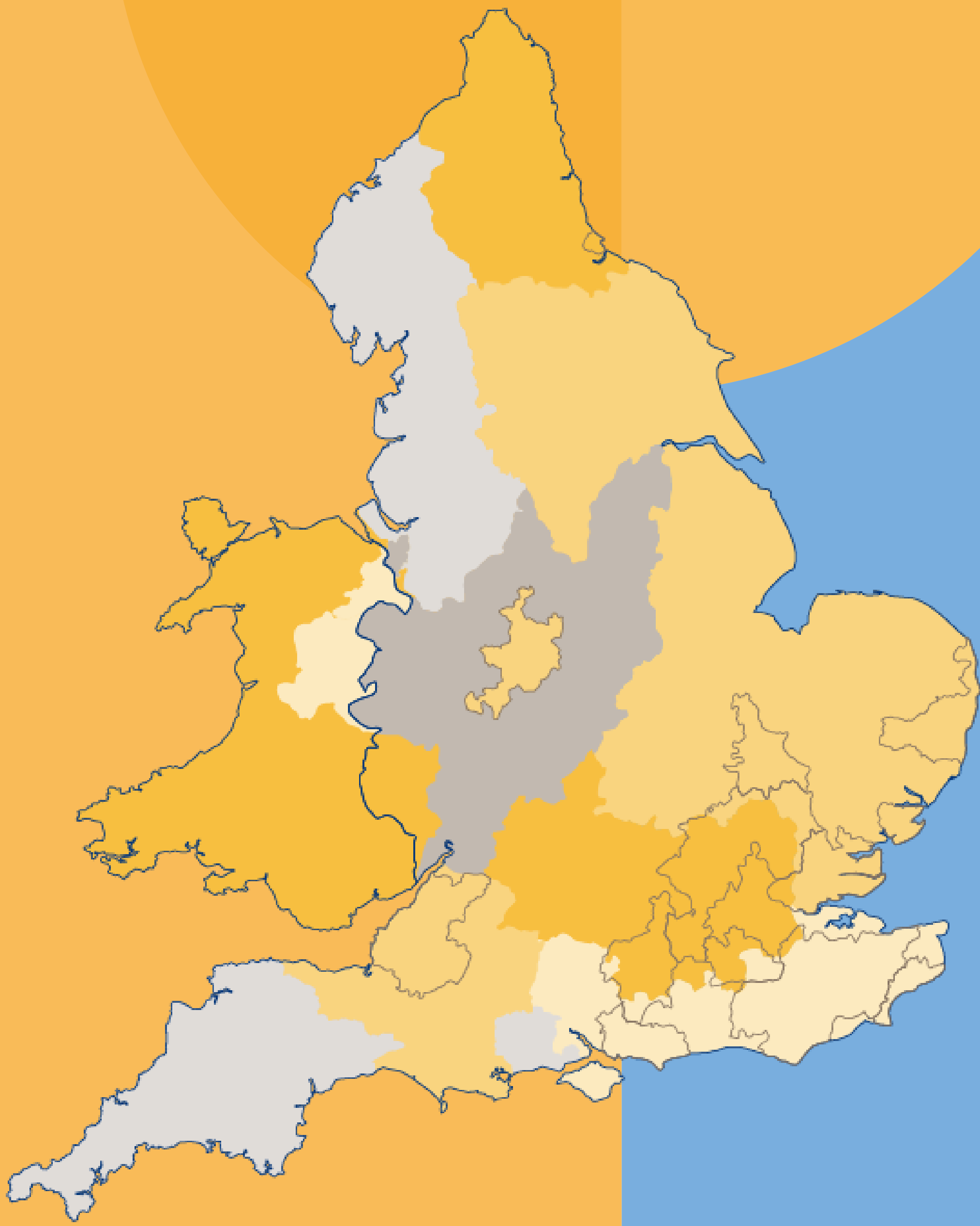
July 2019

Trust in water

PR19 draft determinations

Southern Water draft determination



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PR19 draft determinations: Southern Water draft determination

About this document

This document, together with the 'Notification of the draft determination of price controls for Southern Water', sets out for consultation the draft determination of price controls, service and incentive package for Southern Water for 2020 to 2025. All figures in this document are in 2017-18 prices except where otherwise stated.

The draft determination sets out:

- the outcomes for Southern Water to deliver;
- the allowed revenue that Southern Water can recover from its customers; and
- how we have determined allowed revenues based on our calculation of efficient costs and the allowed return on capital.

The draft determination covers five price controls for the 2019 price review (PR19):

- water resources;
- water network plus;
- wastewater network plus;
- bioresources; and
- residential retail.

This draft determination is in accordance with our PR19 methodology, our statutory duties and the UK Government's statement of strategic priorities and objectives for Ofwat. We have also had regard to the principles of best regulatory practice, including the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted.

All of the responses to the initial assessment of business plans, including all of the companies' revised business plans, provided by 1 April 2019 are taken into account in our decisions where relevant. Where appropriate, we explicitly set out our response to points and issues raised by respondents.

Our decisions also take into account the representations made on the fast track draft determinations where points and issues raised are relevant to the slow track and significant scrutiny draft determinations. We will deal with the other elements of the representations on the fast track draft determinations as part of the final determinations.

We have not necessarily been able to take full account of all late evidence, submitted after 1 April 2019 business plans, and we will consider this information for the final determination.

The appendices to this document provide more detail and form part of the draft price control determination:

- PR19 draft determinations: Southern Water - Cost efficiency draft determination appendix
- PR19 draft determinations: Southern Water - Outcomes performance commitment appendix
- PR19 draft determinations: Southern Water - Accounting for past delivery appendix
- PR19 draft determinations: Southern Water - Allowed revenue appendix

For all other documents related to the Southern Water draft determination, please see the draft determinations webpage.

Southern Water investigation

Separate to the price review process we are consulting on our proposal to impose an enforcement penalty on Southern Water in light of the findings of our investigation into misreporting and the management, operation and performance of Southern Water's wastewater treatment works ('the Southern Water investigation'). The consultation, 'Notice of Ofwat's proposal to impose a penalty on Southern Water Services Limited', closes on the 19 July 2019. Subject to consultation this could result in payments and penalties of about £126m. The company remains subject to an ongoing investigation by the Environment Agency.

Given our finding of misreporting, Southern Water has restated data for the period 2010-2017. This restated data will be in its annual performance report which will be submitted to us on 15 July. Our draft determination does not take this restated data into account and it does not take into account the proposed payment and penalties in the consultation. Subject to the representations received on our penalty notice and once we have made a final decision in respect of that penalty notice, we will take account of the Southern Water investigation in the final determination, including the payments and penalties and the impact of any restated data submitted to us on 15 July in the annual performance report.

How to respond

Written representations on the draft determinations should be provided to us by 10am on 30 August 2019. Representations can be made by all stakeholders. Representations can be sent either to our PR19 inbox (PR19@Ofwat.gov.uk) or by post to our Birmingham office address: Ofwat, Centre City Tower, 7 Hill Street, Birmingham, B5 4UA.

To ensure transparency, we expect companies to publish their representations in full. We also intend to publish all the written representations we receive on our website once our final determinations are made.

In view of this, if respondents consider that some of the information in their representations should not be disclosed (for example, because they consider it is commercially sensitive information) they should identify that information and explain why. We would expect strong, robust reasons that are specific to the information concerned. We will take such explanations into account, but we cannot give an assurance that information included in representations will not be disclosed.

Where companies are making representations, they should consider what further evidence may be necessary to submit with their representations as a result of this draft determination. Where companies consider that we have not appropriately considered any points previously raised by the company, companies should include this within their representations. Companies should provide a completed ‘All company representation pro forma’ alongside any representations.

We will publish Southern Water’s final determination on 11 December 2019 after considering representations (from all stakeholders) on the draft determination and other relevant matters. If Southern Water accepts the final determination, it will be accepting that it has adequate funding to properly carry out the regulated business, including meeting its statutory and regulatory obligations, and to deliver the outcomes within its final determination.

Contents

1 Summary

Through PR19 we are enabling, incentivising and challenging water companies to address the key issues facing the sector of climate change, a growing population and ever increasing customer expectations about service. We expect companies to look well beyond the five year price review period to meet needs of future customers and protect and improve the natural environment.

Our PR19 methodology set out a framework for companies to address these challenges, with particular focus on improved service, affordability, increased resilience and greater innovation. Our draft determinations are based on our detailed review of the revised plans submitted to us on 1 April. We are intervening, where required, to protect customers.

1.1 What the draft determination will deliver

Our draft determination for Southern Water will cut average bills by 14.3% in real terms in the 2020-25 period compared to the company's proposed 7.2% reduction. Table 1.1 below sets out the difference in bill profile between the company's business plan submission in April 2019 and our draft determination. Average bills are lower than proposed by Southern Water in its April 2019 plan, reflecting our view of efficient costs and our intervention on pay as you go (PAYG) rates, which will help balance cost recovery between current and future customers. Further details on bills are set out in section 6.

Our draft determination does not take into account the potential impact on bills of the Southern Water investigation, including the payments and penalties that may be payable by Southern Water as a result of our enforcement investigation and the impact of any restated data submitted to us on 15 July in the annual performance report. We would expect this to lead to lower bills if our provisional findings in the penalty notice are confirmed.

Table 1.1: Bill profile for 2020-25 before inflation

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Company plan (April resubmission)	£422	£392	£392	£392	£392	£392
Draft determination	£422	£362	£362	£362	£362	£362

Our draft determination allows Southern Water £840 million to invest in improvements to service, resilience and the environment. Key parts of this allowance include:

- £547 million to improve the environment by efficiently delivering its obligations as set out in the Water Industry National Environment Programme (WINEP);
- £175 million to improve the water supply demand balance, including to deliver an ambitious water demand reduction programme, and to restore and increase capacity of water supply sources;
- £61 million to address the impact of deteriorating raw water quality;
- £30 million to protect groundwater around Thanet; and
- £21 million to improve bathing waters beyond statutory requirements.

In addition, we are allowing the company £82 million to evaluate, in partnership with others, potential strategic regional water resource solutions. This includes the company progressing both Fawley desalination and River Itchen reuse solutions.

Further details on our cost allowances are set out in section 3.

Our draft determination package includes a full set of performance commitments, specifying the minimum level of service that Southern Water must commit to deliver for customers and the environment. Each performance commitment also has a financial or reputational incentive to hold the company to account for delivery of these commitments.

The performance commitments require Southern Water to deliver service improvements by reducing water supply interruptions and internal sewer flooding. Southern Water will deliver environmental benefits by reducing per capita consumption, pollution incidents and leakage. The company will also increase the amount of renewable energy generated by 2024-25. Further details of performance commitments are set out in Table 1.2 below and in section 2.

Table 1.2: Key commitments for Southern Water

Area	Measure
Overall incentive package	Overall, the likely range of returns from the outcome delivery incentive package in our draft determination equates to a return on regulatory equity range of – 2.76% (P10) to + 0.72% (P90).
Key common performance commitments	• 15% reduction in annual level of leakage by 2025 from the 2020 level[1]. • 7% reduction in per capita consumption by 2024-25 • 41% reduction in pollution incidents by 2024-25 • 33% reduction in internal sewer flooding incidents by 2024-25 • 51% reduction in water supply interruptions by 2024-25
Bespoke performance commitments	• 30% reduction in external sewer flooding incidents by 2024-2525 • 37% increase in total renewable electricity generated as a percentage of the company's total electricity consumption by 2024-25. • 12% reduction in customer contacts regarding the taste & odour of their drinking water by 2024-25.

Note: The calculations behind these numbers are outlined in the 'Southern Water – Outcomes performance commitment appendix'

1.2 Allowed revenues

Our draft determination sets allowed revenue or average revenue for each of the price controls. Table 1.3 shows the allowed revenues in the draft determination across each price control. Further details on our calculation of allowed revenues are set out in section 4.

Table 1.3: Allowed revenue, 2020-25 (£ million)

	Water Resources	Network plus - water	Network plus - wastewater	Bioresources	Wholesale Total	Residential retail
Final allowed revenues (£ million)	140.7	822.3	2,277.9	244.0	**3,484.9**	224.0

[1]Whilst the figures in the tables of the 'Southern Water - Outcomes performance commitment appendix' which relate to this performance commitment reflect that it is measured on a three-year average to smooth annual variations due to weather, the overall performance commitment target is a reduction in average annual leakage of 15% (from 2019-20 baseline) by 2024-25.

Note: retail revenue is the sum of the margin, retail costs, and adjustments. The bioresources and residential retail controls are average revenue controls. We have included forecast revenue (in real terms) for these controls to illustrate the total revenue across all controls.

As set out in the 'Cost of capital technical appendix', we are updating our assessment of the cost of capital for Southern Water's draft determinations. The updated cost of capital is 3.19% (on a CPIH basis, 2.19% on a RPI basis) at the level of the Appointee, a reduction of 0.21% from our early view set out in the PR19 methodology.

We consider that Southern Water's draft determination is financeable, based on an efficient company, with the notional capital structure, and is sufficient to deliver its obligations, including to ensure a long term resilient service. Each company is responsible for ensuring its capital and financial structure allows it to maintain financial resilience over the short and the long term. We expect Southern Water to take account of this requirement and of the reasonably foreseeable range of plausible outcomes of their final determination including evidence of further downward pressure on the cost of capital in very recent market data. We expect Southern Water to provide appropriate Board assurance that it will remain financeable on a notional and actual basis and can maintain its long term financial resilience in its response to our draft determination. Further detail on our assessment of financeability is set out in section 5.

We have encouraged companies to take greater account of customers' interests – and to transparently demonstrate that they are doing so in the way they finance themselves, pay dividends to their shareholders, and determine performance related executive pay. Southern Water has committed to meeting the expectations set out in our 'Putting the sector in balance position statement'. In its revised business plan, Southern Water says that it expects its gearing to be below 70% by 31 March 2020 and plans to keep it below 70% during 2020-25. The company says that further equity injections are possible if significant downside risks materialise, that its Board has full control over its flexible dividend policy and that it has continuing access to significant liquidity facilities. It also states that it carried out a fresh assessment of its financial resilience and considers that the company remains financeable, with adequate financial resilience having considered all extant regulatory investigations.

Since the submission of the revised business plan, we have issued a penalty notice, which invites comments on our proposal to impose an enforcement penalty on Southern Water in light of our findings in the Southern Water investigation. Subject to comments received on the notice, this could result in payments and penalties of about £126 million. Moody's and S&P have downgraded the credit rating of the company's finance subsidiary's senior debt and the company remains subject to an ongoing investigation by the Environment Agency.

We expect Southern Water to provide further detail and Board assurance setting out the steps it is taking to demonstrate that the company will maintain financial resilience in the long term within the context of its performance issues including matters covered by the penalty notice and our interventions to its business plan and that the company will be able to raise finance as and when required. We expect this to be accompanied by evidence of support from its equity investors and to be accompanied by independent assurance about the long term viability of the company, including its ability to maintain sufficient headroom with respect to its target credit rating. We will continue to engage with the company on issues associated with its long term financial resilience.

Southern Water has committed to meeting the expectations on executive pay and dividend policy set out in our 'Putting the sector in balance' position statement. However we expect the company to explain, as part of its response to our draft determination, how it will provide transparency over obligations or commitments to customers that will be considered, as well as the level of performance delivery used for the assessment and how it will affect dividend payments. We also expect the company to demonstrate that its performance related executive pay policy has a substantial link to significantly increased performance delivery for customers through 2020-25.

In the 'Putting the sector in balance' position statement, we also encouraged companies to adopt voluntary sharing mechanisms, particularly where, for example, companies outperform our cost of debt assumptions. Southern Water has not proposed a voluntary sharing mechanism but it does include a payment matching scheme, NewStart. The NewStart scheme provides that Southern matches any payment that customers can make where customers fall into debt, subject to certain eligibility criteria.

1.3 Where we intervene

Our initial assessment of Southern Water's plan on 31 January 2019 assessed the plan as significant scrutiny. We identified a number of areas where material interventions were required to protect customers' interests. In its 1 April 2019 revised business plan, Southern Water has not adequately addressed our concerns. We are therefore intervening in Southern Water's plan in the following areas:

- We align total expenditure (totex) allowances to our view of efficient costs, which saves customers £290 million. The gap between requested and allowed expenditure is lower than for most slow track or significant scrutiny companies at 7.8% as the company reduced expenditure in its revised business plan.
- We do not allow enhancement expenditure for leakage (the company is not forecasting to go beyond upper quartile performance) or for reducing pollution incidents (we don't allow additional expenditure to achieve upper quartile). Southern Water must deliver its performance commitments at no additional

cost to customers. Outperformance in these areas is rewarded through the outcome delivery incentive framework.
- We adjust or amend a number of outcome delivery incentive rates to protect customer interest including for leakage, per capita consumption, improving bathing water, treatment works compliance and pollution incidents, due to concerns over the quality of evidence provided.
- We set a cap on delivery incentive rates for its river improvement programme and impose our standard deadband for the compliance risk index for drinking water quality performance commitment.
- We remove £182 million of pay as you go revenue that the company proposed to bring forward from future customers as it did not provide sufficient evidence that this would strike a fair balance of cost recovery between current and future customers.

Southern Water's September 2018 business plan was assessed as requiring significant scrutiny at the initial assessment of plans. We said we would decide at the final determination whether to apply a reduced cost sharing rate, or cap bespoke outcome delivery incentives, to reflect whether the company had engaged positively to address our concerns with the plan over the remainder of the price review process.

In 'Significant scrutiny companies - Application of lower cost sharing rates and outcome delivery incentive cap' we set out our current view on how the company has responded to the initial assessment of plans. We consider, that for us to not apply the reduced cost sharing rate, Southern Water needs to make further progress in addressing our concerns through timely, high quality response to draft determination. For the purpose of the draft determination we have not applied a reduced costs sharing rate for Southern Water.

We set out further detail of our interventions in this document and in the Southern Water actions and interventions documents.

2 Outcomes

The outcomes framework is a key component in driving companies to focus on delivering the objectives that matter to today's customers, future customers and the environment in the 2020-25 period and beyond. Outcomes define the service package that companies should deliver for their customers and their incentives to do this.

There are two key elements of the outcomes framework: performance commitments and outcome delivery incentives. Performance commitments specify the services that customers should receive and set out in detail the levels of performance that the companies commit to achieve within the five year period from April 2020 to March 2025. Outcome delivery incentives specify the financial or reputational consequences for companies of outperformance or underperformance against each of these commitments. (They are referred to as 'out' where there is a payment to the company for better than committed performance, 'under' where there is a payment to customers where there is worse than committed performance, or 'out-and-under' incentives, depending on their design). Most outcome delivery incentives will be settled at the end of each year to bring incentives closer to the time of delivery of the service ('in-period' incentives) and some will be settled once at the end of the five year period ('end-of period' incentives). The outcomes framework gives companies the freedom to innovate and explore to find the most cost-effective way of delivering what matters to their customers.

The outcomes framework sits in the broader context of the company's statutory and licence requirements for service delivery. Independently of the outcomes framework, each company also has to ensure that it complies with its legal obligations, or risk enforcement action. If a company's performance falls below the level set for a performance commitment (irrespective of the existence of any deadband or collar), we will consider whether this is indicative of wider compliance issues to the detriment of consumers and whether enforcement action, with the potential for remedial and fining measures, is warranted.

Please see the 'Delivering outcomes for customers policy appendix' for further details on our policy decisions on cross-cutting issues such as common performance commitments and outcome delivery incentive rates.

Following our investigation into the management, operation and performance of Southern Water's wastewater treatment works, the company has submitted restated performance data to us for the period 2010 – 2017. This restated performance data will also be included in the annual performance report due to be submitted to us on 15 July. This restated data and our investigation is relevant for the calculation of outcome delivery incentives underperformance payments of the period 2015-20 but have no impact on setting performance levels for 2020-25. The issues in the investigation relate to two performance commitments for the period 2015-20.

- The pollution incidents performance commitment levels is set with reference to industry data.
- The wastewater treatment compliance performance commitment is set at 100% for all companies.

2.1 Customer engagement

In our PR19 methodology we set out our expectations that companies should demonstrate ambition and innovation in their approach to engaging customers as they develop their business plans. This includes direct engagement with customers to develop a package of performance commitments and outcome delivery incentives.

We expect customer challenge groups to provide independent challenge to companies and independent assurance to us on: the quality of a company's customer engagement; and the degree to which this is reflected in its business plan.

We continue our assessment of customer engagement evidence following each company's submission of its response to our initial assessment of its plan in April 2019. We find variability in both the quality of engagement undertaken by companies and the extent to which customers' views are reflected in company proposals.

In our initial assessment of business plans, we found that some aspects of Southern Water's approach to customer engagement were high quality and other areas raised concern, such as how the results of customer engagement informed the company's business plan.

In response to our initial assessment of its plan, Southern Water explains that it has worked with its customer challenge group and engaged with more non-household and vulnerable customers to reflect their views on revised commitments being presented in its 1 April 2019 business plan submissions. Southern Water presents research that was intended to identify the level of customer support for 'overpayment' on 23 of its outcome delivery incentives, whether it is achieving the right balance between stretching targets and keeping bills affordable, whether customers support 'overpayment' on specific performance commitments if the company exceeds its performance target and also gathers views on outcome delivery incentives in general. The research engaged 23 customers via an online platform and 6 meetings with stakeholders representing vulnerable customers, non-household customers, environmental groups and local authorities. As such, the results cannot be considered to be robust, but may provide an indication of customer views.

Southern Water's customer challenge group explains that 'by the time of [business plan] submission, we were satisfied that customers' preferences underpinned the outcome delivery incentives'. It was involved in the recent research on outcome delivery incentives and affordability at three stages: a) agreeing the approach to the research and the audience segments to be captured; b) reviewing the revised outcome delivery incentive package which would be tested during the research; and c) evaluating the feedback. The customer challenge group also comments that 'this new data also corroborates the evidence that SWS's customers find the bills affordable'.

2.2 Performance commitments and outcome delivery incentives

Southern Water's performance commitments and outcome delivery incentives for the 2020-25 period are listed in Table 2.2 and Table 2.3. The detail of these performance commitments and outcome delivery incentives are set out in the 'Southern Water - Outcomes performance commitment appendix'. The performance commitments and outcome delivery incentives include the revisions accepted by the company in response to our 31 January 2019 initial assessment of business plans and any additional interventions we are making in the draft determination.

The material interventions we are making in the draft determination are set out in Table 2.1 below. 'Southern Water – Delivering outcomes for customers actions and interventions' sets out in detail our interventions in the company's performance commitments and outcome delivery incentives following our 31 January 2019 initial assessment of plans.

Table 2.1: Summary of key interventions on outcomes

Intervention description
Accepting the company's performance commitment proposal of reducing the leakage performance commitment level by 15%, which will take its performance to industry upper quartile for urban companies by 2024-25. Reducing the outperformance rate in relation to leakage to reflect our concerns with the quality of evidence of customer support for outperformance payments for this performance commitment.
Accepting the company's proposal to reduce per capita consumption by 7% by 2024-25, as the company is currently one of the industry leading performers. Reducing the outperformance rate in relation to per capita consumption to reflect our concerns with the quality of evidence of customer support for outperformance payments for this performance commitment.
Accepting the company's proposal to reduce water supply interruptions by 51%, to achieve forecast industry upper quartile by 2024-25. We are setting an industry wide glidepath for all years before 2024-25. Accepting the company's outcome delivery incentive rates in relation to water supply interruptions.
Accepting the company's proposal to reduce internal sewer flooding by 33% to achieve industry upper quartile by 2024-25 Accepting the company's outcome delivery incentive rates in relation to internal sewer flooding. Accepting the company's proposal to reduce pollution incidents by 41%, to reach the industry upper quartile by 2024-25. Reducing the outperformance rate in relation to pollution incidents, due to low quality evidence of customer support.
Applying our standard deadband for the compliance risk index (water quality performance commitment), as measures that the company is taking now to rectify compliance failure, should not allow it to neglect regulatory requirements. Accepting the company's outcome delivery incentive rates in relation to the compliance risk index (water quality) performance commitment.
Amending the company's proposed large end of period RCV linked outcome delivery incentive for treatment works compliance performance, to an in-period revenue linked outcome delivery incentive.
Adopting outcome delivery incentive rates for maintaining and improving the quality of bathing waters based on the standard outcome delivery incentive rate formula for two improving bathing water performance commitments and adjusting the P90 and P10.

Intervention description
Accepting the company's outcome delivery incentive rates to protect customers in the event of delay or non-delivery of its river improvement programme but setting a cap at the company’s proposed P90 performance level.
Applying our standard approach to calculating delay and non-delivery underperformance payments instead of the three delivery incentives proposed by the company to protect customers in the event of a delay or non-delivery of large infrastructure programmes.

Table 2.2: Summary of performance commitments: common performance commitments

Name of common performance commitment	Type of outcome delivery incentive	Price controls outcome delivery incentives will apply to
Water quality compliance (CRI) [PR19 SRN_WN02]	Financial - Under; In-period	Water network plus
Water supply interruptions [PR19 SRN_WN03]	Financial - Out & under; In-period	Water network plus
Water quality compliance (CRI) [PR19SRN_WN02]	Financial - Under; In-period	Water network plus
Water supply interruptions [PR19SRN_WN03]	Financial - Out & under; In-period	Water network plus
Leakage [PR19SRN_WN04]	Financial - Out & under; In-period	Water network plus
Per capita consumption [PR19SRN_WR01]	Financial - Out & under; In-period	Water resources
Mains repairs [PR19SRN_WN05]	Financial - Out & under; In-period	Water network plus
Unplanned outage [PR19SRN_WN06]	Financial - Under; In-period	Water network plus
Risk of severe restrictions in a drought [PR19SRN_WR02]	Reputational	N/A
Priority services for customers in vulnerable circumstances [PR19SRN_RR08]	Reputational	N/A
Internal sewer flooding [PR19SRN_WWN01]	Financial - Out & under; In-period	Wastewater network plus
Pollution incidents [PR19SRN_WWN02]	Financial - Out & under; In-period	Wastewater network plus
Risk of sewer flooding in a storm [PR19SRN_WWN03]	Reputational	N/A
Sewer collapses [PR19SRN_WWN04]	Financial - Under; In-period	Wastewater network plus
Treatment works compliance [PR19SRN_WWN05]	Financial - Under; In-period	Wastewater network plus
C-Mex: Customer measure of experience [PR19SRN_RR01]	Financial - Out & under; In-period	Residential retail
D-Mex: Developer services measure of experience [PR19SRN_WN01]	Financial - Out & under; In-period	Water network plus; Wastewater network plus

Table 2.3: Summary of performance commitments: bespoke performance commitments

Name of bespoke performance commitment	Type of outcome delivery incentive	Price controls outcome delivery incentives will apply to
Drinking water appearance [PR19 SRN_WN07]	Financial - Out & under; In-period	Water network plus
Drinking water appearance [PR19SRN_WN07]	Financial - Out & under; In-period	Water network plus
Drinking water taste and Odour [PR19SRN_WN08]	Financial - Out & under; In-period	Water network plus
Effluent re-use [PR19SRN_WWN07]	Financial - Out; In-period	Wastewater network plus
Renewable Generation [PR19SRN_BIO01]	Financial - Out & under; In-period	Water network plus; Bioresources
Satisfactory bioresources recycling [PR19SRN_BIO02]	Financial - Under; In-period	Bioresources
River water quality [PR19SRN_WWN09]	Financial - Under; In-period	Wastewater network plus
Abstraction Incentive Mechanism [PR19SRN_WR05]	Financial - Out & under; In-period	Water resources
Maintain Bathing waters at ‘Excellent’. [PR19SRN_WWN11]	Financial - Under; In-period	Wastewater network plus
Improve the number of Bathing waters to at least ‘Good’ (Cost Adjustment Claim). [PR19SRN_WWN12]	Financial - Out & under; In-period	Wastewater network plus
Target 100 [PR19SRN_WR03]	Reputational	N/A
Water saved from water efficiency visits [PR19SRN_WR04]	Reputational	N/A
Access to daily water consumption data [PR19SRN_RR02]	Financial - Out; In-period	Water network plus
Improve the bathing waters at ‘Excellent’ quality (Cost Adjustment Claim). [PR19SRN_WWN13]	Financial - Out & under; End of period	Wastewater network plus
Void properties [PR19SRN_RR03]	Financial - Out & under; In-period	Residential retail
Effectiveness of Financial Assistance [PR19SRN_RR04]	Reputational	N/A
Customer satisfaction with vulnerability support [PR19SRN_RR05]	Reputational	N/A
Replace lead customer pipes [PR19SRN_WN09]	Financial - Out; In-period	Water network plus

Name of bespoke performance commitment	Type of outcome delivery incentive	Price controls outcome delivery incentives will apply to
Surface water management [PR19SRN_WWN06]	Financial - Out & under; In-period	Wastewater network plus
Community engagement [PR19SRN_N01]	Reputational	N/A
Schools visited and engagement with children [PR19SRN_N02]	Reputational	N/A
Water supply resilience [PR19SRN_WN10]	Reputational	N/A
Properties at risk of receiving low pressure [PR19SRN_WN11]	Financial - Under; In-period	Water network plus
External sewer flooding [PR19SRN_WWN08]	Financial - Out & under; In-period	Wastewater network plus
Combined Sewer Overflows (CSO) monitoring [PR19SRN_WWN10]	Reputational	N/A
Natural Capital [PR19SRN_WWN15]	Reputational	N/A
Gap Sites [PR19SRN_RR06]	Reputational	N/A
Thanet Sewers [PR19SRN_WWN16]	Financial - Under; End of period	Wastewater network plus
Distribution input [PR19SRN_WN12]	Reputational	N/A
Value for Money [PR19SRN_RR07]	Reputational	N/A
Long term supply demand schemes [PR19SRN_WN13]	Financial - Under; In-period	Water network plus
Impounding reservoirs [PR19SRN_WR07]	Financial - Under; In-period	Water resources
WINEP Delivery [PR19SRN_NEP01]	Reputational	N/A

Figure 2.1 and Figure 2.2 below provide an indication of the financial value of each of Southern Water's outcome delivery incentives (taking into account the impact of our draft determination interventions) showing how much the company would have to return to customers if it underperformed to the P10 level and how much the company would gain if it over performed to the P90 level. The figures cover common and bespoke commitments respectively.

Table 2.4 below provides an indication of the financial value of the overall package at the upper and lower extreme levels of performance (expressed as a percentage point impacts on RoRE (return on regulated equity)) and the overall impact of our draft determination interventions. The estimates are based on the company's own view of the plausible bounds of performance. The P90 is the performance threshold at which there is only a 10% chance of outturn performance being better. The P10 is the performance threshold at which there is only a 10% chance of outturn performance being worse.

Figure 2.1: Projected P10 penalties and P90 payments for common performance commitments over 2020-25 (£ million)

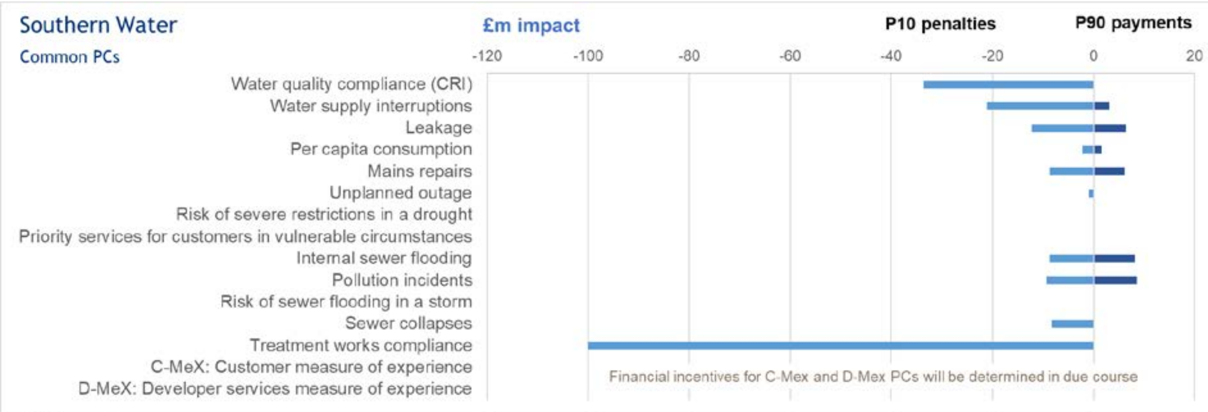


Figure 2.2: Projected P10 penalties and P90 payments for bespoke performance commitments over 2020-25 (£ million)

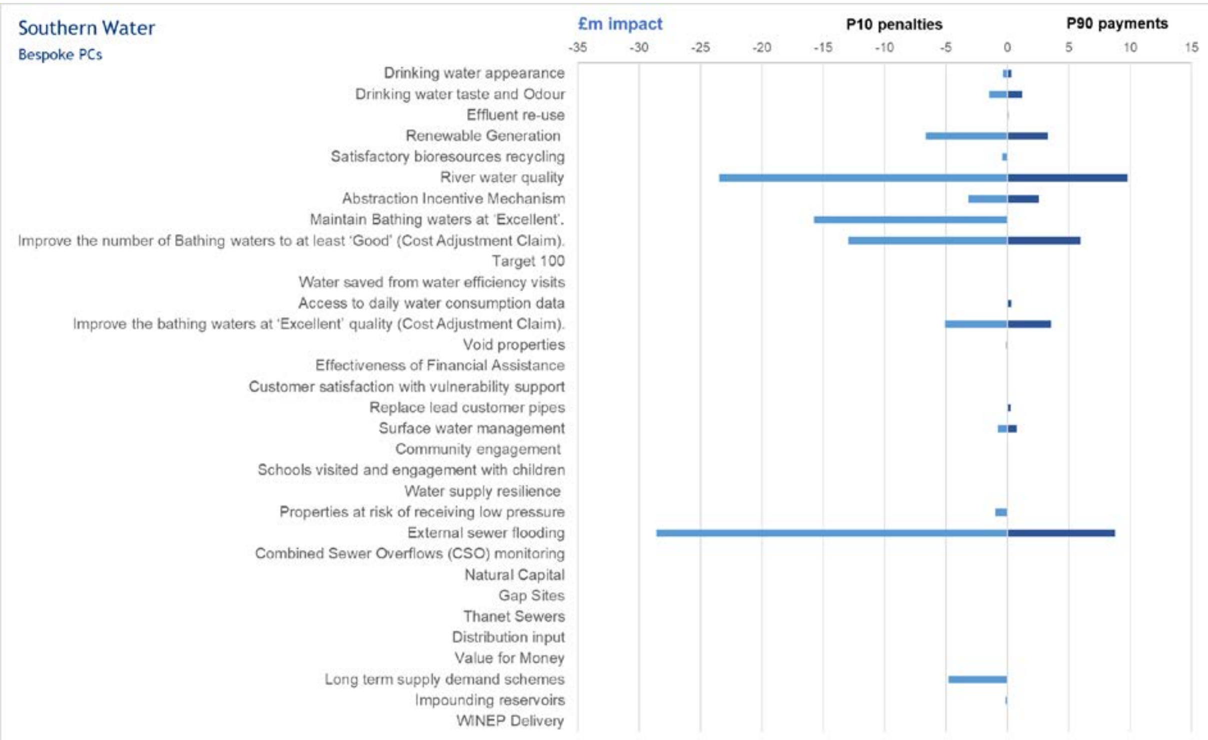


Table 2.4: Impact of draft determination interventions on RoRE range

	April 2019 business plan		Draft determination	
	% of 5 year regulatory equity		% of 5 year regulatory equity	
	P10	P90	P10	P90
Southern Water	-2.13	+0.85	-2.76	+0.72

In the PR19 methodology we said that we expect companies to propose approaches to protect customers in case their outcome delivery incentive payments turn out to be much higher than expected. We asked companies in our initial assessment of business plans 'PR19 initial assessment of plans: Delivering outcomes for customers policy appendix' to put in place additional protections for customers where we considered protections were not adequate.

We are applying caps and collars to financially material and/or highly uncertain performance commitments and allowing caps and collars on other performance commitments where company proposals are supported by high quality customer engagement.

The company has accepted our standard sharing mechanism, where 50% of outperformance payments that exceed 3% of return on regulatory equity (RoRE) in any year are shared with customers through bill reductions in the following year. We accept this proposal. We set out further detail of the mechanism in 'Delivering outcomes for customers policy appendix'.

In our PR19 methodology, we decided to replace the current Service Incentive Mechanism (SIM) with two new mechanisms to incentivise companies to provide a great experience for residential customers (our customer measure of experience, or C-MeX) and developer services customers (our developer services measure of experience, or D-MeX). C-MeX and D-MeX will be operational from April 2020. We set out further details on C-MeX and D-MeX in the 'Delivering outcomes for customers policy appendix'. We will publish our decisions on C-Mex and D-Mex incentive designs for 2020-25 as part of the final determinations in December.

We will finalise the company's performance commitments and outcome delivery incentives in the light of representations on this draft determination, so that these can be reflected as appropriate in the company's final determination to be published in December.

2.3 Linking outcomes to resilience

In our initial assessment of plans, we were concerned that companies' plans lacked a clear line of sight between the identified risks to resilience, the proposed mitigations to tackle these risks, and how these mitigation plans were reflected as service improvements in the form of stretching performance commitments.

Our initial assessment of plans also noted that while Southern Water provided some detail of the high level hazards affecting the business, the company provided insufficient evidence to demonstrate that it understands the effects that these will have in the company's systems and, as a consequence, the effectiveness of the mitigations and service improvements presented in the plan. Southern Water also provided little evidence that its resilience framework builds on lessons learned in relation to operational and corporate resilience failings. Overall, the company provided insufficient evidence to demonstrate the benefit that specific investments have in mitigating quantified levels of risk (and/or in increasing system resilience) and supporting stable or improved commitment targets. We expect companies to address this and other issues associated with the way they integrate resilience across their business in the action plans that will be submitted by 22 August 2019 and in their responses to the draft determinations in relation to specific investment proposals. We will take into account the quality of companies' response in our final determinations.

2.4 Deliverability

To maintain trust and confidence, it is important that companies not only have a great business plan but also that customers have confidence that the business plan will be delivered. In our initial assessment of the company's past performance Southern Water did not provide us with sufficient evidence of the deliverability of its outcomes proposals, in particular in relation to leakage and mains repairs, and the handling of major incidents in its business plan.

We required the company to provide further evidence of deliverability and an action plan for continuous improvement in these areas. We have considered the additional deliverability evidence and action plans provided by Southern Water to identify whether we need to include additional measures in its draft determinations to incentivise the delivery of its business plan, in particular whether to strengthen the outcome delivery incentives package. The detailed assessment of the company's additional evidence of deliverability is included in 'Southern Water - Accounting for past delivery actions and interventions', and our methodology for conducting this assessment is in the 'Accounting for past delivery technical appendix'.

For the leakage and mains repairs performance commitments, the company provides further evidence to support the deliverability of its business plan, and an action plan for continuous improvement.

The company's action plan for continuous improvement is generic, not specific to individual performance commitments. The company provides sufficient evidence in most areas in its action plan for continuous improvement.

For the leakage performance commitment, the company provides sufficient evidence to support the deliverability of the stretch for leakage in its 2020-25 business plan in its April 2019 submission. We also consider that Southern Water's outcome delivery incentive rate (which is within our reasonable range) is sufficient to incentivise delivery of the leakage targets. We are therefore not intervening in the company's leakage performance commitment as a result of our deliverability assessment as we consider that customers are adequately protected.

For the mains repairs performance commitment, the company provides sufficient evidence to support the deliverability of the stretch for mains repairs in its 2020-25 business plan in its April 2019 submission. We also consider that Southern Water's outcome delivery incentive rate (which is within our reasonable range) is sufficient to incentivise delivery of the mains repair targets. We are therefore not intervening in the company's mains repairs performance commitment as a result of our deliverability assessment as we consider that customers are adequately protected.

For major incidents handling performance, the company provides further evidence to support its deliverability, and an action plan for continuous improvement. The company provides sufficient evidence to support the deliverability of the stretch in its 2020-25 business plan and a sufficient action plan for continuous improvement for 2020-25 in relation to major incidents handling in its April 2019 submission. We note that there are already a number of protections for customers in the business plan, through performance commitments for category 1,2 and 3 pollution incidents, treatment works compliance, drinking water compliance and average interruptions.

The findings set out in our penalty notice for Southern Water are relevant to our assessment of the deliverability of the company's incident handling performance because the investigation identified failings in relation to avoiding pollution incidents, which could result in major incidents.

In the Southern Water investigation our provisional findings (subject to consultation) indicate that Southern Water deliberately misreported data to us about the performance of its wastewater treatment works during the 2010-17 period. Our penalty notice also concluded that it has failed:

- to have adequate systems of planning, governance and internal controls in place to be able to manage its wastewater treatment works;
- to accurately report information about the performance of these works; and
- to properly carry out its general statutory duties as a sewerage undertaker, to make provision for effectually dealing with and treating wastewater.

Our assessment of the company's evidence on deliverability provided to Ofwat in its April 2019 submission as part of the price review is consistent with the findings of our penalty notice. The penalty notice identified a number of failings in the company. We recognise that the company is putting in place measures to address these in response to the investigation and through its PR19 business plan. These measures include stringent underperformance payments on treatment works compliance and pollution incidents performance commitments to protect customers from any future failure to deliver. In the 'Notice of Ofwat's proposal to impose a penalty on Southern Water Services Limited' we set out other measures to address failings identified in the investigation, including in relation to misreporting. We are therefore not intervening in the company's draft determination in relation to major incidents handling as we consider that customers are adequately protected. We note that we are intervening through our outcomes assessment on Southern Water's treatment works compliance performance commitment to set this as an in-period outcome delivery incentive.

3 Cost allowances

We set out in our PR19 methodology that we expect company business plans to show a step change in efficiency. In its April 2019 business plan, Southern Water requests total expenditure levels that are 17% higher than it has incurred historically although we recognise it reduces its costs relative to those in its September 2018 business plan. To ensure customers pay only for efficient costs we challenge these costs. In the water network plus and wastewater network plus price controls, we find the proposed costs to be greater than our view of efficient costs. We note however, the gap between requested and allowed expenditure is lower than for most slow track or significant scrutiny companies.

We consider the company has very ambitious plans in the residential retail price control and make an allowance greater than it requests in this area.

For enhancement expenditure, we have challenged the scope of work, the evidence provided to support solution options and the efficient delivery of programmes. The company provides additional evidence to support its case for expenditure in areas where it does not accept the challenges we made at the initial assessment, which we assess for the draft determination. The company accepted our view of costs for some of its proposals.

We make a significant allowance for local solutions delivering water supply benefits in both the 2020-25 period and beyond 2025, and for developing in partnership with others, strategic regional water resource solutions. Given the presented scale and timing of supply-demand balance deficits we expect the company to deliver any solutions both efficiently and in time to meet these challenges. We take into account the timing challenges for the company within our assessment of the strategic regional solutions to support early decision making and delivery. The ‘Strategic regional water resource solutions appendix’ provides more details.

Overall our allowance for total expenditure, includes a significant efficiency challenge but we still allow greater than historical levels. This reflects the company’s enhancement expenditure request which is higher than historical levels and is driven by challenges in areas such as ensuring resilience to drought and delivering wastewater schemes in the WINEP.

Our approach to setting total expenditure (totex) allowances in our publication ‘Securing cost efficiency technical appendix’. In addition to challenging companies to be more efficient we have also, where appropriate, set safeguards to protect customers if specific investments are not delivered as planned.

In the ‘Southern Water - Cost efficiency draft determination appendix’ we provide more detailed information on our cost challenge for enhancement expenditure, our allowance for cost adjustment claims, our allowance for any transitional expenditure, and how we will deal with the uncertainty in WINEP.

3.1 Wholesale total expenditure

Table 3.1 shows the totex allowances by year and by wholesale price control for the period 2020-25. We have phased our allowed totex over 2020-25 using the company business plan totex profile.

Table 3.1: Totex[1] (excluding pension deficit recovery) by year for wholesale controls, 2020-25 (£ million, 2017-18 CPIH deflated prices)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total	Company view - total
Water Resources	37.3	34.8	31.9	32.5	32.6	169.2	124.6
Water network plus	204.8	208.3	193.3	175.4	188.2	969.9	1,088.2
Wastewater network plus	347.2	441.9	449.3	382.5	323.0	1,943.8	2,116.2
Bioresources[2]	37.7	42.3	60.9	38.2	32.0	211.2	203.0
Total	**627.0**	**727.3**	**735.3**	**628.6**	**575.8**	**3,294.1**	**3,532.0**

1. These are shown in the table below. Totex includes all costs except pension deficit recovery costs. This includes third party costs, operating lease adjustments, allowances related to the development of strategic regional water resource solutions and costs that are assumed to be recovered through grants and contributions.
2. The bioresources control is an average revenue control. The totex allowance in our draft determination is based on a forecast level of tonnes of dry solids.

Table 3.2 sets out the build-up of our totex allowance from base and enhancement costs. Base expenditure refers to routine, year on year costs, which companies incur in the normal running of their business. Enhancement expenditure refers to investment for the purpose of enhancing the capacity or quality of service beyond base level.

For draft determinations, we have changed the scope of costs included under base expenditure compared to the initial assessment of plans. Our base costs for wholesale water now include costs associated with the connection of new developments (ie new developments and new connection costs) and costs for addressing low pressure. Our base costs for wholesale wastewater now include new connections and growth, growth at sewage treatment works and costs to reduce flooding to properties that were previously assessed as enhancement expenditure.

Table 3.2: Totex by wholesale price control and type of cost, 2020-25 (£ million, 2017-18 CPIH deflated prices)

	Our cost allowance					Company view
	Water resources	Water network plus	Wastewater network plus	Bioresources	Total	Total
Base expenditure	83.8	659.3	1,388.1	206.2	2,337.3	2,461.4
Enhancement expenditure	39.5	241.3	554.0	5.1	840.0	1,019.6
Third party costs	7.1	26.0	9.4	-	42.5	42.5
Total – excluding pension deficit recovery	**130.5**	**926.5**	**1,951.5**	**211.2**	**3,219.8**	**3,523.4**
Pensions deficit recovery costs	0.5	13.6	28.6	2.3	45.0	79.2
Total	**131.0**	**940.2**	**1,980.1**	**213.5**	**3,264.8**	**3,602.6**

1. We display base costs under the new definition. Company business plan base costs exclude enhancement opex.
2. We are displaying pension deficit recovery costs separately as they are not included in the calculation for PAYG (see section 4).
3. Table 3.2 does not include operating lease adjustments, allowances related to the development of strategic regional water resource solutions. Any ex-ante cost sharing adjustments and costs that are assumed to be recovered through grants and contributions are also excluded. This is to allow a simpler comparison with base and enhancement costs. Table 3.6 sets out a reconciliation of inclusions and exclusions in totex for cost sharing and for the financial model.
4. The company view of pension deficit recovery costs is the full cost, not just the cost the company expects to include within price controls.
5. The company view of business plan costs is understated due to erroneous treatment of enhancement opex. This does not affect our assessment of these costs. Further details are outlined in our feeder model FM_WWW4_ST_DD.

3.2 Base expenditure

Table 3.3 shows our challenge to company proposed base expenditure. We distinguish between 'modelled base costs' and 'unmodelled base costs'. We challenge modelled based costs based on comparative assessment (using econometric models). Our efficiency challenge is based on cost performance within the sector as well as evidence from the wider economy.

Unmodelled base costs include business rates; abstraction charges; costs to meet the Traffic Management Act and costs to meet the wastewater Industrial Emissions Directive where applicable. Our assessment of these costs sits outside of our econometric models and we explain our approach in 'Securing cost efficiency technical appendix'.

Table 3.3: Base totex expenditure, 2020-25 (£ million, 2017-18 CPIH deflated prices)

Price Control	Company business plan - base cost	Modelled base costs efficiency adjustment	Unmodelled base costs adjustment	Base cost allowance
Water Resources	77.2	6.4	0.2	83.8
Water Network plus	738.6	-80.7	1.4	659.3
Wastewater Network plus	1,447.5	-58.3	-1.1	1,388.1
Bioresources	198.1	8.1	-0.1	206.2
Total	2,461.4	-124.4	0.4	2,337.3

1. Base costs include operating and maintenance costs as well as new development, new connections and addressing low pressure costs in water, and new connections and growth, growth at sewage treatment works, costs to reduce flooding to properties and transfer to private sewers and pumping stations in wastewater. Company business plan base costs exclude enhancement opex.
2. The company view of business plan costs is understated due to erroneous treatment of enhancement opex. This does not affect our assessment of these costs. Further details are outlined in our feeder model FM_WWW4_ST_DD.

3.3 Enhancement expenditure

Table 3.4 summarises our allowances for enhancement expenditure.

Our draft determination allows Southern Water £840 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £547 million to improve the environment by efficiently delivering its obligations as set out in the WINEP;
- £175 million to improve the water supply demand balance including to deliver an ambitious water demand reduction programme; restore and increase capacity of water supply sources;
- £61 million to address the impact of deteriorating raw water quality;

- £30 million to protect groundwater around Thanet; and
- £21 million to improve bathing waters beyond statutory requirements.

We make an additional allowance of £82 million for the company to evaluate in partnership with others, potential strategic regional water resource solutions. This includes the company progressing both Fawley desalination and River Itchen reuse solutions. The 'Strategic regional water resource solutions appendix' provides more details.

The most material areas of enhancement cost challenge for Southern Water are in leakage, raw water deterioration, pollution reduction, the wastewater programme within WINEP, and sludge quality and growth.

Leakage

For leakage our expectation for base service levels is that an efficient company should achieve industry forecast upper quartile performance by 2024-25 in both normalised measures (per property and per kilometre of main). This performance is funded through the base allowance. We allow enhancement costs only where a company's performance commitment goes beyond the forecast upper quartile threshold. As this is not achieved by Southern Water, we do not allow the requested funding under enhancement. Companies are able to earn outperformance payments if they deliver leakage reductions beyond their stretching performance commitment levels.

Raw water deterioration

We assess the raw water deterioration expenditure the company requests through a deep dive approach and allow a significant proportion of the expenditure. However, we disallow some of the opex costs associated with treatment works complexity and catchment compliance, which are included in our base cost allowance.

Pollution reduction

We do not allow enhancement expenditure to reduce pollution events because we expect an efficient company to achieve forecast upper quartile performance by 2024-25 within our base cost allowances.

Wastewater WINEP

We assess the wastewater schemes in WINEP using comparative modelling across a range of activities and assessed overall efficiency at a programme level and conclude that Southern Water's costs are above efficient levels and based on this apply a 13% challenge to Southern Water's requested costs. Looking at a programme level allows us to balance modelled outputs where a company appears inefficient and where they appear efficient compared to other companies. We identify that Southern Water appears less efficient than others companies in delivering in phosphorus removal, flow to full treatment and storage at wastewater treatment works these areas. Other areas of material WINEP expenditure where the company appears less efficient are conservation drivers, groundwater schemes, wastewater investigations, reduction in sanitary parameters and UV disinfection. We are allowing efficient costs for Southern Water irrespective of the current level of certainty of individual schemes within the programme i.e. allowance is being made for all schemes with 'green' or 'amber' status. We have a unit cost adjustment mechanism that we will use to change our allowance once the uncertainty has been resolved.

Sludge quality and growth

We assess the sludge quality and growth requested expenditure and disallow a proportion of the allowance where the company provides insufficient evidence that it has sufficiently engaged with the market to provide additional capacity to treat any additional sludge.

Our document 'Southern Water - Cost efficiency draft determination appendix' sets out in more detail the cost allowances by investment area for each price control, and we give full details in our published models.

Table 3.4: Enhancement totex expenditure, 2020-25 (£ million, 2017-18 CPIH deflated prices)

Service	Company requested totex	Scope and efficiency adjustment	Our allowance
Water Resources	44.2	-4.6	39.5
Water Network plus	319.8	-78.5	241.3
Wastewater Network plus	649.1	-95.1	554.0
Bioresources	6.4	-1.4	5.1
Total	1,019.6	-179.6	840.0

3.4 Cost sharing

When a company overruns its totex allowance, the additional cost incurred above our allowance will be shared between its investors and customers. When a company spends less than its totex allowance, it will share the benefits with customers.

For the draft determinations we calculate each company's cost sharing rates based on the ratio of the company's view of costs in its September 2018 business plan relative to our view of efficient costs. For the final determinations we propose to calculate the company's view based on a 50% weight on the company's final cost proposals in its representation to the draft determination and 50% weight on the September 2018 business plan. We explain our approach to calculating cost sharing rates in the 'Securing cost efficiency technical appendix'.

Southern Water's September 2018 business plan was assessed as requiring significant scrutiny at the initial assessment of plans. In our PR19 methodology we set out that for companies whose plans are assessed to need significant scrutiny, we will set a reduced cost sharing rate of 75% for underperformance and 25% for outperformance. When we published our view of costs at the initial assessment of plans we said we would decide at the final determination whether to apply a reduced cost sharing rate, or calculate the rates based on our approach for slow track companies, to reflect whether the company had engaged positively to address our concerns with the plan over the remainder of the price review process. We consider, that for us to not apply the reduced cost sharing rate, Southern Water needs to make further progress in addressing our concerns through timely, high quality response to draft determination. For the purpose of the draft determination we do not apply reduced costs sharing rates for Southern Water.

Table 3.5: Totex cost sharing for cost performance for 2020-25, %

	Water resources	Network plus - water	Network plus - wastewater
Cost sharing rate – outperformance	35.0%	35.0%	35.0%
Cost sharing rate – underperformance	65.0%	65.0%	65.0%

Table 3.6 sets out the costs that are subject to cost sharing. We apply cost sharing to net totex. Net totex excludes grants and contributions, costs of operating leases, strategic regional water resources development costs, third party costs and pension deficit recovery cost.

We adjust allowed costs to reflect a change in the accounting treatment of leases, which causes some assets formerly recognised as operating leases to be recognised on the company's balance sheet. In doing so, we have followed the approach set out in IN 18/09 Guidance for reporting operating leases in PR19 business plans. We have used the adjustment to operating costs that the company proposed in its business plan.

Table 3.6: Totex subject to cost sharing rates – 2020-25, £ million[1]

	Water resources	Network plus – water	Network plus – wastewater	Company view
Gross totex (excluding third party costs)	123.4	900.6	1,942.1	3,286.5
Grants and contributions	0.0	-43.6	-68.4	-212.2
Operating leases adjustment	0.0	0.0	-7.7	-7.7
Net totex (subject to cost sharing)	**123.4**	**857.0**	**1,866.0**	**3,066.6**
Strategic regional water resource solutions[2]	38.7	43.3	0.0	0.0
Third party costs	7.1	26.0	9.4	42.5
Ex-ante cost sharing adjustment	0.0	0.0	0.0	0.0
Net totex (for financial model)	**169.2**	**926.2**	**1,875.4**	**3,109.0**

1. Table 3.6 does not include pension deficit repair expenditure, as this is not included in cost sharing.
2. The standard totex cost sharing does not apply to strategic regional water resource solution expenditure, see 'Strategic regional water resources solution appendix' for more details.

3.5 Transition expenditure

Southern Water does not request any expenditure under the transition programme.

3.6 Residential retail

We determine the residential retail control from the expenditure set out in Table 3.7, using an econometric modelling approach to set our allowance. The residential retail draft determination does not include any of our allowed pension deficit recovery costs. These costs have been wholly allocated to wholesale controls.

Table 3.7: Expenditure, residential retail, 2020-25 (£ million, nominal)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Residential retail	51.5	51.5	51.5	51.5	51.5	257.6
Company view	49.8	47.8	46.5	45.9	45.1	235.0

Note: The residential retail control is an average revenue control. Allowed cost and the associated allowed revenue is based on a forecast of the number of customers. There will be an end-of-period true up based on the actual number of connected households.

3.7 Direct procurement for customers

We set out in our PR19 methodology that we expect company business plans to consider direct procurement for customers where this is likely to deliver the greatest value for customers. Direct procurement for customers promotes innovation and resilience by allowing new participants to bring fresh ideas and approaches to the delivery of key projects. Companies were to consider direct procurement customers for discrete, large-scale enhancement projects expected to cost over £100 million, based on whole-life totex.

There is sufficient evidence that the Southern Water business plan has a number of potential schemes that are likely to offer greater value for customers if delivered through a direct procurement for customers' process. Due to the adaptive nature of the business plan the following schemes will be progressed through a direct procurement for customers' process should they be confirmed, Fawley desalination, Peacehaven indirect potable water reuse and Slowhill Copse industrial reuse or similar sized alternatives.

However, we were less convinced by the decision that the Interzone (Hampshire) Transfer scheme would offer greater value for customers if delivered through a normal procurement. In addition, we noted that the Strategic regional solution development update on the 3rd May 2019 included two further schemes that may be suitable for direct procurement for customers, the Itchen water reuse and Thames to Southern transfer schemes.

We expect Southern Water to develop its solutions, including Fawley desalination, Peacehaven indirect potable water reuse and Slowhill Copse industrial reuse, Interzone (Hampshire) transfer, the Itchen water reuse and Thames to Southern transfer, through a direct procurement for customers process, including a review of detailed costs and commitments and market-testing prior to procurement, to ensure that customers receive the best value. We allow efficient costs to progress the development of these schemes under a direct procurement for customers process where construction is funded by a third-party competitively appointed provider.

Under direct procurement for customers the need to create regulatory mechanisms to manage uncertainty as a result of change is recognised. If a change in external factors dictates that a scheme no longer demonstrates value for money through direct procurement for customers, a scheme may pass from direct procurement for customers back to a traditional in-house procurement process.

Where we expect companies to develop projects through a direct procurement for customers process at the final determination stage, we propose to include an uncertainty mechanism in final determinations which, unless a scheme is deferred to a future price control, facilitates the transfer of a scheme back into the traditional in-house model to ensure timely delivery.

Our preferred uncertainty mechanism in those circumstances would be a notified item detailed in a company's final determination and which could, subject to relevant thresholds, trigger an interim determination.

The uncertainty mechanism would only apply in respect of a scheme where there was an agreed need and the scheme had been approved by Ofwat.

We discuss both the uncertainty mechanism and licence changes which we consider necessary to facilitate the delivery of direct procurement for customers schemes, further in 'Delivering customer value in large projects'.

4 Calculation of allowed revenue

This section sets out the calculation of allowed revenue for each of the price controls, based on our assessment of efficient costs. We set out in section 4.1 the components of allowed revenue for each of the price controls. We then set out information relevant to the calculation of the components of that allowed revenue in sections 4.2 and 4.4.

4.1 Allowed revenue

We calculate revenue separately for each of the wholesale controls and for the residential retail control. We set out the calculation of five year revenues for each of these controls in this section.

Wholesale controls

For the wholesale controls (that is water resources, water network plus, wastewater network plus and bioresources), allowed revenue is calculated based on the following elements, not all elements are applicable to all wholesale controls as set out in Table 4.1.

- PAYG – this reflects the allocation of our efficient totex baseline to costs that are recovered from revenue in 2020-25. The proportion of totex not recovered from PAYG is added to the regulatory capital value (RCV) which is recovered over a longer period of time.
- Allowed return on capital – this is calculated based on our assessment of the cost of capital multiplied by the average RCV for each year.
- RCV run-off – this reflects the amount of RCV that is amortised from the RCV in the period of the price control.
- PR14 reconciliations – this reflects the application of out/underperformance payments from PR14 through revenue adjustments in 2020-25.
- Corporation tax allowance – this is estimated from projected corporation tax rates, profit forecasts and assumed levels of tax relief contained in our financial model for the draft determination.
- Grants and contributions – this represents revenue that we expect to be received from developers in respect of work undertaken by companies to service new developments. It will include income from connection charges and infrastructure charges. This does not necessarily agree to the total grants and contributions deducted from totex, as only the income relating to the price control is included here.

- Non-price control income – income from charges excluded from the price controls. For example, this includes bulk supplies, standpipes, unmeasured cattle troughs, and other services. We deduct the forecast income from these charges from the allowed revenue, because costs relating to these charges are included in the calculation of allowed revenue.
- Revenue re-profiling – this reflects the change in revenue in 2017-18 prices as a result of adjustments made to annual revenues to smooth the final bill profile consistent with customer preferences. The financial model calculates revenue adjustments on a net present value (NPV) neutral basis.

We set out the calculation of the allowed revenue for Southern Water's wholesale controls in Table 4.1. We summarise the total of the build-up of allowed revenue as five year totals, however our financial model calculates the allowed revenue on an annual basis for the purposes of our draft determination. We state the allowed revenue for each price control on an annual basis in section 6.

We explain how we calculate PAYG, RCV run-off and the allowed return on cost of capital in section 4.2, the revenue adjustments for PR14 reconciliations in section 4.3, and other elements of allowed revenue in section 4.4.

Table 4.1: Calculation of allowed revenue (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total	Company view - total
Pay as you go	87.2	432.0	741.5	107.7	1,368.4	1,659.9
RCV run-off	38.4	221.2	1,000.3	108.2	1,368.1	1,345.5
Return on capital	15.1	151.3	491.7	27.9	686.1	733.1
Revenue adjustments for PR14 reconciliations	8.4	-8.7	-8.0	0.0	-8.3	-7.9
Tax	0.0	0.0	0.0	0.0	0.0	12.6
Grants and contributions (price control)	0.0	43.6	68.4	0.0	112.0	212.2
Deduct non-price control income	-8.4	-17.5	-17.0	0.0	-42.9	-42.9
Revenue re-profiling	0.1	0.4	1.0	0.2	1.6	1.0
Final allowed revenues	140.7	822.3	2,277.9	244.0	3,484.9	3,913.6

We set out the calculation of allowed revenue for each wholesale control on an annual basis in the ‘Southern Water - Allowed revenue appendix’ in Tables 1.1 to Table 1.4.

Residential retail control

For the residential retail control, allowed revenue is calculated as:

- Retail cost to serve – this reflects our efficient view of costs per customer for the retail business.
- Net margin on wholesale and retail activities – this is calculated based on the wholesale revenue applicable to residential retail customers, plus the retail cost to serve, with a net margin applied. Net margins are calculated excluding any

adjustments to residential retail (see Table 4.2 below) – the full calculation is set out in our financial models.

- Our methodology set out an early view of the retail margin that applies for the retail price controls. This was used by Southern Water in its business plan and is unchanged in our draft determination.

Allowed revenue for the residential retail control is set on a nominal basis and therefore we present the make-up of the allowed revenue in nominal prices in Table 4.2.

Table 4.2: Retail margins (nominal price base)

	2020-25	Company view 2020-25
Total wholesale revenue - nominal (£ million)	3,715.0	4,097.5
Proportion of wholesale revenue allocated to residential (%)	79.97%	80.08%
Residential retail costs (£ million)	257.6	235.0
Total retail costs (£ million)	3,228.6	3,516.5
Residential retail net margin (%)	1.00%	1.00%
Residential retail net margin (£ million)	32.2	35.1
Residential retail adjustments (£ million)	-43.4	-46.5
Residential retail revenue (£ million)	246.4	209.6

Note: Retail revenue is the sum of the net margin, retail costs, and adjustments. Company view may not sum as this may include other adjustments. The proportion of wholesale revenue allocated to residential customers is provided by the company in the business plan tables. This is provided for each wholesale control separately, so although we have used the same proportions for each control as the company, our interventions on costs in each control mean that the combined proportion is slightly different.

We set out the calculation of residential retail revenue on an annual basis in the 'Southern Water - Allowed revenue appendix' in Table 1.5.

4.2 Cost recovery now and in the long term for the wholesale controls

Our totex cost allowances are sufficient to meet an efficient company's operating and capital expenditure. Companies recover this expenditure either in period from current customers using PAYG or add it to the RCV and recover from future generations of customers using the RCV run- off rates. Consistent with our methodology, we assess how each company's choice of PAYG and RCV run-off rates reflect the levels of proposed expenditure, bill profiles, affordability and customer views relevant to the short and the long term.

To determine the allowed revenue, the PAYG rate is applied to the totex allowance for each wholesale control for each year of the price control. The proportion of the totex allowance that is not recovered in PAYG is added to the RCV and recovered from customers in future periods.

In this section we set out our approach to calculating the PAYG rates, the RCV to which the cost of capital is applied and the RCV run-off rates.

PAYG

We calculate total PAYG totex for each year of each wholesale price control based on the totex allowance for each year multiplied by the relevant PAYG rate for that year. To this we add allowed pension deficit recovery costs to derive total PAYG revenue.

We summarise in Table 4.3 the average PAYG rates across 2020-25 for each wholesale control, and the calculation of total PAYG revenue. The PAYG rates shown in the table are a weighted average across the five years 2020-25, the annual PAYG revenue and PAYG rates for each wholesale control are shown in the 'Southern Water - Allowed revenue appendix', Tables 2.1 to 2.4.

To PAYG totex we add the allowed costs for pension deficit recovery set out in Table 3.2 to derive total amount to be recovered in 2020-25 for each price control.

Table 4.3: PAYG allowances for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total	Company view - Total
Totex allowance (£ million)	169.2	926.2	1,875.4	211.2	3,182.0	3,319.7
Draft determination PAYG rate(%)	51.2%	45.2%	38.0%	49.9%	41.6%	
Pay as you go totex (£ million)	86.6	418.4	712.9	105.4	1,323.3	1,619.0
Pension deficit recovery cost (£ million)	0.5	13.6	28.6	2.3	45.0	40.8
Total pay as you go (£ million)	87.2	432.0	741.5	107.7	1,368.4	1,659.9
Company plan PAYG rate (%)	70.7%	43.9%	48.1%	65.3%		48.8%

Southern Water's approach to PAYG rates is to recover all costs required to maintain the operating capability of the company rather than an enhancement to the asset base. The company has allocated reactive renewals, IT expenditure relating to maintaining corporate systems and expenditure related to studies, investigations and inspections not specifically related to the location and construction of a new project to PAYG. This approach, along with RCV run-off rates which are relatively high in comparison with the sector, results in the company recovering a higher proportion of capital expenditure in the price review period than other companies. Southern Water does not provide sufficient evidence that its proposed PAYG and RCV run-off rates in the round represent a fair balance of cost recovery between current and future customers. We are intervening to align PAYG rates to recover in each year an amount equivalent to operating costs and infrastructure renewal expenditure within allowed totex. This is consistent with the approach we accept for other companies. Our intervention results in a reduction in PAYG rates of 5.7%. We set out how we apply the intervention in 'Aligning risk and return technical appendix' and we have published our calculation of the PAYG rates for each company alongside our draft determinations.

Opening RCV adjustments

As part of the business plan Southern Water proposed allocations of the RCV for both Water Resources and Bioresources price controls based on Ofwat guidance. We are allocating the company's RCV between the existing wholesale controls and these new controls in accordance with the proportions proposed by Southern Water.

We make reconciliation adjustments ('midnight adjustments') related to the company's performance against incentive mechanisms from previous price reviews and for land sales in order to determine the opening RCV for the period of the PR19 controls. We also adjust the RCV upwards to reflect a change in the accounting treatment of leases, which causes some assets formerly recognised as operating leases to be recognised on the company's Balance sheet. In doing so, we have followed the approach set out in IN 18/09 Guidance for reporting operating leases in PR19 business plans. We have used the adjustment proposed in the company business plan.

Table 4.4: Opening RCV, 1 April 2020 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources
RCV – 31 March 2020	1,046.1		3,885.3	
% of RCV allocated by control	8.03%	91.97%	94.78%	5.22%
RCV – 31 March 2020	84.0	962.1	3,682.4	202.9
Midnight adjustments to RCV	-0.1	-1.4	-128.6	
Midnight adjustments relating to operating leases	-	-	16.1	-
Opening RCV – 1 April 2020 (before fast-track reward)	83.9	960.7	3,569.9	202.9

Return on capital

Companies are allowed a return on the RCV, equal to the Weighted Average Cost of Capital (WACC).

Our PR19 methodology set out an 'early view' cost of capital for all wholesale controls. Southern Water's business plan incorporates the early view cost of capital for the wholesale price controls of 3.30% - CPIH deflated (2.30% - RPI deflated). We have updated our view of the cost of capital for the wholesale price controls to 3.08% – CPIH deflated (2.08% – RPI deflated). We set out the basis for the updated view in the 'Cost of capital technical appendix'. We have used our updated cost of capital in this draft determination.

The PR19 methodology confirmed we will transition to CPIH as the primary inflation rate from 2020. At 1 April 2020, we will index 50% of RCV to RPI; the rest, including totex that is added to the RCV, will be indexed to CPIH. Table 4.5 and Table 4.6 set out the opening and closing balance for each component of RCV.

The PR19 methodology confirmed our protection of the value of the RCV as at 31 March 2020 across each of the wholesale price controls. Totex that is added to the RCV from 1 April 2020 is stated as 'post 2020 investment'.

In determining the 'return on capital' revenue building block, we apply the relevant deflated cost of capital to the average RCV for the year for each component (RPI inflated, CPIH inflated and post 2020 investment). This results in a return on capital for each wholesale control over the period 2015-20 as set out in Table 4.7.

Table 4.5: Opening RCV by wholesale control for each component of RCV, 1 April 2020 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	41.9	480.3	1,785.0	101.4	2,408.7
CPIH inflated RCV	41.9	480.3	1,785.0	101.4	2,408.7
Other adjustments	-	-	-	-	**-**
Total RCV	83.9	960.7	3,569.9	202.9	4,817.4

Table 4.6: Closing RCV by wholesale control for each component of RCV, 31 March 2025 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	31.0	413.8	1,428.1	63.0	1,935.9
CPIH inflated RCV	29.6	394.7	1,363.8	60.1	1,848.2
Post 2020 investment	69.1	459.9	1,015.9	81.2	1,626.0
Other adjustments	-	-	-	-	-
Total RCV	129.7	1,268.4	3,807.8	204.3	5,410.2

Table 4.7: Return on capital by wholesale control for each component of RCV, 2020-25 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	3.8	46.5	166.8	8.4	225.5
CPIH inflated RCV	5.5	67.2	241.0	12.2	325.8
Post 2020 investment	5.9	37.6	83.9	7.3	134.8
Other adjustments	-	-	-	-	-
Total return on capital	15.1	151.3	491.7	27.9	686.1
Company view – total return on capital	12.8	167.7	524.6	28.0	733.1

Note: Total return on capital is calculated by multiplying the annual average RCV for each element of RCV (RPI inflated, CPIH inflated and post 2020 investment) by the wholesale WACC for each control. The return on capital for each year of the price control for each wholesale control are shown in the 'Southern Water: Allowed revenue appendix' in tables 3.1 to 3.16 and 4.1 to 4.4.

RCV run-off

RCV run-off is the proportion of the RCV which is recovered in the 2020-25 period. Companies are able to propose different run-off rates for RPI inflated and CPIH inflated RCV and also, for the water resources and bioresources controls, for post 1 April 2020 investment. Table 4.8 sets out the resultant RCV run-off revenue for each component of RCV for each wholesale control.

Table 4.8: RCV run-off on the RCV (5 year) (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
CPIH inflated RCV	12.4	85.6	421.2	41.3	560.4
RPI inflated RCV	12.7	87.6	432.5	42.3	575.0
Post 2020 investment	13.4	48.0	146.7	24.6	232.7
Total RCV run-off	38.4	221.2	1,000.3	108.2	1,368.1
Company view – total RCV run-off	31.0	226.0	987.0	101.6	1,345.5

Note: Total RCV run-off is calculated by multiplying the opening RCV by the relevant RCV run-off rate for each element of RCV (RPI inflated, CPIH inflated and post 2020 investment) by the RCV run-off rate for each control (50% of run-off is applied to post 2020 investment in the year of additions).

Southern Water's RCV run-off rates are based on recovering an amount equivalent to depreciation for assets within each wholesale control. The company has applied a reduction to RCV run-off rates for the water network plus wholesale control and an increase to RCV run-off rates for the wastewater network plus control. The company sets out that the adjustments are to balance the change to bills for water and wastewater customers and provides sufficient evidence that this does not move revenue between price review periods. Taking account of our assessment of RCV run-off rates and our intervention on PAYG rates in the round, we are not intervening to amend RCV run-off rates. However, the interventions to allowed totex changes the post-2020 investment added to RCV and therefore the total RCV run-off. Table 4.9 sets out the average RCV run-off rates across 2020-25 for each wholesale control proposed in the company's business plan and for our draft determination.

Table 4.9: RCV run-off rates for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources
Original company plan (%)	6.75%	3.85%	5.24%	9.93%
Draft determination (%)	6.75%	3.85%	5.24%	9.93%

Note: RCV run-off (%) reflects the average of the rates applied to the CPIH and RPI inflated RCV components across the 5 years 2020-25.

The annual rates for each wholesale control are set out in the 'Southern Water - Allowed revenue appendix' in Table 5.1 to Table 5.4.

4.3 PR14 reconciliations

In PR14, we set mechanisms to incentivise companies to do the right thing for their customers. These financial incentives cover cost efficiency, outcomes performance, revenue forecasting (wholesale and retail), customer service (the service incentive mechanism), water trading and land sales. It is important to reconcile the financial impacts of these mechanisms in PR19 to ensure that customers only pay for the service the company delivers.

We are also applying adjustments to reflect performance in the final year of the 2010 to 2015 period, which could not be fully taken into account in PR14. These adjustments apply to the RCV (the 'midnight adjustment') and revenue for the 2020-25 period. These adjustments are made in line with the 'PR14 reconciliation rulebook'.

We are publishing models for each of these reconciliations, and for the overall RCV and revenue adjustments on our website. 'Southern Water - Accounting for past delivery actions and interventions' provides a detailed explanation of all policy interventions we are making in the models. Table 4.10 summarises our interventions. Table 4.11 sets out the resulting adjustments to revenue and the RCV. The 'Southern Water - Accounting for past delivery appendix' sets out how these adjustments are allocated across controls and how the RCV adjustment feeds into the midnight adjustments to RCV set out in Table 4.4.

We are publishing the results of the reconciliation of the service incentive mechanism for all companies alongside the draft determinations for slow track and significant scrutiny companies in the 'Accounting for past delivery technical appendix'.

For outcome delivery incentives, the information we have used to reflect performance in 2019-20 is based on the company's latest expectations. Final figures for 2019-20 will not be able to be taken into account in PR19. We set out in the 'PR14 reconciliation rulebook' that we planned to complete the reconciliation for 2019-20 outcome delivery incentives at PR24 for 2025-30 so that we use final information.

However, most outcome delivery incentives for the 2020-25 period are in period and will have been reconciled before this date. In light of this we consider it would be more appropriate to complete this reconciliation in the autumn of 2020 and apply any change to bills for 2021-22 as part of the new in-period process. We will designate all of the financial PR14 performance commitments as being in-period for this purpose. Any adjustment between the 2019-20 forecast and actual figures should be modest and we would not expect a significant impact on bills. If, contrary to expectations the bill impact were to be more significant, we would expect companies to take measures to smooth the impact for their customers. The new PR19 mechanism to share benefits with customers from unexpected high outcome delivery incentive payments in a year will not apply to PR14 outcome delivery incentives. Instead the PR14 protection that caps the impact across the five years 2015-20 will apply.

The above applies equally to the company's 2015-20 in period outcome delivery incentives and we have used forecast information for 2018-19 and 2019-20 to reconcile these outcome delivery incentives. For the avoidance of doubt, no application is required in 2019 for in period determinations.

Table 4.10: Reconciliation of PR14 incentives, interventions (2017-18 prices, unless otherwise stated)

Incentive	Intervention(s)
Outcome delivery incentives	No interventions required for draft determinations. In the final determination we will reflect any changes required as a result of our conclusion on the Southern Water investigation and the restated data submitted to us on 15 July in outcome delivery incentive reconciliations and allowed revenues for the payment to customers. We expect the company's 15 July 2019 submission on past delivery to include the corrected reporting of outcome delivery incentive performance resulting from the Southern Water investigation.
Residential retail revenue	We are intervening to reinstate the values for reforecast customer numbers for 2018-2019 that the company provided in September 2018 to replace the values for reforecast customer numbers provided in the April 2019 submission. This is because the reforecast customer numbers are based on the charges that the company set at the end of 2017. They cannot be changed after they are first provided in the July 2018 APR submission. We are intervening to round the company's modification factor figures to two decimal places to ensure consistency with the 'PR14 reconciliation rulebook'. We are including a figure of 3.74% for the 'Materiality threshold for financing adjustment - Discount Rate' in line with the 'PR14 reconciliation rulebook'. Overall, our minor interventions do not result in any changes to the total residential retail revenue payment at the end of the 2015-20 period which remains at - £0.416 million.
Wholesale revenue forecasting incentive mechanism	We are intervening to use the recovered revenue values from tables WS13/WWS13 line 23 and the updated RPI values from table App23. This is because there are rounding differences on the recovered revenues in the Southern Water's model compared to tables WS13/WWS13 line 23 and the RPI indices in the model are not the same as the updated table App23 RPI indices. Overall, our interventions increase the total WRFIM adjustment at the end of the 2015-20 period from £0 million (£0 million for water and wastewater) to £0.844 million (£0.205 million for water and £0.639 million for wastewater).
Totex	We are replacing the company's PR14 water transitional costs figure with the actual water transitional costs figures in 2012-13 prices as shown in Table 4.1 Actual transition expenditure in the 'Updated 2010-15 reconciliation'. Overall, our intervention increases the water totex menu revenue adjustment from - £3.467 million to - £4.050 million (2017-18 prices) and reduces the water totex menu RCV adjustment from £34.828 million to £28.854 million. We are replacing the company's PR14 sewerage transitional costs figure with the actual sewerage transitional costs figures in 2012-13 prices as shown in Table 4.1 Actual transition expenditure in 'Updated 2010-15 reconciliation'. We are also deducting £17.067 million (2016-17) and £23.702 million (2017-18) (outturn prices) from the company's reported actual sewerage and sewerage disallowances figures. We are doing this because Southern Water incorrectly includes the value of sewer adoptions within its sewerage actual totex and sewerage disallowances figures in these years. This does not impact the overall value of the reconciliation. Overall, our interventions increase the wastewater totex menu revenue adjustment from - £1.166 million to - £1.216 million (2017-18 prices) and

Incentive	Intervention(s)
	reduce the wastewater totex menu RCV adjustment from - £80.527 million to - £79.761 million.
Land sales	No interventions required.
Service incentive mechanism	We are intervening to set Southern Water's service incentive mechanism adjustment to - 12.00% of household retail revenue to reflect its performance from 2015-16 to 2018-19. This equates to - £36.726 million in total revenue over the period. This increases revenue relative to the company's estimate of the mechanism's impact.
PR09 blind year adjustments	No interventions required for draft determinations. The PR09 blind year adjustments calculated for this draft determination are based on the company's 1 April submissions as part of the price review. As for outcome delivery incentives, we note that, in the final determination we will reflect updated performance for 2010-15 required as a result of our conclusion on the Southern Water investigation in the PR09 blind year reconciliation. We expect the company's 15 July 2019 submission on past delivery to include the corrected reporting of outcome delivery incentive performance resulting from the Southern Water investigation.

Table 4.11 Reconciliation of PR14 incentives, 2020-25 (£ million, 2017-18 prices)

Incentive	RCV adjustments		Revenue adjustments	
	Company view	**Ofwat view**	**Company view**	**Ofwat view**
Outcome delivery incentives	0.0	0.0	2.2	2.2
Residential retail revenue	N/A	N/A	-0.4	-0.4
Wholesale revenue forecasting incentive mechanism	N/A	N/A	0.0	0.8
Totex	-45.7	-50.9	-4.6	-5.3
Land sales	0.1	0.1	N/A	N/A
Service incentive mechanism	N/A	N/A	-41.8	-36.7
PR09 blind year adjustments	-79.4	-79.3	-5.6	-5.6
Water trading	N/A	N/A	0.0	0.0
Total	-125.0	-130.1	-50.3	-45.0
Total post profiling	N/A	N/A	-50.3	-47.8

Note: Total post profiling is the total revenue over the period, taking account of the time value of money and the company's choices of how it wishes to apply revenue adjustments either in the first year or spread over a number of years.

These reconciliations are based on data from the 1 April company submissions. We will update these reconciliations to reflect the July data submissions for the final determinations.

4.4 Other allowed revenue

Other components of allowed revenue are:

- Corporation tax allowance – this is estimated from projected corporation tax rates, profit forecasts and assumed levels of tax relief contained in our financial model for the draft determination.
- Grants and contributions – this represents revenue that we expect to be received from developers in respect of work undertaken by companies to service new developments. It will include income from connection charges and infrastructure charges.
- Non-price control income – this forecast income is deducted from the total allowed revenues, as this revenue is not recovered from the charges covered by the price control – but is expected to cover some of the costs included in the calculation of the price control.

Table 4.12: Calculation of other allowed revenue (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total	Company view - total
Tax	0.0	0.0	0.0	0.0	0.0	12.6
Grants and contributions (price control)	0.0	43.6	68.4	0.0	112.0	212.2
Deduct non-price control income	-8.4	-17.5	-17.0	0.0	-42.9	-42.9

Taxation

We calculate a tax allowance reflecting the corporation tax that the company expects to pay in 2020-25. We calculate the tax allowance using our financial model based on the projected taxable profits of the appointed business and the current UK corporation tax rates and associated reliefs and allowances.

Southern Water provided information in data tables relevant to the calculation of the expected tax charge. The information has been updated as part of the resubmission of various data tables to take account of the recent changes to capital allowances. We have accepted the information provided by the company and applied this to the draft determination.

Our financial model calculates a lower level of taxable profits than the company view, so the resulting tax allowance is lower. This difference is mostly driven by the lower final allowed revenues calculated by the financial model, which are a result of our interventions compared to the company view.

Our interventions may also impact on forecast levels of capital expenditure and in the area of new connections our assumed recovery rates may differ from what Southern Water assumes in the business plan. The resulting impact on allowances used for the calculation of taxation has not been reflected. Where these changes result in significantly different inputs for capital allowances or tax deductions, we expect Southern Water to identify this as part of its representations on the draft determination.

Table 4.13: Calculation of other allowed revenue (£ million) - Tax

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total	Company view - total
Tax	0.0	0.0	0.0	0.0	0.0	12.6

Grants and contributions (price control)

Companies receive grants and contributions from developers towards the costs of ‘new developments’, expenditure to reinforce the network, and ‘new connections’, expenditure to connect a property, for example the meter and connection pipe. We calculate the grants and contributions receivable by applying a recovery rate to our view of new developments and new connections expenditure. This ensures that developers pay a fair share towards costs to connect new properties. We use this calculation of grants and contributions receivable from developers to ensure that the amounts billed to water and wastewater customers correctly reflect only that share of any new development spend which should be borne by them.

The recovery rates are calculated as follows:

- For water new developments we use the rate implied by the Southern Water business plan which is 119.5%; and

- For water new connections and wastewater new developments we use a rate of 100% based on our understanding of historical practice in the industry and is broadly supported by company business plans.

Table 4.14: Calculation of other allowed revenue (£ million) – Grants and contributions

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total	Company view - total
Grants and contributions	0.0	43.6	68.4	0.0	112.0	212.2

Table 4.14 shows our assumed amounts of grants and contributions. Our view of new developments and new connections expenditure is lower than Southern Water's forecast. The reasons behind the differences in our view of 'Base expenditure' are set out above in the 'Cost allowances' section. This gives a lower view of grants and contributions than the company forecast.

For diversions activities, where companies move their assets to make way for new infrastructure, we use the company view of the associated income and assume that this represents 100% of the costs. In modelling our draft determinations we assume that all diversions income is inside the price control. For the final determinations we consider that we should make a distinction between diversions that are inside or outside the scope of section 185 of the Water Industry Act 1991. Works that are outside the scope of section 185 are, for example, works under the New Roads and Street Works Act 1991 or those associated with High Speed 2. We are yet to have sufficient data to be able to distinguish section 185 diversions from non-section 185 diversions. For the final determination we will assume diversions expenditure is inside the price control unless it relates to non-section 185 diversions. Where companies forecast diversions works outside of section 185 then they should provide details of the income relating to this, on an annual basis, in the data request that accompanies the draft determination. This should be returned with the representations to the draft determination.

Non-price control income

Non-price control income is income from the excluded charges defined in licence condition B. For example, it includes bulk supplies, standpipes, unmeasured cattle troughs, and other services. This is deducted from the total allowed revenues, as this revenue is not recovered from the charges covered by the price control – but is expected to cover some of the costs included in the calculation of the price control.

We have reviewed the company forecast of 'non-price control income' and use this in the draft determination.

Table 4.15: Calculation of other allowed revenue (£ million) – Non-price control income

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total	Company view - total
Non-price control income	-8.4	-17.5	-17.0	0.0	-42.9	-42.9

Note: negative numbers represent a deduction from the allowed revenue.

Uncertainty mechanisms

The PR19 methodology makes limited provision for companies to propose bespoke uncertainty mechanisms. Southern Water has not proposed any uncertainty mechanisms in its business plan.

As noted in section 3.7, we propose to set out an uncertainty mechanism in our final determination for Southern Water in relation to costs associated with the possibility, in some circumstances, of bringing direct procurement for customers schemes back in-house. Further information on this is provided in the 'Delivering customer value in large projects' technical appendix.

5 Assurance, returns and financeability

This section sets out the accountability the company's Board has demonstrated for delivering its plan, the accuracy and consistency of the information within the plan and company proposals for aligning the interests of company management and investors with its customers. We summarise Southern Water's response to our actions on securing confidence and assurance, including Southern Water's proposals in response to our 'Putting the sector in balance' position statement. We comment on the possible range of returns for the notional financial structure. We comment also on the financeability of the draft determination and any adjustments that we have made to the bill profile.

5.1 Assurance

The PR19 methodology set out that stakeholders should have confidence in the information presented in business plans. We set expectations that:

- the data and information presented in the plan must be subject to good assurance processes to ensure it is consistent and accurate; and
- a company's full Board should own, be accountable for and provide assurance of the business plan.

In the initial assessment of plans, we identified four actions in relation to Southern Water's data tables and financial model. Southern Water has satisfactorily responded to three of these actions as set out in its response to our actions on securing confidence and assurance. For the remaining advised action, we are intervening to use our view of dividend yield and growth in the draft determination financial model.

We also had concerns with three of Southern Water's forward-looking Board assurance statements and included actions for the Board to provide restated assurance statements covering the areas of large investments, risk identification and risk mitigation.

Southern Water has since provided compliant Board assurance statements on all of these topics.

5.2 Putting the sector in balance

In July 2018 we published our 'Putting the sector in balance' position statement. The position statement set out the steps we expect companies to take to demonstrate they strike the right balance between the interests of customers and their investors. In summary, we expect that:

- company dividend policies for their actual financial structures and performance related executive pay policies show appropriate alignment between returns to owners and executives and what is delivered for customers[2];
- companies with high levels of gearing will share financing gains from high gearing with customers; and
- companies provide assurance and supporting evidence to demonstrate their long term financial resilience and management of financial risks for the actual financial structure.

We also encouraged companies to adopt voluntary sharing mechanisms, particularly where, for example, companies outperform our cost of debt assumptions.

Our assessment of Southern Water's proposals is in Table 5.1.

[2] We explain more fully our expectations in the 'Aligning risk and return technical appendix' that accompanies this draft determination.

Table 5.1: Our assessment of Southern Water's proposals to balance the interests of customers

Issue	Our assessment
Gearing outperformance benefit sharing	Southern Water projects gearing will be below 70% through 2020-25. However, the company has committed to adopt our default gearing outperformance sharing mechanism should gearing exceed the 70% threshold.
Voluntary sharing mechanisms	Southern Water has not proposed any voluntary sharing mechanism. However, the company does commit to making a company contribution to its payment matching scheme, NewStart. The NewStart scheme will see Southern Water match payments that customers make to reduce their balance of debt owed to the company, subject to certain eligibility criteria.
Dividend policy for 2020-25	Southern Water confirms that it is committed to the expectations on dividend policy as set out in our 'Putting the sector in balance' position statement. In doing so it has indicated a base dividend yield of less than 5% for 2020-25. It has confirmed that the base level of dividend will be calibrated to be consistent with financial and non-financial performance commitments. The company has committed to publishing its dividend policy annually as part of the APR with any changes clearly signposted to stakeholders. However insufficient detail has been provided on which obligations or commitments to customers will be considered, the level of performance delivery used for the assessment and how it will affect dividend payments. We expect the company to be transparent in this area, to demonstrate that in paying or declaring dividends it has taken account of the factors we set out in our position statement and we expect the company to be clear about how it will take account of the particular risks to its long term financial resilience as set out below. We expect the company to respond to this issue in its response to our draft determination.
Performance related executive pay policy for 2020-25	Southern Water states that it has embraced the expectations set out in our 'Putting the sector in balance' position statement, with regard to executive performance related pay for 2020-25. The company states that the specific metrics for 2020 onwards will be set at the end of 2019 and based upon the final determination. As an illustration of its commitment the company's proposals for 2019-20 are: • Annual bonus based on metrics that are weighted, 25% Totex, 25% outcome delivery incentive and regulatory dates delivery, 30% customer service delivery and 20% efficient customer service delivery. • Long term bonus based on metrics that are weighted, 35% Totex glide path, 15% maturity assessment glide path, 20% people management, 10% data quality, 10% cash collection and 10% compliance resilience index performance. • Targets for 2019-20 have been set, based on the business plan and annual budget and for 2020 onwards are aligned to delivering the commitments in the business plan. • The remuneration committee has overall discretion to vary any bonus payments based upon critical factors. • A commitment to publish the full details of the policy and how it has been applied in the annual accounts together with any changes and the underlying reasons.

Issue	Our assessment
	Southern Water commits to publishing the executive pay policy for 2020-25, once it has been finalised by the remuneration committee. We understand that there remain some details to be finalised, for example the finalisation of the policy for 2020-25 including details of the underlying metrics and associated weightings. The proposed policy, if approved, demonstrates the company's commitment to move in the direction of the expectations set out in 'Putting the sector in balance: position statement'. We note however the long term policy, as described above does not demonstrate substantial alignment to the interests of customers and we expect the company to continue to take steps to ensure the design and the application of the policy demonstrates alignment to the customer interest. We expect Southern Water to provide an update on this in response to its draft determination. We expect Southern Water to demonstrate that its policy on performance related executive pay demonstrates a substantial link to stretching performance delivery for customers through 2020-25. We expect the company and its remuneration committee to ensure executives have stretching targets linked to performance delivery for customers and that any further updates to the policy for 2020-25 are transparently reported to stakeholders in its annual performance report.
Financial resilience of the company's actual financial structure	In its revised business plan Southern Water says that it has completed a strategic refinancing involving an equity injection of around £700 million to strengthen its capital structure. It expects its gearing to be below 70% by 31 March 2020 and plans to keep it below 70% during 2020-25. Southern Water says that further equity injections are possible if significant downside risks materialise, and that its Board has full control over its flexible dividend policy. It also says that it has continuing access to significant liquidity facilities and that its credit ratings are consistent with its licence obligations. Southern Water says it has carried out an assessment of its financial resilience in relation to its actual structure. The Board assurance statement confirms that the Board is satisfied the plan, and the company's governance and assurance processes, will deliver enhanced operational, financial and corporate resilience over the next control period and in the longer term. The Board assurance statement says that the company has and will continue to put in place a set of actions to improve operational, corporate and financial resilience. There is, however, evidence in Southern Water's plan that investor support may be required to maintain financial resilience in scenarios that consider the outcome of extant regulatory investigations. The company also has a significant debt financing requirement in 2020-25. The company says that, in some cases, without mitigating action, its investment grade credit rating could be at risk. However, it says that mitigating action could include additional capital injections or other financial restructuring to reduce financing costs and maintain an adjusted interest cover ratio consistent with a Baa2 credit rating. Since the submission of the revised business plan, we have issued a penalty notice, which invites comments on our proposal to impose an enforcement penalty on Southern Water in light of our findings in the Southern Water investigation Subject to comments received to that notice, this could result in payments and penalties of about £126m. Moody's and S&P have downgraded the credit rating of the company's finance

Issue	Our assessment
	subsidiary's senior debt and the company remains subject to an ongoing investigation by the Environment Agency. Each company is responsible for ensuring its capital and financial structure allows it to maintain financial resilience over the short and the long term. We expect Southern Water to provide further detail and Board assurance setting out the steps it is taking to demonstrate that the company will maintain financial resilience in the long term in its response to the draft determination. This should be within the context of its performance issues including matters covered by the penalty notice, the interventions to its business plan (which include for example, our updated view of the cost of capital, our assessment of efficient costs, our assessment of outcome delivery incentives and our intervention to PAYG) and the reasonably foreseeable range of plausible outcomes of the final determination including evidence of further downward pressure on the cost of capital in very recent market data as we discuss in the 'Cost of capital technical appendix'. It should also include evidence that the company will be able to raise finance as and when required. We expect the assessment to be accompanied by evidence of support from its equity investors and to be accompanied by independent assurance about the long term viability of the company, including its ability to maintain sufficient headroom with respect to its target credit rating. We will continue to engage with the company on issues associated with its long term financial resilience. Southern Water has committed to demonstrating that its assessment of financial resilience extends beyond 2025 in its next Long Term Viability Statement. In its future reporting, we expect Southern Water to apply suitably robust stress tests of its long term viability in 2020-25.

5.3 Return on regulatory equity

The PR19 methodology sets out that we expect companies to demonstrate a clear understanding of risk to the delivery of their business plans and to explain and demonstrate how they manage and mitigate risk. We expect companies to use Return on Regulatory Equity (RoRE) analysis to assess the impact of upside and downside risk on the basis of their notional capital structures based on a prescribed suite of scenarios using P10/P90 confidence limit values[3].

RoRE is calculated as the return on equity for the equity portion of the RCV based on our notional gearing assumption. A company's base RoRE is aligned with our allowed real post-tax cost of equity, but can differ between companies because the blended real cost of equity will vary according to the proportion of the RCV (and

[3] The P90 is the performance threshold at which there is only a 10% chance of outturn performance being better. The P10 is the performance threshold at which there is only a 10% chance of outturn performance being worse.

notional regulatory equity) that is indexed to RPI or CPIH[4]. The proportion of RCV (and notional regulatory equity) that is linked to RPI or CPIH will vary between companies according to factors that include the size of the investment programme, the proportion of totex that is capitalised and RCV run-off rates.

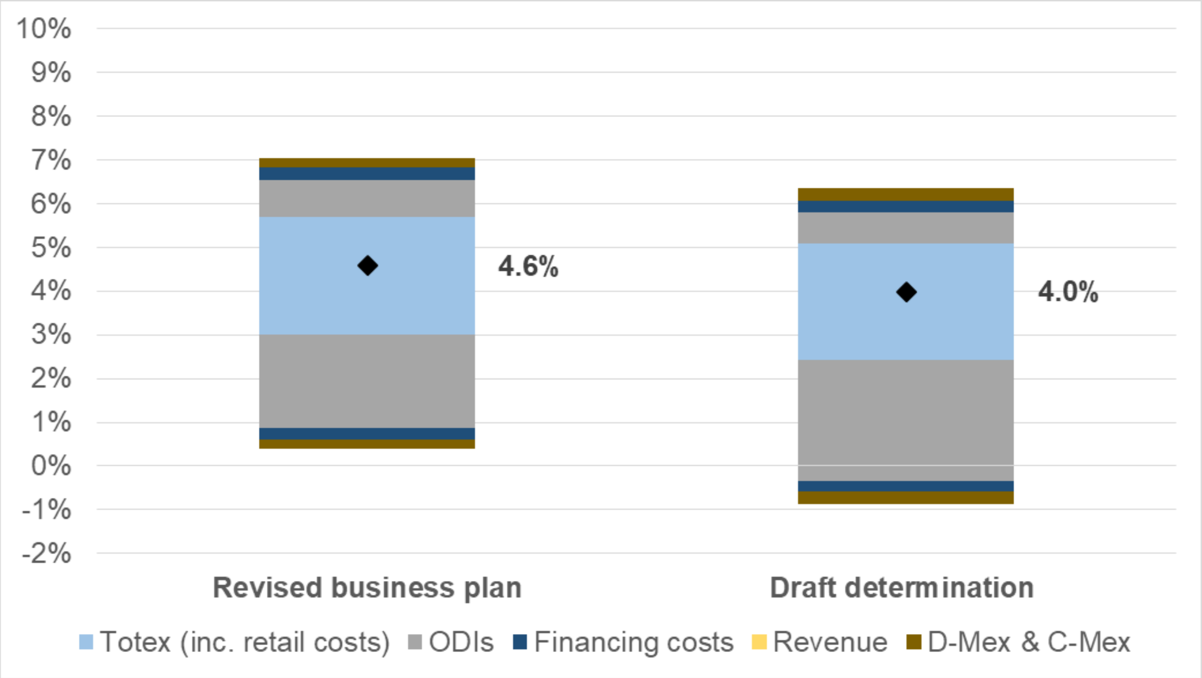
Table 5.2 sets out the annual average RoRE ranges in Southern Water's updated PR19 business plan submission, and the values in our draft determination. The base RoRE in our draft determination reflects our updated cost of equity. The RoRE ranges reflect our interventions outlined below, and other interventions we are making as part of our draft determination.

Table 5.2: Southern Water RoRE ranges

	Updated business plan (Apr 19)		Draft determination ranges reflecting our interventions	
Base RoRE	4.6%		4.0%	
Risk ranges	**Lower bound**	**Upper bound**	**Lower bound**	**Upper bound**
Totex	-1.28%	1.11%	-1.26%	1.10%
Outcome delivery incentives	-2.13%	0.85%	-2.76%	0.72%
Financing costs	-0.27%	0.27%	-0.26%	0.26%
Retail costs	-0.29%	0.00%	-0.29%	0.00%
D-Mex & C-Mex	-0.23%	0.23%	-0.27%	0.28%
Revenues (includes Retail)	0.00%	0.00%	0.00%	0.00%
Total	**-4.20%**	**2.46%**	**-4.84%**	**2.36%**

[4] RPI is the retail price index; CPIH is the consumer price index including owner-occupiers' housing costs; both are published by the Office for National Statistics.

Figure 5.1: RoRE ranges



The draft determination risk ranges shown in Table 5.2 and Figure 5.1 reflect two interventions we are making for our draft determination with respect to values in Southern Water's updated business plan:

- We are intervening to adjust Southern Water's risk range for C-Mex so that it is consistent with the retail revenue exposure limits of +/-12% applicable to this incentive.
- We are intervening to align the RoRE risk ranges for outcome delivery incentives shown in Table 5.2, Figure 5.1, and in the PR19 financial model with the RoRE risk range values for outcome delivery incentives set out in Section 2 (Outcomes). The revised values reflect our interventions on outcome delivery incentives under the Outcomes Framework which seeks to take account of covariance of performance on individual outcome delivery incentives in the presentation of the overall outcome delivery incentive range.

In all other areas we have retained Southern Water's proposed RoRE range. There is a significantly negative skew overall, driven primarily by outcome delivery incentives and totex. Our view is that an efficient company should be able to achieve the base equity return on the notional structure. We expect Southern Water to consider necessary revisions to its overall RoRE range in response to the draft determination.

5.4 Financeability

We interpret our financing duty as a duty to secure that an efficient company can finance the proper carrying out of its functions, in particular by securing reasonable returns on its capital. In coming to our determinations we assess whether allowed revenues, relative to efficient costs, are sufficient for a company to finance its investment on reasonable terms and to deliver activities in the long term, while protecting the interests of current and future customers.

Our PR19 methodology requires companies to provide Board assurance that the business plan is financeable on both the notional and their actual capital structures. Our methodology requires companies to provide evidence to support these statements, including evidence supporting the target credit rating and that this is supported by the financial ratios that underpin the plan. Southern Water's Board has provided assurance that, based on the assumptions in its revised business plan, both notional and actual capital structures remain financeable in the long-term. The company sets out that its business plan is financeable on the basis of the notional structure against a target credit rating of Baa1 (Moody's) taking account of the difference between proposed PAYG rates and 'accounting natural rates'. Southern Water states that this is consistent with Ofwat's view that it may be reasonable for companies to make some use of PAYG or RCV run-off'.

We consider that companies and their shareholders should bear the risk of their capital structure and financing choices, not customers. Therefore, we have focused on whether our draft determination is financeable based on the notional capital structure that underpins our cost of capital using our own financial model.

Our financeability assessment uses a suite of financial metrics based on those used in the financial markets and by the credit rating agencies. We assess financeability for the notional structure excluding the cost of unfunded pension contributions included in the business plan as we consider this is a matter for shareholders and not customers. We set out changes made to the financial model on the 'Adjustments Log page' of each company's financial model. Our assessment takes account of our intervention to reduce PAYG rates. Southern Water's draft determination has high RCV growth (12.3%) therefore it may be appropriate to reduce the dividend yield to fund part of its investment through equity. We state the ratios below using our dividend yield assumption of 3.15% but have considered a sensitivity using a dividend rate of 1.8 which gives a notional gearing level of 60% in 2025 and financial ratios broadly in line with the company's submission. In the round, we consider that Southern Water's draft determination is financeable for the notional structure.

The results for key financial ratios are set out below. The ratios presented for the draft determinations are on the basis of our base dividend yield assumption of 3.15%. We discuss the basis of our financeability assessment further in the 'Aligning risk and return technical appendix'.

Table 5.3: Financial ratios – notional structure before reconciliation adjustments (5 year average)

	Business plan	Draft determinations
Gearing	61.28%	61.74%
Interest cover	4.60	4.23
Adjusted cash interest cover ratio (ACICR)	2.05	1.71
Funds from operations (FFO)/Net debt	12.06%	10.89%
Dividend cover	1.98	0.99
Retained cash flow (RCF)/Net debt	10.30%	8.93%
Return on capital employed (RoCE)	4.92%	3.98%
The basis of the calculation of the ratios is set out in the PR19 methodology **Net debt** represents borrowings less cash and excludes any pension deficit liabilities. **FFO** is cash flow from operational activities and excludes movements in working capital. **Cash interest** excludes the indexation of index-linked debt.		

As set out in section 4 we are intervening to align PAYG rates to recover in each year an amount equivalent to operating costs and infrastructure renewal expenditure out of allowed totex. The adjusted cash interest cover ratio is affected by Southern Water's accounting policy of capitalising part of its infrastructure renewal expenditure and the allocation of this to PAYG revenue as this is treated as fast money within the calculation of the ratio. We discuss the impact of fast money on financial ratios in the 'Aligning risk and return technical appendix'.

Southern Water's RCV run-off rates are based on recovering an amount equivalent to depreciation for assets within each wholesale control. Taking account of our assessment of RCV run-off rates and our intervention on PAYG rates in the round, we are not intervening to amend RCV run-off rates. Interventions to allowed totex and to PAYG rates will change the level of post-2020 additions to RCV. This may affect the average RCV run-off rates and result in movements between the original plan and the draft determination shown in Table 5.4.

Table 5.4: PAYG rates, RCV run-off and RCV growth

	PAYG	RCV run-off	RCV growth
Company plan	48.8%	5.13%	9.84%
Draft determinations	41.6%	5.16%	12.31%

Southern Water is responsible for the financeability and long term financial resilience of its actual structure. The company has proposed to retain gearing at around 70% in

2020-25. We comment further on the financial resilience of the company's actual structure in Table 5.1.

We expect companies to provide further Board assurance that they will remain financeable on a notional and actual basis, and that they can maintain the financial resilience of their actual structure, taking account of the reasonably foreseeable range of plausible outcomes of their final determination including evidence of further downward pressure on the cost of capital in very recent market data as we discuss in the 'Cost of capital technical appendix'.

6 Affordability and bill profile

6.1 Bill profile

Southern Water undertook bill acceptability testing to inform its September 2018 business plan submission. Customers were shown bill impacts in nominal and real terms and told what Southern Water was delivering as part of the plan. This resulted in overall acceptability of 79%. The company's research clearly showed what bills would be over time and linked them to the service levels it proposed to adopt. The company used a sample of 1,400 household customers, using a mixture of online, telephone and in-house interviews. Southern Water's customer challenge group stated in its September 2018 report that the company receives 'a high level of acceptability for the Business Plan from customers'.

Taking account of its acceptability results, the fact it tests nominal bills and multiple bill profiles and the clear information given to customers to help them form views on bills, in the round Southern Water provides sufficient evidence on the acceptability of its bills.

Southern Water carried out bill profile testing for its September 2018 submission. Customers were shown two bills profiles for the period; one stayed flat over 2020-25 and the other gave a reduction in bills in 2020, followed by yearly increases in the years to 2024-25. Results from the testing show 66% of customers preferred a flat bill, which is in line with what Southern Water submitted in its business plan.

The average bill profile put forward by Southern Water provides a reduction of 7.2% in the 2020-25 period. Our amended profile increases this to a reduction of 14.3%. The table below sets out the difference in bills between the company's submission and our amended draft determination figures. We have adjusted the bill profile such that the bill decreases in 2020-21 and then follows a flat profile, consistent with the company's approach.

Table 6.1: Bills in real terms

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Company plan	£422	£392	£392	£392	£392	£392
Bill profile – before re-profiling	£422	£361	£369	£367	£359	£353
Draft determinations	£422	£362	£362	£362	£362	£362

In its business plan, Southern Water sets out its intention to keep average bills constant (0% change) in the 2025-30 period.

Southern Water carried out bill profile testing for the 2020-30 period to inform its September 2018 business plan submission. Customers were given three options to choose from: recovering costs more quickly resulting in a lower bill 2020-25 and a higher bill 2025-30, recovering costs more slowly which would result in the opposite or recovering costs at its proposed, 'natural' rate which leads to a small reduction in 2020-25 and a flat bill in 2025-30. Results from this survey show 64% of customers preferred the company's proposal to recover costs at the 'natural' rate.

Table 6.2: Long term bills

	2020-25	2025-30
Company view of plan	£392	N/A[5]

6.2 Help for customers who are struggling to pay

Our draft determination for Southern Water will deliver a real terms reduction to the average bill between 2020 and 2025.

In addition, Southern Water commits to:

- increase the capacity of its core affordability schemes and tariffs in order to support 155,000 customers per year by 2024-25;
- increase its social tariff cross subsidy to £6, which it has customer support to do;
- undertake 100,000 home water efficiency visits in the 2020-25 period to help customers save money on their bills;
- expand the types of support available through its Priority Services Register (PSR) from 29 to 53; and
- introduce payment breaks to assist customers in situations of transient vulnerability who are temporarily unable to pay their bills.

[5] This figure is not available as the company does not indicate through its financial model what its bill will be in 2025-30. Therefore, the indicative figures included in this section for the bill in this period are based on the company's business plan narrative.

Southern Water has three bespoke performance commitments on affordability and vulnerability, which will require it to improve:

- the effectiveness of its financial support;
- customer satisfaction with its vulnerability support; and
- customer views of value for money.

Companies will be reporting their performance against the priority services register common performance commitment and their bespoke affordability and vulnerability performance commitments to us and their customers on an annual basis during the price control period. In addition, companies put forward in their business plans further measures for addressing affordability and vulnerability issues. We expect companies to report periodically to their customers on their progress in addressing affordability and vulnerability concerns. We will also be considering how we will scrutinise and report on companies' progress in this important area, including working with other stakeholders in the water sector and beyond.

6.3 Total revenue allowances and k factors

Table 6.3 summarises the allowed revenue for each control. This is expressed in a 2017-18 CPIH price base so that this can be compared with the rest of this document.

Table 6.3: Allowed revenue by year (£ million, 2017-18 prices)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Water resources	26.6	26.9	27.7	29.2	30.3	**140.7**
Water network plus	153.2	167.2	169.5	164.5	168.0	**822.3**
Wastewater network plus	451.3	445.9	450.7	464.3	465.6	**2,277.9**
Bioresources	48.2	46.5	48.5	50.6	50.2	**244.0**
Residential retail	46.6	45.6	44.8	43.9	43.1	**224.0**
Total	**725.8**	**732.1**	**741.2**	**752.6**	**757.1**	**3,708.9**

The water resources, water network plus and wastewater network plus controls are in the form of a percentage limit (inflation plus or minus a number that we determine for each year of the control (the 'K' factor)) on the change in allowed revenue (R) from the previous charging year (t-1). This is based broadly on the formula:

$$R_t = R_{t-1} \times \left[1 + \frac{CPIH_t + K_t}{100}\right]$$

Table 6.4 sets out the K factors in each year for each of these three controls. For the first year, we have set a 'base' revenue which will be used as the starting revenue for calculating 2020-21 allowed revenues.

Table 6.4: Base Revenue and K factors by charging year (2017-18 prices)

	Base (£ million)	2020-21	2021-22	2022-23	2023-24	2024-25
Water resources	26.6	0.00%	1.15%	3.31%	5.51%	3.62%
Water network plus	153.2	0.00%	9.38%	1.46%	-3.04%	2.18%
Wastewater network plus	451.3	0.00%	-1.16%	1.10%	3.09%	0.28%

In addition to these controls, we have set a modified average revenue control for bioresources. We recognise that a proportion of bioresources costs are fixed, so we allow for this in setting the average revenue control. The revenue control ensures that where sludge production varies the incremental change in revenues that arises is aligned to incremental costs. The 'modified average revenue' control includes a revenue adjustment factor, which applies if there are differences between the forecast and measured quantities of sludge.

To ensure companies' allowed revenues reflect their costs, we are intervening to implement a standard approach across companies to this classification. We have set out our methodology and our reasons for intervening in the appendix 'Our methodology for the classification of bioresources costs'. Further details of how we have applied the methodology to Southern Water is set out in the 'Bioresources revenue to remunerate fixed costs – Southern Water' model.

Table 6.5 sets out our view of the share of revenue to remunerate fixed costs.

Table 6.5: Classification of proportion of revenue to remunerate fixed costs and variable costs for bioresources

	Company view	Ofwat view based on company submitted data	Ofwat view based on draft determination
Part 1: Revenue to remunerate fixed costs £ million 2017-18 FYA CPIH deflated prices (2020-25)			
Total return on capital	N/A	28.024	27.850
Total run-off	N/A	101.578	108.233
Revenue to service RCV	**N/A**	**129.602**	**136.083**
Local authority and Cumulo rates for both treatment and disposal	N/A	6.409	6.409
Fixed share of other direct costs of treatment and disposal	N/A	19.550	15.555
Fixed share of other indirect cost of treatment and disposal	N/A	7.376	5.869
Fixed PAYG revenue	**N/A**	**33.335**	**27.833**
Fixed share of revenue to cover tax	N/A	0.000	0.000
Pension deficit repair contributions	N/A	1.099	2.316
Other fixed costs	N/A	1.099	2.316
Revenue to remunerate fixed costs	**219.300**	**164.036**	**166.232**
Part 2: Variable revenue (£/TDS) 2017-18 FYA CPIH deflated prices (2020-25)			
Unadjusted revenue (£ million)	264.673	264.673	243.985
Revenue to remunerate fixed costs	219.300	164.036	166.232
Revenue to remunerate variable costs (£ million)	**45.373**	**100.637**	**77.753**
Forecast volume of sludge (TDS)	633,400	633,400	633,400
Variable revenue (£/TDS)	**71.634**	**158.884**	**122.755**

The modified average revenue in each year is calculated by a formula that we set out in the 'Notification of the PR19 draft determination of Price Controls for Southern Water', which includes some components set now in this determination and some components which relate to out-turn performance (such as the actual volume of sludge in future years).

Table 6.6: Bioresources control

	2020-21	2021-22	2022-23	2023-24	2024-25	2020-25
Unadjusted revenue (£ million)	47.957	48.381	48.728	49.190	49.729	243.985
Forecast volume of sludge (TDS)	124,500	125,600	126,500	127,700	129,100	633,400
Variable revenue (£/TDS)	N/A	N/A	N/A	N/A	N/A	122.755

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We regulate the water sector in England and Wales. Our vision is to be a trusted and respected regulator, working at the leading edge, challenging ourselves and others to build trust and confidence in water.

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