

Review of Bristol Water's performance during 2017/18

A1: Unplanned customer minutes lost

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
mins/prop/yr	13.4	15.5	13.1	13.1	12.8	73.7	12.5	12.2

Detailed definition of performance measure: The total number of minutes that customers have been without a supply of water in the year, through unplanned interruptions, divided by the total number of properties served by the company in the year. Expressed as minutes/property; thus low is good. The incentive associated with this commitment is financial (reward and penalty).

The Challenge Panel notes that Bristol Water's performance against this measure deteriorated significantly from 2016/17. The reported number for 2017/18 was 73.7 minutes per property per year, well over the target of 12.8 minutes per property per year. Last year's reported performance was 13.1 minutes per property per year.

The associated financial penalty incurred for 2017/18 is £738,900. The total penalty accrued to date since 2015/16 is £1.478m. The forecast total penalty for 2015/16 to 2019/20 is £1.478m.

The Challenge Panel recognises this performance against this measure in 2017/18 was significantly impacted by large unplanned supply interruptions, particularly the burst main at Willsbridge in July 2017 when 35,000 properties lost supply. There were no such large interruptions during 2016/17.

The company briefed the Challenge Panel on the Willsbridge incident and its operational and customer service response to it. The Challenge Panel was pleased to learn that, partly in response to this incident and others it has experienced, the company has begun to implement a new network strategy involving leadership changes, a new asset management function, a restructuring of its outsourced contractual arrangements and process and procedural improvements including a new work scheduling system. When the strategy is fully implemented, it, together with the newly-completed Southern Resilience Scheme and ongoing mains replacement and relining programmes, should mean the company is better placed to deal with such incidents in the future.

Atkins has confirmed that the company's reporting process for this measure is robust and the resulting data is sound.

Some source data for this measure comes from third parties such as Bristol Water's operational contractors. The Challenge Panel was pleased to learn that the company's information governance policies and procedures have been extended to these third party data.

A2: Asset reliability – infrastructure (bursts/low pressure)

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
n/a	Stable	Stable	Stable	Stable	Stable	Marginal	Stable	Stable

Detailed definition of performance measure: A qualitative measure of the capability of the company's infrastructure assets (generally the water mains and other underground assets) to deliver an expected level

of service to consumers and to the environment. The assessment is based on the number of water mains bursts and the number of properties at risk of receiving low water pressure.

The reliability of the company’s infrastructure assets in 2017/18 was assessed to be ‘marginal’, so missing the ‘stable’ target for the year.

The incentive associated with this commitment is financial (penalty only). There is no penalty accrued for 2017/18 because the performance was within the penalty deadband defined in Ofwat’s Final Determination.

Whilst performance in 2017/18 against the low pressure component of this commitment was above target, the number of mains bursts in the year at 1,222 exceeded the target of 950. The company informed the Challenge Panel that the freeze-thaw event towards the end of 2017/18 took the number of bursts above the target and, without this event the target would have been achieved.

The Challenge Panel notes that Atkins found that the company’s procedures for reporting low pressure information have been satisfactorily updated during the year.

Atkins reported that, whilst the reported burst data are sound, there remains insufficient evidence of information checking. This was also noted in 2016/17.

The Challenge Panel will monitor the company’s response to this finding during the coming year.

A3: Asset reliability – non-infrastructure

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
n/a	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable

Detailed definition of performance measure: A qualitative measure of the capability of the company’s non-infrastructure assets (generally the above ground assets such as treatment works and service reservoirs) to deliver an expected level of service to consumers and to the environment. The assessment is based on the number of unplanned non-infrastructure asset maintenance events and the turbidity of water at treatment works.

The reliability of the company’s non-infrastructure assets in 2017/18 was assessed to be ‘stable’ in line with the target for the year.

The incentive associated with this commitment is financial (penalty only).

Atkins has confirmed that the company’s reporting process for these measures are robust and the resulting data are accurate.

B1: Population in centres >25,000 at risk of asset failure

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
pop at risk	288,589	288,589	288,589	288,589	9,063	9,063	9,063	9,063

Detailed definition of performance measure: The total number of consumers in areas of population greater than 25,000 who are at risk of interruptions to their water supply in the event of a failure of a critical asset such as a treatment works. A low number is good.

The incentive associated with this commitment is financial (reward and penalty).

The company's performance in 2017/18 was in line with the target because the Southern Resilience Scheme was completed during the year as planned.

Atkins has confirmed that the company's reporting process for this measure is robust and the resulting data is accurate.

C1: Security of Supply Index

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
%	100	100	100	100	100	100	100	100

Detailed definition of performance measure: This is the Ofwat measure used to assess the security of the company's water supplies. It takes into account the supply of water available to the company and the demand from its customers. The index is expressed as a percentage. 100% is good.

The incentive associated with this commitment is reputational.

The company's performance in 2017/18 was 100% in line with the target.

Atkins has confirmed that the company's reporting process for this measure is robust and the resulting data is accurate.

C2: Hosepipe ban frequency

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
days	10.2	1.5	10.2	3.1	10.2	3.1	10.2	10.2

Definition of performance measure: The likelihood in any one year that temporary usage restrictions such as the use of hosepipes will be implemented. This is expressed as return period in expected days per year for a defined severity of event. A low number is good. The incentive is financial penalty only.

The reported return period for 2016/17 was 3.1 days per year, the same as in 2016/17. The target for 2017/18 was 10.2 days per year so the actual performance was well within this.

Atkins informed the Challenge Panel that Bristol Water’s reporting methodology for this measure is satisfactory and the reported number for 2017/18 is accurate.

D1: Mean zonal compliance

Unit	Target 15/16	Actual 2015	Target 2016	Actual 2016	Target 2017	Actual 2017	Target 2018	Target 2019
%	99.96	99.93	99.96	99.97	100	99.93	100	100

Definition of performance measure: Statutory indicator used by the DWI to assess overall water quality compliance each calendar year across all water companies in England and Wales. Expressed as a percentage; thus high is good. The incentive associated with this commitment is financial (penalty only).

The Challenge Panel notes that Bristol Water’s performance in 2017 against this measure was 99.93% against a target of 100%. Performance last year was 99.97% and has deteriorated to the level achieved in 2015.

The associated financial penalty incurred for 2017 is £284,000. The total penalty accrued to date since 2015 is £568,000. The forecast total penalty for 2015 to 2019 is £568,000.

The Challenge Panel was informed that performance fell as a result of problems on customers’ pipework (over which Bristol Water has little control). The compliance of water from the company’s assets remained high and similar to the previous year.

Atkins has confirmed the reporting process for this measure is fit for purpose and the resulting data are sound. It has recommended that internal data checks are documented.

E1: Negative water contacts

Unit	Target 15/16	Actual 2015	Target 2016	Actual 2016	Target 2017	Actual 2017	Target 2018	Target 2019
contacts/year	2,422	2,329	2,409	2,162	2,322	1,711	2,275	2,221

Definition of performance measure: The number of customer complaints received each calendar year in relation to the taste, colour and odour of customers’ water supply. It excludes any discoloured water complaints associated with events notified to the DWI but includes ‘air in supply’ complaints. A low number is good. The incentive associated with this commitment is financial (reward and penalty).

The Challenge Panel is pleased to note that Bristol Water’s performance against this measure has improved over 2016. 1,711 negative water contacts were recorded in 2017, 451 (21%) fewer than the previous year. The target for 2017 was 2,322 negative water contacts.

Atkins has confirmed the company’s reporting process for the measure and the resulting numbers are robust.

F1: Leakage

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
MI/day	48.0	44.2	47.0	46.4	45.0	46.6	44.0	43.0

Definition of performance measure: The amount of water that enters the distribution system but is not delivered to customers because it is lost from either the company's or the customers' pipes. Leakage is measured in megalitres per day (MI/d). A low figure is good. The incentive is financial (reward and penalty).

As reported last year the company reviewed its leakage calculation methodology and updated and increased its estimate of non-household night use, one the components that make up the calculation. The company explained in detail in its Annual Performance Report the rationale for revising its estimate and the comparability and consistency of this with the leakage targets included in its Final Determination. The company also informed Ofwat of its revised assumptions.

In 2016/17 Atkins reviewed the revised estimate, and other adjustments to the leakage methodology made by Bristol Water, and concluded that the basis of the latest reported leakage figure is more aligned to the Final Determination performance commitment. It considered the revised methodology and the reported leakage to be robust.

The reported leakage for 2017/18 was 46.6 MI/d, above the target of 45 MI/d. The reported leakage for 2016/17 was 46.4 MI/d.

The associated financial penalty incurred for 2017/18 (based on the original Final Determination target and methodology) is £1.082m. The total penalty accrued to date since 2015/16 is £1.082m. The forecast total penalty for 2015/16 to 2019/20 is £5.592m (see below).

Last year Bristol Water informed the Challenge Panel that it was assigning more resources to reducing leakage so the Challenge Panel is disappointed to see that leakage increased despite this. The company informed the Panel that in the summer of 2017 leakage levels were higher than desired and that it deployed extra resources in the autumn to tackle this. However the freeze thaw event in March this year had a significant detrimental effect on leakage causing the target to be missed. Whilst the Challenge Panel accepts the cold conditions were exceptional for that time of year, it will monitor the company's leakage reduction activities in the coming year.

The company is forecasting to meet its leakage for the rest of the current five-year period, based on its new reporting methodology. However, it is assuming the incentives associated with its leakage performance will be calculated with reference to the original Final Determination leakage targets. This means it is anticipating a total penalty of £5.592m for 2015/16 to 2019/20 to be incurred.

G1: Meter penetration

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
%	50.4	47.3	54.8	49.6	58.8	52.7	62.5	65.9

Definition of performance measure: The proportion of total properties of billed household customers that are charged for water on a measured basis. Expressed as a percentage; thus high is good. The incentive associated with its measure is financial.

As reported last year and the year before Bristol Water made a slow start implementing its plan to install meters on change of occupancy. Despite increasing its meter penetration to 52.7% during the year the company fell short of its 2017/18 target of 58.8%.

The associated financial penalty incurred for 2017/18 is £152,000. The total penalty accrued to date since 2015/16 is £422,000. The forecast total penalty for 2015/16 to 2019/20 is £574,000.

During 2016/17 the company developed and commenced a revised metering plan and it invited comments from the Challenge Panel on this. Bristol Water's revised plan is designed to meet the original meter penetration target by 2019/20.

The Challenge Panel challenged the company to use all means available to promote the benefits of metering, to capture customers' experiences of the metering project and to ensure that any customer complaints received are analysed and the plan amended if necessary. The company has risen to these challenges, including setting up a new project delivery team and assigning additional resources and it is making progress against its revised plan. The Challenge Panel will continue to monitor progress during the coming year.

Atkins has confirmed that both the company's reporting methodology and the resulting data for this measure are robust.

G2: Per capita consumption

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
litres/head/day	145.4	141.1	144.5	144.1	143.6	144.5	142.8	142.0

Definition of performance measure: The average amount of water (expressed in litres) used by each consumer each day. A low figure is good. The incentive associated with this commitment is reputational.

The per capita consumption reported for 2017/18 was 144.5 litres per head per day. The target for the year was 143.6 litres per head per day so was missed. The reported consumption for the previous year was 144.1 litres per head per day. Bristol Water informed the Challenge Panel that the increase was probably partly due to it being behind on its meter installation programme and partly due to the dry weather experienced in 2017/18 which resulted in higher demand and usage such as garden watering.

Last year Atkins recommended that Bristol Water make refinements to the reporting methodology for this measure. The Challenge Panel was pleased to learn this happened and that Atkins considers the company's reporting methodology and the resulting data for this measure for this year are robust.

H1: Total carbon emissions

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
kgCO ₂ e/person	32	35	25	32	23	28	22	20

Definition of performance measure: The total carbon emissions from the activities of the company and its contractors expressed in kilogrammes of CO₂ (carbon dioxide) equivalent divided by the population

supplied; thus low is good. The associated incentive is reputational.

Bristol Water reduced its carbon emissions from 32 to 28.6 kgCO₂e per person from last year but missed the 2017/18 target of 23 kgCO₂e per person. It has missed all its targets since 2015/16. As reported in previous years, the company has informed the Challenge Panel that the use of some standard industry definitions when the targets were set are proving to be too aggressive and cannot be met in a cost-effective manner. The company has informed the Challenge Panel of the ways in which it is implementing energy savings. However, it is unlikely to meet its 2019/20 emissions target of 20 kgCO₂e per person. The Challenge Panel is disappointed that this may be the outcome but accepts the reasons for this.

Atkins has confirmed that the company's reporting methodology for this measure is adequate and the resulting number is reasonable.

H2: Raw water quality of sources

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
%of AMP6 baseline aggregate of algal bloom frequency	>+10% Deteriorating	+20% Deteriorating	>+10% Deteriorating	+11% Deteriorating	+/-<10% Marginal	-1% Marginal	+/-<10% Marginal	+/-<10% for >2years Stable

Detailed definition of performance measure: A qualitative measure of the quality of the company's sources of raw water that are at risk due to increased levels of pesticides and nutrients in their catchments. The assessment is made using a basket of chemical and physiological measures.

The company agreed with Ofwat a change to reporting this metric, therefore the targets are presented as a % change of the AMP5 baseline aggregate (8,059) of algal bloom frequency.

The quality of the company's raw water sources in in 2017/18 was assessed to be 'marginal' in line with expectation. This represents an improvement on the positions reported in 2015/16 and 2016/17.

The incentive associated with this commitment is reputational.

Atkins has confirmed that the company's reporting methodology for this measure is robust and the reported position is correct.

H3: Biodiversity Index

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
n/a	17,649 Improving	17,649 Improving	17,650 Improving	17,650 Improving	17,651 Improving	17,657 Improving	17,652 Improving	17,652 Improving

Definition of performance measure: Bristol Water is required to carry out regular surveys at its sites to assess the level of biodiversity. This will involve quantifying the area of specific habitats available, together with their quality, importance and presence of significant species. The company will combine these measurements to create a quantitative "Biodiversity Index" for each of its sites and an aggregate Biodiversity Index for its overall landholdings. The Biodiversity Index calculation is: [Hectares of priority habitat or metres of linear habitat] x [status grade of this habitat]. The targets associated with this commitment are related to the company 'improving' its Biodiversity Index each year. The associated incentive is reputational.

The company agreed with Ofwat a change to reporting this metric, therefore the targets are presented as a numerical Biodiversity Index score.

Bristol Water achieved an 'improving' Biodiversity Index in 2017/18, in line with its target. The Challenge Panel notes that the Biodiversity Index score will reduce due to natural degradation in the environment and that the company has to undertake environmental improvement work to counter this.

The Challenge Panel was pleased to learn from Atkins that the company's reporting methodology for this measure and the associated documentation improved during 2017/18. The reported number is considered to be accurate.

H4: Waste disposal compliance

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
%	100	96	100	96	100	98.1	100	100

Definition of performance measure: The percentage compliance against environmental standards of waste disposed from the company's operational sites. A high percentage is good. The incentive associated with this measure is reputational.

Bristol Water achieved 98.1% compliance against the 2016/17 target of 100%. This represented an improvement from the year before. As reported last year most issues affecting performance are related to difficulties in obtaining samples. The issues were resolved at water treatment works at Purton and Littleton but remain at Barrow where the company is struggling to find a permanent solution. This, coupled with a new discharge consent at Blagdon will mean the target is likely to be missed for the remainder of the period.

Atkins confirmed that the company's reporting methodology for this measure is satisfactory and the resulting data is robust.

I1: Percentage of customers in water poverty

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
%	2.0	0.4	2.0	0.9	1.9	0.0	1.9	1.8

Definition of performance measure: Bristol Water has defined water poverty as the percentage of households within its supply area for whom their water charges represent more than 2% of their disposable income, defined as gross income less income tax. A low number is good. The incentive relating to this commitment is reputational.

The reported percentage of customers in water poverty in 2017/18 was 0%, a decrease from the figure of 0.9% reported last year. The target percentage for 2017/18 was 1.9% so the Challenge Panel was pleased to see performance was well within this and continues the improvement from last year.

Atkins has confirmed that the reported number comes from the third-party model.

J1: Service Incentive Mechanism (SIM)

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
ranking	Top 5 (85.10)	Top 5 (85.10)	Top 5 (85.00)	Top 5 (85.91)	Top 5 (86.00)	Not Top 5 (83.38)	Top 5 (SIM TBC)	Top 5 (SIM TBC)

Definition of performance measure: The Ofwat comparative measure of customer service that includes the number of complaints and unwanted contacts received and the performance in handling telephone contacts. It also includes a survey of customer's views on the service provided by the company. The result is the company's ranking in the industry. The incentive is financial (reward and penalty).

The company agreed with Ofwat a change to reporting this metric, therefore the targets are presented as the previous year's upper quartile SIM, meaning the 18/19 and 19/20 upper quartile targets cannot yet be stated.

The Challenge Panel noted that the company's SIM performance fell from the previous year's SIM score of 85.91. Bristol Water has to wait for other companies' data to be published to confirm whether its SIM performance in 2017/18 will be in the industry top five.

There is no penalty accrued for 2017/18 because the performance was within the penalty deadband defined in Ofwat's Final Determination.

The company told the Challenge Panel that its SIM performance had been affected by the high number of significant operational incidents it suffered during 2017/18. These included supply interruptions at Willsbridge and Sea Mills, the precautionary boil water notice at Clevedon and the freeze thaw event. The Challenge Panel was encouraged to learn that customers were generally satisfied with the company's responses to these incidents, but expressed concern over the distribution of bottled water to those in need during supply interruptions. The company responded positively to this feedback and its response to the Clevedon water quality issue was more satisfactory in this respect as a result.

Atkins informed the Challenge Panel that the reported SIM performance is robust. It did identify an issue concerning a small and immaterial number of calls not being logged and the company is responding positively to this. The Challenge Panel will monitor this during the coming year.

J2: General satisfaction from surveys

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
%	93	83	93	86	93	87	93	93

Definition of performance measure: The percentage of customers responding to the company's annual household customer tracking survey who rate their satisfaction in respect of the company's service as excellent, very good or good. A high percentage is good. The incentive is reputational.

Bristol Water achieved a satisfaction score of 87% in 2017/18, a 1% increase on the previous year. However the 87% satisfaction achieved fell short of the 2017/18 target of 93%. The company considers customers satisfaction was adversely affected by the high number of significant operational incidents it suffered during 2017/18. These included supply interruptions at Willsbridge and Sea Mills, the precautionary boil

water notice at Clevedon and the freeze thaw event. The Challenge Panel was encouraged to learn that the company is working hard to improve its customer service through initiatives including the improvement of its digital offering, bad debt reduction and assisting customers with water efficiency. The Challenge Panel will monitor progress during the coming year.

Atkins confirmed that the reported data for his measure have come from the associated survey commissioned by a third-party provider.

J3: Value for money

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
%	71	70	71	72	71	69	72	72

Definition of performance measure: The percentage of customers who consider that the company provides good value for money. The measure is calculated from an independent survey of 200 customers each month who have had cause to contact Bristol Water on an operational issue. A high percentage is good. The associated incentive is reputational.

For 2016/17 Bristol Water reported a 69% performance for this measure against a target of 71%. Performance slipped from 72% the year before.

The company told the Challenge Panel that it believes its score has dropped because of the operational incidents it suffered during 2017/8 particularly the precautionary boil water notice in Clevedon. The Challenge Panel considers the increased public debate around re-nationalisation of the water industry may also have had an impact.

Atkins have confirmed the company's reporting methodology and resulting data are robust.

K1: Ease of contact from surveys

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
%	93.4	95.0	94.4	94.4	96.5	93.1	>96.5	>96.5

Definition of performance measure: The percentage of consumers who consider that Bristol Water is easy to contact by telephone, based on responses to a monthly telephone survey. Thus a high percentage is good. The incentive is reputational.

For 2016/17 Bristol Water achieved a 93.1% performance for this measure against a target of 96.5%. Performance in 2016/17 was 94.4% so has reduced slightly.

The Challenge Panel notes that Bristol Water is introducing IT improvements designed to improve customer service by making it easier to respond to enquiries. It also welcomed the company's efforts to understand and reduce customers' 'don't know' responses to the survey questions. The Challenge Panel will monitor performance against this measure during the coming year.

Atkins have confirmed the reporting methodology and resulting data for this measure are robust.

L1: Negative billing contacts

Unit	Target 15/16	Actual 15/16	Target 16/17	Actual 16/17	Target 17/18	Actual 17/18	Target 18/19	Target 19/20
contacts/year	2,480	2,301	2,395	3,096	2,315	2,300	2,240	2,170

Definition of performance measure: The number of ‘unwanted’ calls received by Bristol Water relating to specific billing related issues. The definition of unwanted calls is taken from the Ofwat definition used for the SIM. A low number is good. The incentive is reputational.

Bristol Water reported 2,300 negative billing contacts in 2017/18 This was significantly fewer than in 2016/17 (3,096) and just below the target of 2,315 for 2017/18.

The Challenge Panel was pleased to learn that performance has improved and that the increased focus the company is giving to customer service and the initiatives such as proactive text messaging it has introduced are proving to be effective. It will continue to monitor the company’s performance against this measure in the coming year.