

December 2014

Setting price controls for 2015-20
Final price control determination notice:
company-specific appendix – Severn Trent Water



OFWAT

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Overview

This appendix sets out the details of the final determination of price controls that are specific to Severn Trent Water. As set out in [‘Policy chapter A1 – Introduction’](#) (‘policy chapter A1’), the final determination protects customers in accordance with our statutory duties and [‘Setting price controls for 2015-20 – final methodology and expectations for companies’ business plans’](#) (our ‘final methodology statement’). We have also had regard to relevant guidance from the UK Government and the principles of best regulatory practice to be transparent, accountable, proportionate, consistent and targeted.

We published [‘Draft price control determination notice: company-specific appendix – Severn Trent Water’](#) (the ‘draft determination’ for Severn Trent Water) on 29 August. Severn Trent Water is a non-enhanced company. This means its final determination is subject to any adjustments we considered necessary in light of any additional evidence available to us. In this respect, Severn Trent Water has been treated in the same way as the other non-enhanced companies.

The customer challenge group (CCG) played an important role in both the development of the company’s original plan and the company’s revised proposals in response to our challenges and published guidance.

Since the first submission of its business plan in December 2013, Severn Trent Water’s proposals have also continued to evolve to take into account the outcome of our risk-based review (RBR), [‘Setting price controls for 2015-20 – risk and reward guidance’](#) (our ‘risk and reward guidance’) and our draft determination and other relevant policy consultations.

The revised business plan submitted by Severn Trent Water in June 2014 sought to close the gaps we identified during the RBR. In particular, the company revised its proposal for the Birmingham resilience scheme, reducing costs by £230 million and accelerating delivery of the scheme into the 2015-20 period. The company also accepted our risk and reward guidance and strengthened its package of outcome delivery incentives (ODIs) to include more financial rewards and penalties.

In the draft determination we noted that the revisions that Severn Trent Water made to its business plan were positive, however there remained outstanding concerns in a number of areas. Most significantly, we made the draft determination on the basis of two scenarios – one including the core Birmingham Resilience Scheme and the other excluding the scheme. We stated that inclusion of the scheme in the final determination would be contingent on the company providing appropriate assurance relating to our remaining concerns on need and customer protection. We also made some targeted interventions in relation to the retail control

and in relation to wastewater wholesale costs, where the company was more than 5% under our cost threshold.

Severn Trent Water's representations on the draft determination focused on a small number of critical issues, namely:

- water wholesale costs, where the company provided additional evidence and assurance to support claims for the Birmingham resilience scheme, community risk schemes and water non-infrastructure expenditure;
- risk and reward, where the company provided evidence to support maintaining the cost of capital at the level assumed in the draft determination;
- financeability, where the company proposed changes to pay as you go (PAYG) rates and financial ratio calculations to address financeability concerns associated with retaining its target credit rating; and
- 2010-15 performance, where the company raised a number of detailed points about our technical approach to legacy adjustments.

We also received representations from the company's CCG, the Environment Agency, Natural Resources Wales, Natural England and the Consumer Council for Water (CCWater), which predominantly focused on performance commitments (PCs), delivery incentives and the Birmingham resilience scheme.

In reaching the final determination we have carefully considered all representations we received on the draft determination and taken account of the most up-to-date information available where appropriate. As a result, this has led to changes which we consider are in the interests of customers and in line with our other statutory duties, including:

- accepting Severn Trent Water's revised proposals for the core Birmingham resilience scheme and associated community risk schemes;
- partially accepting Severn Trent Water's changes to PAYG rates to bring revenue forward into the 2015-20 period;
- reducing the size of the downwards adjustment (or shortfall) we made to reflect some aspects of performance in 2010-15 from £85 million to £48 million;
- in line with all non-enhanced companies, reducing the allowed return (WACC) to 3.6% for the wholesale business to reflect the significant movement in the cost of new debt since the publication of our risk and reward guidance in January 2014; and
- adopting 2013-14 as the price base for setting the retail price controls (household and non-household).

We summarise our final determination for Severn Trent Water in section A1: 'Final determination – at a glance'.

The remainder of this document sets out our final determination in more detail and is structured according to the binding price controls we are setting for the wholesale and retail elements of the appointee (the whole regulated business):

- wholesale water;
- wholesale wastewater;
- household retail; and
- non-household retail.

As we explained in our final methodology statement, these separate controls are binding, confirmed through the modifications already made to the price setting elements of companies' licence conditions. This means that the companies cannot recover more revenue than allowed under each specific price control and cannot transfer costs between the controls. The revenue allowance for each price control is determined by the costs specific to that particular price control. This provides the companies with more effective incentives. It also helps to avoid distortion to the non-household market, which will be fully open to competition from 2017, as provided for in the Water Act 2014.

To support these separate, binding controls, throughout this document we also provide details on:

- the responses that we have received to our draft determination and any consequential adjustments that we have made;
- the outcomes for the company to deliver and associated ODI;
- the efficient costs that we consider the company can achieve;
- the adjustments we are making to the wholesale water and wastewater price controls to reflect the company's performance in 2010-15;
- the allowed return for the wholesale water and wastewater controls, and the retail household and non-household net margins;
- the return on regulatory equity (RoRE) range;
- the financial ratios under the notional capital structure;
- the uncertainty mechanisms that form part of each price control; and
- where appropriate, the assumptions we have made to arrive at the allowed revenue for each price control.

Implementing these price limits

Severn Trent Water must deliver its obligations as required by the Water Industry Act 1991, other relevant legislation and its Instrument of Appointment ('licence'). This price control determination has been made under the terms of Severn Trent Water's licence and the Water Industry Act 1991. We consider that Severn Trent Water must act in an economic and efficient manner in delivering all of its obligations.

Policy chapter A1 sets out the milestones leading up to April 1, 2015 that will ensure effective business plan delivery. These cover menu choices, charges approval, reporting and assurance requirements during 2015-20, and the 2014 price review (PR14) reconciliation.

In [IN 14/15: '2014 price review – timetable for setting charges for 2015-16 and making menu choices'](#) we set out the requirement for companies to notify us of their menu choices by 16 January 2015. We will make any adjustment to the company's allowed revenues that result from its menu choice as part of the price review in 2019 (PR19). A company's menu choice will be influenced by our decisions in this final determination. We confirm in annex 4 of this document a commitment that the ODIs will be recalibrated in the true up calculations, based on a sharing rate that is consistent with the company's menu choice. To facilitate this, we expect the company to publish its ODIs with the cost sharing rate that is implied by its menu choice on 16 January 2015. This will allow inclusion of the recalibrated ODIs within the framework for reporting and assurance from 1 April 2015, which we will publish on 9 February 2015. We require companies' Boards to provide assurance that the recalibrated ODIs conform with the final determination and are consistent with their menu choice. Any modifications should be confined to correctly adjusting the incentive rates for the difference between the final determination assumption on the cost sharing rate and the rate associated with their final menu choice.

This price determination sets out the allowed revenues that Severn Trent Water can recover from its customers in the period 2015-20. Severn Trent Water is responsible for converting the allowed revenues into charges. In [IN 14/17: 'Approval of charges 2015-16 – our approach, process and information requirements for large and small companies'](#) and the accompanying policy document, we set out the timeline and process for charging approval. Companies are required to provide us with their charges schemes, associated assurances, and the other information requirements, and to provide any new appointees in their area with their charges schemes by 16 January 2015. By 2 February 2015 each company is required to publish its charges schemes.

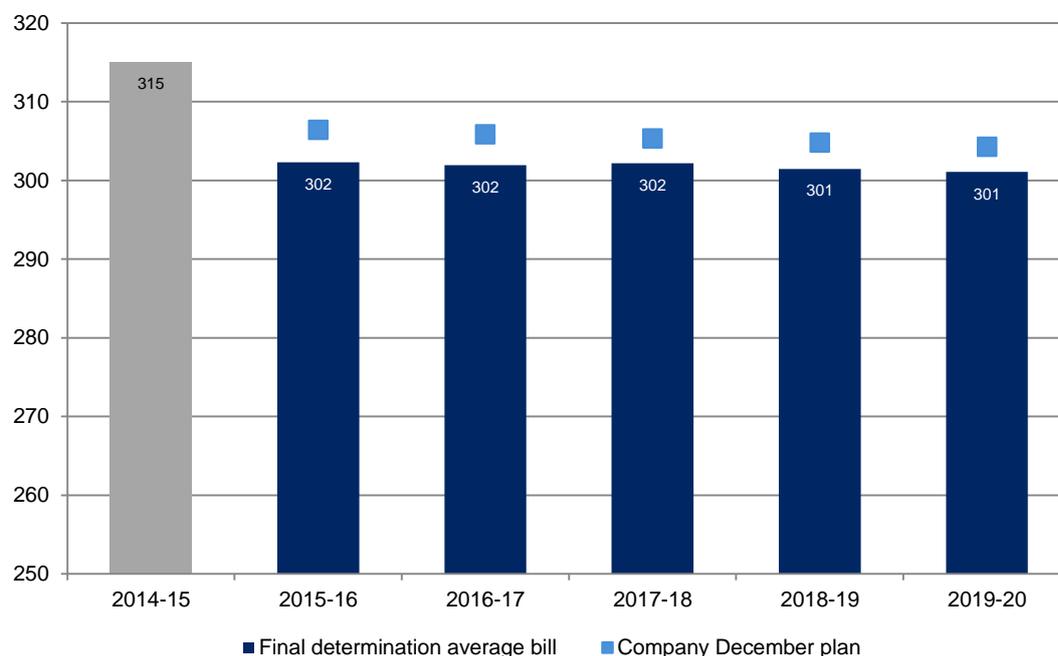
A1 Final determination – at a glance

This chapter provides a summary of the final determination for Severn Trent Water. It summarises what the final determination will mean for customers, with respect to the average bills they will pay and the outcomes that the company will deliver in return. For the company, it covers its allowed costs and revenues, RoRE and financeability ratios. We also summarise the interventions we have made to the company's revised plan in order to protect the interests of customers.

Combined average household bill (£)

The chart below shows the average bills proposed in the company's December plan, the average bills in our final determination and the level of current bills (2014-15). All bills are shown without the impact of inflation and are indicative as final bills will depend on the growth in the number of customers, changes in their usage and the specific charges that the company sets each year within the overall price controls that we have determined. Our final determination means that average bills in 2019-20 will be £301, which is 4% lower than current average bill levels (of £315).

The difference between Severn Trent Water's December plan and our final determination is the result of the company's acceptance of our risk and reward guidance, other revisions to its plan and the interventions we have made in its plan. This represents a cumulative saving of £18 for the average customer over the 2015-20 period.

Figure A1.1 Average bills

Note: The comparative bills from company's December business plan' is based on the data submitted by the company in its business plan but projected using our financial model, thereby ensuring consistency with the final determination projection. As a consequence the company's proposed bills illustrated above may not necessarily be the same as those described in the revised business plan.

The outcomes committed to by Severn Trent Water

Severn Trent Water has committed to delivering outcomes that reflect its customers' views. These are supported by 45 associated PCs which identify the company's committed level of performance under each outcome. For 33 of these PCs the company is subject to associated financial ODIs whereby it will incur a penalty for performance worse than its commitments, but for some can earn a reward for performance better than its commitments during the period from 2015 to 2020.

The table below sets out the outcomes proposed by Severn Trent Water. These outcomes reflect the priorities of customers set out in research and engagement with the CCG. We have undertaken a comparative assessment of outcomes where it was possible to draw comparisons across the sector and, where necessary, we have intervened to challenge companies to deliver an upper quartile level of performance. Details of the types of incentives and level of PCs associated with these outcomes are set out in annex 4.

Wholesale water	Wholesale wastewater
We provide water that is good to drink	We will safely take your waste away
We will ensure water is always there when you need it	We will have the lowest possible charges
We will have the lowest possible charges	We will protect our local environment
We will protect our local environment	We will protect the wider environment
We will protect the wider environment	We will make a positive difference in the community
We will make a positive difference in the community	
Retail	
We will provide you with excellent customer service	
We will help you if you struggle	

Allowed costs and revenue for Severn Trent Water

The table below shows the wholesale total expenditure (totex) we have allowed over the period from 2015 to 2020. The final determination allows Severn Trent Water to receive revenues of £7,024 million. This combines allowed revenues for the wholesale and household retail controls. For non-household retail, we have also set average revenue controls per customer for each of the customer types proposed by the company. The £141.6 million of non-household revenue shown in the table below is indicative, as it does not assume any gains or losses from competition or the company charging customers at levels different to the relevant default tariffs.

Wholesale	Water	Wastewater
Totex 2015-20 total (£m)	2,843.5	2,737.1
Allowed return (%)	3.60%	3.60%
Allowed wholesale revenue 2015-20 (£m)	3,100.0	3,322.8
Retail	Household	Non-household
Cost allowance – 2015-20 total (£m)	542.0	
Margin (%)	1.00%	2.49%
Retail allowed revenue (£m)	601.4	141.6

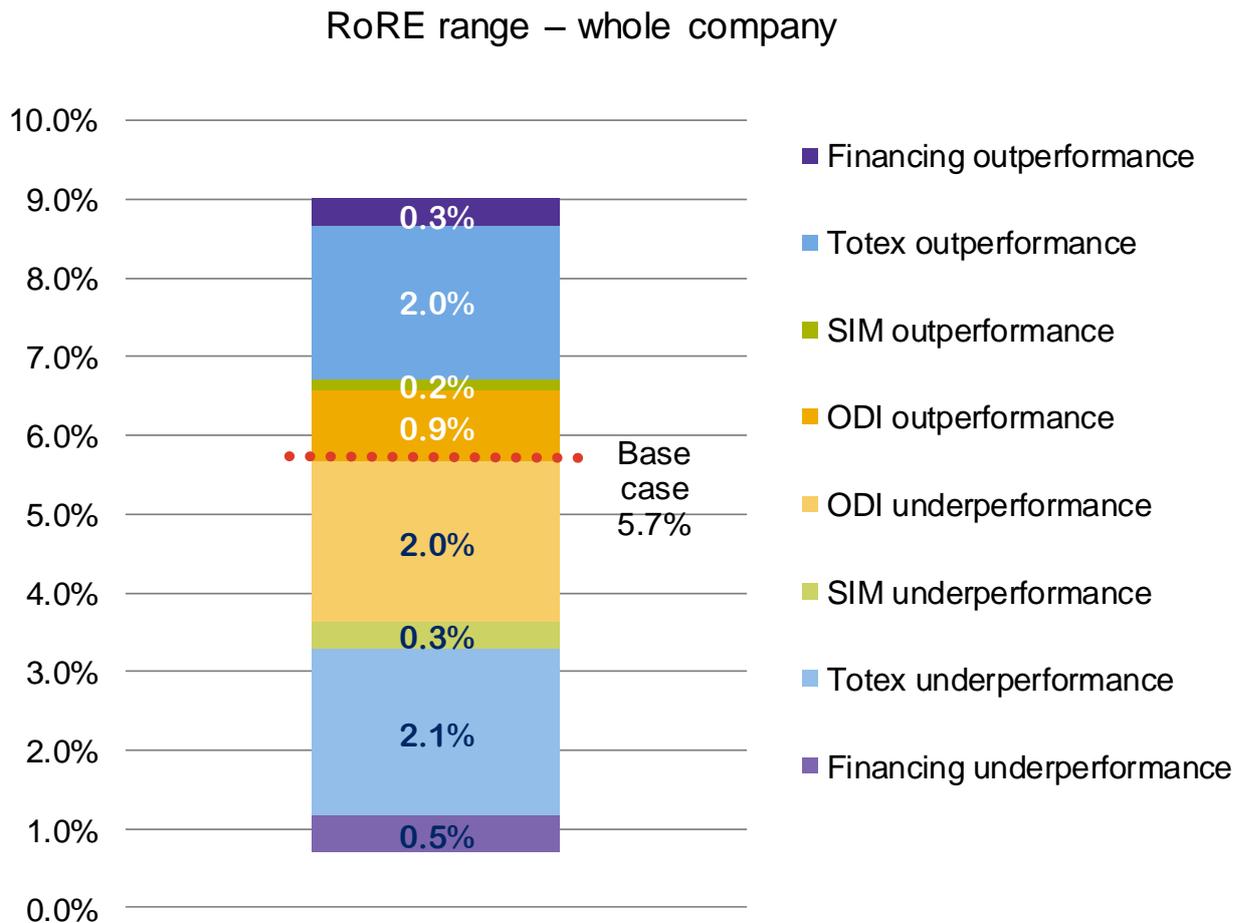
Note: Wholesale figures in 2012-13 prices as wholesale revenue will be affected by inflation and retail figures in nominal prices as retail revenue will not be affected by inflation. This is consistent throughout this final determination unless otherwise stated.

RoRE ranges – appointee

Severn Trent Water has estimated the range of returns on regulatory equity (RoRE) that it could earn dependent on its performance and external risk factors over the price control period. The RoRE range reflects the company's views and is based on an efficient company with the

notional¹ capital structure. We have identified the RoRE impact separately for ODIs, totex performance, financing and the service incentive mechanism (SIM). We note that Severn Trent Water’s actual returns may differ from notional returns due to differences between notional and actual capital structure and notional and actual cost of new debt and level of cost efficiency compared to allowed totex and household retail average cost to serve (ACTS).

Figure A1.2 RoRE range – whole company



Source: Our calculations based on information from Severn Trent Water.

Note: Numbers presented based on calibration of the ODIs against an assumed menu choice of a 50% sharing factor

¹ Notional refers to the capital structure that reflects Ofwat’s assumption of an appropriate level of gearing to use in determining the allowed return

Our calculation of notional financeability ratios

Ofwat has a statutory duty to secure that a company is able to finance the proper carrying out of its functions. We interpret this financing duty as requiring that we ensure that an efficient company with a notional capital structure is able to finance its functions. A company's actual capital structure is a choice for the company and it bears the risk associated with its choices. An efficient company is assumed to be able to deliver its plans based on the expenditure allowance in our final determination.

Severn Trent Water provided assurance that its plan was financeable on the basis of a notional and its actual structure. The notional financial ratios on which this final determination is based, which take account of our interventions, are set out in section A6 and summarised on a 5-year average basis below. We have assessed this final determination for Severn Trent Water to be financeable on a notional basis.

Financial ratios for notional company	Ofwat calculation (average 2015-20) ²
Cash interest cover (ICR)	3.12
Adjusted cash interest cover ratio (ACICR)	1.55
Funds from operations(FFO)/debt	9.60%
Retained cash flow/debt	6.97%
Gearing	63.09%
Dividend cover (profit after tax/dividends paid)	1.12
Regulatory equity/regulated earnings for the regulated company	17.25
Regulatory capital value (RCV)/earnings before interest, taxes, depreciation and amortisation (EBITDA)	10.45

Summary of interventions

In reaching our final determination we have intervened in the company's business plan, where necessary, to safeguard the interests of customers. In doing so, we have listened carefully to representations we have received on the draft determination and taken account of the most up-to-date information available where appropriate. We summarise the most significant interventions in the table below.

Outcomes	Wholesale costs
<ul style="list-style-type: none"> Cap: We have imposed an overall cap and collar on ODIs of +/- 2% of RoRE, although we have excluded six PCs from the cap 	<ul style="list-style-type: none"> The company proposed wholesale water totex of £2,930 million in its plan, which is £87 million (3%) above our final determination threshold of

² Final determination ratios reflect 100% of IRE expensed in the income statement.

<ul style="list-style-type: none"> • Comparative assessments: We have updated our comparative assessment and interventions on PCs, deadbands, collars and caps that are applied consistently for all non-enhanced companies. • Company specific assessments: We have made interventions to ensure that Severn Trent Water is subject to effective incentives that protect customers in areas that are not comparable across companies. Importantly this includes a PC and ODI relating to the Birmingham resilience scheme and associated community risk schemes. 	<p>£2,843 million.</p> <ul style="list-style-type: none"> • The company proposed wholesale wastewater totex of £2,658 million in its plan, which is 11% below our threshold of £2,992 million. Given that the difference exceeds 5%, and consistent with the approach for all companies that are significantly below our final determination threshold, we have capped the cost threshold at £2,791 million: 5% above the company plan view of totex.
<p>Retail</p>	<p>Reconciling 2010-15 performance</p>
<ul style="list-style-type: none"> • We are using 2013-14 as the price base for setting the retail price controls (household and non-household). 	<ul style="list-style-type: none"> • We have changed the company's proposed revenue adjustments by £50 million (in customers' favour) and its proposed RCV adjustment by £45 million (in customers' favour). • We have removed the serviceability shortfall for unplanned interruptions and reduced the shortfall value for water treatment works coliforms performance and sewer blockages in line with our change in methodology for the final determination.
<p>Risk and reward</p>	<p>Financeability and affordability</p>
<ul style="list-style-type: none"> • Based on the latest market evidence for the cost of new debt we have reduced the company's allowed return from 3.7% to 3.6%. 	<ul style="list-style-type: none"> • The PAYG rate for the final determination has increased as we have allowed for some of the increase proposed by Severn Trent Water to assist with financeability through maintaining a target credit rating for the notional structure.

A2 Wholesale water

A2.1 Consideration of representations on our draft determination

In policy chapter A1, we provide a list of the respondents to the draft determinations published in April, May and August of this year. We have fully considered all of the responses received, and where appropriate, we have made either consequential adjustments to our price control methodology or company-specific interventions.

Our general policies relevant to the wholesale water control are set out in the following policy chapters that accompany our final determination. These include our responses to representations on sector-wide issues.

- [‘Policy chapter A2 – outcomes’](#) (‘policy chapter A2’).
- [‘Policy chapter A3 – wholesale water and wastewater costs and revenues’](#) (‘policy chapter A3’).
- [‘Policy chapter A4 – reconciling performance for 2010-15’](#) (‘policy chapter A4’).
- [‘Policy chapter A7 – risk and reward’](#) (‘policy chapter A7’).
- [‘Policy chapter A8 – financeability and affordability’](#) (‘policy chapter A8’).

Table A2.1 lists the representations we have received that are specific to Severn Trent Water's wholesale water control and sets out where to find more information on our responses in this document.

Table A2.1 Representations specific to the wholesale water control of Severn Trent Water

Area	Company-specific representations	Detailed commentary in this company appendix
Outcomes, PCs and incentives	Severn Trent Water Environment Agency Natural Resources Wales CCWater Natural England	Annex 4
Outcome delivery and reporting	None	Annex 4

Area	Company-specific representations	Detailed commentary in this company appendix
Calculating allowed wholesale water expenditure	Severn Trent Water CCWater CCG	Section A2.3.1 and Annex 1
Calculation of revenues: PAYG and RCV run-off	Severn Trent Water	Section A2.3.2 and A6.5
Return on the RCV	Severn Trent Water	Section A2.3.3
Reconciling 2010-15 performance	Severn Trent Water	Section A2.3.4 and Annex 3
Uncertainty mechanisms	Environment Agency	Section A2.4

A2.2 Company outcomes, performance commitments and delivery incentives

A2.2.1 Outcomes, performance commitments and incentives

In policy chapter A2, we discuss our approach to outcomes for the wholesale and retail controls. Severn Trent Water has developed and committed to delivering outcomes which reflect its customers' views. These are supported by specific PCs and associated incentives (ODIs) whereby the company can be rewarded or penalised for its performance during the period from 2015 to 2020.

The company's outcomes have been developed with input from its CCG. The CCG's role was to challenge how well the company's outcomes, PCs and delivery incentives reflect the views and priorities of customers, both now and in the future, as well as environmental priorities.

Consistent with the draft determination, our assessment of the specific PCs proposed by each company for wholesale water has focused on:

- comparative assessments where it was possible to compare PCs and incentives across the sector and so challenge companies to deliver an upper quartile level of performance so that companies are focused on delivering benefits for customers and the environment; and
- company-specific assessments to ensure that the PCs proposed by each company are challenging, appropriately incentivised and supported by customer engagement.

We summarise the outcomes, PCs and ODIs for the wholesale water control for Severn Trent Water in table A2.2 below. Where we have intervened we have done so to ensure that companies are subject to effective incentives that protect customers against under-delivery and where merited, reward companies for outperformance.

We summarise our interventions in table A2.2 and set out whether they are the result of our comparative assessment or company-specific assessment. Full detail of the wholesale water outcomes, PCs and incentives, and our consideration of relevant responses, is provided in annex 4.

Consistent with the draft determination, we are intervening to impose an overall cap and collar on ODIs for the 2015-20 period, thereby limiting total rewards and penalties. The cap and collar will apply in line with the approach set out in policy chapter A2. The wholesale water PCs that are excluded from the cap and collar are:

- Timing delays on Birmingham resilience scheme;
- Non-delivery of the outcome of the Birmingham resilience scheme;
- Timing delays on community risk schemes;
- Non-delivery of the community risk schemes;
- Timing delays on EVA maintenance; and
- Non-delivery of the EVA maintenance.

Table A2.2 Wholesale water outcomes, performance commitments and incentives

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
We provide water that is good to drink	Number of complaints about drinking water quality	Financial – reward and penalty	Comparative assessment – We have maintained our draft determination intervention to make the PC more demanding by setting it at upper quartile. Our revised assessment of upper quartile levels and deadbands has led to minor changes as set out in annex 4.
	Compliance with drinking water quality standards	Financial – penalty only	Comparative assessments – We have maintained our draft determination intervention to make the PC more demanding. Our revised assessment of upper quartile levels and deadbands has led to minor changes as set out in annex 4.

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Asset stewardship – number of sites with coliform failures	Financial - penalty only	Company-specific assessments – We have maintained our draft determination intervention to make the PC level more demanding, and have changed the PC from a four year average to an annual assessment
	Successful catchment management schemes	Financial – reward and penalty	Company-specific assessments – We have accepted Severn Trent Water’s revised proposal to split the River Severn catchment into 4 schemes, and have adopted the company’s revised PC level and incentive rate
We will ensure water is always there when you need it	Resource efficiency (amount of water we take out of the environment)	Non-financial incentive	No intervention
	Leakage levels	Financial – reward and penalty	No intervention
	Speed of responses in repairing leaks (% fixed within 24 hours)	Financial – reward and penalty	No intervention

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Number of minutes customers go without supply each year	Financial – reward and penalty	Comparative assessments – We have increased the reward and penalty deadband and removed one of the penalty rates.
	Percentage of customers with resilient supplies (those that benefit from a second source of supply)	Financial – reward and penalty	No intervention
	Asset stewardship (mains bursts)	Financial – penalty only	Company-specific assessments – We have changed the PC from a four year average to an annual assessment
	Customers at risk of low pressure	Financial – reward and penalty	Company-specific assessments – We have maintained our draft determination intervention to make the PC more demanding
	Restrictions on use	Financial – reward and penalty	Company-specific assessments – We have maintained our draft determination intervention to reduce the reward incentive rate

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Timing delays on Birmingham resilience scheme	Financial – penalty only	Company-specific assessments – We changed this PC in the draft determination, but we have accepted the company’s proposals from its subsequent representations. However, we have not accepted the company’s proposal for a reduced penalty rate for delays outside of its control
	Non-delivery of the outcome of the Birmingham resilience scheme	Financial – penalty only	Company-specific assessments – No intervention from the company’s revised proposals. We changed this PC in the draft determination, but we have accepted the company’s proposals from its subsequent representations

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Timing delays on community risk schemes	Financial – penalty only	Company-specific assessments – No intervention from the company’s revised proposals. We removed this PC in the draft determination, but we have accepted the company’s proposals from its subsequent representations
	Non-delivery of the community risk schemes	Financial – penalty only	Company-specific assessments – No intervention from the company’s revised proposals. We removed this PC in the draft determination, but we have accepted the company’s proposals from its subsequent representations

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Timing delays on EVA maintenance	Financial – penalty only	Company-specific assessments – No intervention from the company’s revised proposals. We removed this PC in the draft determination, but we have accepted the company’s proposals from its subsequent representations
	Non-delivery of the EVA maintenance	Financial – penalty only	Company-specific assessments – No intervention from the company’s revised proposals. We removed this PC in the draft determination, but we have accepted the company’s proposals from its subsequent representations
We will have the lowest possible charges	Customers rating our services as good value for money (based on tracker survey)	Financial – reward and penalty	Company-specific assessment – We have introduced a new reward deadband.
We will protect our local environment	Improvements in river water quality against Water Framework Directive (WFD) criteria – water	Financial – reward and penalty	No intervention

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Asset stewardship: environmental compliance	Non-financial incentive	Company-specific assessment – We have intervened to make the PC level more demanding and adjusted the penalty deadband
	Biodiversity	Non-financial incentive	No intervention
	Sites with eel protection at intakes	Non-financial incentive	Company-specific assessments – We have maintained our draft determination intervention to reinstate this performance measure
We will protect the wider environment	Size of our carbon footprint – water	Financial – reward and penalty	No intervention
We will make a positive difference in the community	Improved understanding of our services through education – company total	Non-financial incentive	No intervention

A2.2.2 Outcome delivery and reporting

Severn Trent Water's proposed approach to the measurement, reporting and governance of outcomes and our assessment of this approach is summarised in annex 4.

A2.2.3 Licence modification

In its revised business plan, Severn Trent Water expressed a desire for price controls to be adjusted within the control period to take account of rewards or penalties for selected PCs. Under the current licence the adjustment for other companies will occur at the end of the price control period (either as an RCV or revenue adjustment to future price controls), however Severn Trent Water considers that annual adjustments will encourage improved performance and increase investor confidence in the incentive regime.

In the draft determination, we stated that this would require a licence change and asked the company to propose a draft licence modification that would enable its proposed approach in its representations on the draft determination. Anglian Water and South West Water also requested the possibility of in-period changes to price controls to take account of rewards or penalties for some of its PCs.

Following dialogue with Severn Trent Water, Anglian Water and South West Water we are proposing a draft licence modification that would allow in-period adjustments to the level of price controls in relation to selected PCs. The three companies are only seeking in-period changes for ODIs which would result in a revenue adjustment, as opposed to an RCV adjustment.

Our proposed licence modification for Severn Trent Water, Anglian Water and South West Water is set out in ['Consultation under section 13 of the Water Industry Act 1991 on proposed modification to condition B of Anglian Water Services', Severn Trent Water's and South West Water's licences'](#) (our 'section 13 consultation'). The wholesale water PCs that would be covered by the licence modification are those notified to Severn Trent Water in this document as being eligible for in-period changes. These are as follows.

- Number of complaints about drinking water quality.
- Compliance with drinking water quality standards.
- Leakage levels.
- Speed of responses in repairing leaks (% fixed within 24 hours).
- Number of minutes customers go without supply each year.
- Customers at risk of low pressure.

- Customers rating our services as good value for money (based on tracker survey).
- Size of our carbon footprint – water.

We set out the wholesale wastewater PCs that would be covered by the licence modification in section A3.2.2.

A2.3 Calculating the wholesale water price control

A2.3.1 Calculating allowed wholesale water expenditure

The cost of delivering wholesale water and wastewater services is a major driver of customer bills, comprising almost 90% of the value chain. In order to protect the interests of customers, we have determined the efficient level of costs for the company to deliver the outcomes that matter to customers both today and tomorrow and to allow it to meet its statutory obligations.

Our approach to determining efficient wholesale expenditure is set out in policy chapter A3.

Following representations, the company’s proposed wholesale water totex is £2,930 million over 2015-20 (versus £2,806 million in its December plan). This is 3% above the final determination threshold (post additions) of £2,843 million. Table A2.3 below notes the comments that we have received that are specific to this aspect of the wholesale water control of Severn Trent Water and sets out our response.

Table A2.3 Representations specific to the wholesale water totex for Severn Trent Water

Respondent	Summary of comment	Ofwat response
Severn Trent Water	The company provided a response to the conditions set out in the draft determination for accepting the Birmingham resilience core scheme.	<p>We are making an allowance of £242 million for the core Birmingham resilience scheme as we are satisfied with the company’s response to the conditions set out in the draft determination. Our assessment of the gates is:</p> <p>Need – Pass</p> <p>Cost-benefit analysis – Pass</p> <p>Robustness of estimate – Pass</p>

Respondent	Summary of comment	Ofwat response
		<p>Further information about our assessment of the claim is set out in the populated version of the final determination cost threshold models.</p>
Severn Trent Water	<p>The company reduced the size of the Birmingham resilience community risk schemes claim to £54 million, and provided additional supporting evidence.</p>	<p>We are making an allowance of £50 million for the community risk schemes following the submission of appropriate evidence to support the need for the investment on the basis of health and safety. Our assessment of the gates is:</p> <p>Need – Pass</p> <p>Cost-benefit analysis – Pass.</p> <p>Robustness of estimate – Pass.</p> <p>Further information about our assessment of the claim is set out in the populated version of the final determination cost threshold models.</p>
Severn Trent Water	<p>The company reduced the size of the maintenance element of the community risk schemes to £22 million, and provided additional evidence to support its view that the replacement of the identified asset is not covered by the base allowance in our models.</p>	<p>We are maintaining our draft determination position that the maintenance element of the Birmingham resilience community risk schemes is fully covered by our cost threshold. No other tests apply so we have not assessed the claim against the four criteria.</p> <p>Further information about our assessment of the claim is set out in the populated version of the final determination cost threshold models.</p>

Respondent	Summary of comment	Ofwat response
Severn Trent Water	The company proposed a revised special cost factor claim for water non-infrastructure expenditure of £41 million.	We consider that the proposed additional allowance for water non-infrastructure expenditure relates to maintaining performance against existing service standards, and is therefore fully covered by our final determination cost threshold. No other tests apply so we have not assessed the claim against the four criteria. Further information about our assessment of the claim is set out in the populated version of the final determination cost threshold models.
CCWater	CCWater noted that the Birmingham resilience scheme and associated community risk schemes are supported by customers and stated that rejecting the proposals would not be in customers' best interests.	An allowance has been made for the core Birmingham resilience scheme and associated community risk schemes as set out above.
CCG	The CCG stated that it supports Severn Trent Water's proposals for the core Birmingham resilience scheme and the associated community risk schemes.	An allowance has been made for the core Birmingham resilience scheme and associated community risk schemes as set out above.

The wholesale water allowed expenditure for Severn Trent Water is detailed in table A2.4 below. We provide a further breakdown of some of the calculations in annex 1. Further information about our assessment of each claim is set out in the [populated version of the final determination cost threshold models](#).

Table A2.4 Wholesale water allowed expenditure (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total 2015-20
Final determination cost threshold						2,842.9
Costs excluded from menu	16.9	16.6	16.6	16.6	16.6	83.2

	2015-16	2016-17	2017-18	2018-19	2019-20	Total 2015-20
Menu cost baseline ¹	497.6	557.9	588.1	582.9	533.2	2,759.7
Company's view of menu costs ²						2,849.9
Implied menu choice						103.3
Allowed expenditure from menu	501.7	562.4	592.9	587.7	537.6	2,782.2
Costs excluded from menu	16.9	16.6	16.6	16.6	16.6	83.2
Total allowed expenditure ³	518.6	579.0	609.4	604.3	554.2	2,865.4
Less pension deficit repair allowance	4.4	4.4	4.4	4.4	4.4	22.0
Totex for input to PAYG	514.2	574.6	605.0	599.9	549.8	2,843.5

Notes:

1. Menu baseline is equal to the final determination threshold less pension deficit recovery costs, third party costs and market opening costs related to 2014-15 (see annex 1).
2. Based on company plan totex (reflecting its representation on its draft determination) minus costs for items excluded from the menu. The company will make a final menu choice by 16 January 2016 and any difference between this and the implied menu choice will be reconciled as part of PR19.
3. Includes pension deficit recovery costs.

A2.3.2 Calculation of revenues: PAYG and RCV run-off

In section A6.5 we discuss financeability at an appointee (whole regulated company) level. Table A2.5 shows the PAYG rates and the amount of totex recovered for wholesale water, which we have used as the basis for this final determination. The 'Resulting PAYG (£m)' is the amount of money recovered from customers in the short term. This reflects our intervention on PAYG rates as described in section A6.5 on financeability.

Table A2.6 shows the RCV run-off amounts included within the wholesale water charge as proposed by the company. This is the amount of money recovered in the long term through the company's RCV.

Table A2.5 Severn Trent Water’s wholesale water PAYG rates

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Totex (£m)	514.2	574.6	605.0	599.9	549.8	2,843.5
PAYG (%)	67.4%	61.5%	59.1%	59.5%	64.0%	62.3%
Resulting PAYG (£m)	346.7	353.3	357.7	357.0	351.6	1,766.3

Note: The figures in this table reflect our change in PAYG rates as described in section A6.5 on financeability

Table A2.6 Severn Trent Water’s wholesale water RCV run-off (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Run-off of 2015 RCV	117.0	113.0	109.1	105.4	101.8	546.3
RCV run-off of totex additions	3.6	12.1	22.3	32.9	42.5	113.5
Total RCV run-off	120.6	125.1	131.4	138.3	144.3	659.7

Note: The figures in this table reflect a run-off rate of 3.42% for the RCV as at 31 March 2015 and 23 years for the totex additions to the RCV over 2015-20.

A2.3.3 Return on the RCV

As stated in policy chapter A3, the return on the RCV is a key component of allowed wholesale revenues. The return on the RCV is the wholesale WACC applied to the RCV during the 2015-20 period. The RCV is calculated as the RCV at the start of the period plus totex that is not funded on a PAYG basis minus RCV run-off (or regulatory depreciation).

In our risk and reward guidance, we set out a single industry cost of capital for both wholesale water and wastewater services based on market evidence, which at the time was 3.70%. The company accepted this guidance in its revised business plan. As set out in policy chapter A7, based on the latest market evidence for the cost of new debt we have set the wholesale cost of capital at 3.60%. This results in a return on capital of £651.8 million over 2015-20.

Table A2.7 shows our calculation of the opening RCV at 1 April 2015 taking account of the adjustments for 2010-15 performance discussed in section A2.3.4 below. The average RCV, set out in Table A2.8 for each year, takes into account the proportion of totex additions to the RCV determined by the PAYG rate and RCV run-off as set out in Table A2.5 and Table A2.6 above.

Table A2.7 Severn Trent Water’s wholesale water opening RCV (£ million)

	2015-16
Closing RCV 31 March 2015	3,397.1
Land sales ¹	-11.1
Adjustment for actual expenditure 2009-10 ²	63.6
Adjustment for actual expenditure 2010-15 ³	16.7
Net adjustment from logging up and logging down ^{3,4}	0.0
Adjustment for shortfalls ^{3,4}	-24.4
Adjustment for serviceability shortfalls ⁵	-24.9
Other adjustments ⁶	0.0
Opening RCV 1 April 2015	3,416.9

Notes:

1. Land sales adjustment is set out in table AA3.20.
2. 2009-10 actual expenditure adjustment is set out in table AA3.20.
3. A component of the capital expenditure incentive scheme (CIS) adjustment as set out in table AA3.16.
4. The net adjustment from the change protocol is set out in table AA3.8.
5. The serviceability shortfall adjustment is set out in table AA3.11.
6. Other RCV adjustments are set out in table AA3.20.

Table A2.8 Severn Trent Water’s wholesale water return on RCV (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening RCV	3,416.9	3,463.8	3,560.0	3,676.0	3,780.5
RCV additions (from totex)	167.5	221.3	247.3	242.9	198.1
Less RCV run-off	120.6	125.1	131.4	138.3	144.3
Closing RCV	3,463.8	3,560.0	3,676.0	3,780.5	3,834.3
Average RCV (year average)	3,440.4	3,511.9	3,618.0	3,728.2	3,807.4
Return on capital	123.9	126.4	130.2	134.2	137.1

A2.3.4 Reconciling 2010-15 performance

When we last set price controls in 2009 (PR09), we included a number of incentive mechanisms designed to encourage companies to improve and deliver services

more efficiently, and to manage uncertainty. Consistent with the broad approach set out at the time of the final determinations in 2009 we have made adjustments at this price review (PR14) to 2015 to 2020 revenues to take account of company performance in the 2010 to 2015 period.

Our approach to reconciling 2010-15 performance is set out in policy chapter A4.

The comments that we have received in relation to this aspect of the wholesale water control and our responses are provided in annex 4. In its representations on the draft determination, the company raised a number of detailed points about our technical approach to legacy adjustments. We discuss this issue in policy chapter A4. We have not made any material changes for the period 2015-20 as a consequence of these representations.

The company proposed adjustments to the opening RCV and allowed revenue for the wholesale water services to reconcile performance in 2010-15. We have intervened and, as a result, the revenue adjustments for wholesale water have changed from -£12.3 million to -£33.2million. We summarise these interventions in Table A2.9 below. The impact on the opening RCV of 2010-15 adjustments is shown in Table A2.7 and we discuss our interventions in this area further in annex 3.

The main changes we have made in the final determination in reconciling the company's 2010-15 performance result from our removal of the serviceability shortfall for unplanned interruptions and our reduction in the shortfall value for water treatment works coliforms performance. We have also revised our adjustment to the RCV for actual expenditure in 2009-10. When making these final determinations we do not have the full information on companies' performance in 2014-15. We set out in ['Setting price controls for 2015-20 – further information on reconciling 2010-15 performance'](#) that we would reconcile for the revenue correction mechanism (RCM), change protocol and serviceability in 2015, and in 2016 for the CIS, when we have the company's actual performance for 2014-15. In carrying out this reconciliation we will take a proportionate approach (for example, applying materiality thresholds where appropriate) to making adjustments for company's actual performance and implement these changes at the next wholesale price control review in 2019.

Table A2.9 Severn Trent Water's wholesale water revenue adjustments to reflect 2010-15 performance (£ million)

Area of intervention	Intervention	Total revenue adjustment 2010-15 (post intervention)		
		Company view	Draft determination	Final determination
SIM	There are no interventions in this area	0.0	0.0	0.0
RCM	<p>We have intervened in the following areas:</p> <ul style="list-style-type: none"> • Back-billing amounts • Tax • Final determination 2009 (FD09) assumptions • Number of households billed <p>Combined, these interventions reduced revenue by £7.8 million compared to the company's revised business plan and by £4.1 million compared to the company's representation of £16.4 million.</p>	20.1	10.8	12.4
Opex incentive allowance (OIA)	The interventions we have made have not changed the overall result for the company.	0.0	0.0	0.0
CIS	<p>As for all companies, in carrying out our assessment, we have used:</p> <ul style="list-style-type: none"> • PR09 post-tax cost of capital when calculating the financing costs; and • the post-tax basis of the PR09 cost of 	-30.2	-46.6	-45.5

Area of intervention	Intervention	Total revenue adjustment 2010-15 (post intervention)		
		Company view	Draft determination	Final determination
	<p>capital for the discount rate when calculating the future value of the revenue adjustment in the 2010-15 period.</p> <p>Combined these interventions reduced revenue by £15.3 million compared with the company's revised business plan.</p>			
Other adjustments	We removed the company's proposed £2.2 million reduction in revenue in respect of the financing cost on shortfalls derived under the methodology used in previous price reviews.	-2.2	0.0	0.0

A2.3.5 Calculation of allowed revenue

We set out the calculation of the allowed revenue for Severn Trent Water's wholesale water control in Table A2.10.

Overall, Severn Trent Water's wholesale water revenue allowance will be £620.7 million in 2015-16, decreasing by 0.2% to £619.3 million in 2019-20.

Table A2.10 Severn Trent Water's wholesale water allowed revenue (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Totex	514.2	574.6	605.0	599.9	549.8	2,843.5
PAYG rate (%)	67.4%	61.5%	59.1%	59.5%	64.0%	
Totex additions to the RCV	167.5	221.3	247.3	242.9	198.1	1,077.1
RCV (year average)	3,440.4	3,511.9	3,618.0	3,728.2	3,807.4	
Wholesale allowed revenue build up:						
PAYG ¹	351.1	357.7	362.1	361.4	356.0	1,788.3
Return on capital	123.9	126.4	130.2	134.2	137.1	651.8
RCV run-off	120.6	125.1	131.4	138.3	144.3	659.7
Tax ²	11.4	6.6	4.2	3.6	2.2	27.9
Income from other sources ^{3,4}	-12.3	-12.4	-12.5	-12.6	-12.7	-62.5
Reconciling 2010-15 performance	-6.6	-6.6	-6.6	-6.6	-6.6	-33.2
Ex ante additional menu income	-2.1	-2.3	-2.4	-2.4	-2.2	-11.4
Wholesale allowed revenue adjustments:						
Profiling adjustments ⁵	19.3	10.0	-2.9	-13.3	-16.4	-3.2

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Capital contributions from connection charges and revenue from infrastructure charges	15.3	15.9	16.5	17.1	17.7	82.5
Final allowed revenues	620.7	620.3	620.0	619.7	619.3	3,100.0

Notes:

1. PAYG includes the PAYG calculated from totex and the pension deficit repair allowance.
2. Including tax on adjustments for reconciling 2010-15 performance and ex-ante additional menu income.
3. We have adjusted other income values to remove the deferred income element relating to IFRIC18, as this is an accounting adjustment.
4. Our assessment of income from other sources is discussed in policy chapter A3.
5. Our bill profiling adjustments are discussed in section A6.6

A2.4 Uncertainty mechanisms

We have set the company's allowed revenues for the 2015-20 period. All companies face uncertainty about future costs and revenues and this is reflected in the rate of return and the established framework in the licence.

We outline our approach to incremental uncertainty mechanisms in policy chapter A7, where we set out our response to the representations made by stakeholders in support of sector wide uncertainty mechanisms.

We have allowed all companies an uncertainty mechanism for business rates as the revaluation of business rates in 2017 is a material risk that is largely outside the control of companies. This mechanism allows a proportion of the costs to be passed through to customers, reflecting the fact that companies have more control than customers in managing the risk.

In Table A2.11 below, we set out Severn Trent Water's proposed wholesale water uncertainty mechanisms and our final assessment of these proposals.

Table A2.11 Severn Trent Water’s proposals for wholesale water uncertainty mechanisms

Assessment at draft determination	Our final assessment
<p>In the draft determination we accepted Severn Trent Water’s proposed uncertainty mechanism for water business rates with the proposed sharing rate of 75:25 (customer:company).</p>	<p>For our final determination we confirm the uncertainty mechanism included in our draft determination. The specific text of this Notified Item is in the annex to the final determination letter. The rationale for its inclusion in the final determination is set out in policy chapter A7.</p>
<p>No other uncertainty mechanisms for wholesale water were included in our draft determination and Severn Trent Water did not propose any beyond those that will already form part of the regulatory framework for 2015-20. Severn Trent Water withdrew its proposals for a Birmingham resilience uncertainty mechanism before our draft determination.</p>	<p>Severn Trent Water has not objected to our approach in the draft determination. We respond to any representations that apply to all companies in policy chapter A7. We have not included any additional uncertainty mechanisms for the company.</p>

A3 Wholesale wastewater

A3.1 Consideration of representations on our draft determination

In policy chapter A1, we provide a list of the respondents to the draft determinations published in April, May and August of this year. We have fully considered all of the responses received, and where appropriate, we have made either consequential adjustments to our industry-wide approach or company-specific interventions.

Our general policies relevant to the wholesale wastewater control are set out in the following policy chapters that accompany our final determination. These include our responses to representations on sector-wide issues.

- Policy chapter A2.
- Policy chapter A3
- Policy chapter A4.
- Policy chapter A7.
- Policy chapter A8.

Table A3.1 lists the representations we have received that are specific to Severn Trent Water's wholesale wastewater control and sets out where to find more information on our responses in this document.

Table A3.1 Representations specific to the wholesale wastewater control of Severn Trent Water

Area	Company-specific representations	Detailed commentary in this company appendix
Outcomes, PCs and incentives	Severn Trent Water Environment Agency CCWater Natural Resources Wales Natural England	Annex 4
Outcome delivery and reporting	None	Annex 4

Area	Company-specific representations	Detailed commentary in this company appendix
Calculating allowed wholesale wastewater expenditure	Severn Trent Water	Section A3.3.1 and Annex 1
Calculation of revenues: PAYG and RCV run-off	Severn Trent Water	Section A3.3.2 and A6.5
Return on the RCV	Severn Trent Water	Section A3.3.3
Reconciling 2010-15 performance	Severn Trent Water	Annex 3
Uncertainty mechanisms	Environment Agency	Section A3.4

A3.2 Outcomes, performance commitments and incentives

A3.2.1 Outcomes, performance commitments and incentives

In policy chapter A2, we discuss our approach to outcomes for the wholesale and retail controls.

The company's outcomes have been developed with input from its CCG. The CCG's role was to challenge how well the company's outcomes, PCs and delivery incentives reflect the views and priorities of customers, both now and in the future, as well as environmental priorities.

Similar to the wholesale water control, our assessment of the specific PCs proposed by each company for wholesale wastewater has focused on a comparative assessment of outcomes and a company-specific assessment.

We summarise the outcomes, PCs and ODIs for the wholesale wastewater control for Severn Trent Water in Table A3.2 below.

For some PCs and incentives types we have intervened to change the underlying performance level or incentives. Where we have intervened we have done so to ensure that companies are subject to effective incentives that protect customers against under-delivery and where merited, reward companies for outperformance. We summarise our interventions in Table A3.2 and set out whether they are the result of our comparative assessment or company-specific assessment.

Full detail of the wholesale water outcomes, PCs and incentives, and our consideration of relevant representations, is provided in annex 4.

Similar to the water wholesale control, we are intervening to impose an overall cap and collar on ODIs for the 2015-20 period, thereby limiting total rewards and penalties. The cap and collar will apply in line with the approach set out in the Policy chapter A2. There are no wholesale wastewater PCs that are excluded from the cap and collar.

Table A3.2 Wholesale wastewater outcomes, performance commitments and incentives

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
We will safely take your waste away	Number of internal sewer flooding incidents	Financial – reward and penalty	No intervention
	Number of external sewer flooding incidents	Financial – reward and penalty	No intervention
	Partnership working	Financial – reward and penalty	No intervention
	Asset stewardship: blockages	Financial – penalty only	Company-specific assessment – We have maintained our draft determination intervention to make the PC more demanding, and have changed the PC from a four year average to an annual assessment.
	Statutory obligations (Section S101a schemes connectable properties)	Non-financial incentive	No intervention
We will have the lowest possible charges	Customers rating our services as good value for money (based on tracker survey)	Financial – reward and penalty	Company-specific assessment – We have introduced a new reward deadband

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
We will protect our local environment	Improvements in river water quality against WFD criteria – wastewater	Financial – reward and penalty	No intervention
	Serious pollution incidents	Non-financial incentive	No intervention.
	Category 3 pollution incidents	Financial – reward and penalty	Comparative assessments – We have accepted Severn Trent Water’s proposal to separate category 3 and 4 incidents. We have set the PC level at upper quartile performance.
	Category 4 pollution incidents	Non-financial incentive	Comparative assessments – We have accepted Severn Trent Water’s proposal to separate category 3 and 4 incidents. We have set the PC level at upper quartile performance.

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Asset stewardship: Environmental compliance	Financial – penalty only	Company-specific assessment – We have intervened to make the PC level more demanding and adjusted the penalty deadband, and have changed the PC from a four year average to an annual assessment.
	Biodiversity (based on SSSIs at favourable status)	Financial – reward and penalty	No intervention
	Sustainable sewage treatment	Financial – reward and penalty	No intervention
	Overall environmental performance	Financial – reward and penalty	No intervention
We will protect the wider environment	Size of our carbon footprint – wastewater	Financial – reward and penalty	No intervention
We will make a positive difference in the community	Improved understanding of our services through education – company total	Non-financial incentive	No intervention

A3.2.2 Licence modification

As outlined in section A2.2.3 for wholesale water, our proposed licence modification for Severn Trent Water, Anglian Water and South West Water is set out in our section 13 consultation. The wholesale wastewater PCs that would be covered by the licence modification are those notified to Severn Trent Water in this document as being eligible for in-period changes. These are as follows:

- No. internal sewer flooding incidents;
- No. external sewer flooding incidents;
- Customers rating our services as good value for money (based on tracker survey);
- Category 3 pollution incidents; and
- Size of our carbon footprint – wastewater.

A3.3 Calculating the wholesale wastewater price control

A3.3.1 Calculating allowed wholesale wastewater expenditure

Our approach to calculating allowed wholesale expenditure is set out in policy chapter A3.

Following representations, the company proposed wholesale wastewater totex of £2,658 million over 2015-20 (versus £2,657 million in its December plan). This would be 11% below our pre-cap basic threshold of £2,992 million. However, we have applied a 5% cap on this which results in a revised, post-cap threshold of £2,791 million.

The wholesale wastewater allowed expenditure for Severn Trent Water is detailed in Table A3.3 below. A further breakdown of some of the calculations is provided in annex 1. Further information about our assessment of each claim is set out in the populated version of the final determination cost threshold models.

Table A3.3 Wholesale wastewater allowed expenditure (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Final determination cost threshold						2,791.0
Costs excluded from	4.4	4.0	4.0	4.0	4.0	20.5

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
menu						
Menu cost baseline ¹	486.9	565.8	590.0	586.0	541.8	2,770.5
Company's view of menu costs ²						2,635.3
Implied menu choice						95.1
Allowed expenditure from menu	481.0	558.9	582.8	578.9	535.2	2,736.7
Costs excluded from menu	4.4	4.0	4.0	4.0	4.0	20.5
Total allowed expenditure ³	485.4	562.9	586.8	582.9	539.2	2,757.2
Less pension deficit repair allowance	4.0	4.0	4.0	4.0	4.0	20.1
Totex for input to PAYG	481.4	558.9	582.8	578.9	535.2	2,737.1

Notes:

1. Menu baseline is equal to the final determination threshold less pension deficit recovery costs, third party costs and market opening costs related to 2014-15 (see annex 1).
2. Based on company plan totex (reflecting its representation on its draft determination) minus costs for items excluded from the menu.
3. Includes pension deficit recovery costs.

A3.3.2 Calculation of revenues: PAYG and RCV run-off

In section A6.5, we discuss financeability at an appointee (whole regulated company) level.

Table A3.4 shows the PAYG rates and associated totex recovery for wholesale wastewater, which we have used as the basis for this final determination. The 'Resulting PAYG (£m)' is the amount of money recovered from customers in the short term. This reflects our intervention on PAYG rates as described in section A6.5 on financeability.

Table A3.5 shows the RCV run-off amounts included within the wholesale wastewater charge. This is the amount of money recovered in the long term through the company's RCV.

Table A3.4 Severn Trent Water’s wholesale wastewater PAYG rates

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Totex (£m)	481.4	558.9	582.8	578.9	535.2	2,737.1
PAYG (%)	63.1%	54.2%	52.0%	51.2%	56.0%	55.3%
Resulting PAYG (£m)	303.9	302.7	303.3	296.6	299.8	1,506.3

Note: The figures in this table reflect our change in PAYG rates as described in section A6.5 on financeability.

Table A3.5 Severn Trent Water’s wholesale wastewater RCV run-off (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Run-off of 2015 RCV	195.5	185.7	176.4	167.5	159.1	884.2
RCV run-off of totex additions	3.9	13.3	24.9	37.1	48.4	127.6
Total RCV run-off	199.4	199.0	201.3	204.7	207.5	1,011.8

Note: The figures in this table reflect a run-off rate of 5.02% for the RCV as at 31 March 2015 and 23 years for the totex additions to the RCV over 2015-20.

A3.3.3 Return on the RCV

As discussed in section A2.3.3, we have used a cost of capital of 3.6% in this final determination. This results in a return on capital of £716.4 million over 2015-20.

Table A3.6 shows our calculation of the opening RCV at 1 April 2015 taking account of the adjustments for 2010-15 performance discussed in section A3.2.4 below. The average RCV, set out in Table A3.7 below for each year, takes into account the proportion of totex additions to the RCV determined by the PAYG rate and RCV run-off as set out in Table A3.4 and Table A3.5 above.

Table A3.6 Severn Trent Water’s wholesale wastewater opening RCV (£ million)

	2015-16
Closing RCV 31 March 2015	3,968.4
Land sales ¹	-12.9
Adjustment for actual expenditure 2009-10 ²	56.6
Adjustment for actual expenditure 2010-15 ³	-98.8

	2015-16
Net adjustment from logging up and logging down ^{3,4}	13.1
Adjustment for shortfalls ^{3,4}	-12.8
Adjustment for serviceability shortfalls ⁵	-23.4
Other adjustments ⁶	4.3
Opening RCV 1 April 2015	3,894.5

Notes:

1. Land sales adjustment is set out in table AA3.20.
2. 2009-10 actual expenditure adjustment is set out in table AA3.20.
3. A component of the CIS adjustment as set out in table AA3.16.
4. The net adjustment from the change protocol is set out in table AA3.8.
5. The serviceability shortfall adjustment is set out in table AA3.11.
6. Other RCV adjustments are set out in table AA3.20.

Table A3.7 Severn Trent Water's wholesale wastewater return on RCV (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening RCV	3,894.5	3,872.6	3,929.8	4,008.0	4,085.6
RCV additions (from totex)	177.4	256.2	279.5	282.3	235.4
Less RCV run-off	199.4	199.0	201.3	204.7	207.5
Closing RCV	3,872.6	3,929.8	4,008.0	4,085.6	4,113.6
Average RCV (year average)	3,883.6	3,901.2	3,968.9	4,046.8	4,099.6
Return on capital	139.8	140.4	142.9	145.7	147.6

A3.3.4 Reconciling 2010-15 performance

When we last set price controls at PR09, we included a number of incentive mechanisms designed to encourage companies to improve and deliver services more efficiently, and, to manage uncertainty. Consistent with the broad approach set out at the time of the final determinations in 2009 we have made adjustments at PR14 to 2015 to 2020 revenues and the RCV to take account of company performance in the 2010 to 2015 period.

Our approach to reconciling 2010-15 performance is set out in policy chapter A4.

The comments that we have received in relation to this aspect of the wholesale water control and our responses are provided in annex 4. In its representations on the draft determination, the company raised a number of detailed points about our technical approach to legacy adjustments. We discuss this issue in policy chapter A4. We have not made any material changes for the period 2015-20 as a consequence of these representations.

The company proposed adjustments to the opening RCV and allowed revenue for the wholesale wastewater services to reconcile performance in 2010-15. We have intervened and as a result the revenue adjustments for wholesale wastewater have changed from -£0.5million to -£29.2million. We summarise these interventions in Table A3.8 below, and quantify the resulting adjustments within this final determination. The impact on the opening RCV of 2010-15 adjustments is shown in Table A3.6 above and we discuss our interventions in this area further in annex 3.

The main changes we have made in the final determination in reconciling the company's 2010-15 performance result from our smoothing of pension adjustments in the calculation of the OIA, our reduction in the shortfall value for sewer blockages and our revised adjustment to the RCV for actual expenditure in 2009-10. When making these final determinations we do not have the full information on companies' performance in 2014-15. We set out in '[Setting price controls for 2015-20 – further information on reconciling 2010-15 performance](#)' that we would reconcile for the RCM, change protocol and serviceability in 2015, and in 2016 for the CIS, when we have the company's actual performance for 2014-15. In carrying out this reconciliation we will take a proportionate approach (for example, applying materiality thresholds where appropriate) to making adjustments for company's actual performance and implement these changes at the next wholesale price control review in 2019.

Table A3.8 Severn Trent Water’s wholesale wastewater revenue adjustments to reflect 2010-15 performance (£ million)

Area of intervention	Intervention	Total revenue adjustment 2010-15 (post intervention)		
		Company view	Draft determination	Final determination
SIM	There are no interventions in this area	0.0	0.0	0.0
RCM	<p>We have intervened in the following areas:</p> <ul style="list-style-type: none"> • back-billing amounts • tax • FD09 assumptions • number of households billed <p>Combined these interventions reduced revenue by £9.6 million compared to the company’s revised business plan and by £3.2 million compared to the company’s representation of -£21.5 million.</p>	-15.1	-25.6	-24.7
OIA	<p>We have not accepted the company’s representation to exclude pension deficit costs from the OIA calculation, but have intervened by smoothing the company’s pension adjustments equally over the 2010-14 period.</p> <p>This intervention increased revenue by £6.8 million compared to the draft determination.</p> <p>We have not accepted the company’s</p>	19.4	9.3	16.1

Area of intervention	Intervention	Total revenue adjustment 2010-15 (post intervention)		
		Company view	Draft determination	Final determination
	<p>representation that the OIA calculation should use the headline tax rate of 20% rather than the actual effective tax rate for 2013-14.</p> <p>We challenged the company's proposed logging up opex adjustments for private sewers.</p>			
CIS	<p>As with all companies, in carrying out our assessment, we have used:</p> <ul style="list-style-type: none"> • PR09 post-tax cost of capital when calculating the financing costs; and • the post-tax basis of the PR09 cost of capital for the discount rate when calculating the future value of the revenue adjustment in the 2010-15 period. <p>Combined, these interventions reduced revenue by £15.7 million compared to the company's revised business plan.</p>	-4.8	-20.9	-20.6
Other adjustments	There are no interventions in this area	0.0	0.0	0.0

A3.3.5 Calculation of allowed revenue

The calculation of the allowed revenue for Severn Trent Water's wholesale wastewater control is shown in Table A3.9.

Overall, Severn Trent Water's wholesale wastewater revenue allowance will be £661 million in 2015-16, increasing by 1.1% to £668.2 million in 2019-20.

Table A3.9 Severn Trent Water's wholesale wastewater allowed revenue (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Totex	481.4	558.9	582.8	578.9	535.2	2,737.1
PAYG rate	63.1%	54.2%	52.0%	51.2%	56.0%	
Totex additions to the RCV	177.4	256.2	279.5	282.3	235.4	1,230.8
RCV (year average)	3,883.6	3,901.2	3,968.9	4,046.8	4,099.6	
Wholesale allowed revenue build up:						
PAYG ¹	307.9	306.7	307.3	300.6	303.8	1,526.4
Return on capital	139.8	140.4	142.9	145.7	147.6	716.4
RCV run-off	199.4	199.0	201.3	204.7	207.5	1,011.8
Tax ²	27.2	18.1	13.7	9.5	9.7	78.1
Income from other sources ^{3,4}	-4.9	-5.0	-5.1	-5.2	-5.2	-25.2
Reconciling 2010-15 performance	7.0	-9.1	-9.1	-9.1	-9.1	-29.2
Ex ante additional menu income	2.9	3.4	3.5	3.5	3.2	16.6
Wholesale allowed revenue adjustments:						
Profiling adjustments ⁵	-22.6	4.5	4.8	10.9	4.4	2.1
Capital contributions from connection charges and	4.2	4.7	5.2	5.7	6.2	25.9

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
revenue from infrastructure charges						
Final allowed revenues	661.0	662.8	664.6	666.4	668.2	3,322.8

Notes:

1. PAYG includes the PAYG calculated from totex and the pension deficit repair allowance.
2. Including tax on adjustments for reconciling 2010-15 performance and ex ante additional menu income.
3. We have adjusted other income values to remove the deferred income element relating to IFRIC18, as this is an accounting adjustment.
4. Our assessment of income from other sources is discussed in the wholesale policy chapter A3.
5. Our bill profiling adjustments are discussed in section A6.6.

A3.4 Uncertainty mechanisms

We have set the company's allowed revenues for the 2015-20 period. All companies face uncertainty about future costs and revenues and this is reflected in the rate of return and the established framework in the licence.

We outline our approach to incremental uncertainty mechanisms in policy chapter A7, where we set out our response to the representations made by stakeholders in support of sector wide uncertainty mechanisms.

For the wholesale wastewater control we are not allowing additional uncertainty mechanisms within this framework.

In Table A3.10 below, we set out Severn Trent Water's proposed wholesale wastewater uncertainty mechanisms and our assessment of these proposals.

Table A3. 10 Severn Trent Water's proposals for wholesale wastewater uncertainty mechanisms

Assessment at draft determination	Our assessment
No uncertainty mechanisms for wholesale wastewater were included in our draft determination and Severn Trent Water did not propose any beyond those that will already form part of the regulatory framework for 2015-20.	Severn Trent Water has not objected to our approach in the draft determination. We have not included any additional uncertainty mechanisms for the company.

A4 Household retail

A4.1 Consideration of representations on our draft determination

In policy chapter A1, we provide a list of the respondents to the draft determinations published in April, May and August of this year. We have fully considered all of the responses received, and where appropriate, we have made either consequential adjustments to our industry-wide approach or company-specific interventions.

Our general policies relevant to the household retail control are set out in the following policy chapters that accompany our final determination. These include our responses to representations on sector-wide issues.

- Policy chapter A2.
- [‘Policy chapter A5 – household retail costs and revenues’](#) (‘policy chapter A5’).
- Policy chapter A7.

Table A4.1 lists the representations we have received that are specific to Severn Trent Water's household retail and sets out where to find more information on our responses in this document.

Table A4.1 Representations specific to the household retail control of Severn Trent Water

Area	Company-specific representations	Detailed commentary in this company appendix
Outcomes, PCs and incentives	None	Annex 4
Outcome delivery and reporting	None	Annex 4
Allocation of costs	Severn Trent Water	Section 4.3
Adjustments	None	Section A4.3 and Annex 2
New costs	None	Section A4.3
Uncertainty mechanisms	None	Section A4.5

A4.2 Outcomes, performance commitments and incentives

In policy chapter A2, we discuss our approach to outcomes for the wholesale and retail controls.

The company's outcomes have been developed with challenge provided by the company's CCG. The CCG's role was to challenge how well the company's outcomes, PCs and delivery incentives reflect the views and priorities of customers, both now and in the future, as well as environmental priorities.

Our assessment of the specific PCs proposed by each company for household retail has focused on a company-specific assessment to ensure that the performance proposed by each company is challenging, appropriately incentivised and supported by customer engagement.

We summarise the outcomes, PCs and ODIs for the household retail control for Severn Trent Water in Table A4.2 below.

For some PCs and incentives types, we have intervened to change the underlying performance level or incentives. Where we have intervened we have done so to ensure that companies are subject to effective incentives that protect customers against under-delivery and where merited, reward companies for outperformance. We summarise any interventions in Table A4.2.

Full detail of the household retail outcomes, PCs and incentives, and our consideration of relevant responses, is provided in annex 4.

Table A4.2 Household retail outcomes, performance commitments and incentives

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
We will provide you with excellent customer service	Customer satisfaction with their service (based on a customer survey)	Non-financial incentive	No intervention
	Customers' experience of dealing with us (based on Ofwat's SIM) ¹	Financial – reward and penalty	No intervention
We will help you if you struggle	Number of customers helped by a review of their tariff and water usage and/or supported by our social fund	Non-financial incentive	No intervention
	Percentage of customers who do not pay	Non-financial incentive	No intervention

¹ We have required all companies to include a PC based on the SIM.

A4.3 Costs

Our approach to the household retail control is set out in policy chapter A5. We have adjusted companies' costs to align to the 2013-14 base year. Historic costs are therefore presented in 2013-14 prices, and all future costs and revenues in nominal prices. We set out our final household retail adjustments, the modification factors for household retail allowed revenue and the assumed number of customers we have used to calculate the total revenues in annex 2.

A4.3.1 Allocation of costs

Table A4.3 below, we summarise our assessment of Severn Trent Water's cost allocation methodology. We have used the company's cost allocation between retail and wholesale and between household and non-household to set our final determination.

Table A4.3 Our assessment of Severn Trent Water's cost allocation methodology

Area assessed	Assessment
No potential material misallocations	Pass
Adequate assurance provided	Pass
Reconciliation to regulatory accounts and December business plan provided	Pass

In the draft determination, we reallocated the company's investigatory visit costs so that all costs where follow-up work was required were allocated to wholesale and all costs where no follow-up work was required were allocated to retail.

In its representation Severn Trent Water agreed that all jobs with follow-up work should be allocated to wholesale. However, the company stated that some jobs where no follow-up work is required should also be allocated to wholesale. The company has provided a proposed reallocation of investigatory visits costs with evidence to support this. We have accepted the evidence, including external assurance that the company provided to support this reallocation.

We have adjusted the company's costs in line with its proposal. The impact of this adjustment is to increase wholesale water costs for 2013-14 by £1.604 million (£7.580 million for 2015-20), to decrease household retail costs for 2013-14 by £1.432 million (£6.753 million for 2015-20) and to decrease non-household retail costs for 2013-14 by £0.171 million (£0.826 million for 2015-20).

A4.3.2 Adjustments

In its revised business plan, submitted in June 2014, Severn Trent Water sought adjustments to the ACTS for:

- pension deficit repair costs;
- doubtful debt driven by deprivation and bill size; and
- costs related to its ‘We will provide you with excellent customer service’ and ‘We will help you if you struggle’ outcomes.

Pension deficit repair costs

In the final determination we have included an adjustment to the ACTS for all companies to reflect the pension deficit recovery costs that our modelling shows is appropriate for household retail as set out in [IN 13/17: ‘Treatment of companies’ pension deficit repair costs at the 2014 price review’](#).

Doubtful debt

In its representations on the draft determination Severn Trent Water did not pursue an adjustment for doubtful debt driven by deprivation further, therefore our final position is the same as our position for draft determination.

Severn Trent Water’s proposed adjustment value (£25.9 million) included £14.6 million of bad debt costs that it incorrectly allocated to the adjustment value (to reflect “one-off” bad debt costs excluded from the ACTS cost base). Instead, these costs were reallocated to base costs and considered by us as part of the general movement in the ACTS cost base (‘new costs’).

Removing this £14.6m from Severn Trent Water’s proposed ACTS adjustment reduced the adjustment value to approximately £10.9 million, which was immaterial at 1.9% of retail operating expenditure plus depreciation over 2015-20. We therefore did not accept the adjustment at the draft determination on the grounds that it was immaterial.

Further details on our assessment are set out in Annex 2 – Household retail. Our approach to assessing adjustment claims is set out in policy chapter A5.

Costs related to Severn Trent Water’s ‘We will provide you with excellent customer service’ and ‘We will help you if you struggle’ outcomes

The company’s proposed adjustments for the two outcomes are immaterial and has been added onto the base operating expenditure as a new cost.

Table A4.4 outlines our assessment of Severn Trent Water’s ACTS adjustment. The value of the adjustments we have accepted in our final determination is summarised in Table A4.5.

Table A4.4 Severn Trent Water’s proposals for ACTS adjustments

		Adjustment assessment criteria			
Adjustment	Value (£m over 2015-20)	Materiality	Beyond efficient management control	Impact company in materially different way	Value of adjustment appropriate
Doubtful debt	10.9	Fail	N/a	N/a	N/a

Note:

For household retail materiality is defined as being 2.25% of household retail opex plus depreciation over 2015-20.

Table A4.5 Household retail adjustments (£ million, nominal prices)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Adjustments included in final determination						
Doubtful Debt	£0.0m allowed as an adjustment and £15.0m added on to new costs					
Pension deficit repair costs	0.809	0.809	0.809	0.809	0.809	4.045
Outcome A: We will provide you with excellent customer service	Not included as adjustment – forms part of new costs					
Outcome B: We will help you when you struggle	Not included as adjustment – forms part of new costs					

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Adjustments included in final determination						
Adjustments included in final determination	0.809	0.809	0.809	0.809	0.809	4.045

Note: There will be no automatic indexation for retail price controls to RPI.

A4.3.3 New costs

In its revised business plan Severn Trent Water included new costs relating to its ‘We will provide you with excellent customer service’ and ‘We will help you when you struggle’ outcomes.

We have also considered the £14.6 million that has been incorrectly allocated to the bad debt adjustment claim as part of the general movement in the ACTS cost base.

In the draft determination, the new costs were found to be immaterial and we therefore made no intervention. However we stated that we would consider making an intervention if new costs proved to be material.

Following a correction to the household retail feeder model, which is discussed in policy chapter A5, Severn Trent Water’s new costs are no longer material, at 1.5% of household retail operating expenditure plus depreciation over 2015-20. As the costs are not material we have made no further assessment of the evidence to support these costs. We have included these immaterial new costs in the calculation of ACTS and allowed revenues. The value of any modification for immaterial new costs is quantified in table A4.6.

Table A4.6 New household retail costs (£/customer)

	Value
Modification made to 2013-14 cost to serve for ACTS calculation	0.41

Note: There will be no automatic indexation for retail price controls to RPI.

A4.4 Calculating the allowed revenues

As set out in policy chapter A5, total allowed household retail revenues are calculated taking account of our assessment of the cost to serve per customer (after

the impact of our efficiency challenge), the projected customer numbers in the company’s revised business plan and the household retail net margin.

The company proposed net margins of 1%. This is in line with our risk and reward guidance and our further consideration of margins following representations on draft determinations. We have therefore accepted the company’s proposals.

Table A4.7 below shows the household retail net margin over 2015-20.

Table A4.7 Household retail net margins (%)

	2015-16	2016-17	2017-18	2018-19	2019-20
Household retail net margin	1.0%	1.0%	1.0%	1.0%	1.0%

Table A4.8 below sets out the components of the allowed household retail revenue.

Table A4.8 Components of the allowed household retail revenue (nominal prices)

	2013-14	2015-16	2016-17	2017-18	2018-19	2019-20
Company cost to serve (£/customer)						
Unmetered single service customers	21.5					
Unmetered water and wastewater customers	27.9					
Metered water only customers	29.3					
Metered wastewater only customers	22.0					
Metered water and wastewater customers	35.7					
Industry ACTS (£/customer)						
Unmetered single service customers				21.47		
Unmetered water and				27.91		

	2013-14	2015-16	2016-17	2017-18	2018-19	2019-20
wastewater customers						
Metered water only customers			27.26			
Metered wastewater only customers			25.54			
Metered water and wastewater customers			34.26			
Allowed cost to serve¹ (£/customer)						
Unmetered single service customers		19.5	20.2	20.8	21.1	21.2
Unmetered water and wastewater customers		25.4	26.3	27.1	27.4	27.6
Metered water only customers		26.7	27.0	27.1	26.9	27.0
Metered wastewater only customers		20.2	20.9	21.5	21.7	21.8
Metered water and wastewater customers		32.6	33.3	33.8	33.8	33.9
Total allowed (£m)						
Cost to serve (excluding net margin)		102.4	106.2	109.6	111.1	112.7
Forecast household wholesale charge (including forecast RPI ²) ³		1,106.6	1,145.3	1,188.5	1,228.2	1,268.2
Household retail revenue (including an allowance for the net margin) ⁴		113.5	117.6	121.4	123.4	125.4

Notes:

There will be no automatic indexation for retail price controls to RPI. However, the wholesale price controls are indexed linked to RPI. This will affect the retail net margins.

1. Allowed cost to serve includes pension deficit repair costs.
2. The household wholesale charge includes forecast RPI so that the total household retail revenue can be displayed on the same price base as other retail costs.
3. The allocation of allowed wholesale revenue to different wholesale charges will be at the company's discretion, subject to charging rules and licence conditions, however, our assumed allocation of wholesale revenue is binding for the purposes of determining the allowance for the net margin which is one component of allowed household retail revenue.
4. This number is indicative as allowed revenue will depend upon actual customer numbers.

A4.5 Uncertainty mechanisms

We outline our approach to uncertainty mechanisms in policy chapter A7. Severn Trent Water did not propose any household retail uncertainty mechanisms beyond those that will already form part of the regulatory framework for 2015-20.

A5 Non-household retail

In ‘Policy chapter A6 – non-household retail costs and revenues’ (policy chapter A6), we outline our overall approach to the non-household retail price control.

In this chapter, we provide details of Severn Trent Water’s non-household retail price control.

A5.1 Consideration of representations on our draft determination

In policy chapter A1, we provide a list of the respondents to the draft determinations published in April, May and August of this year. We have fully considered all of the responses received, and where appropriate, we have made either consequential adjustments to our industry-wide approach or company-specific interventions.

Our general policies relevant to the non-household control are set out in the policy chapter A6. This includes our responses to representations on sector-wide issues.

Table A5.1 lists the representations we have received that are specific to Severn Trent Water’s non-household retail control. It points to the relevant policy chapters which address more general comments and sets out where to find more information on our responses to company-specific issues in this document.

Table A5.1 Representations specific to the non-household retail control of Severn Trent Water

Area	Company-specific representations	Detailed commentary in this company appendix
Net margins	None	Section A5.3
Cost proposals	None	Section A5.4
Form of control	Severn Trent Water	Section A5.5

A5.2 Indicative non-household retail total revenue

Table A5.2 below shows the indicative total of non-household allowed revenue. The table is indicative, as it does not assume any gains or losses from competition or impacts from the company charging customers at levels different to the relevant

default tariffs for the projected customers in each customer type. Furthermore, the controls for each customer type we have set will only apply for two years; there will be a review in 2016. Years 2017-18 to 2019-20 below are shown for illustrative purposes only.

Table A5.2 Indicative non-household retail total revenue price control including net margins (£ million, nominal prices)

	2015-16	2016-17	2017-18	2018-19	2019-20
Indicative non-household retail total revenue price control including net margins	26.0	26.8	28.7	29.7	30.5

Note: There will be no indexation for retail price controls from this price base. The non-household wholesale charge includes forecast RPI so that the total non-household retail revenue can be displayed in the same price base as other retail costs. Figures exclude retail services to developers and revenues associated with miscellaneous charges.

A5.3 Net margins

The company proposed net margins that equal 2.5% in aggregate. This is in line with our risk and reward guidance and our further consideration of margins following representations on draft determinations. We have therefore accepted the company's proposals.

A5.4 Cost proposals

As set out in policy chapter A6, we have adjusted companies' costs to align to the 2013-14 base year. Historical costs are therefore presented in 2013-14 prices, and all future costs and revenues in nominal prices. As set out in policy chapter A6, we expect our decisions on the total level of non-household retail costs now, will still apply for years 2017-18 to 2019-20 – the 2016 review will focus on the allocations between different non-household customer types.

In IN 13/17: 'Treatment of companies' pension deficit repair costs at the 2014 price review' we explained how we would treat the costs associated with water companies reducing the deficits in their defined benefit pension schemes at PR14. Where companies' proposals have differed from our calculations we have over-written their proposals in line with our overall approach. This resulted in the company's proposals being adjusted from £0.466 million over the control period, to £0.649 million.

In the draft determination we noted that the company's 2013-14 costs were significantly higher than the preceding three years. We requested as part of its representations for the company to provide us with a clear explanation as to the cost increase, and to explain why the increase should not be treated as an exceptional one-off event.

The company explained that this was due to one-off bad debt costs that were removed from its 2015-20 profile, an ongoing increase in bad debt and debt management, and the establishment of a key account team. We note that there was support for the accounts team by the company's CCG. Adjusting for this difference, and the input price pressure and wholesale cost adjustments below, the company's 2015-20 costs did not appear materially high compared to the years preceding 2013-14. We therefore did not intervene with the company's base-year cost proposals.

In the draft determination we made an adjustment to the company's non-household retail costs to reflect costs misallocated to wholesale. This was estimated to be £1.740 million over the period. In its representations, the company provided an updated figure of £1.183 million. We have used the updated figure for the final determination.

In the draft determination we made an adjustment to the company's non-household retail costs to remove the input price pressure allowance that the company had proposed. This was estimated to be £5.009 million over the period. While the company did not represent on this issue, in its representations the company provided an updated figure of £5.221 million. We have used the updated figure for the final determination.

In total, this resulted in the company's proposed costs being adjusted from £91.998 million over the control period to £88.142 million.

A5.5 Form of control

In ['Setting price controls for 2015-20, Draft price control determination notice: technical appendix A5 – non-household retail'](#), we recognised that some companies could benefit from having further time to consider and address any issues ahead of the introduction of competition into the non-household retail market in April 2017.

Our final determination on the form of control is set out in the policy chapter A6. In that document we confirm the basic form of control set out in our final methodology statement, but with a two-year initial duration and with a review carried out in 2016.

A5.6 Average revenue controls

The allowed average retail cost component (£) and the allowed net margin (%) for each customer type are shown in the table below for Severn Trent Water.

The average retail revenue per customer – £ (r) – has also been shown. For the avoidance of doubt, it is the average cost component and the allowed net margin that make up the non-household retail control. The average retail revenue per customer is shown only to help comparisons to be drawn.

Table A5.3 Non-household retail average controls per customer

Customer type	Units	2015-16	2016-17	2017-18	2018-19	2019-20
Band 1 – Water: unmetered	£	27.91	30.18	35.77	39.19	42.35
	%	2.3%	2.3%	2.5%	2.5%	2.7%
	£ (r)	35.46	38.28	44.86	48.97	52.87
Band 2 – Water: 0-10 ml/a – metered	£	40.86	42.41	46.62	48.62	50.03
	%	3.2%	3.2%	3.1%	3.1%	3.1%
	£ (r)	61.85	64.31	69.28	71.99	73.89
Band 3 – Water: 10-50 ml/a – metered	£	87.41	91.19	98.26	102.37	105.18
	%	1.5%	1.5%	1.5%	1.5%	1.5%
	£ (r)	474.96	502.64	522.76	541.77	551.26
Band 4 – Water: 50+ ml/a – metered	£	104.70	109.12	117.04	121.86	125.11
	%	1.4%	1.4%	1.4%	1.4%	1.4%
	£ (r)	2,012.08	2,133.47	2,203.76	2,280.40	2,312.73
Band 5 – Water: special agreements – metered	£	55.76	57.89	65.67	68.64	70.67
	%	5.0%	4.9%	5.0%	4.9%	5.0%
	£ (r)	75.65	78.52	87.65	91.20	93.72
Band 6 – Sewerage: unmetered	£	11.79	12.48	14.60	15.69	16.63
	%	2.7%	2.8%	3.1%	3.1%	3.2%
	£ (r)	14.97	15.81	18.30	19.59	20.75
Band 7 – Sewerage: 0-50	£	21.15	21.50	23.38	24.18	24.86

Customer type	Units	2015-16	2016-17	2017-18	2018-19	2019-20
ml/a – metered	%	2.8%	2.8%	2.8%	2.8%	2.8%
	£ (r)	33.53	33.91	36.01	37.01	38.02
Band 8 – Sewerage: 50-250 ml/a – metered	£	47.89	47.92	50.55	51.83	53.42
	%	1.4%	1.5%	1.5%	1.5%	1.5%
	£ (r)	625.62	624.60	633.86	643.66	660.44
Band 9 – Sewerage: 250+ ml/a – metered	£	47.34	47.22	49.72	50.89	52.44
	%	1.4%	1.4%	1.4%	1.4%	1.4%
	£ (r)	1,519.48	1,516.96	1,536.81	1,559.68	1,599.75
Band 10 – Sewerage: special agreements – metered	£	49.47	50.96	58.19	60.72	62.50
	%	4.5%	4.6%	4.8%	4.8%	4.7%
	£ (r)	67.58	69.33	77.74	80.67	82.93
Band 11 – Surface water drainage: unmetered	£	32.92	35.83	40.97	44.71	47.69
	%	5.3%	5.7%	6.0%	6.3%	6.4%
	£ (r)	41.76	45.35	51.28	55.70	59.36
Band 12 – Surface water drainage: 0-50 ml/a – metered	£	18.72	19.34	21.20	21.99	22.52
	%	2.3%	2.3%	2.3%	2.2%	2.2%
	£ (r)	33.42	34.69	37.00	38.27	39.08
Band 13 – Surface water drainage: 50-250 ml/a – metered	£	45.79	47.08	49.73	51.16	52.22
	%	1.5%	1.5%	1.5%	1.5%	1.5%
	£ (r)	269.27	283.17	291.83	301.22	305.63
Band 14 – Surface water drainage: 250+ ml/a – metered	£	47.80	49.17	51.91	53.40	54.51
	%	1.4%	1.4%	1.4%	1.4%	1.4%
	£ (r)	672.53	710.30	730.85	754.94	765.05
Band 15 – Trade effluent: 0-50 ml/a – metered	£	177.56	175.26	182.35	185.84	193.34
	%	2.3%	2.3%	2.2%	2.2%	2.2%
	£ (r)	338.59	335.75	344.47	351.79	366.47
Band 16 – Trade effluent:	£	220.78	218.04	226.96	231.61	241.47

Customer type	Units	2015-16	2016-17	2017-18	2018-19	2019-20
50-250 ml/a – metered	%	1.4%	1.4%	1.4%	1.4%	1.4%
	£ (r)	1,837.73	1,851.51	1,904.74	1,956.47	2,038.89
Band 17 – Trade effluent: 250+ ml/a – metered	£	181.72	181.38	190.68	195.83	203.95
	%	1.4%	1.4%	1.4%	1.4%	1.4%
	£ (r)	1,421.71	1,434.53	1,478.22	1,519.65	1,583.33
Band 18 – Trade effluent: special agreements – metered	£	1,474.73	1,509.63	1,725.10	1,795.50	1,849.82
	%	1.4%	1.5%	1.5%	1.5%	1.4%
	£ (r)	8,094.81	8,210.89	8,644.98	8,910.12	9,253.98

A6 Appointee financeability and affordability

In this section we discuss at an appointee level:

- bills and K factors;
- RoRE;
- financeability; and
- affordability.

However, we first consider the responses to our draft determination that are specific to Severn Trent Water's treatment in these areas below.

A6.1 Consideration of representations on our draft determination

In policy chapter A1, we provide a list of the respondents to the draft determinations published in April, May and August of this year. We have fully considered all of the responses received, and where appropriate, we have made either consequential adjustments to our industry-wide approach or company-specific interventions.

Our general policies relevant at appointee level are set out in the following policy chapters that accompany our final determination. These include our responses to representations on sector-wide issues.

- Policy chapter A7.
- Policy chapter A8.

Table A6.1 lists the representations we have received that are specific to Severn Trent Water at an appointee level and sets out where to find more information on our responses in this document.

Table A6.1 Representations specific to issues at an appointee level for Severn Trent Water

Area	Company-specific representations	Detailed commentary in this company appendix
Bills and K factors	None	Section A6.2
Appointee level uncertainty and gain share mechanisms	None	Section A6.3
RoRE range	None	Section A6.4
Financeability	Severn Trent Water	Section A6.5
Affordability	CCWater	Section A6.6
Financial modelling	Severn Trent Water	Section A6.7

A6.2 Bills and K factors

Table A6.2 below sets out the allowed revenues we have assumed in our final determination for Severn Trent Water to deliver for its customers on its:

- statutory duties; and
- associated PCs.

It also sets out the average customer bills on the basis of the final determination.

Table A6.2 Severn Trent Water’s final determination – K factors, allowed revenues and customer bills¹

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Wholesale water – allowed revenues (£m) ²	620.7	620.3	620.0	619.7	619.3	3,100.0
Wholesale water – K (%)	0.0%	0.5%	0.1%	-0.2%	-0.2%	-
Wholesale wastewater – allowed	661.0	662.8	664.6	666.4	668.2	3,322.8

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
revenues (£m) ²						
Wholesale wastewater – K (%)	0.0%	0.9%	0.4%	0.1%	0.1%	-
Retail household allowed revenue (£m)	113.5	117.6	121.4	123.4	125.4	601.4
Retail non-household expected revenue (£m)	26.0	26.8	28.7	29.7	30.5	141.6
Average household bill – water (£)	170	170	170	170	170	-
Average household bill – wastewater (£)	149	149	150	149	149	-
Average household bill – combined (£) ^{3,4}	302	302	302	301	301	-

Notes:

1. Wholesale figures in 2012-13 prices as revenue will be affected by inflation and retail figures in nominal prices as revenue will not be affected by inflation.
2. The allowed revenue for our final determination is based on an implied menu choice. The company will have the opportunity to make its own menu choice, which will impact on its allowed revenues and customers' bills from 2020. Customer bills in the regulatory period from 2020 will also be affected by Severn Trent Water's performance in the forthcoming regulatory period in relation to costs and the regulatory incentives in place for performance delivery and revenue projection performance.
3. The average combined household bill is not equal to the sum of the average household water bill and the average household wastewater bill due to the use of the economies of scope factor in the household retail price control.
4. It should be noted the average household bill illustrated above reflects a notional allocation (by Ofwat but based on the company's split of household and non-household customers) of the overall wholesale revenue requirement across Severn Trent Water's household and non-household customer base. In practice, this will depend upon the structure of wholesale charges implemented by Severn Trent Water.

As discussed in policy chapter A3, K is set to zero for 2015-16 for wholesale water and wastewater because there are no directly equivalent wholesale revenues for 2014-15 (on account of the new price review structure). As such, there is no existing reference point against which to express a change in K.

The base (2014-15) revenue allowance we have set is the financial year average revenue for 2015-16 adjusted for inflation. We set this out for Severn Trent Water in Table A6.3 below.

Table A6.3 Severn Trent Water’s allowed wholesale revenue for 2014-15

Severn Trent Water	Wholesale water	Wholesale wastewater
Allowed wholesale revenue 2014-15 (£ million)	654.9	697.4

A6.3 Uncertainty and gain share mechanisms

We outline our approach to uncertainty mechanisms and “pain and gain share” in policy chapter A7. Severn Trent Water did not propose any appointee uncertainty mechanisms beyond those that will already form part of the regulatory framework for 2015-20.

A6.4 RoRE range

Severn Trent Water has estimated the range of RoRE that it could earn dependent on its performance over the price control period. The RoRE range reflects the company’s views and is based on an efficient company with the notional³ capital structure. Impacts are identified separately for ODIs, totex performance, financing and the SIM. The approach to calculating the RoRE range is set out in policy chapter A7. We note that Severn Trent Water’s actual returns may differ from notional due to differences between notional and actual capital structure and cost of new debt and level of cost efficiency compared to allowed totex.

Table A6.4 Whole company RoRE range

	Lower bound (%) – appointee	Upper bound (%) – appointee
Overall	-5.0%	+3.4%
ODIs	-2.0%	+0.9%
Totex	-2.1%	+2.0%
Financing	-0.5%	+0.3%

³ Notional refers to the capital structure that reflects Ofwat’s assumption of an appropriate level of gearing to use in determining the allowed return

	Lower bound (%) – appointee	Upper bound (%) – appointee
SIM	-0.3%	+0.2%

Commentary:

The whole company RoRE range is from 0.7% to 9.0%, with a base case of 5.7% and overall impacts from -5.0% to +3.4%. This is similar to the appointee range from the draft determination of -4.8% to +3.4% and remains in line with other companies. We have modified the draft determination RoRE range to exclude additional returns from non-household retail control to be consistent with approach in our risk and reward guidance. This lowers the base case returns from 5.8% to 5.7%.

The totex risk range from -2.1% to +2.0% is only marginally changed from the draft determination of -2.1% to +1.9%. It was modelled by Severn Trent Water by combining the macro scenario variables as set out in the PwC guidance with additional totex over/under performance based on external benchmarks. Its methodology has been appropriately evidenced and the overall range is broadly in line with other companies.

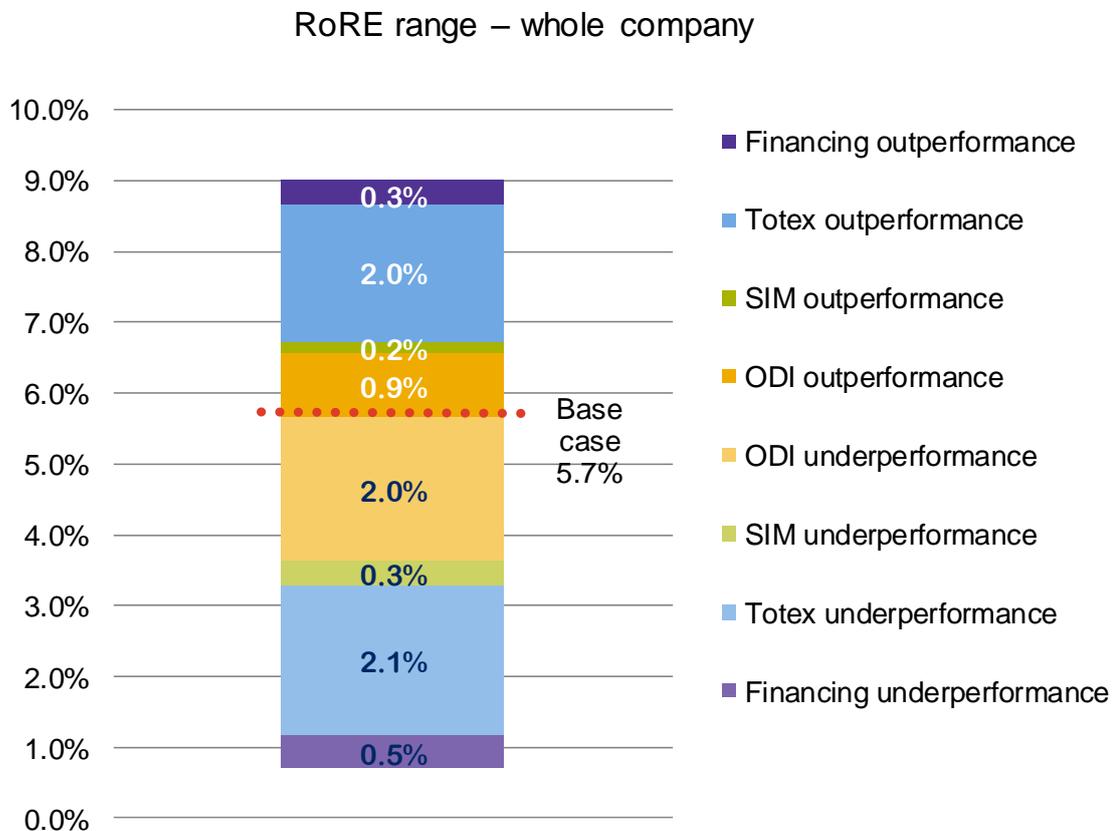
The ODI risk range proposed by Severn Trent Water in response to the draft determination was from -2.0% to +0.8%. This is a small reduction on the -1.9% to +0.9% in the draft determination, which reflected our comparative assessment interventions on ODIs together with changes proposed by Severn Trent Water. We have adjusted this to -2.0% to +0.9% to take account of the interventions discussed in annex 4. The downside scenario includes an assumption that the schemes excluded from capping, Birmingham resilience, community risk and EVA maintenance, incur a combined penalty of £69m associated with a one year delay and some shortfall in delivery. The final range has not been subject to capping, as excluding those schemes, the downside scenario for water does not exceed 2%.

Financing risk impacts from -0.5% to +0.3% are unchanged from the draft determination. These were assessed under a scenario of +/- 100 basis points on the cost of new debt with the downside case compounded by a credit downgrade adding a further 40 basis points to the cost of new debt.

The SIM risk range of -0.3% to +0.2% is changed slightly from the draft determination -0.4% to +0.2%. Severn Trent Water has retained its assumption of +0.5%/-1.0% of appointee revenue with the impacts aligned to the draft determination revenue and the treatment of RPI.

The composition of the RoRE range for Severn Trent Water at an appointee level is shown in Figure A6.1 below.

Figure A6.1 Severn Trent Water’s RoRE range – appointee



Source: Our calculations based on information from Severn Trent Water.

Note: Numbers presented based on calibration of the ODIs against an assumed menu choice of a 50% sharing factor

A6.5 Financeability

Ofwat has a statutory duty to secure that a company is able to finance the proper carrying out of its functions. We interpret this financing duty as requiring that we ensure that an efficient company with a notional capital structure is able to finance its functions. A company’s actual capital structure is a choice for the company and it bears the risk associated with its choices. An efficient company is assumed to be able to deliver its plans based on the expenditure allowance in our final determination.

We set out our approach to assessing financeability in policy chapter A8. Consistent with our PR14 methodology, we have asked companies to provide board assurance on their financeability and to set out their target credit ratings and financial ratios for

the notional company. As part of our assessment, we consider the evidence of financeability provided by companies and model their business plan and our draft and final determination financial ratios. Table A6.5 below notes the comments that we have received in relation to financeability and sets out our response.

Table A6.5 Representations specific to Severn Trent Water’s financeability

Respondent	Summary of comment	Ofwat response
Severn Trent Water	<p>The company raised a number of challenges to our calculation of credit ratios and considered our calculation of the credit metrics overstated the company’s financial strength and provided a report from KPMG setting out the following differences:</p> <p>Type 1: Fundamental differences:</p> <p>Severn Trent Water states that ratios should reflect the amount of IRE assumed to be expensed to the income statement (100%) rather than the company’s assumption of the HMRC tax treatment (75%).</p> <p>Type 2: Modelling/assumption differences: These relate to differences in Ofwat’s and Severn Trent Water’s models or assumptions.</p> <p>Severn Trent Water states that this is primarily the difference between our assumed totex and the company’s view as reported in its business plan.</p> <p>Type 3: Definitional differences: These relate to differences in the definition of a term used in the ratio calculation.</p> <p>Severn Trent Water states that:</p> <ul style="list-style-type: none"> • Moody’s will make adjustments for underfunded pension deficits and a deduction for non-cash interest from net interest expense. • Standard and Poor’s will make adjustments for underfunded 	<p>While HMRC has informed us that generally the tax treatment will follow the accounting treatment of IRE, Severn Trent Water has been using a different IRE expensing approach under IFRS accounting for some time. We accept that it would be appropriate to calculate ratios based on 100% IRE expensed.</p> <p>Consistent with our methodology and the approach used that we and other regulators have used previously, we assess financeability on a notional basis for an efficient company. It is for companies to decide on their actual capital structure and to bear the consequences of such decision. We acknowledge that each of the rating agencies has their own approach to calculating financial ratios and that these may differ between rating agencies and from the approach that Ofwat has taken.</p> <p>We do not adjust for unfunded pension costs because to do so would be inconsistent with the principle that we base our determination on our view of efficient costs.</p> <p>We do not adjust for specific financial instruments because we look at financeability based on our assume cost of new debt which includes an allowance for transaction costs.</p> <p>We do not adjust for the</p>

Respondent	Summary of comment	Ofwat response
	<p>pension deficits, finance leases and capitalised interest costs. Standard and Poor's will calculate net debt using the closing net debt while Ofwat uses average net debt.</p> <p>The company states that if the calculation to its ratios are adjusted as it proposes and combined with the legacy adjustments, means that the draft determination is not financeable at the company's target credit ratings of BBB+/Baa1</p>	<p>capitalisation of interest costs because our ratio is based on cash. For example the accretion of index linked (IL) debt is not a cash payment therefore we do not adjust for it in the numerator. The accretion of IL debt is included in the debt figure in the denominator as it reflects the current value of the amount of debt that will need to be repaid.</p> <p>We assume average net debt as the denominator for financial ratios where the numerator is based on average cash flows.</p> <p>We consider that our approach to the calculation of ratios is appropriate for purpose of setting the price control</p>
<p>Severn Trent Water</p>	<p>Severn Trent Water states we should consider the level of financial ratios that reflect the impact of some legacy adjustments (for example, RCM and the financing true-up of CIS) which are true-ups rather than incentives/performance adjustments.</p>	<p>Our financeability assessment is, consistent with PR09 and our methodology, prior to legacy adjustments as this reflects financeability in-period.</p>
<p>Severn Trent Water</p>	<p>The company proposed to increase revenue in the current period, compared to its December business plan. They provided a range of PAYG scenarios to cover potential final determination positions on totex, legacy and WACC reductions. We estimate that this required PAYG increase of 2.2% and an increase in revenue by £142 million to take account of our interventions. They also sought an increase in PAYG of 0.4% for reducing WACC by 5 basis points.</p>	<p>Overall we do not consider that the proposed the level of the PAYG increase is required to meet its target FFO/debt credit ratio of 9% -10% (taking account of S&P treatment of index linked debt) on a notional company basis and have therefore intervened to reduce the amount of revenue brought forward to £99 million.</p>

Respondent	Summary of comment	Ofwat response
Severn Trent Water	The draft determination interventions make the plan unfinanceable on an actual basis	Financeability should be assessed pre-legacy adjustments based on an efficient notional company ie Ofwat's view of allowed totex and ACTS, consistent with the established approach that we and the Competition Commission have used previously. It is for companies to manage any impact arising from legacy adjustments.

In Table A6.6 we set out the notional financeability ratios associated with Severn Trent Water's business plan, draft determination and final determination.

Table A6.6 Company and Ofwat financial ratio calculations based on the company business plan and financial ratios based on our final determination

Financial ratios for notional company	Financial ratio calculations based on the company business plan (average 2015-20)		Financial ratio calculations based on Ofwat calculations (average 2015-20)	
	Company calculation	Ofwat calculation	Draft determination	Final determination ⁴
Cash interest cover (ICR)	3.11	3.12	3.12	3.12
Adjusted cash interest cover ratio (ACICR)	1.55	1.60	1.60	1.55
Funds from operations(FFO)/debt	9.72%	9.92%	9.91%	9.60%
Retained cash flow/debt	7.10%	7.28%	7.26%	6.97%

⁴ Final determination ratios assume that 100% of IRE is expensed. Ofwat calculations for the financial ratios for the draft determination and company business plan do not take this into account.

Financial ratios for notional company	Financial ratio calculations based on the company business plan (average 2015-20)		Financial ratio calculations based on Ofwat calculations (average 2015-20)	
	Company calculation	Ofwat calculation	Draft determination	Final determination ⁴
Gearing	62.15%	62.94%	63.03%	63.09%
Dividend cover (profit after tax/dividends paid)	1.20	1.26	1.25	1.12
Regulatory equity/regulated earnings for the regulated company	16.52	17.33	17.32	17.25
RCV/EBITDA	10.56	10.22	10.23	10.45

Commentary:

On a notional basis Severn Trent Water is targeting a notional rating of Baa1/BBB+ and considers and S&P FFO/debt ratio of 9% to 10% is required. In its June business, the company accepted the risk and reward guidance and lowered its wholesale WACC and proposed to change its PAYG rate to from its December business plan to bring forward around £200m of revenue to the 2015-20 period to ensure financeability. Given that the financial ratios for the draft determination were at similar levels to those for the company plan we considered that the draft determination was financeable.

As set out in Table A6.5 Severn Trent Water does not consider that it is financeable, as it considers our draft determination ratios overstate its financeability and were not aligned to its view of rating agency ratio calculations and did not take account of the impact of PR09 legacy. Severn Trent proposes to bring forward a further £142 million through changes to PAYG. Severn Trent Water has undertaken a customer survey which it states supports its position. The CCG supports the use of PAYG.

We accept that our calculation of financeability ratios in the draft determination should be revised to take account of IRE expensed at 100% and that an adjustment to PAYG rates is required to maintain Severn Trent's target S&P credit ratio on the basis of notional company as set out in Table A6.7. Overall we do not consider that the amount of the increase is proportionate and have therefore intervened to reduce the amount of revenue brought forward to £99 million which is sufficient to achieve Severn Trent Water's target notional credit rating (pre-legacy adjustments). We have not amended PAYG to take account of reduction in allowed return as a reduction in notional cost of debt does not adversely impact on financeability ratios as both the cost of capital and allowed revenues are reduced.

As explained in policy chapter A8, companies have been allowed to use new tools in the form of PAYG rates (the proportion of totex recovered in the period 2015-20) and RCV run-off rates (depreciation of the RCV). Both PAYG and RCV run-off rates can be adjusted to change the proportion of costs recovered within the 2015-20 period and the amount added to the RCV and recovered over a longer period. As set out in Table A6.7 we have partially accepted Severn Trent Water's proposals to increase the PAYG rate to bring forward revenue to maintain notional financeability.

Table A6.7 Assessment of changes to PAYG and RCV run off rates

Area assessed	Commentary	Our final assessment
Quality of engagement	Focus group and online survey, CCG support and inflation explained	Pass
Basis of engagement	Explained benefits to customers from retaining credit rating at notional company level and so avoiding high long run cost of new debt based on evidence downgrade for Severn Trent Water. Engagement on notional financeability is consistent with our modelling, although the company also takes into account legacy impacts and so will overstate the impact on ratios.	Pass
Proportionality	The proposed change is larger than the amount required to achieve Severn Trent Water target levels of financeability (which should be pre and not post legacy).	Partial pass
Evidence of net benefits	Evidence of costs and benefits to customers	Pass
Overall	Overall accept part of the proposed PAYG change (£99 million out of £142 million) as well supported by customer engagement and notional S&P ratio is below 9%-10% target. We have adjusted the scale of PAYG change to reach an FFO/debt (with S&P treatment of index linked debt) in the 9-10% range for the notional company.	Partially accept

Table A6.8 sets out the PAYG and RCV run-off rates which shows whether revenue has been brought forward compared to the December plan and the impact that this

has on RCV growth and longer term affordability and financeability. The final determination PAYG rate reflects the changes discussed in Table A6.7.

Table A6.8 Impact of changes in cost recovery rates on RCV growth

	PAYG rate	RCV run-off	RCV growth (%) – 1 Apr 2015 to 31 Mar 2020
Company December plan	54.4%	4.3%	10.5%
Company June plan	57.2%	4.2%	9.5%
Draft determination	57.2%	4.2%	9.7%
Final determination	58.8%	4.2%	8.7%

A6.6 Affordability

We set out our approach to assessing affordability in policy chapter A8.

Table A6.9 sets out the change in household bill profile between the company's December and June business plans and the draft and final determination.

Table A6.9 Household bill profile

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Company December plan	316	306	306	305	305	304
Company June plan	315	305	300	300	300	303
Ofwat calculation for June plan	315	305	299	300	300	305
Ofwat calculation for draft determination – pre-reprofiling	315	298	294	294	293	297
Ofwat calculations for draft determination	315	298	294	294	293	297

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Ofwat calculations for final determination	315	302	302	302	301	301

Companies have not necessarily used the same method of calculating household bills as Ofwat – for example, we have included economies of scope for household retail when calculating combined water and sewerage bills. So the Ofwat calculations are not directly comparable to the company plans (lines 1 and 2 of Table A6.9).

The final determination leads to a reduction in bills in 2015-20. To reflect Severn Trent Water’s plan and customer preferences we have re-profiled bills so that there is a large reduction in the first year with broadly flat bills for the rest of the period.

The following text sets out the reasons why this final determination is assessed as affordable. It describes key changes in relation to Severn Trent Water’s December business plan that we assessed as affordable.

A6.6.1 Acceptability

Severn Trent Water’s customer engagement, carried out in support of its December submission, found that the business plan was considered acceptable by 88% of customers.

In its June resubmission, the company’s proposed average bills were around 1% lower than those in the December plan. There is no evidence that there has been any reduction in the scope or scale of the service package being offered. While the final determination average bill is higher than the June plan it is lower than the December plan, therefore it is reasonable to assume that the final determination will remain acceptable to the majority of the company’s customers.

Table A6.10 notes the comments that we received that are specific to affordability and sets out our response.

Table A6.10 Representations specific to affordability for Severn Trent Water

Respondent	Summary of comment	Ofwat response
CCWater ¹	CCWater conducted research on the acceptability of the draft determination to customers. CCWater did not seek to produce comparable results to the company. The CCWater research suggests 66% of customers find the draft determination acceptable after they have been provided with information on bills, inflation and what the water company will deliver.	We note that the CCWater research was not intended to be comparable. It has produced a significant difference to the research that the company undertook on its revised business plan, which was that 88% found the plan acceptable. The company's plan has been developed with input from its CCG. The CCG's role was to help ensure the business plan reflected the views and priorities of customers. We have reviewed the company's acceptability research, which included reviewing the transparency and accuracy of the bill and inflation information. We consider that the acceptability that the company reported is sufficiently robust. We also consider that the CCWater survey results indicate the importance of continued engagement with customers.

Note:

1. CCWater acceptability results sourced from final version of 'Customers' views on Ofwat's draft determinations for process and service 2015-20' October 2014.

A6.6.2 Identification of affordability issues and appropriate support measures

The company has a comprehensive range of affordability measures in place, and outlines in its business plan how it is proposing to both increase the coverage of these schemes and add new initiatives. The key measures are summarised in Table A6.11.

Table A6.11 Key affordability measures

Measure	Current coverage (no. of customers)	Forecast 2019-20 coverage
WaterSure	10,183	11,500
Water direct	56,395	Similar volume forecast
Flexible payment plans	29,349	Similar volume forecast
Proactive metering in deprived areas	New	2,000 p.a.
Trust fund/hardship fund	2,700	Similar volume forecast
Social Tariff	New	35,000 p.a.
Water efficiency advice/audits	153,766 devices installed	Expected to rise but no target
Water health checks	New	1,500 p.a.

A6.6.3 Longer-term affordability

Table A6.9 above sets out the change in household bill profile between the company's December and June business plans and the draft and final determinations.

In its December plan, the company demonstrated a robust approach to ensuring that its proposals were affordable to customers in the longer term. Although the company did not directly ask customers about long term affordability, it consulted about future preferences in its acceptability research, and concluded that 88% of customers expressed a desire for the same level of bills now and in the future. In response to these findings, Severn Trent Water stated that its cost recovery tools had been set in order to avoid intergenerational disparities.

In its June plan, the company increased its 2015-20 and 2020-25 PAYG rates from its December plan. The CCG expressed support for the revised PAYG rates.

In its representations Severn Trent Water presented new research that found that 68% of customers supported the use of PAYG to maintain financeability. The company re-engaged with the CCG and obtained its support for further increases to PAYG. We therefore consider that the final determination is consistent with long term affordability.

A6.6.4 Longer-term affordability – ODIs

The company has revisited its package of ODIs for the June submission, and has increased the associated rewards and penalties. The company provides evidence

that the impact on customers' bills of even the maximum level of rewards will be more than offset by the new, lower bills proposed in the June plan. Therefore, the impact of ODIs is not expected to negatively impact customers' acceptability of the plan. The company undertook dedicated ODI acceptability research as part of its June submission, which found that most customers considered the amended ODI package to be broadly acceptable.

The CCG is broadly supportive of the company's response to our RBR feedback on its ODI package, but has highlighted concerns around the company's intention to apply ODIs in-period, and that the complex nature of the revised ODI package may be difficult to successfully communicate to customers. The CCG also questions the appropriateness of having rewards set against serious pollution incidents and hosepipe bans, and notes that the rewards in general are weighted towards wastewater in a way which may not be proportionate.

In the draft determination we proposed that companies include a subset of cross-industry 'comparative' ODIs within their overall package. In its representation, Severn Trent Water confirmed that it accepted our proposed amendments to the ODI package.

A6.7 Financial modelling and tax credit

Table A6.12 notes the comments that we received that are specific to financial modelling and Severn Trent Water's proposed use of an expected tax credit and sets out our response.

Table A6.12 Representations specific to financial modelling and Severn Trent Water's expected tax credit

Respondent	Summary of comment	Ofwat response
Severn Trent Water	<p>In the draft determination we required Severn Trent Water to provide evidence that it has engaged with its CCG and received its agreement about the company's proposed use of an expected tax credit.</p> <p>Severn Trent Water provided a full and transparent analysis of its tax affairs, and the company's CCG concluded that an appropriate</p>	<p>Severn Trent Water has demonstrated that it has engaged with its CCG on this issue specifically. The CCG has confirmed it has concluded that an appropriate balance of risk and reward between customers and investors has been struck. We have accepted Severn Trent Water's position.</p>

Respondent	Summary of comment	Ofwat response
	balance of risk and rewards between customers and investors had been struck, and that treating this decision in isolation would not be appropriate.	
Severn Trent Water	Severn Trent Water stated that there are errors in the calculation of tax in the index linked debt model.	We have checked the model and we are content it is working correctly.

Annex 1 Wholesale costs

Establishing final determination thresholds

Our approach to establishing final determination thresholds is outlined in policy chapter A3.

In the tables below, we provide some information on the company-specific numbers that support these calculations.

Further information about our assessment of each claim is set out in the populated version of final determination cost threshold models.

Table AA1.1 Movement from basic cost threshold to final determination threshold for wholesale water totex (£ million)

Basic cost threshold	Policy additions ¹	Unmodelled costs adjustment	Deep dives	Final determination threshold	Deep dives fully or partially not added ²
2,251.0	300.5	0.0	291.4	2,842.9	52.7

Notes:

1. See Table AA1.2 below.
2. Deep dives are net of implicit allowances. A value of zero means deep dives are wholly covered by IAs.

Table AA1.2 Policy additions to the wholesale water basic cost threshold (£ million)

Business rates	Pension deficit payments	Third party costs	Open market costs	Net v gross adjustments	Total
215.2	22.0	60.9	2.5	0.0	300.5

Table AA1.3 Comparison of company wholesale water totex with the final determination threshold and 2010-15 totex (£ million)

Plan ¹	Final determination threshold	Gap ²	2010-15 v plan
2,930.3	2,842.9	87.4	419.3

Note:

1. Where the company's business plan total has been adjusted by the company as part of its representations on its draft determination, this is reflected here.
2. This gap will not equal the deep dives fully or partially not added in Table AA1.1 if the company's claims for special treatment in the costs thresholds are not equal to the gap.

Table AA1.4 Summary of wholesale water deep dive assessments (£ million)

Company proposal		Assessment				Final determination allowance	
Claim	Amount sought	Implicit allowance	Need	Cost-benefit analysis	Robust costs	Assessment	Amount allowed
Deep dives							
Representation: Elan Valley Aqueduct resilience – main scheme	264.7	22.8	Pass	Pass	Pass	Pass	241.9
Representation: non-infrastructure maintenance	40.9	40.9	-	-	-	-	-
Representation: Elan Valley Aqueduct resilience – community risk	54.2	4.7	Pass	Pass	Pass	Pass	49.5
Representation: Elan Valley Aqueduct maintenance	21.5	21.5	-	-	-	-	-
Supply demand – additional resources	30.3	0.0	Pass	Pass	N/a	Pass	0.0
Catchment management	19.7	19.7	-	-	-	-	-
Unmodelled cost assessment²							
Other resilience	57.7	5.0	Fail	Partial pass	Partial pass	Fail	0.0

Note:

1. Adjustment of £14m after triangulation is made in the basic cost threshold

2. For the water service the unmodelled adjustment to the basic cost threshold is triangulated and is therefore one third of the amount allowed.

Table AA1.5 Movement from basic cost threshold to final determination threshold for wholesale wastewater totex (£ million)

Basic cost threshold	Policy additions ¹	Unmodelled costs adjustment	Private sewage pumping stations	NEP5	Update of private sewer model delta	Deep dive	Final determination on threshold	Deep dives fully or partially not added
2,633.5	164.0	-17.3	36.2	183.2	-7.4	-201.2 (Cap on totex)	2,791.0	None

Notes:

1. See Table AA1.6 below.
2. Deep dives are net of implicit allowances. A value of zero means deep dives are wholly covered by IAs.

Table AA1.6 Policy additions to the wholesale wastewater basic cost threshold (£ million)

Business rates	Pension deficit payments	Third party costs	Open market costs	Net v gross adjustments	Total
141.3	20.1	0.0	2.7	0.0	164.0

Table AA1.7 Comparison of company wholesale wastewater totex with the final determination threshold and 2010-15 totex (£ million)

Plan ¹	Final determination threshold	Gap ²	2010-15 v plan
2,658.1	2,791.0	-132.9	185.4

Note:

1. Where the company's business plan total has been adjusted by the company as part of its representations on its draft determination, this is reflected here.
2. This gap will not equal the deep dives fully or partially not added in Table AA1.5 if the company's claims for special treatment in the costs thresholds are not equal to the gap.

Table AA1.8 Summary of wholesale wastewater deep dive assessments (£ million)

Company proposal		Assessment				Final determination allowance	
Claim	Amount sought	Implicit allowance	Need	Cost-benefit analysis	Robust costs	Assessment	Amount allowed
Deep dives							
NEP Phase 5 Water Framework Directive	204.5	0.0	Pass	Pass	Partial pass	Pass	183.2
Ofwat adjustment: capping	0.0	0.0	N/a	N/a	N/a	N/a	-201.2

Annex 2 Household retail

Details on our assessment of proposed adjustments to the ACTS

Our approach to setting the industry ACTS is outlined in policy chapter A5.

Below we provide information on our assessment of the company-specific adjustments to the ACTS.

Doubtful debt

In its revised business plan, Severn Trent Water sought an ACTS adjustment for bad debt based on deprivation and bill size. The total value of the adjustment was £25.9 million. This is higher than the £15.7 million sought by Severn Trent Water in its original business plan submission in December.

However, in its representations the company did not pursue an adjustment for doubtful debt driven by deprivation further, therefore our final position is the same as our position for draft determination.

Materiality

Severn Trent Water's proposed adjustment value (£25.9 million) includes £14.6 million of bad debt costs that it incorrectly allocated to the adjustment value (to reflect "one-off" bad debt costs excluded from the ACTS cost base). Instead, these costs have been reallocated to base costs and considered by us as part of the general movement in the ACTS cost base ('new costs').

Removing this £14.6m from Severn Trent Water's proposed ACTS adjustment reduces the adjustment value to approximately £10.9 million, which is immaterial at 1.9% of retail operating expenditure plus depreciation over 2015-20. The adjustment is therefore not accepted on the grounds that it is immaterial.

It should be noted that this amount related primarily to changes in nominal bill size and thus is more appropriately treated as an input price pressure adjustment. This fact does not change our assessment of whether to accept or reject the adjustment. However, as we are rejecting the adjustment, we have not added the value of the adjustment back on to Severn Trent Water's base costs, consistent with our treatment of other input price pressure related adjustments.

In its representations on its draft determination, Severn Trent Water did not submit additional evidence around its adjustment for doubtful debt driven by deprivation. Therefore, we have not accepted the adjustment claim as in the draft determination, on the grounds that the value of the adjustment is not material.

The amounts we have included in our draft and final determinations are quantified in Table AA.2.1

Table AA2.1 Household retail adjustments (£ million, nominal prices)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Adjustments included in Severn Trent Water's June business plan						
Doubtful debt	3.512	3.967	5.060	6.138	7.636	26.311
Pension deficit repair costs	0.745	0.745	0.745	0.745	0.745	3.725
Outcome A: We will provide you with excellent customer service	0.243	0.768	1.169	1.371	1.305	4.856
Outcome B: We will help you when you struggle	0.997	0.964	0.932	0.902	0.875	4.670
Adjustments included in business plan	5.497	6.444	7.906	9.156	10.561	39.562
Adjustments included in draft determination						
Doubtful debt	£0.0m allowed as an adjustment and £15.0m added on to new costs					
Pension deficit repair costs	0.809	0.809	0.809	0.809	0.809	4.045
Outcome A: We will provide you with excellent customer service	Not included as adjustment – forms part of new cost					

Outcome B: We will help you when you struggle	Not included as adjustment – forms part of new costs					
Adjustments included in draft determination	0.809	0.809	0.809	0.809	0.809	4.045
Adjustments proposed in Severn Trent Water’s representations						
Doubtful Debt	3.425	3.880	4.973	6.051	7.549	25.878
Pension deficit repair costs	0.745	0.745	0.745	0.745	0.745	3.727
Outcome A: We will provide you with excellent customer service	0.243	0.768	1.169	1.371	1.305	4.855
Outcome B: We will help you when you struggle	0.997	0.964	0.932	0.902	0.875	4.670
Adjustments included in business plan	5.411	6.358	7.819	9.069	10.474	39.130
Adjustments included in final determination						
Doubtful Debt	£0.0m allowed as an adjustment and £15.0m added on to new costs					
Pension deficit repair costs	0.809	0.809	0.809	0.809	0.809	4.045
Outcome A: We will provide you with excellent customer service	Not included as adjustment – forms part of new costs					
Outcome B: We will help you when you struggle	Not included as adjustment – forms part of new costs					

Adjustments included in final determination	0.809	0.809	0.809	0.809	0.809	4.045
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Household retail revenue modification

We outline our approach to revenue modification in policy chapter A5.

Table AA2.2 sets out the amount per customer, by customer type, that allowed revenues will be modified by if outturn customer numbers differ from forecast customer numbers and Table AA2.3 sets out the baseline number of customers.

Table AA2.2 Household retail allowed revenue modification factors by class of customer (£/customer)

Revenue modification per:	2015-16	2016-17	2017-18	2018-19	2019-20
Unmetered water only customer	21.64	22.39	23.09	23.41	23.59
Unmetered wastewater only customer	21.64	22.39	23.09	23.41	23.59
Unmetered water and wastewater customer	28.14	29.10	30.02	30.43	30.67
Metered only water customer	29.61	29.91	30.06	29.84	30.04
Metered wastewater only customer	22.37	23.11	23.80	24.11	24.29
Metered water and wastewater customer	36.11	36.88	37.46	37.49	37.74

Note: There will be no automatic indexation for retail price controls to RPI.

Table AA2.3 Assumed number of customers for household retail total revenues (000s)

Number of customers	2015-16	2016-17	2017-18	2018-19	2019-20
Unmetered water only	148.9	145.7	142.5	139.3	136.2
Unmetered wastewater only	457.6	448.4	439.1	429.6	420.2
Unmetered water and wastewater	1690.9	1653.8	1617.4	1581.5	1546.2
Metered water only	113.7	118.4	123.2	128.0	133.0
Metered wastewater only	245.4	257.0	268.9	281.0	293.2
Metered water and wastewater	1217.0	1266.9	1318.0	1370.3	1423.7

Annex 3 Reconciling 2010-15 performance

When we last set price controls at PR09, we included a number of incentive mechanisms designed to encourage companies to improve and deliver services more efficiently, and, to manage uncertainty. Consistent with the approach set out at the time of the final determinations in 2009 we have made adjustments at PR14 to 2015 to 2020 revenues to take account of company performance in the 2010 to 2015 period

We set out our methodology for calculating the adjustments to 2015-20 wholesale price controls resulting from the company's actual performance during the 2010-15 period in policy chapter A4.

In this annex, we set out the final determination adjustments to 2015-20 price controls for Severn Trent Water resulting from the company's actual performance during the 2010-15 period.

As part of the final determination of the 2010-15 adjustments we have undertaken detailed calculations within our models for the RCM, OIA, CIS and serviceability shortfalls. While we provide an explanation of our interventions within this annex, each model contains the detail of the specific calculation.

We make a "midnight adjustment" to the closing RCV from the previous period (ending on 31 March 2015) to obtain the opening RCV for the next period (starting on 1 April 2015). Our detailed calculations are contained within the RCV midnight adjustment model published alongside the final determination.

In this annex we provide an overview – comparing the company's view of the required revenue adjustments included in its revised business plan for each of the incentive tools for water and wastewater services, with our own view. We then consider each adjustment mechanism in turn.

However, we first consider the responses to our draft determination that are specific to Severn Trent Water's treatment in these areas below.

Consideration of representations on our draft determination

In policy chapter A1, we provide a list of the respondents to the draft determinations published in April, May and August of this year. We have fully considered all of the

responses received, and where appropriate, we have made either consequential adjustments to our industry-wide approach or company-specific interventions.

In its representation Severn Trent Water raised a number of detailed points about our technical approach to legacy adjustments. In light of these, we commissioned an independent review of the legacy models. In policy chapter A4, we set out the issues identified in the review and the actions we have taken for the final determination. As a result of these representations no material changes have been made for the period 2015-20.

Table AA3.1 Representations specific to reconciling 2010-15 performance for Severn Trent Water

Area	Respondent	Summary of comment	Ofwat response
RCM	Severn Trent Water	<p>Tax treatment of the billing incentive (BI) and back-billing incentive (BBI)</p> <p>Severn Trent Water states that the BI and BBI are part of the RCM and not a separate incentive. As such, its tax treatment should be the same as the RCM true-up component of the RCM legacy adjustment.</p> <p>Discount rates (PR09/PR14)</p> <p>Severn Trent Water states that there are inconsistencies in discount rates across the legacy tools.</p>	<p>We have carefully reviewed the company's representations and evidence provided in the accompanying independent reports. Our more substantive comments on the issues identified in these reports are set out in policy chapter 4.</p> <p>We consider that no changes are required to the approach we have taken for the draft determination. We also consider that the interventions we applied at the draft determination remains valid for the final determination.</p>
	Severn Trent Water	<p>Number of household billed</p> <p>Severn Trent Water disagreed with our draft determination intervention of adjusting its property numbers because it was not consistent with business plan table R3.</p> <p>It considered that the line definitions for property numbers in business plan table R3 were different to that of the June return or annual returns on which the RCM</p>	<p>We consider that Severn Trent Water has misunderstood the reporting requirements for business plan table R3.</p> <p>Following a query to all companies, the company submitted an updated business plan table R3.</p> <p>For the final determination we have used the updated R3 data but have intervened on the 2010-11 value because we are concerned that it does not comply with the reporting requirements. We have</p>

Area	Respondent	Summary of comment	Ofwat response
		calculates the billing incentive.	intervened and applied the value as submitted in the June return.
		<p>FD09 assumptions – forecast revenues for the measured non-household groups under and over the tariff basket threshold of 50 megalitres (MI)</p> <p>Severn Trent Water disagrees with the FD09 non-household revenues that we have used in our RCM model because it does not represent all of its customers that lie below and above the 50 MI threshold.</p>	<p>We have carefully reviewed the company's representation. We consider that no changes are required to the approach we have taken at the draft determination for the final determination.</p> <p>In accordance with PR09/31: 'Revenue correction mechanism – technical details', we adjust our expectation of tariff basket revenue if revenue from non-household tariffs moves into or out of the tariff basket.</p> <p>In calculating the adjustment in the RCM model, we assume that any cross-boundary movements of revenue is most likely to occur in the groups that lie immediately either side of the tariff basket threshold (rather than all of the measured non-household groups that lie below and above the 50MI threshold). We explained this approach in 'Setting price controls for 2015-20 – further information on reconciling 2010-15 performance'.</p>
OIA	Severn Trent Water	The company has made a representation regarding the inclusion of pension deficit	We have carefully reviewed the company's representations and evidence provided in

Area	Respondent	Summary of comment	Ofwat response
		<p>costs and considers its post (corporation) tax outperformance allowance should be £19.4 million.</p>	<p>the accompanying independent reports. Our more substantive comments on the issues identified in these reports are set out in policy chapter 4.</p> <p>While we accept that the OIA methodology has become sensitive to the amount and timing of pension deficit contributions, we consider they should remain in the calculation as they form part of a company's controllable costs. However, in recognition of the company's sustained outperformance in the wastewater service during the 2010-14 period, we have retained actual pension deficit contributions in the calculation, but have smoothed the resulting pension adjustments to actual opex over the period.</p>
		<p>The company has made a representation regarding the use of the effective tax rate in the calculation.</p>	<p>We apply the effective tax rate to the outperformance because the actual benefit retained by a company during the period is net of tax. We have retained its use in the calculation, for consistency with our published methodology and for consistency with other companies, who have accepted the effective tax rate in the calculation of OIA.</p>

Area	Respondent	Summary of comment	Ofwat response
Service standard outputs	Severn Trent Water	The company provided commentary and an assurance report from Atkins regarding its resilience, odour and enhanced digestion service standards and an assurance report from Jacobs regarding its pollution service standards.	We have reviewed the evidence provided and are satisfied that service standards have been achieved. In relation to resilience service standards, we are satisfied that there is a net customer benefit for the schemes delivered. We have therefore not applied shortfall adjustments for these outputs.
Serviceability performance	Severn Trent Water	The company did not challenge our serviceability adjustments at the draft determination. However, the company noted that should successful challenges by other companies in this area result in industry-wide changes, it would expect these changes to be reflected in its final determination.	We have conducted a full review of our methodology for calculating shortfalls in light of companies' representations. Details and the implications of this review can be found in policy chapter A4. Our assessment of the company's specific representations, in relation to exclusions and mitigating circumstances for example, is set out in Table AA3.12.
CIS	Severn Trent Water	The company stated that it considered that our draft determination proposals for the CIS did not operate in the way originally intended during PR09 because of inconsistencies or errors in: <ul style="list-style-type: none"> the way that we adjust for price inflation; the net present value (NPV) 	As explained in policy chapter A4, we have corrected a minor error in the CIS model for all companies with respect to the discount rate used when calculating the future value of the revenue adjustment in the 2010-15 period. This minor change had no material impact of the final revenue adjustments

Area	Respondent	Summary of comment	Ofwat response
		<p>calculations; and</p> <ul style="list-style-type: none"> the way that the model handled tax for the ex-ante and ex-post elements of the calculated reward/penalty 	<p>As discussed in policy chapter A4, we have not changed our treatment of inflation in the calculation of CIS adjustments for the period 2015-20.</p>
<p>Other adjustments – adjustment to opening RCV (land sales adjustment)</p>	<p>Severn Trent Water</p>	<p>Severn Trent Water claims we have used incorrect data but acknowledge that the differences are not material. The company also disagrees with the discount rate used. However, the representation shows that we actually derived an RCV which is £0.8 million higher using our draft determination method than the Severn Trent Water method.</p>	<p>We have calculated land sales using the business plan sales figures in our RCV midnight adjustment model where they agree to the proceeds as recorded in the audited regulatory accounts. Severn Trent Water had reduced the audited figures by netting off additional costs contrary to the usual treatment. We did not allow all of these additional offsetting costs.</p> <p>Our calculations for final determination show that our view of the RCV is £1.0m higher than the Severn Trent Water final business plan in respect of land sales.</p>
<p>Other adjustments – adjustment to opening RCV</p>	<p>Severn Trent Water</p>	<p>Severn Trent Water does not agree with the method of indexation of the IRE spend element of this adjustment. It claims the RCV is £8.8 million lower as a result of</p>	<p>The indexation principles have been brought forward from the 2009 determination as they seek to tie up the ‘blind year’ from that review where we did</p>

Area	Respondent	Summary of comment	Ofwat response
(2009-10 outperformance)		this. The KPMG report calculated the understatement as £4.1m. The BDO report calculated this as £8.5 million.	<p>not have finalised outturn capex figures. Companies accepted this calculation as part of the PR09 package so it would not be appropriate to alter the basis of calculation at this stage.</p> <p>The difference is in any case immaterial (the opening RCV is £7.3 billion for Severn Trent Water).</p>

Summary of 2010-15 adjustments

All companies were required to put in business plans their own adjustments for PR09 reconciliation. Table AA3.2 below sets out for each of the incentive tools for water and wastewater services:

- the company's view of the required revenue adjustments included in its revised business plan; and
- our own view.

Our view reflects our understanding of the company's performance using these incentives, based on information provided in its revised business plan, subsequent query responses and representations on our draft determination. The table also shows other adjustments, such as those relating to tax resulting from the company's actual performance during the 2010-15 period.

Table AA3.1 notes the comments that we have received that are specific to this aspect of the wholesale water and wastewater controls of Severn Trent Water and outlines how our interventions have been influenced by our consideration of these responses.

The changes we have made in the final determination compared to our draft determination, are due to changes in our serviceability shortfall methodology and our revised intervention in the wastewater OIA. We discuss these in more detail in policy chapter A4. We have also revised our adjustment to the RCV for actual expenditure in 2009-10.

Table AA3.2 Revenue adjustments 2015-20 (£ million)

	Water service		Wastewater service	
	Company view	Ofwat view	Company view	Ofwat view
SIM	0.000	0.000	0.000	0.000
RCM	20.121	12.350	-15.053	-24.698
OIA – post-tax	0.000	0.000	19.374	16.093
CIS	-30.225	-45.523	-4.829	-20.571
Tax refinancing benefit clawback	0.000	0.000	0.000	0.000

	Water service		Wastewater service	
	Company view	Ofwat view	Company view	Ofwat view
Other tax adjustments	0.000	0.000	0.000	0.000
Equity injection clawback	0.000	0.000	0.000	0.000
Other adjustments	-2.212	0.000	0.000	0.000
Total wholesale legacy adjustments	-12.316	-33.173	-0.508	-29.176

Notes: For the CIS mechanism, there is a corresponding adjustment to the RCV made at 1 April 2015 (part of the 'midnight' adjustments). The impact on the RCV for both water and wastewater can be seen in Table AA3.14. This adjustment is net of any logging up, logging down or shortfalls. A full reconciliation showing all of the midnight adjustments to the RCV, including the impact of logging up, logging down and shortfalls, can be seen in Table A2.7 and Table A3.6

Totals may not add up due to rounding.

Adjustments by 2010-15 incentive mechanism

RCM

Table AA3.3 below shows the company's view and our view of the company's RCM adjustments. Table AA3.4 summarises our interventions in relation to Severn Trent Water's proposed 2010-15 RCM adjustments.

Our final determination includes an increase of £2.5 million compared to the draft determination.

The company submitted an updated business plan table R3 in response to a query relating to property numbers. We have used the resubmitted data in R3 instead of the numbers that the company proposed in its populated RCM model.

For the RCM, we apply the vanilla wholesale allowed return (real; pre-tax cost of new debt, post-tax cost of equity) as the PR14 discount rate. For the final determination, the updated PR14 discount rate is 3.6%. This has also contributed to a small movement in the RCM from the draft determination.

Table AA3.3 RCM annualised adjustments for 2015-20 (£ million)

		2015-16	2016-17	2017-18	2018-19	2019-20	Total
Water	Company view	4.024	4.024	4.024	4.024	4.024	20.121
	Ofwat view	2.470	2.470	2.470	2.470	2.470	12.350
Wastewater	Company view	-3.011	-3.011	-3.011	-3.011	-3.011	-15.053
	Ofwat view	-4.940	-4.940	-4.940	-4.940	-4.940	-24.698

Table AA3.4 Interventions on proposed 2010-15 RCM adjustments

Area of intervention	What we did	Why we did it
Back-billing amounts	Our assumptions for the final determination did not include the back-billed amounts claimed by the company.	<p>We have not received sufficient evidence that the back-billing amounts being put forward by the company are compliant with RAG4.04 and IN11/04. The company has not demonstrated that:</p> <ol style="list-style-type: none"> a. it has calculated the amounts in accordance with the overall principal that it is the lesser of: <ol style="list-style-type: none"> i. the future extra revenue billed up to March 2015 as a result of correcting historical under billing; or ii. the associated back-billing; b. it has received all outstanding back-billed amounts due from the customer; c. it has claimed for back-billed amounts where the inaccuracy of the charging is not the company's fault; or d. it has taken a reasonable fair and appropriate approach for the back-billed amounts

Area of intervention	What we did	Why we did it
Tax	<p>Our assumptions for the final determination include our view of the way tax is taken into account in the RCM model as per previously published documents on the RCM.</p> <p>Our assumptions for the corporation tax rate applied in the RCM model are the same as HMRC’s published tax rates for each year.</p>	<p>claimed.</p> <p>The company does not agree with our approach on tax in the RCM. It has made an adjustment to deduct tax from the billing incentive element of the RCM in its calculated RCM. It has also applied a corporation tax rate of 20% across all years in its populated RCM model. For our assumptions for the draft determination, we did not accept the company’s proposed alternative approach on how tax is taken into account in the RCM model. Our approach on tax in the RCM remains unchanged from previously published documents on the RCM.</p> <p>Our assumptions for the corporation tax rate applied in the RCM model at the draft determination are the same as HMRC’s published tax rates for each year.</p> <p>We have carefully reviewed the company’s representations and evidence provided in the accompanying independent reports. Our more substantive comments on the issues identified in these reports are set out in policy chapter 4.</p> <p>We consider that the interventions we applied at the draft determination remains for the final determination.</p>
FD09 assumptions – Measured Non-household’s revenue	<p>Our assumptions include our view of the FD09 assumptions.</p> <p>Our view of the company’s</p>	<p>We have carefully reviewed the company’s representations. We consider that the intervention we</p>

Area of intervention	What we did	Why we did it
<p>for the Measured Non-household group immediately above and below the 50ML threshold</p>	<p>revenue assumptions for the measured non-household group immediately below and above the 50 Ml tariff basket threshold originate from the company's FD09 revenue forecasts that come from the tariff basket model, which we used for PR09.</p>	<p>applied at the draft determination remains for the final determination.</p> <p>There are differences between the company's and our view of the FD09 assumptions used in the company's populated RCM model. The company applied different assumptions for 'FD09 Measured Non-household's revenue for the Measured Non-household group immediately above and below the 50ML threshold' compared with our view of its FD09 assumptions.</p> <p>Our assumptions for the final determination include the FD09 revenue forecasts as contained in the PR09 tariff basket model in accordance with our published methodology 'Setting price controls for 2015-20 – further information on reconciling 2010-15 performance'.</p>
<p>FD09 assumptions – PR09 discount rate</p>	<p>Our assumptions include our view of the FD09 assumptions.</p> <p>Our view of the company's PR09 discount rate is 4.5%.</p>	<p>We have carefully reviewed the company's representations and evidence provided in the accompanying independent reports. We consider that the interventions we applied at the draft determination remains for the final determination.</p> <p>The company has used a PR09 discount rate of 5.1% which is not consistent with its FD09 of 4.5% for the company.</p> <p>Our assumptions for the final determination include the FD09 discount rate in accordance with our published methodology</p>

Area of intervention	What we did	Why we did it
		'Setting price controls for 2015-20 – further information on reconciling 2010-15 performance'.
Number of household billed	Our assumptions for the final determination used the data the company submitted in its updated business plan table R3 in response to a query to calculate our view of the RCM adjustment. For 2009-10 and 2010-11 we used the data as per the June return numbers because Severn Trent Water did not provide updated numbers in R3 in its response to a query.	The company submitted an updated business plan table R3 in response to a query on its representation. For the final determination we have used the updated R3 data instead of the numbers that the company originally proposed in its populated RCM model. However, we have intervened on the 2010-11 value because we are concerned that it did not comply with the reporting requirements. We have intervened and applied the value as submitted in the June return.

OIA

Table AA3.5 below summarises the company's view and our view of the incentive allowances for 2015-20. Table AA3.6 summarises our interventions in relation to Severn Trent Water's proposed 2010-15 OIA adjustments.

The only change from our draft determination relates to the smoothing of pension adjustments to actual opex over the period 2010-14 in calculating the wastewater allowance. This has increased the revenue adjustment by £6.8 million for the final determination.

Table AA3.5 OIAs for 2015-20 (£ million)

		2015-16	2016-17	2017-18	2018-19	2019-20	Total
Water service							
Incentive	Company	0.000	0.000	0.000	0.000	0.000	0.000

		2015-16	2016-17	2017-18	2018-19	2019-20	Total
allowance (post-tax)	view						
	Ofwat view	0.000	0.000	0.000	0.000	0.000	0.000
Wastewater service							
Incentive allowance (post-tax)	Company view	19.374	0.000	0.000	0.000	0.000	19.374
	Ofwat view	16.093	0.000	0.000	0.000	0.000	16.093

Table AA3.6 Interventions on proposed 2010-15 OIA adjustments

Area of intervention	What we did	Why we did it
FD09 assumptions (both services)	We have added back the FD09 pension deficit allowances to the FD09 expectation assumptions used in the calculation which the company had removed.	For consistency with the business plan information requirements and expected methodology we published in 'Setting price controls for 2015-20 – further information on reconciling 2010-15 performance' April 2014. This requires pension deficit allowances to be included in the original FD09 expectation. Our intervention also ensures consistency with the opex expectation assumptions used in the calculation for all other companies.
Adjustment to actual opex to account for pensions (both services)	We have included all of the company's pension deficit repair costs in the pension adjustments to actual opex, but have smoothed the adjustments equally over the period 2010-14.	<p>We consider the company has provided sufficient evidence for us to reassess our draft determination assumptions in light of the company's specific circumstances, acknowledging both the company's management action in making significant payments to reduce the pension deficit during the period and recognising the sustained outperformance in wastewater opex achieved by the company throughout the 2010-14 period.</p> <p>Our final determination retains our approach of including all pension deficit costs in the calculation and is consistent with the approach we carried out at PR09 but our intervention derives pension adjustments based on a smooth profile of pension deficit costs over the period. This is akin to the</p>

Area of intervention	What we did	Why we did it
		pragmatic approach adopted by another company who has smoothed the impact of its pension adjustment over the period so as to avoid claiming an OIA that they consider was unrepresentative.
Effective tax rate	Based on the company's query response, we amended the company's effective tax rate from 20% to 0%.	For consistency with guidance published in 'Setting price controls for 2015-20 – further information on reconciling 2010-15 performance' April 2014, we reflected the company's actual tax rate in 2013-14 of -1.5% by resetting this to zero. In its draft determination representation, the company disagreed with the use of the effective tax rate in the calculation of the OIA arguing that its justification has not been explained by Ofwat and that it is inconsistent with the headline rate used in the financial model. We note the company's concerns but consider the PR14 approach is consistent with that carried out for PR09 and has not been challenged by other companies. We have therefore retained the effective tax rate in the calculations for the final determination.
Private sewers logging up opex	We reflected savings arising from avoided abortive visits and we excluded employment costs linked to mandatory build standards forecast in 2014-15.	To maintain consistency with the approach we applied in our interim determination of K for Thames Water.

Change protocol (logging up, logging down and shortfalls)

Table AA3.7 and Table AA3.8 below summarise Severn Trent Water’s view and our baseline view of total adjustments to:

- capex included in the CIS reconciliation; and
- the FD09 opex assumptions used in the calculation of the opex incentive revenue allowances.

There are no changes from our draft determination.

Table AA3.9 summarises our interventions in relation to Severn Trent Water’s proposed change protocol adjustments.

Table AA3.7 Summary of post-efficiency capex for logging up, logging down and shortfalls included in the CIS reconciliation (£ million)

2009-10 to 2014-15 – post-efficiency capex	Water service		Wastewater service		Total service	
	Company view	Ofwat view	Company view	Ofwat view	Company view	Ofwat view
Logging up (two-sided)	0.000	0.000	42.636	32.788	42.636	32.788
Logging down (two-sided)	0.000	0.000	-15.723	-19.699	-15.723	-19.699
Shortfalls (one-sided)	-24.406	-24.418	-12.810	-12.810	-37.216	-37.228

Note:

We exclude shortfalls for serviceability from the CIS reconciliation, but instead make direct adjustments to the RCV in 2015-16. We do this to allow the actual capex the company incurred in seeking to maintain serviceability, to be reflected in the rewards or penalties earned through the scheme. But to also ensure customers are not required to pay for the regulatory output the company has failed to deliver.

Table AA3.8 Summary of post-efficiency opex for logging up, logging down and shortfalls included in the OIA calculation (£ million)

2009-10 to 2014-15 – post-efficiency opex	Water service		Wastewater service		Total service	
	Company view	Ofwat view	Company view	Ofwat view	Company view	Ofwat view
Logging up	0.000	0.000	33.300	31.646	33.300	31.646
Logging down	0.000	0.000	0.000	0.000	0.000	0.000
Shortfalls	0.000	-0.019	0.000	0.000	0.000	-0.019
Shortfalls for serviceability	0.000	0.000	0.000	0.000	0.000	0.000

Table AA3.9 Interventions on proposed 2010-15 change protocol adjustments

Area of intervention	What we did	Why we did it
Transfer of private sewers and drains – sewerage service – Logging up	We applied a 28% challenge to the collapse related capex. We applied a challenge (£2.2 million) to the capex associated with upgrading pumping stations. Employment costs linked to mandatory build standards were excluded from 2014-15 (£0.3 million). Opex was reduced over the last 3.5 years (by £1.4 million). In post efficiency terms the logging up claim now comprises £32.8 million (capex) and £31.6 million (opex).	We reduced the collapse related capex by 28% in order to bring normalised capex/collapse to the industry (unweighted) average. We applied a challenge to the capex in relation to upgrading pumping stations for 2014-15 based on our view of a more realistic estimate of the number of pumping stations to be upgraded. We assumed 105 pumping stations which is the same as the number forecast by the company in each of the years 2015-16 to 2019-20. Opex was reduced over last 3.5 years (£1.4 million) in order to reflect savings arising from avoided abortive visits. Employment costs linked to mandatory build standards were excluded from 2014-15 (£0.3 million). These adjustments are consistent with the approach we applied in our 2013 Interim Determination of K for Thames Water.
Sewer flooding outputs not delivered – sewerage service – Logging down	The company proposed a £19.9 million (pre-efficiency) log down for sewer flooding outputs not met (register position). This was offset by additional outputs in the period 2005-10 that were logged down at PR09. We accepted the company's proposed logging down claim, however, the additional outputs in the period 2005-10 (valued at £4.3 million (pre-efficiency)) will be reflected as a	We accepted the proposed adjustment to the log down at PR09 in order to reflect improved performance in the period 2005-10. This will be reflected as a midnight RCV adjustment (£4.3 million pre-efficiency (£34.0 million post efficiency)) – see Table A3.6.

Area of intervention	What we did	Why we did it
	midnight RCV adjustment. (This explains the difference between the company view and the Ofwat view in the logging down line in Table AA3.8).	
SEMD Output delays – water service – Shortfall	We applied a challenge to the shortfall proposed by the company. We included opex in our assessment. The company proposed a shortfall of £1.558 million (capex). We assessed the total shortfall to be £1.576 million (capex) and £0.020 million (opex). In post efficiency terms these values were £1.314 million (capex) and £0.019 million (opex).	The shortfall represents the variance to FD09 assumptions for the SEMD programme, in particular, for delays to the Alarm Monitoring Centre. These delays mean that the outputs will not be delivered until after 2015. Our assessment is based upon values assumed for FD09 indexed (using COPI for capex and RPI for opex) to 2012-13 prices.

We have not intervened for the following claims:

- WTW and the strategic grid: Frankley / EVA (shortfall); and
- Newark sewerage strategy delays (shortfall).

Service standard outputs

The final determination supplementary reports in 2009 contained defined project(s) where the primary output was the service standard specified³. These outputs were set out to recognise that companies may decide to prioritise investment differently in order to achieve the service output in a more innovative and efficient manner, while still holding the company to account for the benefits to customers and the environment.

Where companies have not reported progress on these service standards, we would have expected them to demonstrate achievement of the service standards to both customers and Ofwat as part of the price review process.

Having reviewed the evidence provided by the company in its representation and responses to queries, we are satisfied that the service standards in relation to operational expenditure savings, odour from sewage and pollution incidents have been achieved.

In relation to the resilience service standards, we are satisfied that there is a net customer benefit for the schemes delivered. At FD09 there were 24 resilience schemes with service standard outputs. These were grouped according to resilience type. There were six groups: strategic grid schemes, borehole resilience, flood resilience, power resilience, fluvial resilience and sewage treatment works related resilience. In conducting our assessment we considered the overall net customer benefit holistically according to these groupings. At individual scheme level, some schemes over-delivered on the customer benefit set out in FD09 and some under-delivered on the customer benefit set out in FD09. By assessing the overall customer benefit according to the type of resilience provided, it ensures that the overall net benefit to customers is considered. When considered in this manner, the net position for the company's customers is positive. We have therefore not be applied a shortfall for the purposes of the final determination for resilience service standards.

³ In the final determination supplementary reports we said: "Both the project activity (as proposed in your final business plan) and the service standard are the defined output. You must demonstrate delivery of the stated service standard output through the June return. The service standard output is the primary output. We recognise that companies may decide to prioritise activity differently in order to achieve the service output in a more efficient manner. All material changes to the project activity must be reported and explained through your June return."

Serviceability performance

Table AA3.10 below summarises our serviceability assessments for Severn Trent Water and Table AA3.11 quantifies the value and impact of any serviceability shortfall on the RCV. Table AA3.12 summarises our interventions in relation to Severn Trent Water's proposed adjustments for serviceability.

The changes we have made in the final determination compared to our draft determination, are due to changes in our serviceability shortfall methodology set out in policy chapter A4.

We note that the company did not challenge our serviceability adjustments at the draft determination. However, the company noted that should successful challenges by other companies in this area result in industry-wide changes, it would expect these changes to be reflected in its final determination.

Table AA3.10 Serviceability assessments for 2010-15¹

		2010-11	2011-12	2012-13	2013-14	2014-15
Water infrastructure	Company view	Stable	Marginal	Stable	Marginal	Marginal
	Ofwat view	Marginal	Marginal	Marginal	Stable	Stable
Water non-infrastructure	Company view	Stable	Stable	Stable	Marginal	Marginal
	Ofwat view ²	Stable	Stable	Stable	Marginal	Deteriorating
Wastewater infrastructure	Company view	Stable	Stable	Stable	Marginal	Marginal
	Ofwat view	Stable	Marginal	Marginal	Marginal	Marginal
Wastewater non-infrastructure	Company view	Stable	Stable	Stable	Stable	Stable
	Ofwat view	Stable	Marginal	Stable	Stable	Stable

Notes:

1. Assessments are based on actual and forecast performance submitted in the company's revised business plan. Assessments for 2014-15 are based on forecast data and are subject to review once actual performance data becomes available.
2. Our assessment of deteriorating performance is explained in table AA3.12.

Table AA3.11 Impact of serviceability shortfalls on the RCV (£ million)

2009-10 to 2014-15		Water	Wastewater	Total
Amount subtracted from RCV	Company view	27.7	0.0	27.7
	Ofwat view	24.9	23.4	48.3

Table AA3.12 Interventions on proposed 2010-15 serviceability adjustments

Area of intervention	What we did	Why we did it
Unplanned supply interruption exceeding 12 hours	For the final determination we have removed the £11.1 million (post efficiency) shortfall applied at the draft determination. This is conditional upon the performance in 2014-15 being improved to a position such that it could be considered as stable. We will consider a shortfall adjustment if this is not achieved. Serviceability performance in 2010-15 is due to be reviewed in 2015 once data is available for the whole of the period.	The company has had one breach of the upper control limit in 2011-12 and has forecast to do so in 2014-15. With exclusions applied performance in 2012-13 and 2013-14 is near the reference level. In its response to a query, the company provided additional information relating to interruption events. Based on this information one event in 2012-13 was considered to be outside of the company's control (a landslide which cause a main to burst) and was excluded. A second event in 2013-14 (a power failure) was also excluded as the company was able to demonstrate all reasonable actions were undertaken to restore supplies (back-up generators failed and attempted rezoning also failed). As a result of these exclusions, performance in 2013-14 was considered stable; hence no shortfall has been applied at the final determination. However, 2014-15 performance is at risk of a marginal assessment and potential shortfall. This will be reviewed again in 2015 and a shortfall applied at the next price review if performance is not considered stable.

Area of intervention	What we did	Why we did it
<p>Water treatment works coliforms non-compliance</p>	<p>For the purposes of the final determination we have assumed a shortfall for deteriorating performance in this indicator.</p> <p>In accordance with our shortfall calculation methodology (see policy chapter A4), the shortfall applied for the years 2011-12, 2013-14 and 2014-15 has been capped at 1 standard deviation. We have also applied a multiplication factor of 0.875 to the final shortfall value to mitigate the impact of the volatile nature of this indicator. The company proposed a shortfall of £16.7 million (post efficiency); whereas the final determination value of the shortfall adjustment is £24.9 million (post efficiency). The overall scale of the shortfall does not exceed 50% of the sub-service capital expenditure and therefore no further cap has been applied.</p> <p>Our final determination shortfall is £20.2 million lower than the shortfall we applied at the draft determination.</p>	<p>The company has exceeded the upper control limit in 2011-12, 2013-14 and is forecast to do so in 2014-15. The company has not proposed to apply exclusions to the assessment; they have acknowledged performance as marginal and offered a shortfall. However, we do not consider the company's own valuation of the shortfall to be sufficient for the level of failure. Therefore, for the purposes of the final determination we have applied a shortfall adjustment based on our revised methodology.</p>
<p>Sewer blockages</p>	<p>For the purposes of the final determination we have assumed a shortfall adjustment of £9.8 million (post efficiency) for marginal performance in this indicator. In accordance with our shortfall calculation methodology the shortfall (which has been applied</p>	<p>The company has exceeded the upper control limit from 2010-11 to 2012-13. Performance was also close to the upper control limit in 2013-14. This is after removing the impact from transferred private drains and sewers (PDaS) which the company</p>

Area of intervention	What we did	Why we did it
	<p>for the years 2011-12, 2012-13) has been capped at 1 standard deviation. The overall scale of the shortfall does not exceed 50% of the sub-service capital expenditure and therefore no further cap has been applied.</p>	<p>states accounts for around 25% of all blockages. Forecast performance for 2014-15 is expected to be below the reference level (after exclusion of PDaS impact). The company acknowledges performance is marginal but has not offered a shortfall. After taking into account the quantified impact from PDaS on performance, we have applied a shortfall adjustment. This is because we do not consider the methodology and data for quantification of the impact to be sufficiently robust. For the 2015 serviceability review, we require the company to demonstrate improved understanding of the impact from PDaS on blockage performance and how this varies beyond the initial transfer of responsibilities. This may also include independent assurance of the methodology and data for the quantification of the impact. If the company fails to demonstrate an improved, assured understanding, we may revise the shortfall adjustment based on the impact of PDaS provided by other companies which is significantly less than the 25% impact suggested by the company. Any additional shortfall determined as part of the 2015 review will be applied at the next price review.</p>

Area of intervention	What we did	Why we did it
Service Standards – pollution incidents	For the purposes of the final determination we have assumed a shortfall adjustment of £13.5 million (post efficiency) for not achieving the target for this indicator by 2015. This is unchanged from the draft determination.	The company did not offer a shortfall for failing to achieve the target by 2015 with respect to pollution incidents. At FD09 we assumed £13.6 million (pre-efficiency) for a target of 181 by 2015. The company position for 2013-14 is 292 and the company is forecasting 242 for 2014-15 which does not reflect the current trend in performance. Therefore, for the purposes of the final determination we have assumed a shortfall adjustment for the recovery of all FD09 allowed expenditure.

The 2009 agreed overlap programme

As the company did not propose an overlap programme at PR09, our 2009 final determination did not contain any agreed projects that would need to be reviewed in this price review. Therefore, we have not assessed any scheme progress or costs under this mechanism.

Table AA3.13 below confirms Severn Trent Water’s proposed transition programme. There are no interventions in this area.

Table AA3.13 Transition programme in 2014-15

Net capital expenditure	2014-15 (£ million)	Proportion of forecast in 2014-15	Proportion of capital programme in 2015-20
Water service	5.5	2.3%	0.3%
Wastewater service	0.0	0.0%	0.0%

CIS

Table AA3.14 provides details of the CIS ratios and performance incentive. It also gives the:

- monetary amounts of the CIS performance reward or penalty;
- true-up adjustment to 2015-20 allowed revenues; and
- adjustment to the opening RCV.

Table AA3.15 then sets out the profiled values of the revenue adjustments in each year 2015-20, Table AA3.16 shows the components of the opening RCV which are included in the CIS adjustment, and Table AA3.17 summarises our interventions in relation to Severn Trent Water’s proposals.

In its representation Severn Trent Water raised a number of detailed points about our technical approach to legacy adjustments. In light of these, we commissioned an independent review of the legacy models. In policy chapter A4 we set out the issues identified in the review and the actions we have taken for the final determination. We have not made any material changes for the period 2015-20 as a consequence of these representations.

Table AA3.14 CIS true-up adjustments

		Water service	Wastewater service	Total service
Restated FD09 CIS bid ratio ¹	Company view	104.610	103.340	
	Ofwat view	104.308	103.868	
Out-turn CIS ratio	Company view	107.753	98.245	
	Ofwat view	107.442	98.952	
Incentive reward/penalty (%) ²	Company view	-2.009	0.544	
	Ofwat view	-1.953	0.376	
Reward/penalty (£m)	Company view	-22.088	7.564	-14.524
	Ofwat view	-21.539	5.188	-16.352
Adjustments to 2015-20 revenue (£m) ³	Company view	-30.225	-4.829	-35.054
	Ofwat view	-42.468	-19.190	-61.658
RCV adjustment (£m) ⁴	Company view	-7.718	-98.501	-106.219
	Ofwat view	-7.718	-98.501	-106.219

Notes:

1. The restated FD09 CIS bid ratio takes account of the adjustments for the change protocol (Table AA3.7)
2. The reward/(penalty) is adjusted for the additional income included in the 2010-15 determination and the financing cost on the difference between actual spend and capital expenditure assumed in the 2010-15 determination to derive the value of the adjustment to 2015-20 revenue.
3. The adjustment to 2015-20 revenue values shown in this table assume a single year adjustment in the first year, and do not include the NPV profiling used for the final determination.
4. In Table AA3.16 we show how the components of this agree to those shown in Table A2.7 and Table A3.6.

Table AA3.15 Profiled revenue adjustments from the CIS reconciliation (£ million)

		2015-16	2016-17	2017-18	2018-19	2019-20	Total
Water	Company view	-6.045	-6.045	-6.045	-6.045	-6.045	-30.225
	Ofwat view	-9.105	-9.105	-9.105	-9.105	-9.105	-45.523
Wastewater	Company view	-0.966	-0.966	-0.966	-0.966	-0.966	-4.829
	Ofwat view	-4.114	-4.114	-4.114	-4.114	-4.114	-20.571

Table AA3.16 CIS components of the opening RCV adjustment (£ million)

	Water service	Wastewater service
Adjustment for actual expenditure 2010-15	16.699	-98.780
Net adjustment from logging up and logging down	0.000	13.089
Adjustment for shortfalls	-24.418	-12.810
RCV adjustment	-7.718	-98.501

Table AA3.17 Interventions on proposed CIS adjustments

Area of intervention	What we did	Why we did it
Basis of inflation indexation	For final determination we have made no change to the treatment of inflation	The company made representations that we use different approaches to adjust for price inflation in different parts of the CIS model. For the reasons discussed in policy chapter A4, we consider that it would not be appropriate to change the established CIS approach for final determinations.
NPV and treatment of tax	We have corrected an error in our modelling. As a result, our final determination revenues are £1.3 million higher.	The model used at draft determination determines the NPV of the ex post penalties/incentives from 2010-15 using a pre-tax cost of capital. However, when the incentives are unwound through 2015-20, the NPV effects are calculated using a post-tax cost of capital. We accept that this is an error in the modelling and have corrected it for final determinations.
Change protocol adjustments	We have included our view of the applicable change protocol amounts for water and wastewater.	We have applied Ofwat's published methodology.

Other adjustments

Table AA3.18 and Table AA3.19 below confirm the assumptions included in this final determination with respect to the following revenue adjustments:

- tax refinancing benefit clawback;
- other tax adjustments;
- equity injection clawback; and
- other adjustments.

There are no changes from our draft determination.

Table AA3.18 Other revenue adjustments 2015-20 (£ million)

	Water service		Wastewater service	
	Company view	Ofwat view	Company view	Ofwat view
Tax refinancing benefit clawback	0.000	0.000	0.000	0.000
Other tax adjustments	0.000	0.000	0.000	0.000
Equity injection clawback	0.000	0.000	0.000	0.000
Other adjustments	-2.212	0.000	0.000	0.000

Table AA3.19 Interventions on proposed other revenue adjustments

Area of intervention	What we did	Why we did it
Financing costs on shortfalls	We removed the company's adjustment.	The company proposed an adjustment in respect of the financing cost on shortfalls derived under the methodology used in previous price reviews. We removed this adjustment because the financing costs for shortfalls are addressed in the CIS.

Table AA3.20 and Table AA3.21 below confirm the assumptions included in this final determination with respect to other adjustments to the opening RCV.

The only change from our draft determination relates to our revised adjustment to the RCV for actual expenditure in 2009-10.

Table AA3.20 Other adjustments to the opening RCV (£ million)

	Water service		Wastewater service	
	Company view	Ofwat view	Company view	Ofwat view
Land sales	-11.500	-11.074	-13.500	-12.936
2009-10 adjustment	78.379	63.552	67.121	56.608
Enhanced rewards	0.000	0.000	0.000	0.000
Other adjustments	0.000	0.000	4.321	4.321

Table AA3. 21 Interventions on proposed adjustments to the opening RCV

Area of intervention	What we did	Why we did it
Land sales	We calculated land sales using the business plan sales figures in our RCV midnight adjustment model. We accept the business plan figures where they agree to the proceeds as recorded in the audited regulatory accounts. Severn Trent Water had reduced the audited figures by netting off additional costs contrary to the usual treatment. We did not allow all of these additional offsetting costs. However our calculations reduced the RCV by less than Severn Trent Water's proposals.	This provided a consistent approach with all companies.
2009-10 adjustment	We calculated the 2009-10 adjustment using the capex figures from the June return. For some companies there was an incomplete dataset with regard to historic grants and contributions, we have corrected this for final determinations. This means that for those companies, the	This provided a consistent approach with all companies.

Area of intervention	What we did	Why we did it
	adjustment included in the draft determination overstated the positive impact on the RCV. After the correction, the actual net capex being used in the 2009-10 calculation for final determination is lower than that used in draft determination.	

Annex 4 Outcomes, performance commitments and ODIs

We set out our methodology for PCs and ODIs in policy chapter A2.

In this annex we provide an overview of the PCs and ODIs for Severn Trent Water. We then set out in detail these PCs and ODIs for the company's wholesale water, wholesale wastewater and household retail outcomes, presented in that order.

The company has used a cost-sharing rate of 50% to calibrate the reward and penalty rates included in this annex. Companies are required to notify us of their menu choices by 16 January 2015. This might result in the company having a cost-sharing rate higher or lower than 50%. Once the company has chosen its position on the menu we are requiring it, in line with the methodology, to recalibrate its ODIs with the cost-sharing rate associated with that position, and provide us with the updated incentive rate calculations. The company must do this alongside their menu choice on 16 January 2015 so that the recalibrated ODIs can be included in the regulatory reporting framework for 2015-16.

However, we first consider the responses to our draft determination in relation to the PCs and ODIs for Severn Trent Water.

Consideration of representations on our draft determination

In policy chapter A1, we provide a list of the respondents to the draft determinations published in April, May and August of this year. We have fully considered all of the responses received, and where appropriate, we have made either consequential adjustments to our industry-wide approach or company-specific interventions.

Where representations have addressed issues that are common to a number of companies, these comments, and any consequential changes to our approach, are discussed in policy chapter A2. Representations that are specific to PCs and ODIs for Severn Trent Water, and any consequential impact on our final determination, are summarised in the tables below as follows.

- Tables AA4.1 and AA4.2 consider representations received on our draft determination as a result of comparative assessments in six areas for wholesale water and wholesale wastewater respectively.
- Tables AA4.3 and AA4.4 consider representations received on our draft determination as a result of our company-specific assessments for wholesale water and wholesale wastewater respectively.

- Table AA4.5 considers representations received our draft determination as a result of our company-specific assessments for household retail.
- Table AA4.6 lists the PCs that were proposed by companies but that have been removed as part of our final determination.
- Table AA4.7 lists PCs excluded from the commentary tables above because we received no representations on them and we made no interventions at draft determination or through the comparative assessments.

Table AA4.1 Representations specific to the comparative assessments on wholesale water

PC/ODI affected	What we did at draft determination/subsequent comparative assessments	Representations	What we did at final determination	Why we did it
W-A1 Number of complaints about drinking water quality	<p>Tightened PC level to 9,925 from 2017-18 with linear glidepath in intervening years</p> <p>Reward deadband introduced at 9,925 complaints in 2015-16 and 2016-17 and removed thereafter.</p> <p>Penalty deadband introduced at 11,800 complaints in 2016-17</p>	N/a	<p>We have increased the PC level to 9,992 from 2017-18 with linear glidepath in intervening years</p> <p>We have increased the reward deadband to 9,992 complaints in 2015-16 and 2016-17 and have remove it thereafter.</p> <p>We have confirmed the penalty deadband as in draft determination</p>	We revised our comparative assessment for final determinations based on stakeholder representations on draft determinations.
W-A2 Compliance with drinking water quality standards	<p>Increased the PC level to 100% from 2017-18.</p> <p>Penalty deadband increased to 99.960% from 2017-18.</p> <p>Penalty collar increased to 99.920% from 2017-18 in order to maintain penalty range as in Severn Trent Water’s submission.</p>	N/a	<p>We have reduced the penalty deadband to 99.95% from 2017-18.</p> <p>We have reduced the penalty collar to 99.91% from 2017-18.</p>	We revised our comparative assessment for final determinations based on stakeholder representations on draft determinations.

PC/ODI affected	What we did at draft determination/subsequent comparative assessments	Representations	What we did at final determination	Why we did it
W-B4 Number of minutes customers go without supply	Reduced the PC level to 10 minutes in 2017-18 with linear glidepath in intervening years Reward deadband introduced at 10 minutes in 2015-16 and 2016-17 and removed thereafter. Penalty deadband tightened to 10 minutes from 2017-18.	N/a	We have reverted to the PC levels as proposed by Severn Trent Water in its business plan in all years. We have increased the reward deadband to 12 minutes in 2015-16 and 2016-17 and have removed thereafter. We have increased the penalty deadband to 12 minutes from 2017-18 We have removed penalty rate 2	We revised our comparative assessment for final determinations based on stakeholder representations on draft determinations. We have removed penalty rate 2 as the difference between the two proposed penalty rates was small and doing so improves simplicity
Overall caps and collars	Replaced Severn Trent Water's proposed overall caps and collars with standard overall caps and collars (+/-2% of RoRE)	N/a	We have confirmed the approach adopted at draft determination	We have confirmed that we will continue to use the overall caps and collars approach, set at +/-2% of RoRE

Table AA4.2 Representations specific to the comparative assessments on wholesale wastewater

PC/ODI affected	What we did at draft determination/subsequent comparative assessments	Representations	What we did at final determination	Why we did it
S-C2 Total pollution incidents	<p>Removed serious pollution incidents (categories 1 and 2) from the performance measure and ODI;</p> <p>Tightened PC level to 556 category 3 and 4 incidents from 2017-18 with linear glidepath in intervening years</p> <p>Introduced a penalty deadband at 703 incidents in 2015-16 and 2016-17 and removed thereafter.</p> <p>Introduced a reward deadband at 556 incidents in 2015-16 and 2016-17 and removed thereafter.</p>	<p>Severn Trent Water proposes that the PC/ODI should focus only on category 3 incidents and that category 4 incidents should have its own separate non-financial ODI</p> <p>The CCG, Environment Agency and Natural Resources Wales all support separating out category 3 and 4 incidents.</p> <p>The Environment Agency does not support the use of a reward by Severn Trent Water to meet its statutory requirements on pollution incidents.</p>	<p>We have accepted Severn Trent Water’s proposals to separate category 3 and 4 incidents and to keep the financial incentives on category 3 incidents only.</p> <p>We have set the PC level as 374 category 3 incidents from 2017-18 with linear glidepath in intervening years</p> <p>We have set the penalty deadband at 457 category 3 incidents in 2015-16 and 2016-17 and removed thereafter.</p> <p>We have set the reward deadband at 374 category 3 incidents in 2015-16 and 2016-17 and removed thereafter.</p> <p>We have set the category 4 incidents PC level at 182 incidents from 2017-18 with</p>	<p>We revised our comparative assessment for final determinations based on stakeholder representations on draft determinations.</p> <p>Severn Trent Water’s proposal to separate categories 3 and 4 incidents brings the PC in line with the rest of the industry.</p> <p>Although we agree with the Environment Agency that rewards should not be earned for reducing serious pollution incidents we believe it is in customers’ and the environment’s interest for the company to be incentivised to drive the number of incidents down further, as long as rewards represent sufficiently stretching performance, as ensured by the comparative</p>

PC/ODI affected	What we did at draft determination/subsequent comparative assessments	Representations	What we did at final determination	Why we did it
			linear glidepath in intervening years	assessments
Overall caps and collars	Replaced Severn Trent Water's proposed overall caps and collars with standard overall caps and collars (+/-2% of RoRE)	N/a	We have confirmed the approach adopted at draft determination	We have confirmed that we will continue to use the overall caps and collars approach, set at +/-2% of RoRE

Table AA4.3 Representations specific to the company-specific assessments on wholesale water

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
W-A3 Asset stewardship – number of sites with coliform failures	Tightened PC level to <8 from 2015-16 to 2017-18, reducing to <6 in 2018-19 and 2019-20.	N/a	We have maintained the interventions on PC level adopted at draft determination We have changed the four year average incentives to annual incentives	No representations were received on this PC/ODI so we did not amend the PC level. The use of a four year average would dilute penalty for poor performance in the early years of the new price control period. The company is subject to more than one legacy PR09 serviceability shortfall, so dilution of incentives could reduce protection to customers.

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
				<p>In order to prevent this, asset health measures should be annual measures rather than four-year averages. This approach has been applied across all companies subject to more than one legacy PR09 serviceability shortfall.</p>
<p>W-A4 Successful catchment management schemes</p>	<p>Increased PC to 14 out of 18 successful schemes Amended the incentive such that a reward could only be earned if the largest scheme (River Severn) is successfully delivered</p>	<p>Severn Trent Water propose to separate out the River Severn scheme into 4, which removes the need for the caveat on that scheme and to change the PC level to a success rate of 12 out of 21 schemes. Also reduce the incentive rate slightly to reflect this. Natural England and the CCG raised concerns about the changes to Severn Trent Water’s catchment management PC, stating that 9 out of 18 seems a realistic level of achievement and</p>	<p>We have adopted Severn Trent Water’s proposal to split the River Severn catchment into 4 schemes and therefore removed the requirement to deliver this scheme in order to earn a reward We have set the PC level at 12 out of 21 schemes being successful and reduced the incentive rate to £1.03m to reflect this change</p>	<p>Severn Trent Water has provided sufficient evidence to support separating the River Severn scheme. This improves the simplicity of the incentive Severn Trent Water has provided improved evidence to justify its PC level. We believe this provides an appropriate balance of risk and reward to ensure Severn Trent Water is only rewarded for sufficiently stretching performance while not disincentivising it and other companies from trying these</p>

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
		<p>increasing the target risks stifling the innovation this PC is meant to encourage.</p> <p>The Environment Agency and Natural Resources Wales states it only supports rewards for delivering more than the 18 statutory schemes included in the NEP.</p>		<p>schemes</p>
W-B6 Asset stewardship (mains bursts)	N/a	N/a	We have changed the four year average incentives to annual incentives	<p>The use of a four year average would dilute penalty for poor performance in the early years of the new price control period. The company is subject to more than one legacy PR09 serviceability shortfall, so dilution of incentives could reduce protection to customers. In order to prevent this, asset health measures should be annual measures rather than four-year averages. This approach has been applied</p>

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
				across all companies subject to more than one legacy PR09 serviceability shortfall.
W-B7 Customers at risk of low pressure	Reduced the PC level to 250 properties on the DG2 register per year	N/a	We have confirmed the approach adopted at draft determination	No representations were received on this PC/ODI
W-B8 Restrictions on use	Reduced the reward incentive rate to £1.36m (5 year total) for zero hosepipe bans over the 5 year period	The CCG and CCWater both supported the changes to the reward rate at draft determination. The Environment Agency is concerned that there is scope for the “Restrictions on water use” incentive to delay the company taking action when it is appropriate to do so. This could make a drought situation worse.	We have confirmed the approach adopted at draft determination	Severn Trent Water did not represent on this. CCG and CCWater support the changes made at draft determination We continue to believe a financial incentive is appropriate for this PC as it is a customer priority and the incentive reflects this
W-B9 Timing delays on Birmingham resilience	Timing delay penalty increased to £52m per year delayed to reflect the loss of net benefits, based on Severn Trent Water’s	Severn Trent Water has proposed revised ODIs to protect customers against the late delivery of the Birmingham resilience	We have used Severn Trent Water’s incentive rates as proposed in its representation We have allowed the proposed	Severn Trent Water followed the approach we used at draft determination for setting its ODI. The reduction in the rate follows revisions to its assessment of

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
scheme	<p>estimates, to customers associated with the delay</p> <p>Total penalty weighted across the three projects based on proportions of costs</p> <p>Introduce year 3 progress milestone</p>	<p>scheme. The ODIs follow the approach set out in the draft determination but have been changed to reflect the updated assessment of risk.</p> <p>Severn Trent Water also propose reduced penalty rates based on financing rates for particular reasons that are outside company control (for example, delays in getting planning permission) and propose that the penalty for the treatment works scheme should be reduced as milestones are met that deliver demonstrable customer benefits.</p>	<p>‘milestones’ approach to determine the extent of timing delay penalty for the treatment works scheme.</p> <p>We have not accepted the proposal for a separate penalty rate for specific delays outside the company’s control.</p>	<p>risk in line with our draft determination recommendations. We are comfortable with the risk assessment now presented by Severn Trent Water so we accept the new ODI rates</p> <p>Where Severn Trent Water delivers customer benefits it would be inappropriate to apply a penalty based on the full value of the Birmingham resilience scheme. The milestones approach proposed by Severn Trent Water is consistent with marginal incentive rates, based on WTP, used for other ODIs.</p> <p>We are not introducing additional incentive rates based on the reason for delay. Introducing these in addition to the milestones adds complexity which we deem unnecessary based on materiality and insufficient evidence provided</p>

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
				that these adjustments should be made
W-B10 Non-delivery of the outcome of the Birmingham resilience scheme	<p>Follow Severn Trent Water's approach to determining the extent of under-delivery for each of the three alternative supply schemes but increase incentive rate by 50% of the overall benefit:cost ratio (3.75), based on Severn Trent Water's estimates, to reflect the loss of benefits to customers</p> <p>Introduced year 3 progress milestone</p>	<p>Severn Trent Water has proposed revised ODIs to protect customers against non-delivery of the Birmingham resilience scheme. The ODIs follow the approach set out in the draft determination but have been changed to reflect the updated assessment of risk and now include separate rates for the different aspects of the treatment works upgrade</p> <p>The CCG and CCWater both raised concerns that the scale of the penalty for the non-delivery of the Birmingham resilience scheme was too high</p>	We have used Severn Trent Water's incentive rates as proposed in its representation	Severn Trent Water followed the approach we used at draft determination for setting its ODI. The reduction in the rate follows revisions to its assessment of risk in line with our draft determination recommendations. We are comfortable with the risk assessment now presented by Severn Trent Water so we accept the new ODI rates

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
W-B11 Timing delays on community risk schemes	Removed community risk PCs and ODIs	<p>Severn Trent Water proposes PC to be reinstated. ODI set following the same value-based approach as used for W-B9 'Timing delays on Birmingham resilience schemes' but with benefits uplifted by the disproportion factor (10) to make ODI consistent with CBA</p> <p>The CCG expects that, if the community risk schemes are reinstated in the final determination, ODIs based on the Birmingham resilience approach will be introduced to protect customers against delay or non-completion of those schemes.</p>	We have used Severn Trent Water's incentive rates as proposed in its representation	Severn Trent Water followed the approach we used at draft determination for setting its ODI for Birmingham resilience schemes. It has also followed our recommendations to make the ODI and CBA consistent by uplifting the penalty rate to reflect unquantified public benefits. Penalty offers sufficient protection for customers in the event of timing delays.
W-B12 Non-delivery of the community risk	Removed community risk PCs and ODIs	Severn Trent Water proposes PC to be reinstated. ODI set following the same value-based approach as used for W-B10 'Non-delivery of the Birmingham resilience	We have used Severn Trent Water's incentive rates as proposed in its representation	Severn Trent Water followed the approach we used at draft determination for setting its ODI for Birmingham resilience schemes. It has also followed our recommendations to make

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
schemes		<p>schemes’ but with benefits uplifted by the disproportion factor (10) to make ODI consistent with CBA</p> <p>The CCG expects that, if the community risk schemes are reinstated in the final determination, ODIs based on the Birmingham resilience approach will be introduced to protect customers against delay or non-completion of those schemes.</p>		<p>the ODI and CBA consistent by uplifting the penalty rate to reflect unquantified public benefits. Penalty offers sufficient protection for customers in the event of non-delivery.</p>
W-B13 Timing delays on EVA maintenance	Removed community risk PCs and ODIs	<p>Severn Trent Water proposes PC to be reinstated. ODI set following the same value-based approach as used for W-B9 ‘Timing delays on Birmingham resilience schemes’.</p> <p>The CCG expects that, if the community risk schemes are reinstated in the final determination, ODIs based on the Birmingham resilience</p>	We have used Severn Trent Water’s incentive rates as proposed in its representation	<p>Severn Trent Water followed the approach we used at draft determination for setting its ODI for Birmingham resilience schemes. Penalty offers sufficient protection for customers in the event of timing delays.</p>

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
		<p>approach will be introduced to protect customers against delay or non-completion of those schemes.</p>		
W-B14 Non-delivery of the EVA maintenance	Removed community risk PCs and ODIs	<p>Severn Trent Water proposes PC to be reinstated. ODI set following the same value-based approach as used for W-B10 ‘Non-delivery of the Birmingham resilience schemes’.</p> <p>The CCG expects that, if the community risk schemes are reinstated in the final determination, ODIs based on the Birmingham resilience approach will be introduced to protect customers against delay or non-completion of those schemes.</p>	We have used Severn Trent Water’s incentive rates as proposed in its representation	Severn Trent Water followed the approach we used at draft determination for setting its ODI for Birmingham resilience schemes. Penalty offers sufficient protection for customers in the event of non-delivery.
W-C1 Customers rating our services as	N/a	CCWater expressed concern that Severn Trent Water’s reward seems to be enacted at a relatively low level both	We have introduced a reward deadband set at 57% in 2015-16 rising to 65% in 2019-20	Having reviewed the PC further we agree with CCWater that rewards could be earned for levels of service that are not

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
good value for money (based on tracker survey)		compared to its current level and those currently being achieved and targeted by other companies.		sufficiently stretching.
W-D1 Improvements in river water quality against WFD criteria – water	N/a	Natural Resources Wales disagrees with the reward proposed for this PC as these are statutory schemes within the NEP	We have confirmed the approach adopted at draft determination.	<p>Severn Trent Water’s PC level is consistent with its statutory requirements. Any rewards will be associated with delivering additional environmental improvements.</p> <p>Including a reward encourages Severn Trent Water to deliver additional environmental improvements where it is supported by customer WTP. The ability for Severn Trent Water to earn a reward for delivering improvements beyond the PC level is therefore in the interests of both customers and the environment</p>
W-D2 Asset stewardship:	N/a	The Environment Agency and Natural Resources Wales are	We have set the PC at 100% compliance.	We agree with the Environment Agency and Natural Resources

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
environmental compliance		<p>concerned that this PC does not meet its expectations for achieving 100% compliance with all licences and permits.</p> <p>Natural Resources Wales also does not agree with the amalgamation into an ODI basket of W-D2/S-C3, and believe they should be separated.</p>	We have set the penalty deadband at 95.3%	<p>Wales that Severn Trent Water should be targeting 100% compliance with all licences and permits.</p> <p>We have not separated out the basket of measures as this PC was developed following extensive engagement with customers and its CCG</p>
W-D3 Biodiversity	N/a	Natural Resources Wales disagrees with the reward proposed for biodiversity schemes (S-C4/W-D3) as these are statutory schemes within the NEP	We have confirmed the approach adopted at draft determination.	<p>Severn Trent Water’s PC level is consistent with its statutory requirements. Any rewards will be associated with delivering additional biodiversity improvements.</p> <p>Including a reward encourages Severn Trent Water to deliver additional biodiversity improvements where it is supported by customer WTP. The ability for Severn Trent Water to earn a reward for delivering improvements beyond the PC level is therefore in the</p>

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
				interests of both customers and the environment
W-D4 Sites with eel protections	<p>Following clarification dialogue, Severn Trent Water has proposed to remove the PC as improvements will not be delivered until after 2015-20. The company has indicated that it would be appropriate to introduce financial incentives around delivery at PR19.</p> <p>We propose reintroducing the PC, with a non-financial incentive, as it still reflects associated incremental totex. This will help improve transparency of progress and ensure an appropriate incentive is considered at PR19.</p>	N/a	We have confirmed the approach adopted at draft determination.	No representations were received on this PC/ODI

Table AA4.4 Representations specific to the company-specific assessments on wholesale wastewater

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
S-A4 Asset stewardship – blockages	Reduced the PC level to <50,470 blockages in 2015-16 reducing to <48,900 in 2019-20	The Environment Agency and Natural Resources Wales believe Severn Trent Water’s targeted reductions in blockages is insufficient given their links to sewer flooding and pollution incidents	We have maintained the interventions on PC level adopted at draft determination. We have changed the four year average incentives to annual incentives	We believe the intervention made at draft determination makes this sufficiently stretching, especially considering the reductions being targeted through the sewer flooding and pollution incident PCs The use of a four year average would dilute penalty for poor performance in the early years of the new price control period. The company is subject to more than one legacy PR09 serviceability shortfall, so dilution of incentives could reduce protection to customers. In order to prevent this, asset health measures should be annual measures rather than four-year averages. This approach has been applied across all companies subject to

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
				more than one legacy PR09 serviceability shortfall.
S-B1 Customers rating our services as good value for money (based on tracker survey)	N/a	CCWater expressed concern that Severn Trent Water's reward seems to be enacted at a relatively low level both compared to its current level and those currently being achieved and targeted by other companies.	We have introduced a reward deadband set at 57% in 2015-16 rising to 65% in 2019-20	Having reviewed the PC further we agree with CCWater that rewards could be earned for levels of service that are not sufficiently stretching.
S-C1 Improvements in river water quality against WFD criteria – wastewater	N/a	Natural Resources Wales disagrees with the reward proposed for this PC as these are statutory schemes within the NEP	No changes	<p>Severn Trent Water's PC level is consistent with its statutory requirements. Any rewards will be associated with delivering additional environmental improvements.</p> <p>Including a reward encourages Severn Trent Water to deliver additional environmental improvements where it is supported by customer WTP. The ability for Severn Trent Water to earn a reward for delivering improvements beyond</p>

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
				the PC level is therefore in the interests of both customers and the environment

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
<p>S-C3 Asset stewardship: Environmental compliance</p>	<p>N/a</p>	<p>The Environment Agency and Natural Resources Wales are concerned that this PC does not meet its expectations for achieving 100% compliance with all licences and permits.</p> <p>Natural Resources Wales also does not agree with the amalgamation into an ODI basket of W-D2/S-C3, and believe they should be separated.</p>	<p>We have set the PC at 100% compliance</p> <p>We have set the penalty deadband at 95.3%</p> <p>We have changed the four year average incentives to annual incentives</p>	<p>We agree with the Environment Agency and Natural resources Wales that Severn Trent Water should be targeting 100% compliance with all licences and permits.</p> <p>We have not separated out the basket of measures as this PC was developed following extensive engagement with customers and its CCG</p> <p>The use of a four year average would dilute penalty for poor performance in the early years of the new price control period. The company is subject to more than one legacy PR09 serviceability shortfall, so dilution of incentives could reduce protection to customers. In order to prevent this, asset health measures should be annual measures rather than four-year averages. This approach has been applied across all companies subject to more than one legacy PR09 serviceability shortfall.</p>

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
S-C4 Biodiversity (based on SSSIs at favourable status)	N/a	Natural Resources Wales disagrees with the reward proposed for biodiversity schemes (S-C4/W-D3) as these are statutory schemes within the NEP	No changes	<p>Severn Trent Water's PC level is consistent with its statutory requirements. Any rewards will be associated with delivering additional biodiversity improvements.</p> <p>Including a reward encourages Severn Trent Water to deliver additional biodiversity improvements where it is supported by customer WTP. The ability for Severn Trent Water to earn a reward for delivering improvements beyond the PC level is therefore in the interests of both customers and the environment</p>
S-C7 Overall environmental performance	N/a	<p>The Environment Agency does not support the use of rewards for improving performance on permit compliance as these are statutory requirements.</p> <p>Natural Resources Wales disagrees with the basket of</p>	We have confirmed the approach adopted at draft determination	<p>Where rewards are available for individual environment PCs this is only possible by going beyond statutory requirements and only where it is in customers' interests.</p> <p>Severn Trent Water can earn</p>

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
		measures for overall environmental performance (S-C7) as these measures all represent statutory requirements and should therefore not have associated rewards.		rewards for delivering statutory requirements through its overall environmental performance ODI but we have not made adjustments to this because this ODI was developed with its CCG to reflect concerns about focusing on particular PCs and we want to encourage companies to pursue innovative PCs such as this

Table AA4.5 Representations specific to the assessments on household retail

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
R-A2 Customers' experience of dealing with us (based on Ofwat's SIM)	N/a	CCWater propose that we should continue to apply SIM to the wholesale business to ensure that the monopoly wholesale business is incentivised to resolve problems quickly and effectively for customers and retailers.	We have confirmed the approach adopted at draft determination	We are not requiring the company to include a SIM PC in the wholesale control – the PR14 methodology confirmed that we would use the SIM as a standard minimum national incentive for customer service for 2015-20. We also confirmed

PC/ODI affected	What we did at draft determination	Representations	What we did at final determination	Why we did it
				that its likely scale and scope would be similar to the current SIM, but that (in England) it would apply only to the household retail price control

Table AA4.6 Performance commitments proposed by the company that we have removed from this final determination

Performance commitment	Reason for its removal
None	None

Table AA4.7 Performance commitments excluded from the commentary tables because we received no representations to our draft determination on them and we made no interventions at draft determination or through the comparative assessments

Wholesale water	Wholesale wastewater	Household retail
W-B1 Resource efficiency (amount of water we take out of the environment)	S-A1 Number of internal sewer flooding incidents	R-A1 Customer satisfaction with their service (based on a customer survey)
W-B2 Leakage levels	S-A2 Number of external sewer flooding incidents	R-B1 Number of customers helped by a review of their tariff and water usage and/or supported by our social fund
W-B3 Speed of responses in repairing leaks (% fixed within 24 hours)	S-A3 Partnership working	R-B2 % of customers who do not pay
W-B5 Percentage of customers with resilient	S-A5 Statutory obligations (Section S101a)	

Wholesale water	Wholesale wastewater	Household retail
supplies (those that benefit from a second source of supply)	schemes connectable properties)	
W-E1 Size of our carbon footprint – water	S-C5 Sustainable sewage treatment	
W-F1 Improved understanding of our services through education – company total	S-D1 Size of our carbon footprint – wastewater	
	S-E1 Improved understanding of our services through education – company total	

Summary of ODIs

For each outcome proposed, companies were asked to identify one or more measures that would provide evidence that the outcome was being delivered. On each measure, companies had to set out the level of performance that they were committing to deliver. Companies also had to explain why they committed to the performance level chosen and explain why this represented an appropriate level of stretch (as benchmarked against an upper quartile level of performance across the sector).

Companies also had to propose ODIs. Where customers were willing to pay for higher levels of performance and companies could demonstrate that performance was at a high level relative to its peers, then the financial incentives could contain rewards for over delivery as well as penalties for under delivery.

Under the company's current licence the adjustment to price controls for financial rewards and penalties will occur at the end of the control period (either as an RCV or revenue adjustment to future price controls). However, as set out in section 2.2.3, we are proposing a licence modification that will allow in-period adjustments to the level of price controls in relation to selected PCs.

Below, we provide an overview of the PCs and ODIs. Table AA4.8 shows the balance between reward and penalty, penalty only and reputational incentives in the package of incentives for the company, and Figure AA4.1 shows the potential financial impact of each of the financial incentives.

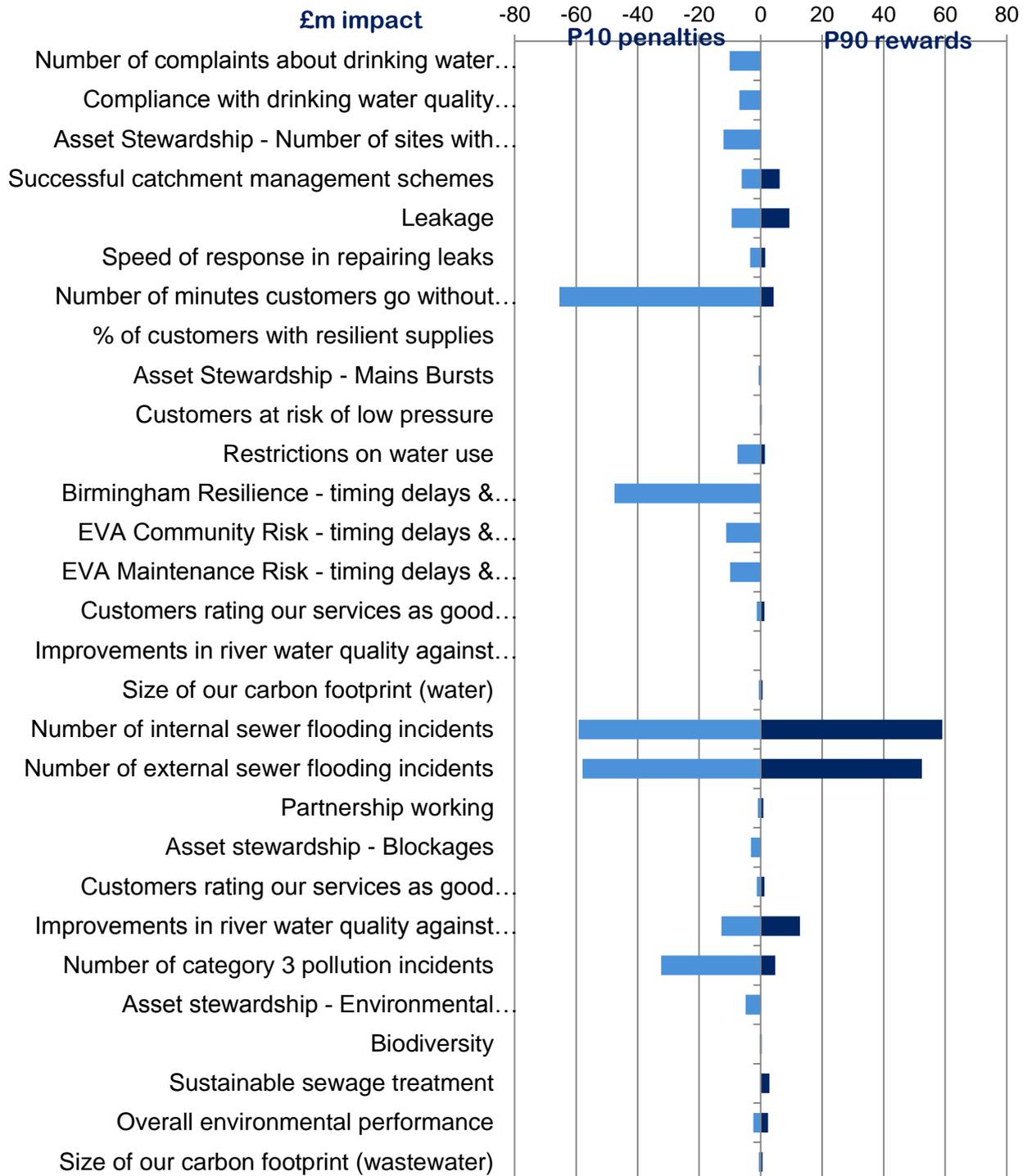
Table AA4.8 The composition of the package of ODIs

	Reward and penalty	Penalty only	Non-financial incentive
Wholesale water	11	9	5
Wholesale wastewater	10	2	4
Household retail	1	0	3
Total	22	11	12

The following graph shows the potential financial consequences of the individual financial ODIs. The figures represent the penalties and rewards associated with the p10 and p90 scenarios over the five years (2015-16 to 2019-20). This means there is a 10% chance of performance being higher or lower than these assumed levels. In

most cases the potential maximum will be bigger but is very unlikely to occur. The p10 and p90 therefore represent a more realistic estimate of potential financial consequences.

Figure AA4.1 Overview of financial ODIs



As explained in policy chapter A2, we are introducing an aggregate cap on rewards and collar on penalties from the ODIs. Details of how the cap/collar will operate are set out in section A2.4 of policy chapter A2.

There are a number of specific exclusions from the cap/collar. For Severn Trent Water, the exclusions are as follows:

- W-B9 Timing delays on Birmingham resilience scheme
- W-B10 Non-delivery of the outcome of the Birmingham resilience scheme
- W-B11 Timing delays on community risk schemes
- W-B12 Non-delivery of the community risk schemes
- W-B13 Timing delays on EVA maintenance
- W-B14 Non-delivery of the EVA maintenance

In the remainder of this chapter, we provide the following information on each PC included as part of this final determination:

- the name and detailed definition of the PC;
- the type of incentive;
- the PC level;
- for financial incentives:
 - the limits on rewards and penalties (caps and collars) and neutral zones (deadbands) as applicable⁴; and
 - the incentive rates;
- additional details on the measure; and
- where Ofwat has not accepted the company's proposals, the nature of the intervention made is also explained.

Appendix 1 of our final methodology statement contains a number of worked examples that illustrate how the different incentive types will operate.

⁴ Unless otherwise stated, a deadband is the level of service against which an incentive is calculated and the cap or collar is the level of service at which the maximum reward or penalty occurs. So for example, if the deadband is 1.29 and the actual performance level is 1.39, the result of the incentive would be a penalty of (1.39-1.29) times the specified penalty rate.

Performance commitments and ODIs in detail

Wholesale water outcome A: We will provide water that is good to drink

Performance commitment W-A1: Number of complaints about drinking water quality

Detailed definition of performance measure:

The total number of complaints about discolouration, taste and odour per year. A consumer contact about drinking water quality is any communication about drinking water quality initiated by a consumer living or working in the area supplied by the water company by phone, letter, email, in person, or website request form (repeat contacts and incidents are excluded). The measure is calendar year.

Incentive type: Financial – reward and penalty.

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	13,000	11,900	10,995	9,992	9,992	9,992
Penalty deadband	No.		11,900	11,800	9,992	9,992	9,992
Reward deadband	No.		9,992	9,992	9,992	9,992	9,992

Incentive rates

Incentive type	Incentive rate (£/No./year)
Penalty	900
Reward	900

Additional details

Necessary detail on measurement units	The definition is in line with DWI reporting on rate of contacts for appearance, taste and odour and illness. Performance reporting will be on a calendar year basis, in line with reporting to DWI for example, performance reporting for 2015-16 will be in relation to 2015 calendar year performance.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually each financial year
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	

Performance commitment W-A2: Compliance with drinking water quality standards

Detailed definition of performance measure:

The mean zonal percentage compliance from the regulatory sampling programme, as calculated by the DWI.

Incentive type: Financial – penalty only.

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	99.95	99.97	99.97	100	100	100

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Penalty collar	%		99.91	99.91	99.91	99.91	99.91
Penalty deadband	%		99.945	99.945	99.95	99.95	99.95

Incentive rates

Incentive type	Incentive rate (£/0.01%/year)
Penalty	£1.74m

Additional details

Necessary detail on measurement units	The calculation will be as set out in the DWI publication 'Calculation and composition of indices published in the Chief Inspector's Report', May 2013. Performance reporting will be on a calendar year basis, in line with reporting to DWI for example, performance reporting for 2015-16 will be in relation to 2015 calendar year performance.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Penalty applied annually each financial year
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	

Performance commitment W-A3: Asset stewardship – number of sites with coliform failures

Detailed definition of performance measure:

The number of water treatment works which had coliform detections in final water regulatory samples.

Incentive type: Financial – penalty only.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	Stable	<8	<8	<8	<6	<6

Incentive rates

Incentive type	Incentive rate (£/No./year)
Penalty	£463,000

Additional details

Necessary detail on measurement units	In the event of a major change in sampling regime (+/->50% change in sampling frequency) the target will be adjusted.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Penalties to be assessed annually and total applied after assessment of annual performance to 2018-19.
Form of reward/penalty	Adjustment to opening RCV at start of AMP7.
Any other information or clarifications relevant to correct application of incentive	

Performance commitment W-A4: Successful catchment management schemes

Detailed definition of performance measure:

The number of catchment management schemes that succeed in changing farming infrastructure and practices.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.					12	
Reward cap	No.					21	

Incentive rates

Incentive type	Incentive rate (£m/scheme)
Penalty	£1.03m
Reward	£1.03m

Additional details

Necessary detail on measurement units	N/a
Frequency of PC measurement and any use of averaging	Progress on the PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty to be applied after assessment of performance to 2018-19. Payment may be made earlier if the total number of schemes shown to be successful is above the target at an earlier date.
Form of reward/penalty	Adjustment to revenue

Any other information or clarifications relevant to correct application of incentive

Success will be measured by KPIs relating to the proportion of farmers changing their infrastructure and practices, since changes in water quality would not be generally observable in the period.
KPIs will be specific to each catchment.

Wholesale water outcome B: We will ensure water is always there when you need it

Performance commitment W-B1: Resource efficiency (distribution input per customer)

Detailed definition of performance measure:

The total volume of water Severn Trent Water puts into distribution, divided by household population.

Incentive type: Reputational.

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Litres per person per day	229	225	222	219	216	213

Additional details

Necessary detail on measurement units	N/a
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

Performance commitment W-B2: Leakage

Detailed definition of performance measure:

The total level of leakage, including customer supply pipe leakage, expressed in megalitres per day (MI/day).

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	MI/d	450	444	439	434	429	424

Incentive rates

Incentive type	Performance levels		Incentive rate (£m/MI/d/year)
	Lower	Upper	
Penalty 2	>450		£0.2m
Penalty 1	424	450	£0.125m
Reward		444	£0.125m

Additional details

Necessary detail on measurement units	Total leakage is the sum of distribution losses and supply pipe losses in megalitres per day (MI/d). It includes any uncontrolled losses between the treatment works and the customer's stop tap. It does not include internal plumbing losses.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year

Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	The higher penalty rate only applies if the average for the four years to 2018-19 exceeds 450 MI/d. If any methodology changes have a material impact on the calculation, outturn figures will be adjusted so that the incentive applies to the underlying change in leakage.

Performance commitment W-B3: Speed of response in repairing leaks

Detailed definition of performance measure:

The percentage of visible leaks (reported by customers or detected by the company's teams) on Severn Trent Water's network that it repairs within 24 hours, where it can do so safely and without unduly disrupting customers.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	50%	70%	80%	90%	95%	100%
Penalty deadband	%		60%	70%	80%	85%	90%

Incentive rates

Incentive type	Incentive rate (£/%/year)
Penalty	£25,000
Reward	£25,000

Additional details

Necessary detail on measurement units	N/a
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	

Performance commitment W-B4: Number of minutes customers go without supply each year**Detailed definition of performance measure:**

The average number of minutes that customers are without water supply each year, due to planned and unplanned interruptions to supply of over 3 hours.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Minutes	15	13.6	12.2	10.8	9.4	8.0
Penalty deadband	Minutes		14.5	14.0	12.0	12.0	12.0
Reward deadband	Minutes		12.0	12.0	10.8	9.4	8.0

Incentive rates

Incentive type	Incentive rate (£m/minute/year)
Penalty	£1.1m
Reward	£1.1m

Additional details

Necessary detail on measurement units	The calculation of reward or penalty will use the actual number of minutes calculated to 2 decimal places. Total minutes from interruptions of over 3 hours is divided by the number of properties (domestic and non-domestic) connected for water supply.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	The impact of any individual incident will be limited to 5 minutes.

Performance commitment W-B5: % of customers with resilient supplies (those that benefit from a second source of supply)

Detailed definition of performance measure:

The percentage of customers for whom there is more than one source of water which can be used to provide supplies.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	77.0%					77.7%

Incentive rates

Incentive type	Incentive rate (£/%)
Penalty	£1.77m
Reward	£1.77m

Additional details

Necessary detail on measurement units	Performance delivery will be assessed against the change in this measure on a consistent basis – the effect of any methodology changes will not be included.
Frequency of PC measurement and any use of averaging	Progress on the PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Five-year reward or penalty to be applied after assessment of performance to 2018-19, based on expected delivery to 2019-20. Incentive rate is a one-off figure at the end of the period.
Form of reward/penalty	Adjustment to revenue.
Any other information or clarifications relevant to correct application of incentive	Second supplies delivered through the Birmingham resilience scheme will not count towards this performance commitment

Performance commitment W-B6: Asset stewardship – mains bursts

Detailed definition of performance measure:

The total number of mains bursts in a financial year, measured by the number of repairs to water mains.

Incentive type: Financial – penalty only.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	Stable	<7,758	<7,758	<7,758	<7,758	<7,758

Incentive rates

Incentive type	Incentive rate (£/burst/year)
Penalty	£2,333

Additional details

Necessary detail on measurement units	Mains bursts include all physical repair work to mains from which water is lost which is attributable to pipes, joints or joint material failures or movement. Maintenance work on valve packings, hydrant seals, air valves, and valve, hydrant, washout and air valve replacements are excluded. Third party damage is excluded.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Penalties to be assessed annually and total applied after assessment of annual performance to 2018-19.
Form of reward/penalty	Adjustment to opening RCV at start of AMP7.

Any other information or clarifications relevant to correct application of incentive

Performance commitment W-B7: Customers at risk of low pressure

Detailed definition of performance measure:

The number of connected properties that have received, and are likely to continue to receive, pressure below the reference level when demand for water is at a normal level.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	300	250	250	250	250	250

Incentive rates

Incentive type	Incentive rate (£ /No./year)
Penalty	£790
Reward	£790

Additional details

Necessary detail on measurement units

The reference level of service is a flow of 9 litres/minute at a pressure of 10 metres head on the customer's side of the main stop tap. The reference level applies to a single property.

Frequency of PC measurement and any use of averaging	Progress on the PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year.
Form of reward/penalty	Adjustment to revenue.
Any other information or clarifications relevant to correct application of incentive	

Performance commitment W-B8: Restrictions on water use

Detailed definition of performance measure:

The number of water restrictions in place on customers in a five-year period.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	0	0	0	0	0	0

Incentive rates

Incentive type	Performance levels	Incentive rate (5 year total)
Penalty 2	>1	£18.75m
Penalty 1	1	£7.5m
Reward	0	£1.36m

Additional details

Necessary detail on measurement units	The number of Temporary Use Bans, as defined in the Flood and Water Management Act 2010 and the Water Use (Temporary Use Ban) Order 2010, imposed in a five-year period.
Frequency of PC measurement and any use of averaging	Progress on the PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Five-year penalty applied in full in the year after a water restriction is applied. Five-year reward to be applied after assessment of performance to 2018-19, based on expected delivery to 2019-20. Incentive rate is 5 year total
Form of reward/penalty	Adjustment to revenue.
Any other information or clarifications relevant to correct application of incentive	<p>If restrictions on use are imposed in a part of Severn Trent Water's area in the five-year period:</p> <ul style="list-style-type: none"> • No reward will be earned. • The penalty will be scaled by the population of the affected area as a proportion of the total population in the Severn Trent Water area.

Performance commitment: W-B9 Timing delays on Birmingham resilience scheme

Detailed definition of performance measure:

Delivery of the Birmingham resilience scheme will be measured in terms of completion of the following projects:

- A new 117 MI/d pumping station on the River Severn
- A 117 MI/d pipeline to Frankley WTW
- An upgrade to Frankley Water Treatment Works to allow it to treat 237 MI/d of river water

There will be separate incentive rates for each of these parts of the scheme.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels					
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	
Pumping station							Progress milestone	Completion
Pipeline							Progress milestone	Completion
Treatment works upgrade							Progress milestone	Completion

Incentive rates

Incentive type	Milestones	Incentive rate (£/unit/year delayed)	Total incentive (£/year delayed)
Penalty 1 (Pumping station)	Completion of project		£1.87m
Penalty 2 (Pipeline)	Completion of project		£5.07m
Penalty 3a (Treatment works – Clarification units)	4 Actiflow units at 30 MI/d per unit	£0.79m per unit	£3.17m
Penalty 3b (Treatment works – Sludge upgrades)	8 thickeners at 15 MI/d per unit	£0.13m per unit	£1.06m
Penalty 3c (Treatment works – RGF)	20 filters at 6 MI/d per unit	£0.07m per unit	£1.46m
Penalty 3d (Treatment works – Dual streaming/ return pumping station)	Completion of project		£3.33m

Additional details

<p>Necessary detail on measurement units</p>	
<p>Frequency of PC measurement and any use of averaging</p>	<p>Progress will be assessed annually, with key milestones at 31 March 2019. Delivery will be assessed at 31 March 2020 and annually thereafter until completion.</p>
<p>Timing and frequency of rewards/penalties</p>	<p>If the progress milestone shows delays are occurring then penalty will apply at PR19. Penalties for further delays will be paid out annually from 2021-22</p>
<p>Form of reward/penalty</p>	<p>Annual payments will be made, or an adjustment at price reviews.</p>
<p>Any other information or clarifications relevant to correct application of incentive</p>	<p>The company will report at least annually on progress, and if there are delays the company will agree remedial action.</p> <p>If the scheme is assessed at the 2018-19 progress milestone as being delayed, Severn Trent Water will commission an independent assessment, to be reviewed by Water Forum and Ofwat, of the extent of delay.</p> <p>The penalty rate, as set out in incentive rates table above, will apply for each year delivery is delayed by, according to which milestones have been completed. The table above shows how penalties for late delivery of the treatment works upgrade will be reduced if milestones have been met – the total incentive column shows the penalty that will occur if no milestones have been met.</p>

Performance commitment: W-B10 Non-delivery of the outcome of the Birmingham resilience scheme

Detailed definition of performance measure:

The success of the scheme in terms of delivering resilience to customers will be assessed by measuring the capacity delivered by the components of the project. If a lower capacity is delivered then the penalty will be proportionate to the shortfall in capacity. The components are:

- A new 117 MI/d pumping station on the River Severn
- A 117 MI/d pipeline to Frankley WTW
- An upgrade to Frankley Water Treatment Works to allow it to treat 237 MI/d of river water

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels					
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	
Pumping station						Progress milestone		Completion
Pipeline						Progress milestone		Completion
Treatment works upgrade						Progress milestone		Completion

Incentive rates

Incentive type	Additional capacity (MI/d)	Incentive rate (£/MI/d)
Penalty 1 (Pumping station)	117	£0.36m
Penalty 2 (Pipeline)	117	£0.97m
Penalty 3a (Treatment works – clarification units)	120	£0.59m

Incentive type	Additional capacity (MI/d)	Incentive rate (£/MI/d)
Penalty 3b (Treatment works – sludge upgrades)	120	£0.20m
Penalty 3c (Treatment works – RGF)	120	£0.27m
Penalty 3d (Treatment works – Dual streaming/return pumping station)	237	£0.32m

Additional details

Necessary detail on measurement units	A tolerance of 5% will be allowed for MI/d targets, in view of the limitations in accuracy of the calculation for example, because of metering error.
Frequency of PC measurement and any use of averaging	Delivery will be assessed on completion of the scheme. Progress will be assessed at 31 March 2018
Timing and frequency of rewards/penalties	Payment will be made through an adjustment to the RCV at PR19 or PR24. If the progress milestone shows under-delivery is likely then penalty will apply at PR19.
Form of reward/penalty	
Any other information or clarifications relevant to correct application of incentive	<p>After the scheme has been completed, any proportion of substantive non-delivery will be assessed and included in either PR19 or PR24.</p> <p>If under-delivery is identified as being likely before scheme completion, for example through the 2017-18 progress milestone, an earlier adjustment may be made at PR19.</p> <p>For each of the scheme components, the penalty as set out in the incentive rates table above, will be based on the proportion of the output not delivered. The incentive rate for the treatment works upgrade will be modified for delivery of separate units of additional capacity, as set out in table above.</p>

Performance commitment: W-B11 Timing delays on community risk schemes

Detailed definition of performance measure:

Delivery of the community risk schemes will be measured in terms of completion of the three projects set out in the company's business plan. There are separate incentive rates for each scheme.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels					
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	
Scheme 1						Progress milestone		Completion
Scheme 2						Progress milestone	Completion	
Scheme 3						Progress milestone	Completion	

Incentive rates

Incentive type	Incentive rate (£/year)
Penalty 1	£2.67m
Penalty 2	£0.87m
Penalty 3	£0.34m

Additional details

Necessary detail on measurement units	
Frequency of PC measurement and any use of averaging	Delivery will be assessed at 31 st March 2020 and annually thereafter until completion. Progress will be

	assessed at 31 March 2018.
Timing and frequency of rewards/penalties	Penalties will be paid out for delay in 2020-21 or 2021-22 if the schemes are not complete by 31 March 2020 and annually thereafter. If the progress milestone shows delays are occurring then penalty will apply at PR19.
Form of reward/penalty	Annual payments will be made, or an adjustment at price reviews.
Any other information or clarifications relevant to correct application of incentive	At the PR19 submission the company will propose an adjustment to the wholesale water revenue requirement, if delays are known in time, for example through the 2017-18 progress milestone. If delays are known earlier an earlier adjustment may be made; if later, then an adjustment will be made during AMP7. Penalty rate, as set out in incentive rates table above, will apply for each year delivery is delayed by.

Performance commitment: W-B12 Non-delivery of the community risk schemes

Detailed definition of performance measure:

The removal of risk will be assessed in terms of delivery of the community risk schemes specified in the company's business plan against the targeted change in risk reduction that they deliver.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels					
			2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Scheme 1						Progress milestone		Completion
Scheme 2						Progress milestone	Completion	
Scheme 3						Progress milestone	Completion	

Incentive rates

Incentive type	Incentive rate (£ / per cent of targeted risk reduction not achieved)
Penalty 1	£0.503m
Penalty 2	£0.165m
Penalty 3	£0.065m

Additional details

Necessary detail on measurement units	
Frequency of PC measurement and any use of averaging	Delivery will be assessed on completion of the scheme. Progress will be assessed at 31st March 2018.
Timing and frequency of rewards/penalties	Payment will be made through an adjustment to the RCV at PR19 or PR24. If the progress milestone shows under-delivery is likely then penalty will apply at PR19.
Form of reward/penalty	
Any other information or clarifications relevant to correct application of incentive	After the schemes have been completed, any proportion of substantive non-delivery will be assessed and included in either PR19 or PR24. If under-delivery is identified as being likely before

scheme completion, for example through the 2017-18 progress milestone, an earlier adjustment may be made at PR19.

For each of the scheme components, the penalty as set out in the incentive rates table above, will be based on the proportion of the output not delivered.

Performance commitment: W-B13 Timing delays on EVA maintenance

Detailed definition of performance measure:

Delivery of the EVA maintenance will be measured in terms of completion of the project set out in the company's business plan.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
EVA maintenance				Completion			

Incentive rates

Incentive type	Incentive rate (£/year)
Penalty	£2.07m

Additional details

Necessary detail on measurement units	
Frequency of PC measurement and any use of averaging	Delivery will be assessed at April 2017 and annually thereafter until completion.
Timing and frequency of rewards/penalties	Penalties will be applied at PR19.
Form of reward/penalty	Annual payments will be made, or an adjustment at price reviews.
Any other information or clarifications relevant to correct application of incentive	Penalty rate, as set out in incentive rates table above, will apply for each year delivery is delayed by.

Performance commitment: W-B14 Non-delivery of the EVA maintenance

Detailed definition of performance measure:

The removal of risk will be assessed in terms of completion of duplication of the section of EVA maintenance identified in the company's business plan.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
EVA maintenance				Completion			

Incentive rates

Incentive type	Incentive (£m)
Penalty	£39.2m

Additional details

Necessary detail on measurement units	Delivery will be assessed in terms of completion of duplication of the section of EVA maintenance identified in the company's business plan.
Frequency of PC measurement and any use of averaging	Delivery will be assessed on completion of the scheme.
Timing and frequency of rewards/penalties	Payment will be made through an adjustment to the RCV at PR19 or PR24.
Form of reward/penalty	
Any other information or clarifications relevant to correct application of incentive	After the scheme has been completed, any proportion of substantive non-delivery will be assessed and included in either PR19 or PR24.

Wholesale water outcome C: We will have the lowest possible charges

Performance commitment W-C1: Customers rating our services as good value for money

Detailed definition of performance measure:

The percentage of customers rating Severn Trent Water's services as good or very good value for money, as measured by its quarterly Customer Satisfaction Survey.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	45%	47%	47%	52%	53%	55%
Penalty deadband	%		37%	37%	42%	43%	45%
Reward deadband	%		57%	57%	62%	63%	65%

Incentive rates

Incentive type	Incentive rate (£/year)
Penalty	£125,000
Reward	£125,000

Additional details

Necessary detail on measurement units	The annual score will be the average of the survey results for the year.
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<p>Frequency of PC measurement and any use of averaging</p>	<p>Progress on the PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.</p>
<p>Timing and frequency of rewards/penalties</p>	<p>Reward or penalty applied annually for each financial year</p>
<p>Form of reward/penalty</p>	<p>Adjustment to revenue.</p>
<p>Any other information or clarifications relevant to correct application of incentive</p>	<p>A consistent methodology will be applied in conducting the survey, and any necessary changes in approach will be reviewed by the Water Forum.</p> <p>The full reward / penalty applies if performance is outside of the deadbands. It is not a graduated incentive.</p> <p>The reward / penalty is split equally between wholesale water and wholesale wastewater. £125,000 is the wholesale water allocation.</p>

Wholesale water outcome D: We will protect our local environment

Performance commitment W-D1: Improvements in river water quality against WFD criteria

Detailed definition of performance measure:

The number of WFD classification improvements Severn Trent Water delivers attributable to improvements in flow, with a point scored for each classification improvement.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.						31

Incentive rates

Incentive type	Incentive rate (£/classification/year)
Penalty	£150,000
Reward	£150,000

Additional details

Necessary detail on measurement units	<p>An improvement will be included in delivery of the PC if the company has delivered the appropriate water company contribution, as agreed with the Environment Agency, towards an improvement in WFD classification, with a point scored for each classification improvement.</p> <p>The company will report annually on both length of river improved and the number of water bodies</p>
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	improved.
Frequency of PC measurement and any use of averaging	Reward or penalty applied in 2019-20, with five years' reward / penalty based on number of improvements delivered to 2018-19 and expected performance in 2019-20.
Timing and frequency of rewards/penalties	Adjustment to revenue.
Form of reward/penalty	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	In the event of an Interim Determination for changes in WFD obligations, the incentive will be adjusted to take into account any impact on price controls, to avoid double-counting. WFD sewage treatment improvements are included in wholesale wastewater.

Performance commitment W-D2: Asset stewardship – environmental compliance

Detailed definition of performance measure:

This measure relates to compliance with four environmental measures, one of which relates to water:

- % of sewage treatment works passing their numeric consents.
- % of actions raised from EA regulatory site audits (actions raised as a % of total site visits).
- % of sites that do not exceed their 90%ile flow on sewage treatment works or maximum daily flow on water treatment works.
- % of sites compliant with their abstraction permits.

Incentive type: Reputational (financial incentive applies to wastewater).

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	Stable	100%	100%	100%	100%	100%
Penalty deadband	%		>95.3%	>95.3%	>95.3%	>95.3%	>95.3%

Additional details

Necessary detail on measurement units	<p>Performance reporting will be on a calendar year basis, in line with reporting to the Environment Agency, for example, performance reporting for 2015-16 will be in relation to 2015 calendar year performance.</p> <p>Performance is an unweighted average of the four measures.</p>
Frequency of PC measurement and any use of averaging	<p>PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.</p>
Any other information or clarifications relevant to correct application of incentive	<p>Financial incentive attributed to wastewater, as three of the four measures, and the greatest potential variability in performance, relates to wastewater.</p> <p>The commitments will be adjusted if there is any material change to the Environment Agency's definitions or approach to measurement.</p>

Performance commitment W-D3: Biodiversity

Detailed definition of performance measure:

The number of hectares of designated areas improved, measured through improvements made to Sites of Special Scientific Interest (SSSIs) on Severn Trent

Water’s land and Severn Trent Water’s contribution to improving other designated areas in its region such as Special Areas of Conservation (SACs).

Incentive type: Reputational (financial incentive applies to wastewater).

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Hectares	334					409

Additional details

Necessary detail on measurement units	Performance delivery will be assessed against the change in this measure on a consistent basis – the effect of any methodology changes will not be included. The PC is for the total number of hectares improved, that is, there is an increase of 75 hectares in the area which is in a favourable or improving condition.
Frequency of PC measurement and any use of averaging	Progress on PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	Reward or penalty attributed to wastewater because, although water contributes to this measure, incremental spend is in wastewater.

Performance commitment W-D4: Sites with eel protection at intakes

Detailed definition of performance measure:

The number of schemes delivered to provide eel protection at intakes

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.					Progress milestone	

Additional details

Necessary detail on measurement units	
Frequency of PC measurement and any use of averaging	This measure relates to delivery of 20 improvements in 2020-21. Progress will be reported during AMP6. Progress on PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

Wholesale water outcome E: We will protect the wider environment

Performance commitment W-E1: Size of our carbon footprint

Detailed definition of performance measure:

Total net annual greenhouse gas emissions of the water regulated business.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	ktCO ₂ e	229	228	224	222	220	216

Incentive rates

Incentive type	Incentive rate (£/ktCO ₂ e/year)
Penalty	£14,630
Reward	£14,630

Additional details

Necessary detail on measurement units	Measured on a financial year basis
Frequency of PC measurement and any use of averaging	Progress on PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year
Form of reward/penalty	Adjustment to revenue.

Any other information or clarifications relevant to correct application of incentive

This is the total net annual greenhouse gas emissions of the water regulated business. It includes all the company's direct carbon emissions and the carbon savings resulting from the renewable energy it generates and exports.

The target was set using the 2013 grid electricity emissions factor and Severn Trent Water will measure its success against the target using the 2013 factor. It will, however, also continue to report emissions each year in line with the latest emissions factors as normal.

Wholesale water outcome F: We will make a positive difference in the community

Performance commitment W-F1: Improved understanding of our services through education

Detailed definition of performance measure:

The number of people benefiting from the company total education programme including workshops, school lessons, site visits, etc.

Incentive type: Reputational.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	75,000	155,000	160,000	140,000	120,000	125,000

Additional details

Necessary detail on measurement units	Commitment is a company total.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

Wholesale wastewater outcome A: We will safely take your wastewater away

Performance commitment S-A1: Number of internal sewer flooding incidents

Detailed definition of performance measure:

The number of times customer properties are flooded internally due to a failure on Severn Trent Water's sewer network (including sewers transferred in 2011) in the financial year. This includes both flooding due to capacity issues on its pipes and those due to other causes such as blockages.

Incentive type: Financial – reward and penalty.

Performance commitments

	Unit	Starting level	Committed performance levels				
			2014-15	2015-16	2016-17	2017-18	2018-19
PC	No.	1,031	1,014	989	960	927	892

Incentive rates

Incentive type	Incentive rate (£/No./year)
Penalty	£42,000
Reward	£42,000

Additional details

Necessary detail on measurement units	Internal flooding is flooding from a public sewer which enters a building or passes below a suspended floor. This includes flooding of cellars, conservatories, porches, stairwells of flats, and integral garages.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.

Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	The measure excludes flooding caused by exceptionally severe weather (greater than a 1 in 20 year return period).

Performance commitment S-A2: Number of external sewer flooding incidents

Detailed definition of performance measure:

The number of times customer properties are flooded externally due to a failure on Severn Trent Water's sewer network (Including sewers transferred in 2011) in the financial year. This includes both flooding due to capacity issues on its pipes and those due to other causes such as blockages.

Incentive type: Financial – reward and penalty.

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	7,714	7,639	7,548	7,447	7,336	7,220
Reward deadband	No.		7,452	7,452	7,447	7,336	7,220

Incentive rates

Incentive type	Incentive rate (£/No./year)
Penalty	£19,400
Reward	£19,400

Additional details

Necessary detail on measurement units	External flooding includes flooding to buildings which are not occupied, such as detached garages and sheds.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	The measure excludes flooding caused by exceptionally severe weather (greater than a 1 in 20 year return period) and flooding to highways and other areas.

Performance commitment S-A3: Partnership working

Detailed definition of performance measure:

The number of projects where Severn Trent Water works in collaboration with other recognised public and not-for-profit organisations to help drive wider benefits for the community, in terms of reducing flooding, reportable on a financial year basis.

Incentive type: Financial – reward and penalty.

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	7					21

Incentive rates

Incentive type	Incentive rate (£/No./year)
Penalty	£60,000
Reward	£60,000

Additional details

Necessary detail on measurement units	N/a
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied on the basis of the total number of projects delivered in the five-year period. Five-year reward / penalty to be assessed in 2018-19 on delivery to date and expected delivery in 2019-20.
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	<p>The criteria to be met for a partnership output are:</p> <ul style="list-style-type: none"> • Multiple organisations. • Multiple flooding issues addressed, with quantifiable benefit. • Multiple funding sources. • Timing of individual partner projects is co-ordinated, or one joint scheme is delivered.

Performance commitment S-A4: Asset stewardship – Blockages

Detailed definition of performance measure:

The total number of sewer blockages on Severn Trent Water's sewer network (including sewers transferred in 2011) reported on a financial year basis.

Incentive type: Financial – penalty only.

Performance commitments

	Unit	Starting level	Committed performance levels				
			2014-15	2015-16	2016-17	2017-18	2018-19
PC	No.	Marginal	<50,470	<50,078	<49,685	<49,293	<48,900

Incentive rates

Incentive type	Incentive rate (£/No./year)
Penalty	£2,079

Additional details

Necessary detail on measurement units	A blockage is an obstruction in a sewer which causes a reportable problem (not caused by hydraulic overload), such as flooding or discharge to a watercourse, unusable sanitation, surcharged sewers or odour.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Penalties to be assessed annually and total applied after assessment of annual performance to 2018-19.
Form of reward/penalty	Adjustment to opening RCV at start of AMP7.
Any other information or clarifications relevant to correct application of incentive	

Performance commitment S-A5: Statutory obligations (Section 101A schemes)

Detailed definition of performance measure:

The total number of connectable properties, identified as polluting or likely to pollute, associated with new Section 101A schemes over the five years to 2019-20.

Incentive type: Reputational.

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	595					312

Additional details

Necessary detail on measurement units	Commitment is for a five-year total. The 2014-15 figure includes all connectable properties, not just those polluting or likely to pollute.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

Wholesale wastewater outcome B: We will have the lowest possible charges

Performance commitment S-B1: Customers rating our services as good value for money

Detailed definition of performance measure:

The percentage of customers rating Severn Trent Water's services as good or very good value for money, as measured by its quarterly Customer Satisfaction Survey.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	45%	47%	47%	52%	53%	55%
Penalty deadband	%		37%	37%	42%	43%	45%
Reward deadband	%		57%	57%	62%	63%	65%

Incentive rates

Incentive type	Incentive rate (£/year)
Penalty	£125,000
Reward	£125,000

Additional details

Necessary detail on measurement units	The annual score will be the average of the survey results for the year.
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<p>Frequency of PC measurement and any use of averaging</p>	<p>Progress on the PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.</p>
<p>Timing and frequency of rewards/penalties</p>	<p>Reward or penalty applied annually for each financial year.</p>
<p>Form of reward/penalty</p>	<p>Adjustment to revenue.</p>
<p>Any other information or clarifications relevant to correct application of incentive</p>	<p>A consistent methodology will be applied in conducting the survey, and any necessary changes in approach will be reviewed by the Water Forum.</p> <p>The full reward / penalty applies if performance is outside of the deadbands. It is not a graduated incentive.</p> <p>The reward or penalty is split equally between Wholesale Water and Wholesale wastewater – £125,000 is the wastewater allocation.</p>

Wholesale wastewater outcome C: We will protect our local environment

Performance commitment S-C1: Improvements in river water quality against WFD criteria

Detailed definition of performance measure:

The number of WFD classification improvements Severn Trent Water delivers attributable to improvements in flow, with a point scored for each classification improvement.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.						202

Incentive rates

Incentive type	Incentive rate (£/classification/year)
Penalty	£150,000
Reward	£150,000

Additional details

Necessary detail on measurement units	Performance will be measured with reference to modelled discharge permit requirements, as determined through reference to EA catchment permitting models. ODI improvements will be deemed to have been delivered on the date that the revised EA permit to discharge is issued. Where several separate projects are required in combination to deliver an outcome, delivery of the ODI points will be
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	<p>recorded at the date when the last permit is issued.</p> <p>The scoring system is on the basis of 1 point per classification change up to good ecological status per parameter improved.</p> <p>The company will report annually on both length of river improved and the number of water bodies improved.</p>
Frequency of PC measurement and any use of averaging	Reward or penalty applied in 2019-20, with five years' reward/penalty based on number of improvements delivered to 2018-19 and expected performance in 2019-20.
Timing and frequency of rewards/penalties	Adjustment to revenue in 2019-20.
Form of reward/penalty	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	<p>An improvement will be included in delivery of the PC if the company has delivered the appropriate water company contribution, as agreed with the Environment Agency, towards an improvement in WFD classification, with a point scored for each classification improvement.</p> <p>In the event of an Interim Determination for changes in WFD obligations, the incentive will be adjusted to take into account any impact on price controls, to avoid double-counting.</p> <p>WFD flow improvements are included in wholesale water.</p>

Performance commitment S-C2: The number of category 3 pollution incidents

Detailed definition of performance measure:

The total number of category 3 pollution incidents attributable to Severn Trent Water assets (including sewers transferred in 2011).

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	457	429	402	374	374	374
Penalty deadband	No.		457	457	374	374	374
Reward deadband	No.		374	374	374	374	374

Incentive rates (category 3 incidents only)

Incentive type	Incentive rate (£/incident/year)
Penalty	£53,900
Reward	£53,900

Additional details

Necessary detail on measurement units	Performance reporting will be on a calendar year basis, in line with reporting to the Environment Agency, for example, performance reporting for 2015-16 will be in relation to 2015 calendar year performance.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year.
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	The commitments will be adjusted if there is any material change to the Environment Agency's definitions or approach to measurement.

Performance commitment S-C3: Asset stewardship – environmental compliance

Detailed definition of performance measure:

This four-part measure relates to compliance with the company's sewage treatment and abstraction permits and includes:

- % of sewage treatment works passing their numeric consents
- % of actions raised from EA regulatory site audits (actions raised as a % of total site visits)
- % of sites that do not exceed their 90thile flow on sewage treatment works or maximum daily flow on water treatment works
- % of sites compliant with their abstraction permits.

Incentive type: Financial – penalty only.

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	Stable	100	100	100	100	100
Penalty deadband	%		>95.3	>95.3	>95.3	>95.3	>95.3

Incentive rates

Incentive type	Incentive rate (£/%/year)
Penalty	£1.4m

Additional details

Necessary detail on measurement units	Performance reporting will be on a calendar year basis, in line with reporting to the Environment Agency, for example, performance reporting for 2015-16 will be in relation to 2015 calendar year performance. Performance is an unweighted average of the four measures.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Penalties to be assessed annually and total applied after assessment of annual performance to 2018-19.
Form of reward/penalty	Adjustment to opening RCV at start of AMP7.
Any other information or clarifications relevant to correct application of incentive	The commitments will be adjusted if there is any material change to the Environment Agency's definitions or approach to measurement.

Performance commitment S-C4: Biodiversity

Detailed definition of performance measure:

The number of hectares of designated areas improved, measured through improvements made to Sites of Special Scientific Interest (SSSIs) on Severn Trent Water's land and its contribution to improving other designated areas in its region such as Special Areas of Conservation (SACs).

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	334					409

Incentive rates

Incentive type	Incentive rate (£/hectare/year)
Penalty	£937
Reward	£937

Additional details

Necessary detail on measurement units	<p>Performance delivery will be assessed against the change in this measure on a consistent basis – the effect of any methodology changes will not be included.</p> <p>The PC is for the total number of hectares improved, that is, there is an increase of 75 hectares in the area which is in a favourable or improving condition.</p>
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied in 2019-20, with five years' reward / penalty based on number of improvements delivered to 2018-19 and expected performance in 2019-20.
Form of reward/penalty	Adjustment to revenue.
Any other information or clarifications relevant to correct application of incentive	

Performance commitment S-C5: Sustainable sewage treatment

Detailed definition of performance measure:

This measure is the number of works where future capital investment is avoided by the development of innovative solutions to reduce capacity pressures at Sewage Treatment Works to accommodate growth.

Incentive type: Financial – reward only.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.						0

Incentive rates

Incentive type	Incentive rate (£/works/year)
Reward	£28,000

Additional details

Necessary detail on measurement units	The above incentive rate is for a notional 1,000 population equivalent capacity increase avoided. The incentive would be scaled up or down for each works according to the scale of the capacity increase avoided.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward applied in 2019-20, with five years' reward based on number of improvements delivered to 2018-19 and expected performance in 2019-20.
Form of reward/penalty	Adjustment to revenue.

Any other information or clarifications relevant to correct application of incentive

No solutions yet available for inclusion in Severn Trent Water’s plan, so the PC is zero.

Performance commitment S-C6: Serious pollution incidents

Detailed definition of performance measure:

The number of serious pollution incidents (Categories 1 and 2) attributable to Severn Trent Water assets (including sewers transferred in 2011).

Incentive type: Reputational.

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	8	8	6	4	2	0

Additional details

Necessary detail on measurement units	Measured on a calendar year basis
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	The commitments will be adjusted if there is any material change to the Environment Agency’s definitions or approach to measurement.

Performance commitment S-C7: Overall environmental performance

Detailed definition of performance measure:

This is a basket of environmental measures to assess overall performance, and includes the following measures in the basket:

- improvements in river water quality against WFD criteria
- asset stewardship – environmental compliance
- total number of category 1, 2 and 3 pollution incidents
- biodiversity improvements

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No. of targets met						3

Incentive rates

Incentive type	Incentive rate (£/target)
Penalty	£2.4m
Reward	£2.4m

Additional details

Necessary detail on measurement units	Measurement is number of measures on or above target (except 'asset stewardship – environmental compliance' which is assessed against the penalty deadband). Pollution incidents and environmental compliance are measured on a calendar year basis in line with reporting to the Environment Agency. The pollution incidents measure is the combined performance on categories 1, 2 and 3 incidents
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Frequency of PC measurement and any use of averaging	Performance will be assessed in 2018-19, on average performance over the period, including expected performance in 2019-20 for biodiversity and WFD improvements. Pollution incidents and environmental compliance will be assessed to 2018.
Timing and frequency of rewards/penalties	Reward or penalty applied in 2018-19.
Form of reward/penalty	Adjustment to revenue in 2019-20.
Any other information or clarifications relevant to correct application of incentive	Penalty and reward rates (£2.4m) are five year totals

Performance commitment S-C8: The number of category 4 pollution incidents

Detailed definition of performance measure:

The total number of category 4 pollution incidents attributable to Severn Trent Water assets (including sewers transferred in 2011).

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	246	225	203	182	182	182

Additional details

Necessary detail on measurement units	Performance reporting will be on a calendar year basis, in line with reporting to the Environment Agency, for example, performance reporting for 2015-16 will be in relation to 2015 calendar year performance.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	
Form of reward/penalty	
Any other information or clarifications relevant to correct application of incentive	The commitments will be adjusted if there is any material change to the Environment Agency's definitions or approach to measurement.

Wholesale wastewater outcome D: We will protect the wider environment

Performance commitment S-D1: Size of our carbon footprint

Detailed definition of performance measure:

Total net annual greenhouse gas emissions of the wastewater regulated business.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	ktCO ₂ e	259	248	245	238	237	242

Incentive rates

Incentive type	Incentive rate (£/ktCO ₂ e/year)
Penalty	£14,630
Reward	£14,630

Additional details

Necessary detail on measurement units	Measured on a financial year basis
Frequency of PC measurement and any use of averaging	Progress on PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Timing and frequency of rewards/penalties	Reward or penalty applied annually for each financial year
Form of reward/penalty	Adjustment to revenue.

Any other information or clarifications relevant to correct application of incentive

This is the total net annual greenhouse gas emissions of the wastewater regulated business. It includes all the company's direct carbon emissions and the carbon savings resulting from the renewable energy it generates and exports.

The target was set using the 2013 grid electricity emissions factor and Severn Trent Water will measure its success against the target using the 2013 factor. It will, however, also continue to report emissions each year in line with the latest emissions factors as normal.

Wholesale wastewater outcome E: We will make a positive difference in the community

Performance commitment S-E1: Improved understanding of our services through education

Detailed definition of performance measure:

The number of people benefiting from the company total education programme including workshops, school lessons, site visits, etc.

Incentive type: Reputational.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	75,000	155,000	160,000	140,000	120,000	125,000

Additional details

Necessary detail on measurement units	Commitment is a company total.
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

Household retail outcome A: We will provide you with excellent customer service

Performance commitment R-A1: Customer satisfaction with their service (based on a survey)

Detailed definition of performance measure:

Performance as measured by the UK Customer Satisfaction Index, from a survey independently conducted by the Institute of Customer Service.

Incentive type: Reputational.

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Ranking	Median	Median	Median	Upper quartile	Upper quartile	Upper quartile

Additional details

Necessary detail on measurement units	
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

Performance commitment R-A2: Customers' experience of dealing with us (based on Ofwat's SIM)

Detailed definition of performance measure:

As set out by Ofwat in 'Service incentive mechanism (SIM) for 2015 onwards – conclusions'.

Incentive type: Financial – reward and penalty.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Ranking	Median	Upper quartile	Upper quartile	Upper quartile	Upper quartile	Upper quartile

Incentive rates

Incentive type	Incentive rate
Penalty	Determined by Ofwat
Reward	Determined by Ofwat

Additional details

Necessary detail on measurement units	Determined by Ofwat
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis.
Timing and frequency of rewards/penalties	End of period
Form of reward/penalty	
Any other information or clarifications relevant to correct application of incentive	

Household retail outcome B: We will help you if you struggle

Performance commitment R-B1: Number of customers helped by a review of their tariff and water usage and/or supported by our social fund

Detailed definition of performance measure:

Includes customers helped by WaterSure, Severn Trent Water’s new social tariff, metering (where advised for customers having difficulty in paying) and water health check support.

Incentive type: Reputational.

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No.	11,500	35,000	50,000	50,000	50,000	50,000

Additional details

Necessary detail on measurement units	
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis and reviewed through the successor to Water Forum.
Any other information or clarifications relevant to correct application of incentive	

Performance commitment R-B2: % of customers who do not pay

Detailed definition of performance measure:

Household bad debt divided by total household revenue, as reported in the Annual Accounts.

Incentive type: Reputational.

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	2.69	2.7	2.7	2.7	2.7	2.7

Additional details

Necessary detail on measurement units	
Frequency of PC measurement and any use of averaging	PC measured, assured and reported on an annual basis.
Timing and frequency of rewards/penalties	
Form of reward/penalty	
Any other information or clarifications relevant to correct application of incentive	

Outcome delivery and reporting

In policy chapter A2, we outline a framework against which we have assessed Severn Trent Water's proposals in relation to outcome delivery and reporting.

The table below summarises Severn Trent Water's proposed approach to the measurement, reporting and governance of outcomes and our assessment of this approach.

Table AA4.9 Severn Trent Water’s proposals for outcome delivery and reporting

Severn Trent Water’s proposals	Our assessment
<p>In the June Submission, Severn Trent Water states that it operates a “Three Lines of Defence model” in the company covering processes and controls, oversight and independent assurance.</p> <p>For each PC, the company proposes to capture the measure using its core systems (for example, SAP) and report it using a standard reporting template. The company states it has assigned an accountable Director and responsible General Manager (GM) for each measure. For each measure, there will be a Process Description Template (PDT) to record how the performance will be measured.</p> <p>The company commits to monitor and review the measures on a weekly, monthly and quarterly basis using its existing hierarchy of performance reporting. This includes quarterly Board updates, monthly updates to Executive leadership teams and daily/weekly operational updates at an individual team level, as well as continued engagement with the Water Forum (CCG). The performance against the risk and reward mechanism will also be reviewed by the Board and the CCG quarterly.</p> <p>The company proposes to continue using its existing approach of engaging independent assurance from both Internal Audit and independent external assurance providers for the measures over 2015-20.</p> <p>The company also states it will introduce a Measure of Success to enable its progress to be transparently reported to customers. The company also commits that its performance against the commitments, and the associated incentive rewards and penalties will be published annually and that it will engage with key local stakeholders on the</p>	<p>In our methodology statement we set out our expectation that companies should demonstrate that their PCs can be measured and recorded consistently and that they will have the appropriate governance and quality assurance processes in place to achieve this. We also expect companies to be transparent with customers about their performance against their outcomes and commitments.</p> <p>Severn Trent Water has provided sufficient evidence demonstrating the approach it will undertake to ensure the PCs will be measured and reported consistently, and the governance and assurance processes. Therefore, we have accepted the company’s proposal.</p> <p>In time, we may develop further information requirements with regard to outcomes, as we review and change current requirements relating to performance indicators and each company’s annual risk and compliance statement.</p>

Severn Trent Water's proposals	Our assessment
company's performance.	

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We are responsible for making sure that the water sector in England and Wales provides customers with a good quality and efficient service at a fair price.



Ofwat
Centre City Tower
7 Hill Street
Birmingham B5 4UA

Phone: 0121 644 7500
Fax: 0121 644 7533
Website: www.ofwat.gov.uk
Email: mailbox@ofwat.gsi.gov.uk

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