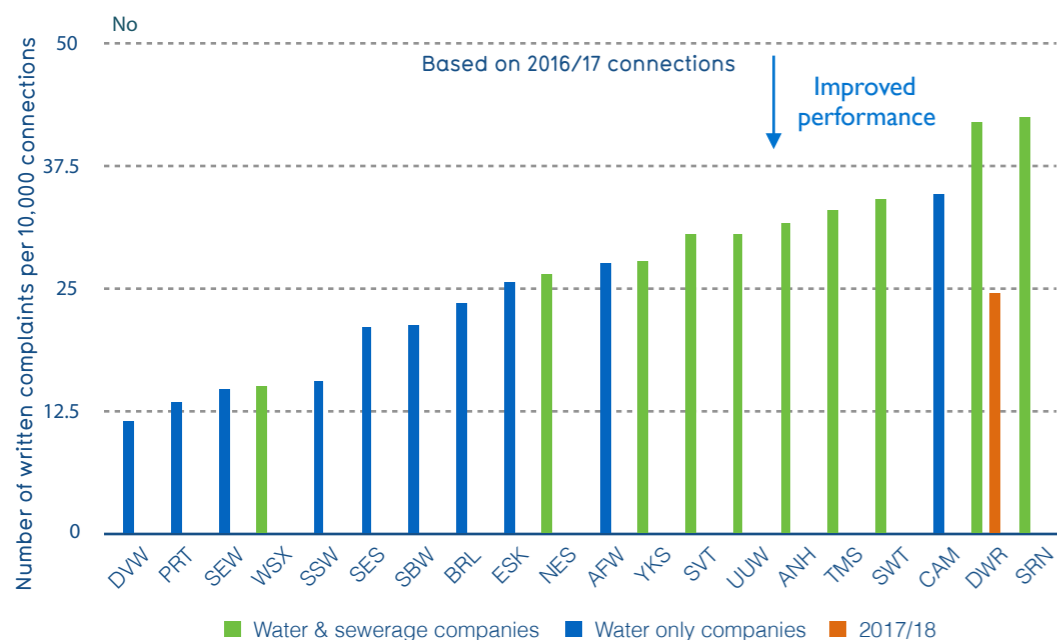
Planned Improvements: We continue to review the reasons for complaints and have improvement plans in place. These include, increased levels of daily and weekly 'progress reviews' as well as improved processes aimed at providing good customer service and getting it right first time.

We continue to encourage customers to contact us by their preferred channel, including email. As a consequence, we continue to receive a large number of complaints via email and this may partly account for an increase in numbers when compared to earlier years and other companies' reported performance.

Customer Compensation See measure on D1 (SIM) on page 18

Definition: The number of written complaints (stage 1 & stage 2 (escalated) complaints). Written complaints include those made by letter, fax and e-mail and comments written on a piece of company correspondence, for example a bill.

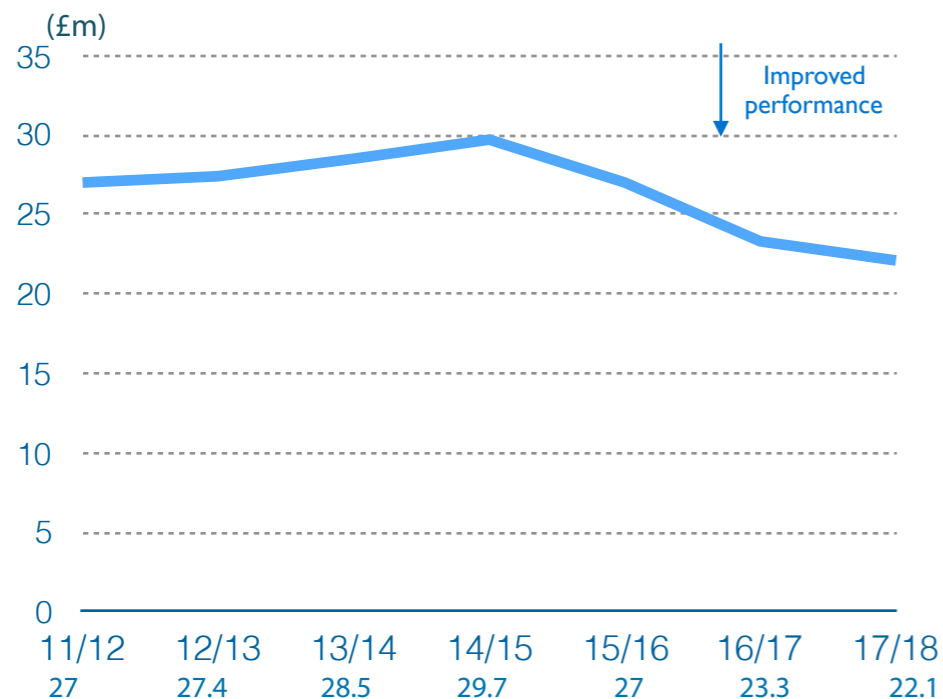
This measure is reported on a financial year basis.





2.4 - Bad Debt

Key Performance Indicator



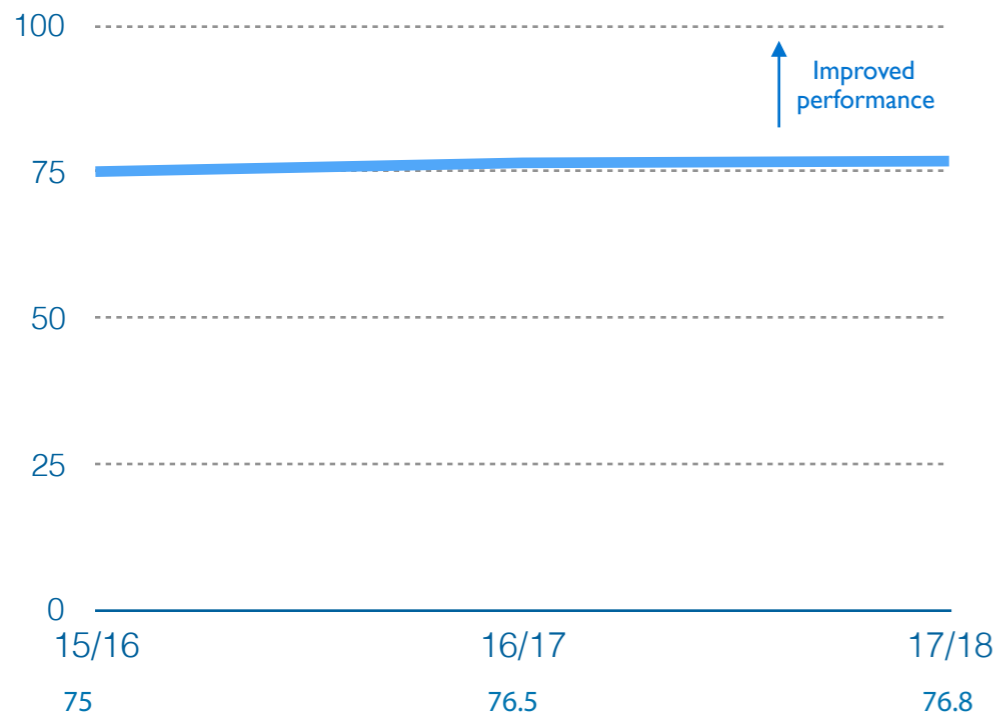
Summary Performance:	The Bad Debt charge at the end of 2017/18 stood at £22.1M (2016/17: £23.3M).
Planned Improvements:	<p>The improvement in collection rates and recovery of aged debt has been driven by a programme of initiatives which include:</p> <ul style="list-style-type: none"> informing credit reference agencies of all late or non-paying customers; improving our recovery system, Tallyman, to improve the effectiveness of our collection strategies; enforcing the regulations introduced by the Welsh Government in 2015 requiring landlords to disclose the identity of their tenants; expanding the financial support provide to low income households through our social tariffs; targeting customer who won't pay their bills as opposed to those who can't pay; and securing charging orders where appropriate. The 4,000 orders obtained have secured some £9m of customers debt. <p>Comparative information for this measure is not available.</p>
Customer Compensation	Not applicable.

Definition: The charge for bad and doubtful debts for all types of customers.
 It includes bad debt element on Council Collection Commission.
 This measure is reported on a financial year basis.



2.4 - UKCSI Satisfaction Score

Key Performance Indicator



Summary Performance:

Generally, there are two UK Customer Satisfaction Index (UKCSI) surveys undertaken in a year (published in January and July). They cover a number of sectors and measure customer satisfaction of their individual experiences with companies within the particular sector.

Our performance over the last year has improved with a score of 76.8 (76.5 last year). The respective scores were 77.1 (in July 2017) and 76.4 (in January 2018).

Customer Compensation:

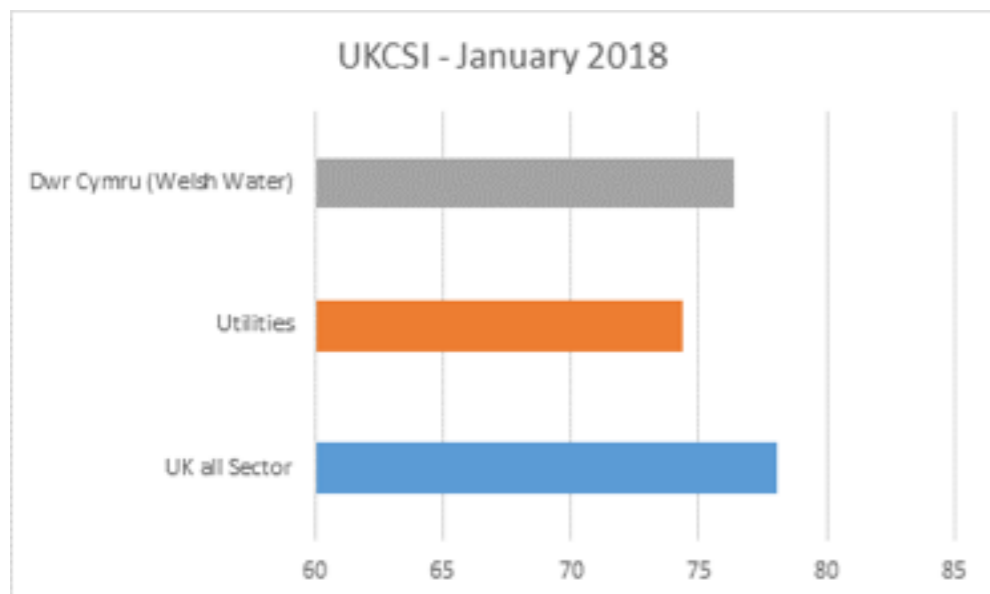
Not applicable.

Definition:

UKCSI survey a sample of 10,000 consumers in the UK twice per year, with reports published in January and July. Consumers are asked a range of questions relating to all companies in the survey (UKCSI members) that they have had an interaction with in the past 3 months. A minimum of 35 respondents must be achieved to appear in the UKCSI report and the score published is an average of the past two surveys. This gives us a direct comparison against other companies both within the Utility sector and across a range of other sectors (Retail, Manufacturing, Healthcare etc), but it should be noted that the company sample size may be very small.

We have no influence with the methodology for this measure to address the number of respondents who participate in the survey.

This measure is reported on a financial year basis.

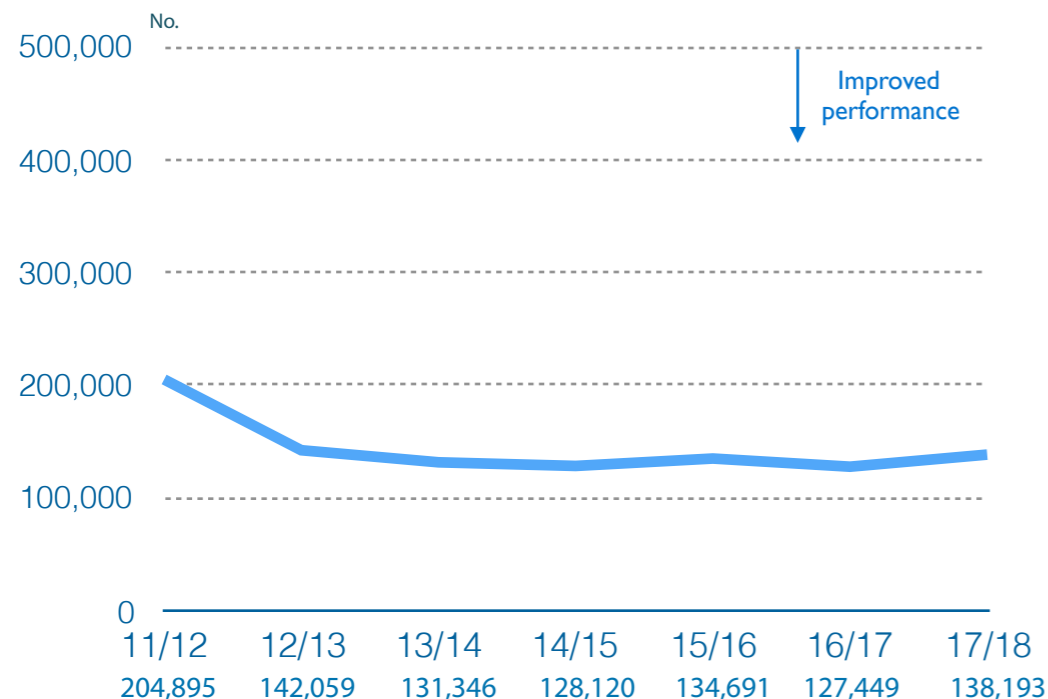


Source: UKCSI Report



2.4 - Unwanted calls

Key Performance Indicator



Summary Performance:

The number of unwanted calls (household and non-household) has increased by some 7% from 127,449 in 2016/17 to 138,193 in 2017/18.

The increase in the volume of unwanted calls is mainly due to the impact of the severe weather (Storm Emma) in March 2018. The water business received some 13,000 additional unwanted calls during this period.

Comparative information on this measure is not available.

Planned Improvements:

See measure on D1 (SIM) on page 18.

Customer Compensation

Our performance on this measure has not led us to making any direct payments of compensation to customers in the financial year 2017/18.

Definition:

We receive a variety of types of telephone contact. From a customer perspective, some of these can be regarded as “wanted”, for example when the caller wants to pay their bill or is providing or seeking information. Others can be defined as “unwanted”. These are where the customer has experienced some form of service failure and this has prompted them to make contact with us.

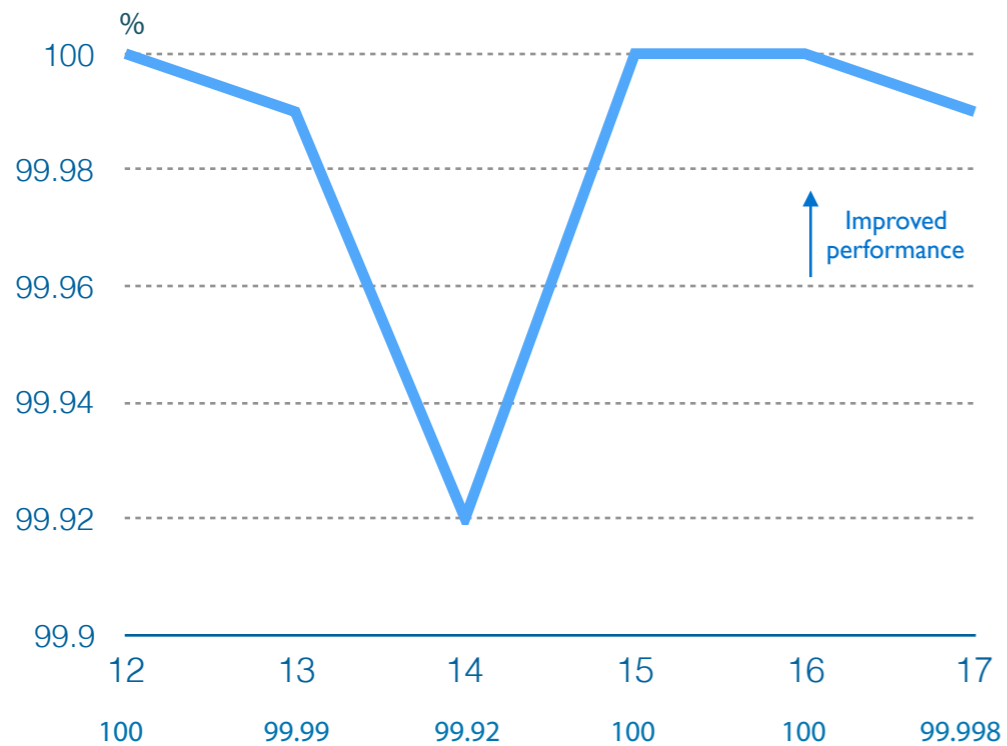
The volume of unwanted calls from household customers contribute to the overall SIM.

This measure is reported on a financial year basis.



2.4 - Process Control Index

Key Performance Indicator

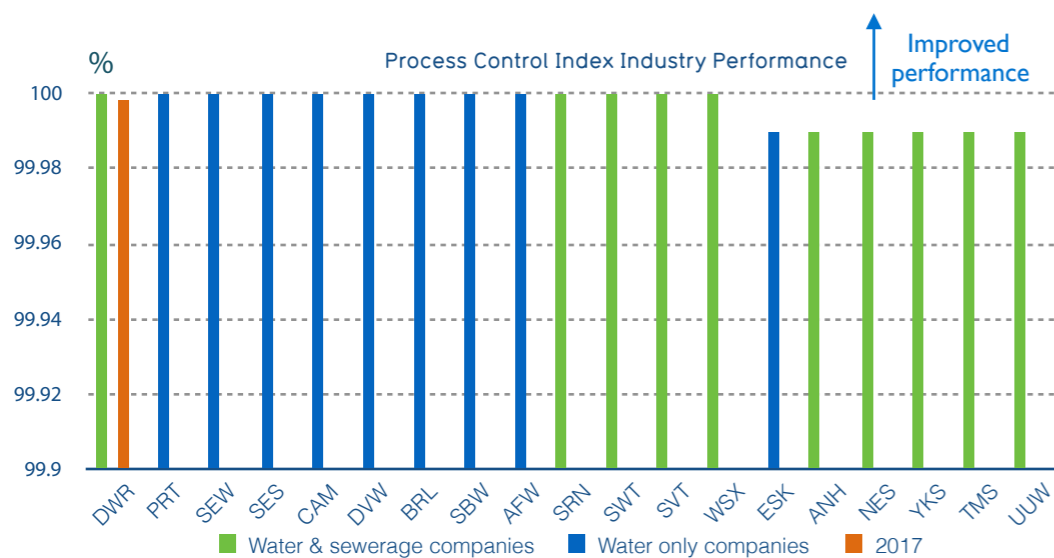


Summary Performance: Performance against the measure was 99.998%, with only one sample (out of 6,310) failing to meet the required quality standard.

Customer Compensation: See measure on A1(B) MZC on page 9.

Definition: The Process Control Index is based on a selection of parameters which are, in general terms, controlled by the process in place at Water Treatment Works.

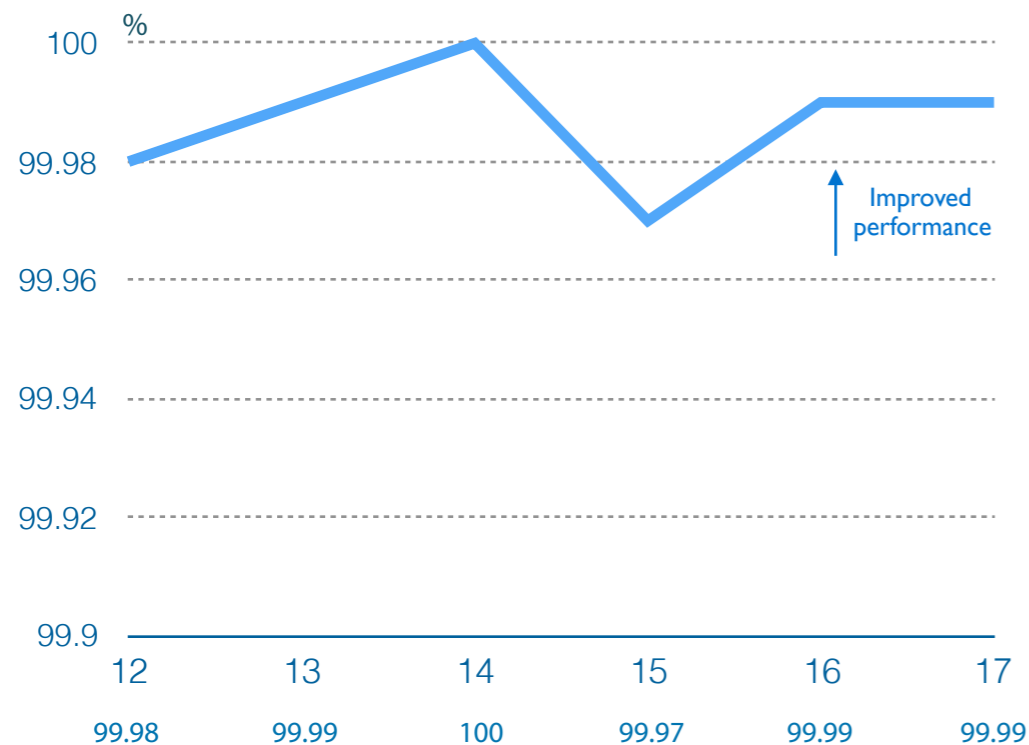
This measure is reported on a calendar year basis.





2.4 - Disinfection Index

Key Performance Indicator

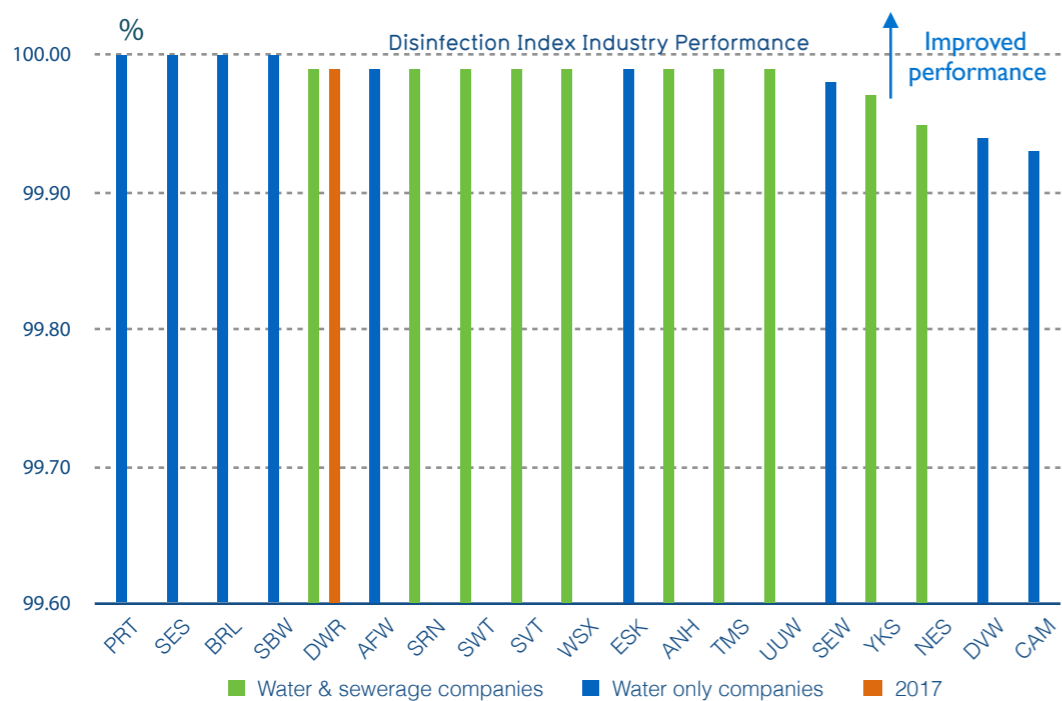


Summary Performance: Performance against the measure was 99.99% of tests meeting the required quality standard. Last year's performance was 99.99%. There were 16,264 tests performed in the year with three test failures.

Customer Compensation: Not Applicable.

Definition: The Disinfection Index is based on a selection of parameters which explain the effectiveness of disinfection and pathogen removal. It is calculated by taking the average of Mean Zonal Compliance figures for coliform, E.coli and turbidity and measuring it against all test undertaken at works.

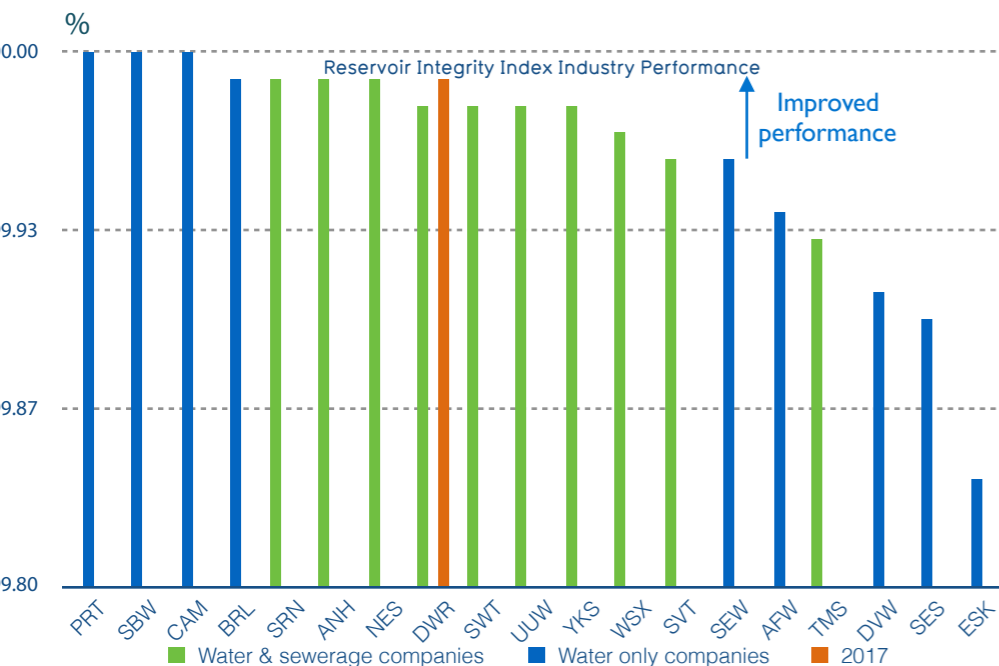
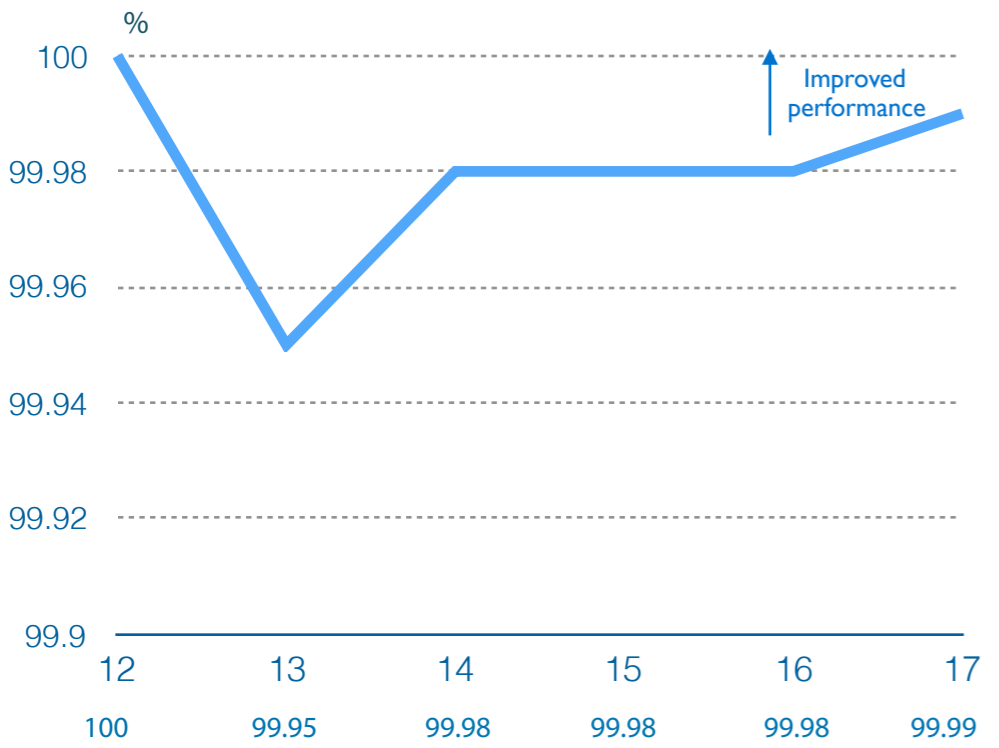
This measure is reported on a calendar year basis.





2.4 - Reservoir Integrity Index

Key Performance Indicator



Summary Performance:	Performance against the measure is 99.99%. There were 35,228 tests performed during the year, and there were two failures. Last year there were six failures at five sites.
Customer Compensation	Not Applicable.
Definition:	Reservoir integrity index is microbiological sampling that takes place at Service Reservoirs (SRVs) as a check on their integrity and general hygienic status. It is calculated by taking the average Mean Zonal Compliance figures for coliforms and E.coli at SRVs. This measure is reported on a calendar year basis.

Source: Drinking Water Inspectorate - Annual Reports



3. Ofwat Summary Performance

Ofwat PR14 Outcome Performance Commitment and Outcome Delivery Incentive Base Data (Table 3A)

Wholesale Water	2016-17 Performance level - actual	2017-18 performance level - actual	2017-18 CPL met?	2017-18 Outperformance payment or Underperformance penalty - ODIs payable at the end of AMP6 (Indicator)	2017-18 Outperformance payment or underperformance penalty - ODIs payable at the end of AMP6 (£mi to 4 DP)	31 March 2020 forecast total AMP6 Outperformance payment or underperformance penalty (Indicator)	31 March 2020 forecast total AMP6 Outperformance payment or underperformance penalty (£m to 4 DP)
A1b Safety of Drinking Water	99.97	99.96	No	Underperformance penalty dead band		Underperformance penalty dead band	
A2 Customer Acceptability	3.20	3.19	No	Underperformance penalty	-1.8600	Underperformance penalty	-5.5800
A3 Reliability of supply	12.15	43.3	No	Underperformance penalty	-3.9000	Underperformance penalty	-3.9000
B1 Water abstractions	100	100	Yes				
C2 Carbon Footprint (Water)	37.49	42.38	Yes				
D1 Service incentive Mechanism	83	85	N/A				
D2 'At Risk' Customer service	575	613	Yes				
D5 Earning the Trust of Customers	85	84	Yes				
E1 Affordable bills	-1%	-2%	Yes				
F1 Asset serviceability	Stable	Stable	Yes				
F2 Leakage	175.43	172.8	Yes				
F3 Asset resilience (Water)	89.5	90.4	Yes				

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3. Ofwat Summary Performance

Ofwat PR14 Outcome Performance Commitment and Outcome Delivery Incentive Base Data (Table 3A)

Wholesale Waste Water	2016-17 Performance level - actual	2017-18 performance level - actual	2017-18 CPL met?	2017-18 Outperformance payment or Underperformance penalty ODIs payable at the end of AMP6 (Indicator)	2017-18 Outperformance payment or underperformance penalty - ODIs payable at the end of AMP6 (£m to 4 DP)	31 March 2020 forecast total AMP6 Outperformance payment or underperformance penalty (Indicator)	31 March 2020 forecast total AMP6 Outperformance payment or underperformance penalty (£m to 4 DP)
B2 Treating used water	99.47	98.21	No				
B3 Preventing pollution	111	112	Yes	Outperformance payment	0.8930	Outperformance payment	4.5590
C1 Adapting to climate change	13,661	15,097	Yes				
C2 Carbon Footprint (Wastewater)	49.01	55.51	No				
D1 Service incentive Mechanism	83	85	N/A				
D2 'At Risk' Customer service	575	613	Yes				
D3 Properties flooded within the year	242	221	Yes	Outperformance payment	1.4880	Outperformance payment	5.8900
D5 Earning the Trust of Customers	85	84	Yes				
E1 Affordable bills	-1%	-2%	Yes				
F1 Asset serviceability	Stable	Stable	Yes				
F3 Asset resilience (Wastewater)	73.6	77.5	Yes				



3. Ofwat Summary Performance

Ofwat PR14 Outcome Performance Commitment and Outcome Delivery Incentive Base Data (Table 3A)

	2016-17 Performance level - actual	2017-18 performance level - actual	2017-18 CPL met?	2017-18 Outperformance payment or Underperformance penalty ODI's payable at the end of AMP6 (Indicator)	2017-18 Outperformance payment or underperformance penalty - ODI's payable at the end of AMP6 (£m to 4 DP)	31 March 2020 forecast total AMP6 Outperformance payment or underperformance penalty (Indicator)	31 March 2020 forecast total AMP6 Outperformance payment or underperformance penalty (£m to 4 DP)
Household Retail							
D1 Service incentive Mechanism	83	85	N/A				
D5 Earning the Trust of Customers	85	84	Yes				
E1 Affordable bills	-1%	-2%	Yes				
E2 Help for Disadvantaged customers	65,461	100,999	Yes				
Non-Household Retail							
D1 Service incentive Mechanism	1,152	574*	N/A				
D4 Business Customer Satisfaction	89	87	No	Underperformance penalty dead band			
D5 Earning the Trust of Customers	85	84	Yes				
E1 Affordable bills	-1%	-1%	Yes				

* This is the number of non-household complaints received and not the overall SIM score, (as was reported in 2017-18).



3B. Sub Measure Performance Table

PC/Sub-measure	Unit	Decimal Places	2016-17 Performance level - actual	2017-18 performance level - actual	2017-18 CPL* met?
F1: Asset Serviceability - Water	category	no	Stable	Stable	Yes
Total Bursts	nr	0	3,679	4,181	Yes
Interruptions >12h	nr	0	986	19,699	No
Iron Non-compliance (as 100 Mean Zonal Compliance)	%	2	0.19	0.34	Yes
DG2 Pressure	nr	0	92	99	Yes
Customer Contacts - discolouration	nr	2	2.35	2.21	Yes
Distribution Index TIM (as 100 Mean Zonal Compliance)	%	2	99.93	99.84	Yes
Water Treatment Works Coliforms non-compliance	%	2	0.02	0.02	Yes
Service Reservoir Coliforms non-compliance	%	2	0.00	0.00	Yes
Turbidity	nr	0	0	0	Yes
Enforcement	nr	0	0	0	Yes
Unplanned Maintenance	nr	0	6,378	11,129	Yes

* CPL - Committed Performance Level



3B. Sub Measure Performance Table

PC/sub-measure	Unit	Decimal Places	2016-17 Performance level - actual	2017-18 performance level - actual	2017-18 CPL* met?
F1: Asset Serviceability Wastewater	category	no	Stable	Stable	Yes
Sewer collapses	nr	0	836	712	Yes
Pollution Incidents Category 1,2, & 3	nr	0	89	82	Yes
Properties Flooded due to Other Causes	nr	0	224	198	Yes
Properties Flooded due to Overload Sewers ex severe weather	nr	0	18	23	Yes
Sewer Blockages	nr	0	24,203	22,612	Yes
Equipment Failures	nr	0	16	37	Yes
Sewage Treatment Works (STW) non-compliance	%	2	0.53	1.79	Yes
Population Equivalent (PE) non-compliance	%	2	0.02	4.45	No
Unplanned Maintenance	nr	0	33,664	32,887	No

* CPL - Committed Performance Level



3D. SIM Table

Qualitative Performance	Units	Decimal places	Score
1st Survey Score	score	2	4.49
2nd Survey Score	score	2	4.45
3rd Survey Score	score	2	4.55
4th Survey Score	score	2	4.40
Qualitative SIM Score (out of 75)	calc	2	65.11
Quantitative Composite Score	score	2	109.45
Quantitative SIM Score	calc	2	19.53
Total Annual SIM Score	calc	0	84.64



4. Assurance

Assurance - The process 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 key measures reported in this part of the Annual Performance Report and these have been subjected to internal review and assessment by the Reporter.
- As part of targeted due diligence, each Dŵr Cymru 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 the Dŵr Cymru intranet, Infozone.
- 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 table owners (data owners), the Regulation Department, Dŵr Cymru Executive (collectively and individually), the Audit Committee and the Board.
- A 'Code of Conduct' policy document, detailing the behavioural framework required around regulatory data and whistle-blowing was issued in 2014.
- Ownership and responsibility for each relevant data item has been clearly defined. Each individual was responsible for adhering to all appropriate guidance in the compilation of the data and providing associated commentary. This also involved formal 'sign off' by the individual, verifying that the data had been obtained from a recognised data source and had been accurately compiled. In addition, confirmation was required that any material judgements or assumptions had been highlighted and documented, ensuring an accurate audit trail, with a review of confidence grades where applicable. Where material was within an individual's personal knowledge, he or she was required to confirm that it was true or, where it was not within their personal knowledge, that appropriate enquiry had been made.
- Allocation of overall responsibility for individual data items and associated commentaries was assigned to the appropriate member of the Dŵr Cymru Executive. Each was responsible for the review and 'sign off' of their own data items.
- A large proportion of the data processing is covered by our Internal Management System which has accreditation to various ISO standards.

Implementation and Internal Review

- Production of 'data item packs' by the Regulation Department ensured that all table owners had a single point of reference for all information necessary to undertake their specific responsibilities. These 'packs' included guidance on how to process the relevant data and populate tables, information on confidence grades and details of where to locate previous Reporter's reports. Methodology statements and training material were also included.
- All of the information included within the data packs (described above) was made available on the InfoZone.
- Training sessions for data owners were held in March and April 2018, where the processes were fully explained, the importance of regulatory data being reliable and accurate highlighted.
- 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 Team throughout the year.

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Assurance - (continued)

- A rigorous process of internal due diligence meetings was undertaken by the Regulation Department between the 30th April 2018 and the 23rd May 2018, to challenge information, judgements and assumptions made and to ensure compliance with the relevant guidance.
- A review was undertaken by the Regulation team to ensure consistency between the Annual Performance Report and the individual data items and the relevant commentaries.
- The 'sign off' forms were endorsed by each data owner, the Leadership Team members (where relevant) and the responsible member of the Dŵr Cymru Executive Team before the publication of the Annual Performance Report.
- A management review meeting of non-financial measures reported in the Annual Performance Report, involving the Dŵr Cymru Executive Directors, took place on 29th May 2018. This was also attended by the Reporter, a Business Assurance team member and data owners. For each measure, a summary containing current year's performance, historical performance and data owner and reporter issues was produced and formed the basis of the discussions. Material issues were highlighted and discussed. A final review of the non financial measures was undertaken at the Dŵr Cymru Executive Team at its meeting on the 26th June 2018.

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 procedures, reporting requirements and highlighted any issues with the reported figures.
- On 16th March 2018 the Dŵr Cymru Executive received a paper seeking approval to publish the Final Assurance Plan. Approval was given and the Final Assurance Plan was published on the 19th March 2018.
- The Audit Committee also received papers to meetings on the 1st November 2017 and the 31st January 2018 detailing the processes in place. Further progress updates were provided to the Audit Committee meetings on the 6th June 2018 (ahead of the full Board review on the 5th July 2018).
- As part of the external review of data, the Reporter also reviewed performance against the PR14 Final Determination Outcomes and Measures of Success. The Reporter also attended the Dŵr Cymru Executive meeting on the 29th May 2018, the Audit Committee meeting on the 6th June 2018 (where he provided verbal updates) and the Board meeting on 5th July 2018.
- A high level audit and evaluation of the systems in place within Dŵr Cymru was also undertaken by the Business Assurance team department. This took place in May 2018 and the report concluded that there is a robust and effective system of risk management, control and governance, with an overall rating of "Full Assurance".
- The Board meeting on 5th July 2018 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.

27 June 2018

Attention: The Board
DCWW
Pentwyn Road
Nelson
Treharris
Mid Glamorgan
CF46 6LY

Project Name: Dwr Cymru Welsh Water (DCWW) non-financial assurance
Project Number: B2271301

Subject: 2017-18 Annual Performance Report - assurance letter

For the attention of the Board

For the period 2015-20 (AMP6) Ofwat requires companies to complete an Annual Performance Report (APR). As set out in IN 17/08, for 2017-18 Ofwat expanded the scope of the APR to incorporate additional information including additional cost and non-cost data in section 4 of the APR and an expanded set of shadow PCs. These additional items were previously reported outside the APR and are designed to inform its PR19 determinations.

As your technical assurance partner, you asked us to take a risk-based approach to reviewing the following;

Measures of Success (MoS) – We reviewed the 2017-18 full year reported performance for the MoS set out in your Final Determination (FD) and a select number of processes and Methodology Statements (MS) that were used to produce the figures.

APR section 4 cost assessment tables (CAT) – We reviewed the 2017-18 data your teams proposed to report in the APR Section 4 tables that correspond to the old CAT data we reviewed last year, and we reviewed the vast majority of processes and Methodology Statements that were used to produce the figures. In addition, where available we checked consistency of your teams' internal commentaries with those we saw in the audit and checked whether they contained any obviously misleading or false statements.

We also reviewed the following associated areas – internal key performance indicators (KPIs) that are not part of your FD; Guaranteed Standards Scheme (GSS) payments; 'Bidding activity: bioresources market' APR table. For these areas we only conducted data audits.

In addition to the annual activities summarised above, we also completed a review of reporting for your Shadow PCs and a review of the process and controls used to produce your risk and compliance statement. As requested for both of these areas we will provide our observations in separate letters once we have completed our work.

As agreed, our assurance is risk based, and uses our end-to-end, three stage assurance approach. We note that due to timing, our review of both your reporting documentation and processes for section 4 of the APR were in the context of the 2016-17 guidance. There were a limited number of new lines introduced to the APR Section 4 tables via Ofwat Information Notice 17/08 in November 2017. This included lines such as 4P.17 and 19; the

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number of, and the capacity of raw water transfer pumping stations. We note we did not undertake documentation or process reviews of these additional lines whilst you determined ownership and/or developed or updated existing Methodology Statements and processes. We did undertake data audits for these lines.

At each stage of our assurance activity, our focus was on assessing the level of risk associated with reporting performance. We also provided your teams with detailed feedback after each stage that explained our assessment of the risk associated with the reported performance figure and set out any actions. We note that when reviewing your performance figures we took a risk based approach (via sampling) to the completeness, reliability and accuracy of the source data that the MoS, KPI or APR Section 4 CAT line draws on, the robustness of the reported performance figure and the appropriateness of the confidence grade the team had assigned to the data.

For APR Section 4 CATs we met with your teams to review proposed data for sets of lines that were produced using the same process (e.g. 4P.7-13, which cover the number of sources by type). As agreed, our focus was on 2017-18 data, and we did not audit prior year figures unless stated otherwise in our audit feedback. You asked us to undertake limited data audits in January 2018 for CAT lines where you had changed figures after our 2016-17 assurance but prior to submission in 2016-17.

Overall, for the data we covered, other than where indicated otherwise in our feedback, we consider:

- **all individuals within the approval process have signed-off the data;**
- **you have documentation, processes and controls in place to produce data that are consistent with the MoS definitions in the FD**
- **you have processes and controls in place to produce data that are consistent with the 2017-18 APR Section 4 cost table definitions**
- **you have satisfactory processes in place to report data that are compliant with the principles and rules within the RAGs¹**
- **any rewards/penalties are calculated in line with FD requirements²; and**
- **your teams' internal commentaries were consistent with the data we saw at the time of reviewing them and did not contain any obviously false or misleading statements in relation to that data.**

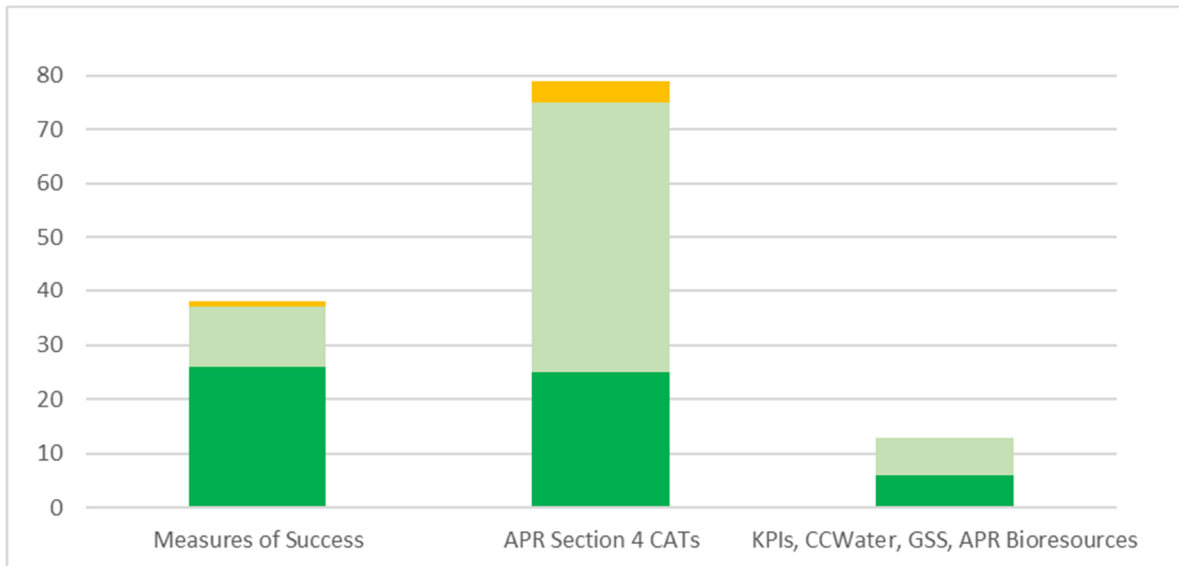
¹ We have reviewed cost allocation processes for a selection of tables in section 4 of the APR (tables 4L, 4N, 4M, 4O, 4V, & 4W)

² We have reviewed the mechanistic calculation of rewards/penalties pre adjustments for price base, tax and any management adjustments.

Observations

Figure 1 below summarises the distribution of data scores across your MoS; supporting sub-components; KPIs and APR Section 4 CAT lines that we reviewed for our full year assurance exercise for 2017-18.

Figure 1 Distribution of scores for the data stage – full year



During the year we observed that you made progress in developing a base level of documentation. We understand that you have addressed our actions and made improvements to your reporting documentation and processes which support your APR Section 4 CAT reporting, thus helping to mitigate single point of failure risks. The improvements in your teams' documentation and processes has helped reduce the overall reporting risk and during the data stage we observed that the majority of your MoS; supporting sub-components; KPIs and APR Section 4 CAT lines, present a low or low to medium level of reporting risk in relation to the actual performance figure.

For all data we have assured we understand that our risk based assurance approach is designed to support your own first and second line assurance and your due diligence process. During our full year data assurance exercise we did identify a limited number of potentially material issues across your MoS; supporting sub-components; KPIs and APR Section 4 CAT lines. Following our feedback your teams were able to satisfactorily address the majority of the material actions.

As can be seen in Figure 1, all but four of the 130 assessments of MoS, CAT and KPI figures for 2017-18 that we reviewed were graded A or B at the end of our data stage, indicating that there are no material weaknesses in the production of the data and that the confidence grade is appropriate.

At the final year-end audit there were four areas where we identified potential material issues with an MoS or APR section 4 CAT line during the data stage of our assurance work. We briefly discuss these issues in Table 1 below.

Table 1 MoS or APR Section 4 Cost Assessment Lines where we consider there remain potentially material issues with the proposed data

Measure of Success	Material issue(s) or minor issues with a material effect
C1	<p>Adapting to climate change</p> <p>It is not clear that the confidence grade reflects the level of accuracy of the estimated annual flows. The team were unable to demonstrate that the modelled flows used to calculate the volume of surface water flow diverted away from the sewer network are within 10% of the actual flow.</p>
APR Section 4 table/lines	Material issue(s) or minor issues with a material effect
4R.14-15	<p>Length of gravity sewer rehabilitated and rising mains refurbished / replaced</p> <p>We note that the reported performance is in line with previous years. However, there are different figures for the length of sewer to be reported as replaced and the actual length replaced. We consider the difference is material and should be investigated and justified by the team.</p>
4P.20 and 63-64	<p>4P.20-Total length of raw water mains and conveyors and 4P.64-Total length of non-potable and partially treated main for treatment.</p> <p>We note that the team is unable to separately identify data for line 4P63- 64 and have therefore reported zero and included the length for this line within 4P.20. The team are undertaking an exercise to improve the data and enable separate reporting for 2018/19.</p>
4R.8-10	<p>Number of combined sewer, emergency and settled storm overflows</p> <p>The classification of overflows on SAP does not match the Ofwat definition and therefore the reported number is an approximation. For future years the team is reviewing the data against consent information.</p>

Overall, we consider we have worked constructively to identify key reporting risks and issues associated with the PC and APR section 4 CAT figures you are proposing to report. In addition to the material observations we also note the following general observations. These focus on the data stage of our assurance for the MoS set out in your Final Determination and your APR Section 4 CATs. They also touch on your internal KPIs and include summary observations from our review of your documentation and processes. We provided more detailed observations on our findings from the first two stages of our approach to you and your teams as we completed them and in our January 2018 interim assurance letter.

- We observed that your internal due diligence process had worked well, and feel this is reflected in our final data scores. Although we note that for the majority of processes, teams were unable to demonstrate that they had applied the checks and controls detailed in their methodology statements. For future reporting we recommend teams develop auditable sign off of checks and controls and suggest that this is something you incorporate as part of your assurance plan for 2018-19.
- As noted our risk based assurance approach is designed to support your own first and second line assurance and during our reviews we did identify a limited number of potentially material issues. For example, across the bioresources tables we did identify a failure in first and second line checks, resulting in a large number of data points that were restated based on our observations. For these tables, we recommend ensuring that first and second lines checks are completed noting that as agreed our assurance is risk based.
- Ofwat has not requested companies assign confidence grades to the APR Section 4 CAT data for 2017-18. We understand that you have encouraged teams to continue to assign confidence grades to data and we

observed that the majority of teams had continued this as best practice, and that where assigned these were generally appropriate for the process and data. We have identified some areas where, although the confidence grade is appropriate for the specific process and data, we would expect confidence to be higher given the information being reported and Ofwat's minimum expectations set out in 2016-17. The following measures are examples of this; SVWWI-Equipment failures; and 4U.21 Odour complaints.

- During audits we were generally able to trace data back to corporate systems without identifying issues. However, for some areas it was difficult to trace back to source. For example, during the APR bioresources audit we could not trace back to the actual contractual information, but note the team was able to provide us emails stating confirmation from the procurement team. For the financial tables that we reviewed, as agreed we traced data back to table 4D and 4E.
- During our review of your internal KPI, Net Promotor Score (NPS), we found that you deviated from the documented methodology by deciding not to send out surveys during a storm event (Storm Emma). We recognise that this decision was taken at DCE and understand the rationale, but note that the drafting of the Methodology Statement did not include any exclusions for severe weather events. For future years the NPS may be incorporated into baselines for the new CMEX measure and similar deviations from the MS would lead to a higher risk.
- As noted above we have reviewed the mechanistic calculation of 2017-18 rewards/penalties. For leakage we note the current audited position is 172.85 MI/d and that this has been derived from a combination of methodological changes, data changes and real changes in the level of leakage. For 2017-18 we have not observed any material weaknesses with your leakage performance figure, although we did observe that the inclusion of plumbing losses has a material effect (reduction of 18MI/d) on the reported performance and has the effect of offsetting an increase in actual leakage (of 10MI/d). We note that application of these changes is supported by evidence and understand that it is consistent with your PR14 leakage strategy. However, Ofwat has stated in its PR19 methodology, and also stated in industry workshops, that it expects companies to relate reported performance and any ODI rewards or penalties to real performance changes, and not definitional, methodological or data changes. Your internal documentation clearly identifies how your leakage performance is calculated and reported on but we would advise you to ensure that your approach is also clearly articulated to Ofwat.
- In line with your approach last year, you are recording restitution costs you incur and compensation payments you make (including potentially GSS payments), with a view to offsetting them against any potential penalties at PR19 (to avoid 'double jeopardy'). In your FD, Ofwat accepted your position on double jeopardy in principle but noted that it expects you to clearly explain why an incentive should not apply in the event that you felt double jeopardy had occurred. For 2017-18 we understand that you have grouped costs associated with low pressure, water quality failures and supply interruptions. These costs are not all directly related to the same ODI and there is a risk that, should this group be subsequently used to offset penalties for Customer Minute Lost (supply interruptions), for example, the offsetting would be partly based on payments made for unrelated service failures. We recommended that you continue to be transparent on how your rewards and penalties are calculated.
- Across each of the stages of our assurance approach we note there remains scope for your teams to further reduce reporting risk. For example, we continued to observe that there was scope to improve your contact team's initial categorisation of operational calls from customers (eg: the teams responsible for reporting drinking water quality and odour complaints performance and during our assurance we observed that for some measures (odour, F1 serviceability etc.), your teams rely on a small number of SAP reports to extract information that then requires a number of additional stages of analysis to arrive at final reported figures.

We set out actions in the detailed feedback we provided at each stage of our activity (including noting outstanding actions during our re-review of your MS) and we understand that addressing outstanding actions will form part of an ongoing improvement programme for 2018-19.

Conclusion

Overall across all the areas we have reviewed, we observed robust processes and reporting procedures. We consider we have worked constructively together to identify key reporting risks and issues associated with the MoS, KPIs and APR Section 4 CATs that fell within the scope of our assurance. We have been helped by the open, co-operative and committed attitude of your teams.

As noted in our findings we have identified some areas of risk and some areas for improvement. For example, we have noted areas where teams can continue to improve documentation, which will ultimately help reduce overall reporting risk. We also note that you are planning to undertake further work on improving reporting processes for some measures.

Finally, this is the first year we have applied our full end-to-end, three stage assurance approach to your APR Section 4 CAT reporting (documentation, process and data). For 2018-19 we look forward to continuing to build on the constructive work we have done together as you further strengthen your reporting and continue your ongoing improvement plans for future years.

Yours sincerely



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Appendix 2

APR Part 3

MOS	Reporter Feedback	Management Response
MOS C1 - Adapting to climate change	"It is not clear that the confidence grade reflects the level of accuracy of the estimated annual flows. The team were unable to demonstrate that the modelled flows used to calculate the volume of surface water flow diverted away from the sewer network are within 10% of the actual flow".	In making this calculation, there is inevitably an element of judgement and subjectivity. However, we believe that the basis of assessment is fundamentally sound. It was made whilst weather conditions were normal (i.e. not during a storm or drought period) and is therefore representative.

APR Part 4

Table and Lines	Reporter Feedback	Management Response
Table 4R Lines 14 and 15 Length of gravity sewers rehabilitated and rising mains refurbished / replaced.	"We note that the reported performance is in line with previous years. However, there are different figures for the length of sewer to be reported as replaced and the actual length replaced. We consider the difference is material and should be investigated by the team".	We have maintained a consistent methodology for the reporting of sewer rehabilitation. This is based on restoring a manhole-to-manhole length of sewer to operational service, by repairing the sewer defects within that length. We believe that this methodology is appropriate and consistent with industry guidance, but we will be consulting with the wider industry to ensure that this is the case. Historically, we have reported sewer defects on a 'manhole to manhole length of sewer' basis.
Table 4P Lines 20 and 64 Total Length of raw water mains and conveyers. Total length of non-portable and partially treated main for treatment	"We note that the team is unable to separately identify data for line 4P.63-64 and have therefore reported zero and included the length for this line within 4P.20. The team are undertaking an exercise to improve the data and enable separate reporting for 2018/19".	We do not have any water mains 'designated' as 'partially treated' within our database and all of these mains are designated as raw water mains and reported in line 20. In the course of the year, we intend undertaking a manual exercise tracing the circa 542km of raw water mains contained within our database and will designate them by reference to those non potable mains with are (1) partially treated and (2) are used for the purpose of transferring water from source to treatment. This will facilitate separate reporting in line 64 for 2018/19.
Table 4R Lines 8 and 10 Number of combined sewer, emergency and settled storm overflows	"The classification of overflows on SAP does not match the Ofwat definition and therefore the reported number is an approximation. For future years the team is reviewing the data against consent information".	As part of a Data Improvement Plan, and using a field entitled "link between the permit and the CSO", we have reviewed the environmental permits relating to CSOs and, by reference to the "discharge type" characteristic identified, we have assigned the particular asset to the appropriate line 8, 9 or 10. Where we do not have a "link between the permit and the CSO", the location characteristic used to populate these lines in previous years is used. Although the total number of assets in lines 8, 9 and 10 are unchanged from last year, the split as between combined sewer overflows, emergency overflows and settled storm overflows has changed. However, we believe that this has improved our confidence in the data and provides a more accurate and reliable return.