December 2019

PR19 final determinations

PR19 final determinations:
Wessex Water final determination

Ofwat

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About this document

This document supports the 'Notification of the final determination of price controls for Wessex Water' and sets out further details about the final determination price control, service and incentive package for Wessex Water for 2020 to 2025. All figures in this document are in 2017-18 prices except where otherwise stated.

The final determination documentation sets out:

- the outcomes for Wessex Water to deliver;
- the allowed revenue that Wessex 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.

This final determination is in accordance with our PR19 methodology (as updated), our statutory duties[1] and the UK Government's statement of strategic priorities and objectives for Ofwat[2]. 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.

Our final determination carefully considers all of the representations we received from companies and stakeholders on our draft determination and takes account of the most up-to-date information available where appropriate. Where appropriate, we explicitly set out our response to points and issues raised by respondents. Where information was provided late and we have not been able to take full account of this in the final determination, this is explicitly stated.

There are five appendices to this document on cost efficiency, outcomes performance, past delivery, allowed revenue and, where relevant, additional information. For all documents related to the Wessex Water final determination, please see the final determinations webpage. Where we reference other documents related to our final determinations we do not include the 'PR19 final determinations' prefix to the document title, for documents relating to our initial assessment of plans or draft determinations the full document title is referenced.

If Wessex Water accepts our 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.

[1] See the 'Policy summary' for more information
[2] See 'UK Government priorities and our 2019 price review final determinations' for more information

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Amendment	**Date**
Table 3.7 Page 42 – Amendments made to figures. • Grants and contributions before the deduction of income offset (£m) Network plus – Water amended from £26.2 million to £25.3 million, for Network plus – Wastewater amended from £53.4 million to £49.4 million. • Net allowed totex subject to cost sharing reconciliation Network plus – Water amended from £437.5 million to £438.4 million, for Network plus – Wastewater amended from £1,233.1 million to £1,237.4 million.	18 May 2020

1 Summary

The water sector faces challenges of climate change, a growing population and increasing customer expectations, while improving affordability of an essential service. The 2019 price review (PR19) enables and incentivises companies to address these challenges both in 2020-25 period and longer term.

To do this the sector needs to innovate and challenge itself to deliver better performance for customers and the environment. Companies need to engage and work with customers and other companies, the supply chain and with other stakeholders.

Our PR19 methodology set out a framework for companies to address the challenges facing the sector with particular focus on improved service, affordability, increased resilience and greater innovation. We published our draft determination for Wessex Water on 18 July 2019, based on our detailed review of the revised plans submitted to us on 1 April 2019. The company and a number of stakeholders provided representation responses on our draft determination on 30 August 2019.

Our final determination carefully considers all of the representations we received from companies and stakeholders on our draft determination and takes account of the most up-to-date information available where appropriate. We consider the changes we have made in our final determination are in line with our statutory duties.

1.1 What our final determination includes

This section sets out the overall shape of our final determination for Wessex Water, covering the customer bill profile, costs, outcomes for customers and allowed revenues. More detail is provided in the following sections of this document.

Bill profile

Our final determination for Wessex Water will cut average bills by 13.0% in real terms in the 2020-25 period compared to the company's proposed 5.9% reduction. Table 1.1 below sets out the difference in bill profile between the company's business plan submission in April 2019, our draft determination and the final determination. Average bills are lower than proposed by Wessex Water, reflecting our view of efficient costs and a reduction in the allowed return. Further details on bills are set out in section 6.

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)	£457	£417	£417	£421	£425	£430
Draft determination	£457	£390	£390	£390	£390	£390
Final determination	£457	£407	£405	£402	£400	£398

Costs

Our final determination allows wholesale totex of £2,080.3 million. This is:

- £74.7 million higher than in our draft determination and
- £141.1 million lower than stated in the company's representation on our draft determination.

Our final determination allows Wessex Water £509 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £402 million to improve the environment by efficiently delivering its obligations as set out in the Water Industry National Environment Programme (WINEP) programme;
- £45 million for the proposed sewerage capacity need outlined in the North Bristol sewerage strategy;
- £13 million to improve security at its sites;
- £11 million for meeting lead standards;
- £11 million to address the impact of deteriorating raw water quality; and
- £11 million for the installation of new meters.

We make an additional allowance of £4.2 million in our final determination for strategic water resource development to support the delivery of long-term drought resilience.

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

Outcomes for customers

Our final determination package includes a full set of performance commitments, specifying the minimum level of service that Wessex Water must commit to deliver for customers and the environment under this price review. These sit alongside the company's statutory and licence requirements. Each performance commitment also has a financial or reputational incentive to hold the company to account for delivery of these commitments.

Further details of key performance commitments are set out in table 1.2 below and in section 2.

Table 1.2: Key performance commitments for Wessex Water

Area	Measure
Key common performance commitments	• At least 15% reduction in leakage from PR14 performance commitment levels3 • 0.9% reduction in per capita consumption by 2024-25 • 11% reduction in pollution incidents by 2024-25 to 19.5 pollution incidents per 10,000km of the wastewater sewer • 16% reduction in internal sewer flooding incidents by 2024-25 to 1.34 incidents per 10,000 sewer connections • 59% reduction in water supply interruptions by 2024-25 to 5 minutes
Bespoke performance commitments	• 10% reduction in external sewer flooding incidents by 2024-25 • 13.7% reduction in the annual gross greenhouse gas emission from operational services by 2024-2025 • 37 catchment based partnership projects to improve natural capital delivered by 2024-25
Overall incentive package	Overall, the likely range of returns from outcome delivery incentive package in our final determination equates to a return on regulatory equity range of -1.35% (P10) to + 0.98% (P90).

Note the calculations behind these numbers are outlined in the 'Wessex Water - Outcomes performance commitment appendix'.

[3] Please note that the figures in the tables of the 'Wessex Water - Outcomes performance commitment appendix' which relate to this performance commitment reflect that it is measured on a three-year average and show a 12.8% reduction from 2019-20 baseline levels on a three-year average basis

Allowed revenues

Our final determination sets allowances for total revenue or average revenue for each of the price controls. Table 1.3 shows the allowed revenues in the final 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	Bio-resources	Wholesale total	Residential retail	Total
Company view of allowed revenue (£m)	92.2	758.9	1,324.4	167.1	2,342.5	167.7	2,510.3
Final allowed revenues (£m)	91.1	732.0	1,267.4	156.6	2,247.1	151.1	2,398.2

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 'Allowed return on capital technical appendix', we are updating our assessment of the allowed return on capital for Wessex Water's final determination. The allowed return is 2.96% (on a CPIH basis, 1.96% on a RPI basis) at the appointee level. After adjustment for the retail margin, the allowed return on capital for the wholesale price controls is 2.92% (on a CPIH basis, 1.92% on a RPI basis), a reduction of 0.16 percentage points from our draft determination, reflecting our assessment of market evidence. The allowed retail margin for the household retail control remains at 1.0%, consistent with the draft determination.

In the draft determination we adjusted the value of the biogas charged from Wessex Water's appointed to non-appointed business by reducing the company's revenue allowance by £10.2m. Following representations from the company we have revised our calculation and will now be reducing the company's revenue allowance by £8.5m.

Wessex Water's Regulatory Capital Value (RCV) growth in 2020-25 is 10.6% and 61% of its RCV will be indexed to CPIH in 2025. We bring forward £41 million of revenue from future periods.

We consider that Wessex Water's final determination is financeable on the basis of the notional structure, based on a reasonable allowed return on capital and revenue advanced through pay as you go (PAYG) adjustments. The determination is sufficient to deliver its obligations and commitments to customers. Further detail on our assessment of financeability is set out in section 5.

Putting the sector in balance

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. Wessex Water commits to meeting the expectations set out in our 'Putting the sector in balance position statement'.

Wessex Water confirms it would implement our default gearing outperformance mechanism within its business plan. Under its actual financial structure, the company expects gearing at the level that will be close to trigger sharing payments under the gearing outperformance sharing mechanism in 2020-25.

To meet our expectations, the company will need to demonstrate to stakeholders that dividends and performance related executive pay policies are substantially aligned to its performance for customers.

In the 'Putting the sector in balance' position statement we also encouraged companies to adopt a voluntary sharing mechanism, particularly where, for example, companies outperform our cost of debt assumptions. Wessex Water proposes a sharing mechanism which will reinvest 20% of net outcome delivery incentive payments in community projects.

We provide further detail on these issues in section 7.

1.2 Representations on the draft determination

All companies and stakeholders were invited to make representations on our fast track draft determinations by 24 May 2019 and on our slow track and significant scrutiny draft determinations by 30 August 2019. More detail about the issues raised in the representations by the company and our consideration of those issues can be found elsewhere in this document, the technical appendices and other documents published alongside our final determinations.

Table 1.4 highlights the key points made by Wessex Water in its representation and a summary of our response to each of those points:

Table 1.4: Company representation

Key point in Wessex Water representation	Summary of our response
Wessex Water argues that the draft determination puts its financeability in jeopardy and will not allow the company to meet its legal obligations or its broader responsibilities to stakeholders.	We have carefully considered all of our duties, in particular our financing functions and consumer protection duties, and are satisfied that our final determination fulfils our duties in the round. Our assessment of notional financeability for the final determination is made in the context of changes made to the draft determination in our final determination. We consider the company's final determination is financeable on the basis of the notional structure based on the allowed revenues which include a reasonable allowed return on capital. The final determination is sufficient to ensure the company will be in a position to deliver its obligations and commitments to customers. It is the company's responsibility to maintain financial resilience under its actual financial structure and it must bear the risks associated with its choice of capital and financing structure.
Wessex Water asks for a revised approach to calculating the allowed return, grounded in long-run market evidence and consistent with other economic parameters in the determination.	In setting the allowed return on capital, we target a figure which will remunerate companies for the efficient cost of capital which will prevail over 2020-25. We have drawn on both short-run and long-run market data where there is evidence that either type of data is likely to improve our forecast of the prevailing cost of capital over the following 5 years. We do not consider that imposing a framework that relies entirely on long-run market data would improve on our current approach. As set out in our 'Allowed return on capital technical appendix', we do not consider that our cost of capital parameter choices are inconsistent with other economic parameters in the determination.
Wessex Water raises concerns that the draft determinations require a frontier efficiency improvement well above the headline rate of 1.5% per year, despite the company being assessed as historically efficient.	Throughout PR19 we set out that we expect companies to demonstrate a step up in cost efficiency. We have carefully considered evidence on catch up efficiency and frontier shift and revised both the catch up efficiency challenge and reduced the frontier shift from 1.5% to 1.1% per year. See the 'Securing cost efficiency technical appendix' for more details.
Wessex Water challenges the remaining cost gap. It asks for additional cost allowances for the WINEP, worth £100 million, as well as funding to deliver improvements on leakage, pollution incidents and water supply interruptions. The company also requests investment to account for new development	We reduce the wholesale totex by £74.7 million including allowing an additional £29.5 million for WINEP; see section 3. We do not make an allowance for pollution incidents or water supply interruptions because

Key point in Wessex Water representation	Summary of our response
and growth and funding for partnership working to deliver environmental resilience.	the company does not provide convincing evidence that it has unique operating circumstances. We only allow enhancement costs for leakage reduction where a company goes beyond the forward-looking upper quartile. We note the company is well placed to earn outperformance payments on pollution incidents where it is a leading performer in the sector. We accept representations that our models do not provide a sufficient allowance for companies with high growth. We make an additional allowance for companies with a high growth forecast. Wessex Water receives a further allowance of £11.9 million across water and wastewater. We allow £1.9 million out of £2 million that the company requests for partnership working.
Wessex Water proposes a return to calculating revenue allowances through PAYG rates based on the natural rate from our cost assessment.	Taking account of company representations, we revise our approach to determine the mix of operating and capital expenditure to take better account of the nature of our decisions on cost allowances. We shared our revised approach with water companies and set out the approach in the 'Securing cost efficiency technical appendix'. We apply the updated approach in our technical intervention to PAYG rates.
Wessex Water calls for the return of the cash flow mechanism from the PR19 methodology.	We have considered the representations we received in relation to upfront payments. We continue to consider that the upfront payment should be removed from companies above our efficient cost baseline. We consider this payment is not appropriate as companies tend to outperform their business plan submissions, and it could lead to even greater negative adjustments to its revenue at PR24. The upfront payment also means that customers are likely to pay more for the 2020-25 period and above the level of efficient costs. We set out our response in more detail in our 'Securing cost efficiency technical appendix'.
Wessex Water asks for amended target levels and associated incentive rates for the event risk index (ERI) and mains repairs performance commitments.	We remove financial incentives from the performance commitment for event risk index, recognising the volatility of the measure. We make changes on mains repairs that apply industry wide, to ensure levels take account of historical levels of performance and the implications of leakage reduction levels for mains repairs. We also amend the underperformance

Key point in Wessex Water representation	Summary of our response
	payment rate on mains repairs for all companies to industry average, see section 2.
Wessex Water proposes the removal of the £10.2 million adjustment for the sale price of biogas.	We retain our draft determination decision to reduce Wessex Water's revenue allowance to take account of a more appropriate value of the biogas transferred to the non-appointed business. However, following new information from Wessex Water, we revise our original adjustment to £8.5 million; see section 6.

We also received representations on Wessex Water's draft determination from other stakeholders as shown in table 1.5, which shows a summary of our response to representations that are relevant to the company. Representations from some other stakeholders relate to all companies and are described in the relevant technical appendices. More detail about the issues raised in the representations by stakeholders can be found elsewhere in this document, the technical appendices and other documents published alongside our final determinations.

Table 1.5: Stakeholder representations

Stakeholder representations	Summary of our response
The **Consumer Council for Water** argues that Wessex Water will focus excessively on lucrative performance commitments and that level of stretch on internal sewer flooding is too low.	We consider it is importance to recognise and remunerate sector leading performance and that customers value improved service as well as lower bills. We impose caps on the material performance commitments to prevent excessive levels of outperformance payments. We require the company to achieve our forecast industry upper quartile levels on internal sewer flooding, see section 2.
The **Environment Agency** asks Ofwat to recognise the leading role that Wessex Water has played in the development of Drainage and Wastewater Management Plans (DWMPs) in its final determination.	At draft determination, we did not make any allowance for DWMPs as we considered that the plans were funded from the base allowance. After reviewing the outcome of Defra's recent consultations on DWMPs, and the additional information in Wessex Water's representation, we agree that some additional investment is required to develop DWMPs to ensure a more consistent basis for long-term planning of drainage and wastewater services. We make a partial allowance of £6.6 million; see section 3 for more details.
The **Wessex Water Partnership** (Wessex Water's customer challenge group) calls on	Our assessment of cost efficiency takes into account the overall level of stretch across both

Ofwat to provide sufficient cost allowances so that Wessex Water can deliver the required improvements to meet key performance commitment levels. It also asks Ofwat to demonstrate that it has taken into account the view of Wessex Water customers in its determination.	costs and outcomes. We consider that the combination of our requirements on both costs and outcomes are stretching but achievable. Evidence suggests that companies can perform well on both costs and outcomes. Some companies are already performing better than the forward-looking upper quartile benchmarks that we have set. We set out in our PR19 methodology for the price review that customer support is important as one of a number of considerations we are taking into account when making our decisions. We have considered and taken account of the quality of customer evidence provided in setting our final determination and outcome delivery incentives. Our suite of final determination documents explains the rationale for our decisions, including the evidence used.
The **Wessex Water Catchment Panel** and the **Bristol Avon Catchment Partnership** call for the reinstatement of enhancement funding for partnership working.	We allow £1.9 million out of £2 million that the company requests for partnership working, see section 3.

1.3 Key changes from the draft determination

Our final determination carefully considers the representations we received from companies and stakeholders on our draft determinations on 30 August 2019. It also takes account of the most up-to-date information available where appropriate. Changes to overall revenue and costs allowances are set out in table 1.6.

Table 1.6: Difference in cost and revenue allowance final to draft determination

	Draft determination	Final determination
Allowed revenues (£m, 2017-18 CPIH deflated)	2,303.9	2,398.2
Wholesale cost allowance[1] (£m, 2017-18 CPIH deflated)	2,005.6	2,080.3
Retail cost allowance (£m, nominal)	143.1	143.1
Wholesale allowed return[2] (% - CPIH basis)	3.08%	2.92%

[1] Note that we include pension deficit recovery costs in the wholesale cost allowances we present in table 1.6 above and in table 3.1 later in this document. At the draft determination we published cost allowances excluding pension deficit recovery costs. The numbers we show here as the draft determination allowances can be calculated by adding the pension deficit recovery costs from draft determination table 3.2 to draft determination table 3.1 total allowances. Our decisions on individual elements of the totex allowance are set out in section 3.

[2] The allowed retail margin for the household retail control remains at 1.0%, consistent with the draft determination

Significant changes from the draft determination for Wessex Water are:

- We make a positive growth adjustment of £1.9 million to Wessex Water's wholesale water base allowance, and a positive adjustment of £10 million to its wholesale wastewater base allowance.
- We increase the enhancement allowance for Wessex Water's environment programme and partnership working.
- We make changes on mains repairs that apply industry wide, to ensure levels take account of historical levels of performance and the implications of leakage reduction levels for mains repairs. We also amend the underperformance payment rate on mains repairs for all companies to the industry average.
- We increase the water supply interruptions 2024-25 level (making it easier to achieve) to five minutes, with an amended glidepath in the first four years. We reduce the underperformance rate to be symmetrical with its outperformance rate.
- We make the outcome delivery incentive type reputational for event risk index.
- Taking account of company representations, we revise our approach to determine the mix of operating and capital expenditure to take better account of the nature of our decisions on cost allowances. We apply the updated approach in our technical intervention to PAYG rates.
- We revise Wessex Water's average bill profile from a large reduction upfront followed by flat real terms prices, to have a smaller reduction upfront, followed by a gradually falling real price over 2020-25.
- We retain our draft determination decision to reduce Wessex Water's revenue allowance to take account of a more appropriate value of the biogas transferred to the non-appointed business. However, we agree with the company that there was an issue with in the calculation of the adjustment and we have amended our view from £10.2m to £8.5m as a result.

2 Outcomes

Key changes from the draft determination

The key changes made to the outcomes elements of the draft determination are:

- We increase performance commitment levels on mains repairs that apply industry wide, to ensure levels take account of historical levels of performance and the implications of leakage reduction levels for mains repairs. We also amend the underperformance payment rate on mains repairs for all companies to industry average. This will provide a more balanced spread of incentives and risks across its performance commitments.
- We make the outcome delivery incentive type reputational for event risk index to reflect the uncertainty in the performance commitment levels and customer benefit given that it is a new measure.
- We Increase the water supply interruptions 2024-25 level (making it easier to achieve) to five minutes, with an amended glidepath in the first four years taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company. We reduce the outcome delivery incentive underperformance rate to be symmetrical with its outperformance rate. Together these changes provide a more balanced spread of incentives and risks on water supply interruptions.
- We amend the deadband on the compliance risk index (which measures compliance with the Drinking Water Inspectorate's (DWI's) water quality standards) to a score of 2.00 throughout the period reducing the risk of underperformance payments in the last three years of the 2020-25 period. This allows more flexibility in performance to take into account the uncertainty created by the ban on the use of metaldehyde, which has been overturned by the High Court and also aligns with the median level of company performance.

Throughout PR19, we have been asking companies to:

- make more stretching performance commitments to their customers;
- have stronger incentives to deliver on their commitments; and
- better reflect resilience in their commitments

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 are the reputational and financial incentives that companies have, to deliver on their performance commitments to customers. They 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 incentive payments 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 company is a good performer and is currently delivering upper quartile performance overall. It performs well on service incentive mechanism (SIM), ranking 5th best in the sector. In 2018-19, the company achieved 77% of its performance commitments and it demonstrates upper quartile performance on pollution incidents, internal sewer flooding, leakage and water supply interruptions.

In its September business plan, and its revised plan in April 2019, the company proposed very stretching levels on some of its performance commitments including in the upper quartile for per capita consumption and external sewer flooding. It was less stretching on some other performance commitments such as water quality contacts where previously the company has had poor performance, and event risk index where it proposed no improvement over the 2020-25 period. The company did not provide sufficient evidence to justify the use of outperformance payments on several bespoke commitments for example, on event risk index, the company’s proposed outperformance rates appeared to have no direct customer support.

The outcome delivery incentive rates proposed by the company were also outside the reasonable ranges we use to assess rates in relation to this performance commitment. In a number of cases, it sought performance related additional funding for internal sewer flooding, water supply interruptions, pollution incidents and for its proposed leakage reduction. At draft determination4 we increased the company's outcome delivery incentive rates on most of the customer facing performance commitments for different reasons, for example, on water quality contacts the company did not provide adequate justification for the determination of its rates. We reduced outperformance rates on other commitments such as internal sewer flooding and event risk index. For example on internal sewer flooding this was due to the use of customer values that were widely varying and we had concerns regarding both the wide range and the high resulting value combined with the relatively low level of stretch to the forecast upper quartile. We increased the stretch of some of the asset health measures including customer contacts and event risk index where we considered that the company's proposals were not stretching enough in light of poor performance.

In its representations, the company argues that it does not support the use of reasonable ranges to assess outcome delivery incentive rates for specific performance commitments. It says that its customer research and how it has used this research to set outcome delivery incentive rates accurately reflects customer preferences, and that its customer research has been widely praised as being of a high quality. It further argues it should not be forced to align its incentive rates to those of companies whose customer research is of a lower quality. It considers that quality of research should be taken into account when constructing reasonable ranges for outcome delivery incentive rates to align with and states we have not followed this approach.

Our methodology for assessing outcome delivery incentive rates considers reasonable ranges based on company business plan submissions. We use reasonable ranges, as companies proposed outcome delivery incentive rates vary considerably, in ways we are unable to correlate to plausible drivers of underlying customer preferences. Using a reasonable range based on data from across the sector mitigates the risk of methodological differences leading to outcome delivery incentive rates which depart from underlying customer preferences. Our approach uses the reasonable range proportionately and as one element of our analysis, we conscientiously consider companies' research as well as several other factors such as large variance from PR14 rates, comparative performance as well as past performance issues. If the research is considered good quality, it is included in the data we use to set outcome delivery incentive rates for customer facing performance commitments.

Consequently, we consider our use of reasonable ranges to be proportionate and consistent, and that, in setting rates, we balance our use of reasonable ranges with additional information including companies' evidence. We consider that past performance is a relevant consideration when setting outcome delivery incentive rates. There is a risk that companies with poor past performance may propose weak

[4] See 'PR19 draft determinations: Wessex Water delivering outcomes for customers actions and interventions'.

incentives, whereas, we consider they may require stronger financial incentives than in previous periods, to ensure that they place due focus on improving performance in this specific area. As such, we use a range of tests as articulated in our 'Delivering outcomes for customers policy appendix'.

We also assess the company's specific representations on unplanned outages, internal sewer flooding, water quality contacts and sewer collapses. We make changes to the draft determination rates on all of these, moving closer to the company's proposals, although, on unplanned outages, our final determination outcome delivery incentive underperformance rate remains significantly higher than the company proposal since we do not consider the approach the company has taken to set rates is justified. Full rationale is contained in our 'Wessex Water - Delivering outcomes for customers final decisions'.

The company also makes representations that our draft determination levels for mains repairs do not take into account the link between leakage and mains repairs. We increase the performance commitment levels for mains repairs by a reducing percentage, for all companies, in all years. The aim is to allow all companies the flexibility to deliver the step change in leakage reduction, allowing more flexibility in the earlier years to use proactive mains repairs to reduce leakage. We intervened in mains repairs levels for this company at draft determinations since it was lagging behind the sector, setting the level at the average of the best three years' performance. At final determination, we amend the base levels of mains repairs to an average of the best five years' performance, as we now consider the use of this information to set the forward-looking base level provides a more representative level and ensures companies maintain good performance to improve the overall health of their assets over the longer-term. We also amend the underperformance payment rate on mains repairs for all companies to industry average. This will provide a more balanced spread of incentives and risks across its performance commitments. This will ensure the company does not overly focus on mains repairs to the detriment of other performance commitments which will benefit its customers.

The company also asks for amended performance commitment levels and incentive rates for the event risk index. The company considers that it is likely to face maximum underperformance payments in each year based on the draft determination. It was sixth in the industry in 2017 and eighth in 2018 in terms of performance.

Event risk index is a new measure and is volatile. Industry performance deteriorated in 2018 and laggards' scores can be 1000 times (worse) than that of the leading companies. For each incident the seriousness of an incident (1-5) is multiplied by the company response (1-5) and then by the population. This can lead to large scores and significant changes between years. On reflection, we are concerned that it is difficult to calibrate the appropriate stretch and outcome delivery incentive rates. The incremental benefits to customers from improvement this metric by one unit are not robust because the measure is not linear. While improvements are clearly beneficial to customers it is difficult to quantify the incremental benefits for each unit of improvement. In view of this we propose removing financial incentives from this performance commitment and for the performance commitment to be reputational only for 2020-25 and then consider whether to introduce financial incentives at PR24.

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.

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 expected customer challenge groups[5] 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 continued our assessment of customer engagement evidence following each company's submission of its representations to our draft determination in August 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 its September 2018 business plan, Wessex Water provided evidence to demonstrate elements of high-quality customer engagement although we highlighted some areas of concern in our initial assessment of the company's plan, such as insufficient evidence of customer support for its largest value performance

[5] Customer challenge groups provide independent assurance to us on the quality of a company's engagement with its customers to develop their business plans.

commitment, event risk index, and insufficient evidence of customer research to test long-term bill profiles (beyond 2025).

Following our initial assessment of business plans, in its April 2019 revised business plan, Wessex Water provided the results of recent customer research on outcome delivery incentives, including the level of support for groups of performance commitments and individual outperformance payments. In general, we find this quantitative research to be of a satisfactory quality. The company also provides evidence of qualitative research focussed on the event risk index performance commitment: this research cannot be assumed to be statistically robust due to the low numbers of participants involved but it can provide an indication of customer views. We note that neither piece of new customer research provides evidence of customer views on the level of stretch within the performance commitment levels for the event risk index performance commitment.

In its representations to our draft determination, Wessex Water states that we have made adjustments based on industry comparisons that do not reflect its customer evidence. The company makes specific representations that the financial incentives set out in our draft determinations do not align with its customers' valuations in relation to event risk index, mains repairs, water quality contacts, unplanned outage, internal sewer flooding and sewer collapses. Whilst as noted above we consider that there is insufficient evidence to justify the company’s argument against our use of reasonable ranges, in some cases we have found that the company provides sufficiently convincing evidence to support specific arguments. In particular, in regards to internal sewer flooding and water quality contacts we amended our outcome delivery incentive rates, set at draft determination, to better align with the customer valuations provided by the company. We are additionally making the outcome delivery incentive for event risk index reputational to reflect the uncertainty in the performance commitment levels and customer benefit given that it is a new measure. The company’s customer challenge group did not submit any representations to our draft determination.

We set out in our PR19 methodology that we expect companies to reflect their customers’ preferences in the levels they propose for performance commitment levels and outcome delivery incentives. We also expected companies to challenge the level of stretch in their performance commitments against a range of approaches (for example, against comparative and historical information). In our PR19 methodology we also expected companies to use customer valuations to set outcome delivery incentive rates and noted that we would compare these valuations and rates and challenge companies where appropriate. Therefore, when making our decisions, we have taken into account several factors in setting our final determination outcome delivery incentive rates including the quality of customer evidence provided. Our suite of final determination documents explains the rationale for our decisions, including the evidence used to inform our decisions.

2.2 Performance commitments and outcome delivery incentives

Wessex Water's performance commitments and outcome delivery incentives for the 2020-25 period are listed in table 2.2 and table 2.3. The full details of these performance commitments and outcome delivery incentives are set out in the 'Wessex Water - Outcomes performance commitment appendix'.

The key changes we are making in the final determination are set out in table 2.1[6] below. 'Wessex Water – Delivering outcomes for customers final decisions' sets out our final decisions in terms of changes to our draft determination for the company's performance commitments and outcome delivery incentives, having considered stakeholder and company representations to our draft determination.

Table 2.1: Summary of key changes to draft determinations on outcomes

Key changes
Increasing the water supply interruptions 2024-25 level (making it easier to achieve) to five minutes, with an amended glidepath in the first four years taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company. We reduce the underperformance rate to be symmetrical with its outperformance rate. Together these two changes provide a more balanced spread of incentives on water supply interruptions.
Retaining the company improvement in relation to internal sewer flooding Increasing outperformance rate in relation to internal sewer flooding to reflect our concerns around some of the valuations the company used in setting its outcome delivery incentives. Amending the underperformance outcome delivery incentive rates in relation to internal sewer flooding to be symmetrical with its outperformance rate to provide a more balanced spread of incentives and risks on internal sewer flooding
Amending the performance commitment levels for mains repairs by a reducing percentage, for all companies, in all years, reducing the stretch. The aim is to allow all companies the flexibility to deliver the step change in leakage reduction, allowing more flexibility in the earlier years to use proactive mains repairs to reduce leakage. We intervened in mains repairs levels for this company at draft determinations since it was lagging the sector, setting the level at the average of the best three years performance. At final determination, we amend the base levels of mains repairs to an average of the best five years' performance, which provides a more representative level and ensures companies maintain good performance to improve the overall health of their assets over the longer-term. We also amend the underperformance payment rate on mains repairs for all companies[7] to industry average
Accepting the company's revised level in relation to sewer collapses as it is one of the leading performers in this measure based on its revised reporting.

[6] Please note, table 2.1 focuses on policy changes and does not include changes made to correct errors in our draft determinations or changes made as a consequence of other amendments such as updating enhanced outcome delivery incentive rates for amendments to standard outcome delivery incentive rates using the same methodology and approach as at draft determinations.
[7] This does not include Severn Trent Water and South West Water who have early certainty on mains repairs outcome delivery incentive rates.

Key changes
We are amending the sewer collapses underperformance rate to median rather than mean as part of a methodology change covered in the 'Delivering outcomes for customers policy appendix'.
Adjusting the deadband on the compliance risk index to a score of 2.00 throughout the period reducing the risk of underperformance payments in the last three years of the 2020-25. This allows more flexibility in performance to take into account the uncertainty created by the ban on the use of metaldehyde being overturned by the High Court and also aligns with the median level of current company performance.
Making the outcome delivery incentive type reputational for event risk index to reflect the uncertainty in the performance commitment levels and customer benefit given that it is a new measure
Decreasing the underperformance rate relative to the company's proposal in relation to water quality contacts to provide stronger customer protection. We are also decreasing the outperformance rate in order to balance incentives.
Accepting the company's proposal to include outperformance as well as under performance incentives for the total bill reduction to customers on social tariffs per 10,000 households performance commitment, and also accepting its proposal to change successful applications for assistance received by the independent advice sector/third parties to a reputational performance commitment. We acknowledge there is customer benefit in making these performance commitments financial, although there would be significant risk of double counting by making both performance commitments financial. We accept the company's proposal that the former performance commitment is the key measure of the two.
Accepting the new performance commitment of delivery of the security (non-SEMD) scheme. We consider that this new performance commitment provides additional customer protection in the event of non-delivery of its non-SEMD investment.
Accepting the proposed improvement in the performance commitment level in relation to per capita consumption as the company provides revised data.
Amending our intervention at draft determination to set the company's outcome delivery incentive rate for unplanned outage at the lower bound of our reasonable range instead of the industry average since recognise that the company does have an interconnected network and the company was identified as a relatively good performer in our 'Out in the Cold' report on the response to the Freeze/Thaw incident.
Amending the performance commitment definitions in relation to non-household void properties to ensure that in-period determinations take into account the financial consequences of any retail market mechanism which may be developed, for example, under the Market Performance Framework in the 2020-25 period.

Table 2.2: Summary of performance commitments: common performance commitments

Name of common performance commitment	Type of outcome delivery incentive			
	Financial			Reputational
	Under	Out	In-period	
Water quality compliance (CRI) [PR19WSX_Q1]	X		X	
Water supply interruptions [PR19WSX_R1]	X	X	X	
Leakage [PR19WSX_W1]	X	X	X	
Per capita consumption [PR19WSX_W2]	X	X	X	
Mains repairs [PR19WSX_R4]	X		X	
Unplanned outage [PR19WSX_R5]	X		X	
Risk of severe restrictions in a drought [PR19WSX_R2]				X
Priority services for customers in vulnerable circumstances [PR19WSX_C1]				X
Internal sewer flooding [PR19WSX_F1]	X	X	X	
Pollution incidents [PR19WSX_E2]	X	X	X	
Risk of sewer flooding in a storm [PR19WSX_R3]				X
Sewer collapses [PR19WSX_R6]	X		X	
Treatment works compliance [PR19WSX_E1]	X		X	
C-MeX: Customer measure of experience [PR19WSX_X1]	X	X	X	
D-MeX: Developer services measure of experience [PR19WSX_X2]	X	X	X	

Table 2.3: Summary of performance commitments: bespoke performance commitments

Name of bespoke performance commitment	Type of outcome delivery incentive				
	Financial				Reputational
	Under	Out	In-period	End of period	
Total bill reduction to customers on social tariffs per 10,000 households [PR19WSX_A1]	X	X	X		
Successful applications for assistance received by the independent advice sector/third parties [PR19WSX_A2]					X
Void sites [PR19WSX_A3]	X	X	X		
Gap sites [PR19WSX_A4]	X	X	X		
Value for money [PR19WSX_X3]					X
Delivering for customers in vulnerable circumstances [PR19WSX_C2]					X
Number of children/students engaged [PR19WSX_C3]	X	X	X		
Customer reported leaks fixed within a day [PR19WSX_W3]	X	X	X		
Volume of water saved by water efficiency engagement [PR19WSX_W4]					X
Water quality customer contacts (appearance, taste and odour) [PR19WSX_Q2]	X	X	X		
Tackling water quality at home and in the work place [PR19WSX_Q3]	X	X	X		
Lead communication service pipes replaced (Wessex Water assets) [PR19WSX_Q4]	X	X	X		
Event risk index (Wessex Water) (ERI WW) [PR19WSX_Q5]					X
Customer property sewer flooding (external) [PR19WSX_F2]	X	X	X		
Sewer flooding risk [PR19WSX_F3]	X		X		

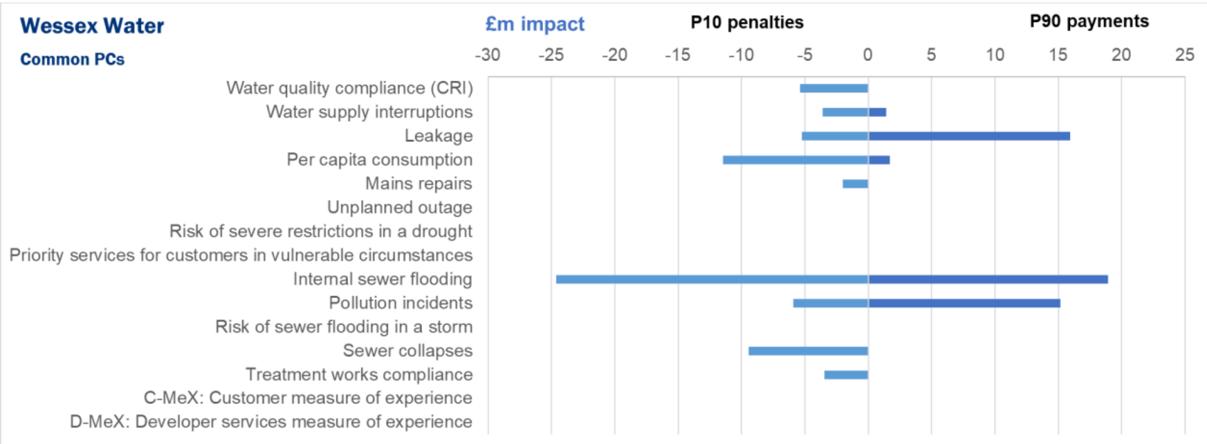
Name of bespoke performance commitment	Type of outcome delivery incentive				
	Financial				Reputational
	Under	Out	In-period	End of period	
North Bristol Sewer Scheme - Trym catchment [PR19WSX_F4]	X		X		
Restrictions on water use (hosepipe bans) [PR19WSX_R7]	X		X		
Abstraction Incentive Mechanism (Mere) [PR19WSX_E3]	X	X	X		
Natural capital: improve Sites of Special Scientific Interest (SSSI sites) [PR19WSX_E4]	X	X	X		
Greenhouse gas emissions [PR19WSX_E5]	X		X		
Working with communities to improve bathing water experience [PR19WSX_E6]	X	X	X		
Working with catchment partners to improve natural capital [PR19WSX_E7]	X	X	X		
Satisfactory sludge disposal [PR19WSX_E8]	X		X		
Reduce frequent spilling overflows (non-WINEP) [PR19WSX_E9]		X	X		
Length of river with improved water quality through WINEP delivery [PR19WSX_E10]	X		X		
Km of river improved (non-WINEP) [PR19WSX_E11]		X	X		
Abstraction Incentive Mechanism (Stubhampton) [PR19WSX_E12]	X	X	X		
WINEP Delivery [PR19WSX_NEP01]					X
Delivery of security (non-SEMD) [PR19WSX_SEC]	X		X		
Delivery of DWMPs [PR19WSX_DWMP]					X
WINEP requirements (Bristol (Avonmouth) STW) [PR19WSX_E13]	X			X	

Figure 2.1 and figure 2.2 provide an indication of the financial value of each of Wessex Water's outcome delivery incentives (taking into account the impact of our final determination decisions) 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 outperformed to the P90 level. The P90 is the performance threshold at which there is only a 10% chance of outturn performance being better.

The figures cover common and bespoke commitments respectively. The estimates are based on the company's own view of the plausible bounds of performance submitted in April 2019 submission. Where we have changed service levels for performance commitments, we have amended these estimates so that the distance between the service level and estimate remains the same.

Our analysis has built on the estimates companies have provided, but there is a range of plausible estimates of what may happen in plausible worst case (P10) and plausible best case (P90). There is inherent uncertainty in forecasting these parameters and the figures presented should be seen as indicative of the likely range of financial impacts for each performance commitment.

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



Note P10 underperformance payments and P90 outperformance payments for C-Mex: Customer measure of experience and D-Mex: Developer services measure of experience are not shown in this figure but are shown in table 5.1 below.

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

Table 2.4 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 regulatory equity)) and the overall impact of our final determination decisions. Further information on how we have calculated these values is set out in the 'Delivering outcomes for customers policy appendix'.

Table 2.4: Impact of draft determination and final determination decisions on RoRE range

	Draft determination		Final determination	
	% of 5 year regulatory equity		% of 5 year regulatory equity	
	P10	P90	P10	P90
Wessex Water	-1.01	+0.70	-1.35	+0.98

The figures in the above tables are estimates. 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. Where, through these reasons, the vast majority of companies have caps and collars on a common performance commitment, we will apply caps and collars to all companies.

We are applying a standard sharing mechanism for all companies, 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 set out further detail of the mechanism in the 'Delivering outcomes for customers policy appendix'.

In our PR19 methodology, we decided to replace the existing Service Incentive Mechanism (SIM) with two new common performance commitments to incentivise companies to provide an excellent 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 operate from April 2020 and incentivise companies to improve their performance relative to other water companies and the wider economy.

We set out further details on how C-MeX and D-MeX will operate in the 2020-25 period, including any changes from draft determinations, in the 'Customer measure of experience (C-MeX) and developer services measure of experience (D-MeX) policy appendix'.

2.3 Delivering a framework for resilience in the round

Resilience is one of our four themes for PR19. We set out our expectations for water companies' business plans in our PR19 methodology. Overall, Wessex Water's September 2018 business plan falls short of demonstrating that the company has applied an integrated resilience framework that will deliver resilience in the round. It does however provides sufficient evidence in some areas. The company's Entrade platform, to enable a markets approach to environmental outcomes, is an innovative environmental resilience solution. The company also provides sufficient evidence of customer engagement on resilience risks and options and presents a commitment to carry out an annual independent maturity assessment to assess resilience and prepare detailed resilience action plans based on the gaps identified.

We recognise that it may take some time for companies to fully understand best practice approaches to resilience in the round and implementing a systems-based approach to resilience. In our initial assessment of business plans, we set Wessex Water an action (WSX.LR.A2) to develop a resilience action plan which demonstrates that it has a framework in place to deliver resilience in the round, and to submit this to us by 22 August 2019. We expected the resilience action plan to build upon the feedback that we provided following our initial assessment of the business plan.

Overall, Wessex Water's resilience action plan includes some good elements but falls short in many areas.

Wessex Water's action plan meets our expectations in the following areas:

- there is a structured action plan in place to deliver the key elements of an integrated resilience framework including elements of its systems-based approach such as interdependencies analysis;
- the company has developed robust corporate governance arrangements to monitor, report on and assure the resilience framework;
- the company appears to have the organisational capability to deliver the framework; there is clear ownership of all elements of the framework; and
- the company has taken on-board good practice from other areas and companies, for example United Utilities, Welsh Water and Yorkshire Water, in developing its framework.

However, Wessex Water's action plan falls short of our expectations in the following areas:

- the company does not respond to our feedback from the initial assessment of business plans on areas such as the prioritisation of risks and providing additional evidence to link resilience focused performance commitments to its resilience framework. We expect the company to clearly respond to our feedback and demonstrate how this informed the development of its action plan;
- the company's baseline maturity assessment is not yet complete therefore its action plan has not been driven by the priorities identified in the maturity assessment. We expect the company to clearly demonstrate how its action plan is influenced by an understanding of its baseline maturity;
- whilst the company includes an action to develop a line of sight between the risks to resilience, mitigation options and package of outcome, there is little evidence to demonstrate that the different elements of this are being applied in practice; and
- the company's action plan does not sufficiently address medium to long-term activities. We expect the company to cover long-term resilience actions, across planning periods, to embed and continually improve its approach to resilience.

Overall, Wessex Water, along with the sector, has further work to do to implement a fully integrated resilience framework. The company should continue to work with the sector, with Ofwat, and across sectors to incorporate best practice and address the concerns highlighted about its resilience framework above. Ofwat plans to engage the sector through its strategy to encourage further joint development of resilience approaches to accelerate best practice through the industry. We also may consider the progress companies have made as part of assessing company business plans in the 2024 price review.

3 Cost allowances

Key changes from the draft determination

- Our final determination allowance for Wessex Water is £2,080.3 million for the wholesale services. This compares with £2,005.6 million at draft determination. In retail, our final determination allowance is £143.1 million, and it does not change from the draft determination.
- Our base allowance is affected by a number of changes we have made since draft determination:
  - we include company outturn data from 2018-19 in our econometric models;
  - we exclude non-section 185 diversions costs (i.e., diversions other than those required by section 185 of the Water Industry Act 1991) from our econometric models and allow companies to recover related income outside the price control, from the relevant transport authority;
  - we strengthen the catch-up challenge applied to wholesale modelled base costs. We use the 4th placed company in wholesale water and the 3rd placed company in wholesale wastewater as an efficiency benchmark, rather than the upper quartile company at draft determinations;
  - we reduce the frontier shift challenge from 1.5% per year to 1.1% per year, but we extend to all wholesale base costs.
- We make a £1.9 million upward adjustment to our base allowance for water network plus, and a £10 million upward adjustment for wastewater network plus. The adjustments are due to a relatively high forecast of population growth in 2020-25 in the company's supply area.
- We increase the enhancement allowance in the areas of Wessex Water's environment programme and for working in partnership with stakeholders.
- We make a £6.6 million allowance for costs related to the development of the Drainage and Wastewater Management Plans (DWMPs).

Throughout price review 2019 we set out that we expect companies to demonstrate an increase in cost efficiency. In our final determinations, we set a cost-outcomes package that provides a strong incentive for companies to invest and operate efficiently and at the same time deliver a marked improvement in their level of performance, particularly on outcomes that matter to customers and the environment. Our cost-outcomes package is demanding but achievable. It will incentivise companies to innovate, which will pave the way for a more efficient, higher performing sector, with a more meaningful, trusted relationship with customers.

Wessex Water submitted a business plan for 2020-25 with expenditure proposals that are significantly above what it has incurred historically. The company's proposed costs are less efficient than our view of efficient costs, in particular in wholesale wastewater services. To ensure customers pay only for efficient costs we challenge the company's proposed costs and investment programme where appropriate. As a result of a small reduction in the company's requested costs and additional cost allowances that we make, the gap of £276 million (11%) at draft determinations has reduced to £161.4 million (6.8%) at final determinations. Our main challenge on the company's proposed costs relates to the efficiency of its environmental programme (WINEP) and costs associated with reducing leakage, pollution incidents and supply interruptions.

Our approach to setting total expenditure (totex) allowances is detailed 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 'Wessex Water – Cost efficiency final determination appendix' we provide more detailed information on our cost challenge for enhancement expenditure, our allowance for cost adjustment claims and transitional expenditure and our unit cost adjustments related to uncertain schemes in WINEP.

3.1 Allowed expenditure for wholesale services

Table 3.1 shows total expenditure (totex) allowances by year and by wholesale price control for the period 2020-25. We phase our allowed totex over 2020-25 using the company business plan totex profile.

Table 3.1: Totex[1] 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 August 2019 - total
Water Resources	22.7	17.2	17.8	14.3	13.4	85.3	91.1
Water network plus	107.4	105.0	124.3	107.1	101.7	545.4	571.1
Wastewater network plus	285.8	268.6	265.7	260.0	248.8	1,328.8	1,433.9
Bioresources[2]	23.4	22.7	25.4	23.0	26.2	120.7	125.3
Total	**439.2**	**413.5**	**433.1**	**404.3**	**390.1**	**2,080.3**	2,221.4

[1] Totex includes all costs. This includes pension deficit recovery costs, 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 components of our totex allowance. The main components are base and enhancement costs. Base expenditure refers to routine, year on year costs, which companies incur in the normal running of their business to operate, maintain and incrementally improve service to customers. Enhancement expenditure refers to investment for the purpose of enhancing the capacity or quality of service beyond base level.

We adjust allowed costs to reflect a change in the accounting treatment of leases as discussed in the 'Securing cost efficiency technical appendix'. We use the adjustment to operating costs that the company proposed in its business plan.

Our base costs for wholesale water include operating costs (excluding enhancement opex) and maintenance costs. In wholesale water, base costs also include costs associated with the connection of new developments (ie new developments and new connection costs) and costs for addressing low pressure. In wastewater, base costs include new connections and growth, growth at sewage treatment works and costs to reduce flooding to properties that were previously assessed as enhancement expenditure.

We adjust allowed costs to reflect a change in the accounting treatment of leases as discussed in the 'Securing cost efficiency technical appendix'. We use the adjustment to operating costs that the company proposed in its business plan.

Our draft determination allowance included all revenues and costs in relation to diversions. This approach was criticised by companies who said that it did not take into account forecast step changes in diversions costs for some companies as a result of large infrastructure projects such as High Speed 2 (HS2). Following our draft determinations consultation, we exclude revenue relating to diversions other than those required by section 185 of the Water Industry Act 1991 ('non-section 185 diversions').

Non-section 185 diversions costs are included in table 3.2. Companies will be able to recover most of the non-section 185 diversions costs directly, usually from transport authorities, outside of the price control. This is in addition to our total revenue allowance.

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

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Base expenditure	60.8	486.2	884.6	114.7	1,546.3
Enhancement expenditure	20.1	47.8	437.0	4.1	509.0
Operating lease adjustment	-	-0.3	-0.2	-	-0.5
Gross allowed totex for calculation of cost sharing rates	80.9	533.7	1,321.3	118.8	2,054.7
Strategic regional water resources solutions and other cash items	1.1	3.2	-	-	4.2
Third party costs	2.7	2.5	0.5	-	5.7
Non-section 185 diversions	-	1.0	0.2	-	1.2
Ex-ante cost sharing adjustment	-	-	-		-
Gross totex	84.7	540.4	1,322.0	118.8	2,065.9
Grants and contributions after adjustment for income offset[1]	-	24.3	49.1		73.4
Net allowed totex used in PAYG calculation	84.7	516.2	1,272.8	118.8	1,992.5
Pensions deficit recovery costs[2]	0.7	5.0	6.9	1.9	14.4
Total	85.3	521.2	1,279.7	120.7	2,006.9

[1] Includes price control and non-price control grants and contributions.
[2] We are displaying pension deficit recovery costs separately as they are not included in the calculation for PAYG (see section 4).

Movement in allowed wholesale expenditure between draft and final determinations

Table 3.3 compares our totex allowance at final determination to our allowance at draft determination. The table only includes base and enhancement expenditure. That is, it excludes pension deficit recovery costs, third party costs, and costs for strategic regional water resources development where relevant.

Following the change in approach to non-section 185 diversions costs discussed above, for final determinations, our allowance also excludes non-section 185 diversions costs of the amount stated against these cost in table 3.2. Our draft determinations allowance does not exclude these costs.

Table 3.3 also provides the company's requested costs in its April 2019 submission, and its revised requested costs in August 2019, in response to our draft determinations for slow-track companies. Table 3.4 provides further detail.

Table 3.3: Totex by service, 2020-25 (£ million, 2017-18 CPIH deflated prices)

Price Control	Company April 2019	Company August 2019	Draft determination allowance	Final determination allowance
Wholesale water	647.0	645.9	610.4	614.9
Wholesale wastewater	1,554.1	1,549.7	1,374.3	1,440.3
Total	**2,201.1**	**2,195.6**	**1,984.6**	**2,055.3**

Table 3.4: Totex by type of cost, 2020-25 (£ million, 2017-18 CPIH deflated prices)

	Draft determination allowance	Final determination allowance
Base expenditure	1,514.2	1,546.3
Enhancement	470.4	509.0
- Environmental obligations (WINEP)	372.0	401.5
- Supply-demand balance and metering enhancement	14.0	13.8
- Resilience enhancement	3.2	3.4
- Other enhancement (including raw water deterioration, meeting lead standards, security, first time sewerage, sludge quality and growth, and aggregated free form lines)	81.2	90.3

3.2 Wholesale base expenditure

Table 3.5 shows a comparison between the company's requested and our allowed base expenditure.

Table 3.5: Base expenditure, 2020-25 (£ million, 2017-18 CPIH deflated prices)

Price Control	Company August 2019	Final determination allowance
Water Resources	61.7	60.8
Water Network plus	469.0	486.2
Wastewater Network plus	903.0	884.6
Bioresources	119.2	114.7
Total	**1,552.9**	**1,546.3**

Note company business plan base costs exclude enhancement opex.

For final determinations, we retain our approach of including growth related expenditure in our base econometric models. We have also made an adjustment depending on whether the company operates in an area with a relatively high or low forecast of population growth, relative to the historical average for the sector. This follows representations made at draft determinations that the models did not adequately compensate for companies with a high growth forecast. We also consider that the models overcompensate for companies that operate in an area with a low growth forecast. We consider that using the symmetrical adjustment approach set out in our PR19 methodology best accommodates for these factors.

As the population growth forecast in Wessex Water for the period 2020-25 is higher than the historical average growth rate in the sector, we make a positive adjustment to the company's wholesale water base allowance of £1.9 million, and a positive adjustment of £10 million to its wholesale wastewater base allowance. More details of our approach to these adjustment is in the 'Securing cost efficiency technical appendix'.

In its representations Wessex Water states that its 2017-18 business rates are understated due to a provision release and are not a true reflection of its liability in that year. At final determinations we update Wessex Water's business rates allowance to take account of the provision release.

The company forecasts £84.6 million, to proactively manage sewer flooding and to improve company performance for internal sewer flooding and external sewer flooding. Wessex Water further plans to hold its flooding risk score at a stable value against the pressure of climate change and urbanisation. Wessex Water highlights its unique chalk geology which impacts its sewer flooding performance. However, the impact of chalk geology on its performance is not evaluated to sufficiently justify the need for additional funding for sealing its sewers to prevent groundwater infiltration.

We expect Wessex Water to deliver a significant reduction in risk of sewer flooding for properties from its base allowance and meet its stretching performance commitments. If the company delivers a more stretching sewer flooding performance, it will earn outperformance payments under the outcome delivery incentive framework. For the final determination, we maintain our decision not to make any addition to our modelled allowance for the company's sewer flooding programme.

However, within its sewer flooding programme, Wessex Water requests £12.7 million for developing Drainage and Wastewater Management Plans (DWMPs) in line with the DWMP framework published by Water UK. At draft determination, we did not consider there was sufficient evidence to make an adjustment to our base allowance for these costs. Following our review of the outcome of Defra's recent consultations on DWMPs, and the additional information in Wessex Water's representation, we agree that some additional investment is required to develop DWMPs to ensure a more consistent basis for long-term planning of drainage and wastewater services as recognised by the 21st Century Drainage Programme supported by Water UK, Defra and the EA. We make a partial allowance of £6.6m million in line with our DWMPs cost estimate approach, which we describe in the 'Securing cost efficiency technical appendix'.

3.3 Enhancement expenditure

For wholesale enhancement expenditure we challenge the scope of work, the evidence provided to support solution options and the efficient delivery of programmes. We cost benchmark with the rest of the industry where we can. In particular, we challenge the expenditure Wessex Water proposes for its supply-demand balance programme, and specific freeform investments including Bristol (Avonmouth) STW and performance related enhancement proposals.

Table 3.6 summarises our allowances for enhancement expenditure.

Table 3.6: Enhancement expenditure, 2020-25 (£ million, 2017-18 CPIH deflated prices)

Price Control	Company August 2019	Final determination allowance
Water Resources	24.9	20.1
Water Network plus	90.3	47.8
Wastewater Network plus	523.3	437.0
Bioresources	4.2	4.1
Total	**642.7**	**509.0**

Our final determination allows Wessex Water £509 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £402 million to improve the environment by efficiently delivering its obligations as set out in the WINEP programme;
- £45 million for the proposed sewerage capacity need outlined in the North Bristol sewerage strategy;
- £13 million to improve security at its sites;
- £11 million for meeting lead standards
- £11 million to address the impact of deteriorating raw water quality; and
- £11 million for the installation of new meters.

Below we discuss key areas of our determination on enhancement cost proposals. Our document 'Wessex Water - Cost efficiency final determination appendix' sets out in more detail the cost allowances by investment area for each price control, and we give full reasoning in our published cost assessment models (enhancement feeder models and cost claims feeder models).

Leakage

We expect an efficient company to achieve its stretching performance commitments from our base allowance. Only where the company's performance commitment goes beyond the industry forecast upper quartile leakage performance, do we make an enhancement allowance for leakage reduction. As this is not achieved by Wessex Water, our allowance is unchanged from draft determination and we do not allow any of the requested £25.3 million under enhancement. In 'Securing cost efficiency technical appendix' we set out our policy on the funding of leakage reduction costs, including how we derive the upper quartile threshold for leakage enhancement costs.

Metering

Wessex Water requests £11.2 million to install new meters. At final determination we apply a frontier efficiency shift to the model output which results in a reduction in the allowance. However, we also make an adjustment based on a joint assessment of the metering and supply-demand balance allowances which increases the company's metering allowance reducing the impact of the frontier shift. Our final determination allowance is £10.9 million a reduction of £0.3 million from draft determination.

Performance related enhancements

We maintain the draft determination approach and we do not allow enhancement costs proposed by Wessex Water for performance related proposals, including costs for improving supply interruptions, and reducing wastewater pollution incidents. We do not allow enhancement expenditure relating to the common performance commitment levels. We therefore do not allow enhancement proposals of £13.9 million in wholesale water and £15.6 million in wholesale wastewater. Companies can receive outperformance payments from improving service through the outcome delivery incentives.

Resilience

In our draft determination we allowed £0.7 million for water resilience enhancements related to resilience improvements at a treatment works.

In its water services proposals, Wessex Water makes representations in relation to elements of resilience investment. We consider the evidence and increase our allowance in one area by removing optioneering and cost efficiency challenges. However, we maintain our draft determination decision to reject the other elements of the scheme which we consider are describing base activities and we expect our base allowance to cover them. There is insufficient evidence to justify them as resilience enhancement because the company fails to provide specific details about the likelihood and consequence of failure and to demonstrate how these are beyond management control. For final determination we allow £0.9 million for water resilience proposals.

The company does not raise substantive issues regarding its wastewater resilience allowance of £2.5 million to protect Portbury Wharf sewage treatment works from coastal flooding. We maintain our draft determination allowance.

Environmental resilience through partnership working

For draft determinations Wessex Water allocated investment which proposes to deliver environmental resilience through partnership working, to resilience enhancements. Our draft determination did not make an allowance for this investment as it did not meet our resilience assessment criteria.

In its representation to the draft determination, the company proposes £2.0 million to deliver environmental resilience through partnership working. It allocates the investment to a company-defined enhancement category and provides additional evidence to justify the need for investment.

We reallocate £0.3m of this proposed investment that delivers phosphorus reductions to the relevant WINEP category and we make an efficient allowance in our WINEP phosphorus removal model.

The remainder of the £2 million is for projects to deliver improvements to bathing water quality; beach experience; and river environments. We accept the need for the investment, except for a small component (< £0.1 m in total) that delivers benefits for sewer flooding performance. We consider that our base econometric models provide an allowance companies should use to deliver forward-looking upper quartile performance on sewer flooding. Consequently, we do not allow enhancement funding for the component intended to deliver benefits for sewer flooding performance. We apply a cost challenge to the investments that we accept the need for because the company provides insufficient evidence that its proposed costs are robust and efficient. Our final determination allowance for environmental resilience through partnership working is £1.9m.

Bristol (Avonmouth) sewage treatment works (STW) – flow to full treatment and STW growth

Wessex Water submits a new cost adjustment claim (£44 million) for the WINEP flow to full treatment scheme at Bristol (Avonmouth) STW. The company contends that the scale of the scheme and the particular engineering challenges at the site mean that our feeder model is not properly representative of the true scope and cost of the work it needs to do. However, we do not find persuasive the supporting evidence persuasive that there are exceptional engineering challenges at Avonmouth. We accept that it is appropriate to remove Avonmouth from our flow to full treatment model due to its atypical scale, and we make a separate, additional allowance for the scheme. To do so we assume that Wessex Water's estimate for the Avonmouth scheme is at the same level of cost efficiency as the rest of its flow to full treatment programme. We calculate Wessex Water’s model efficiency for the other twelve schemes it proposes for flow to full treatment improvements. We then apply that same efficiency challenge to the company’s proposed costs for Avonmouth to calculate an allowance for the scheme. We add our resulting allowance (£35 million) as part of our modelled flow to full treatment allowance and not as a cost adjustment claim. This allowance is then subject to further efficiency challenge through our WINEP programme level efficiency calculation.

Wastewater environmental obligations (WINEP)

Our comparative assessment of wastewater WINEP costs shows Wessex Water to be inefficient in areas including sewage treatment works storage schemes and efficient in its phosphorus removal programme. It requests £406 million for its wastewater WINEP and we allow £384 million.

Strategic water resource development

We make an additional allowance in our final determination for strategic water resource development to support the delivery of long-term drought resilience. We set out our policy on funding of these strategic solutions in the ‘Strategic regional water resource solutions appendix’. At draft determination, we allowed £1.3 million for Wessex Water to develop strategic regional water resource solutions in association with other companies. For final determination we update this allowance based on assessing the representations from the company and West Country Water Resources group. As a result, we increase Wessex Water’s funding in this area and we allow its requested £4.2 million in full. We accept that two of the solutions that Wessex Water is funded to participate in will follow the standard gate timeline, but we now expect the West Country sources north solution to follow the accelerated route.

Our document 'Wessex Water - Cost efficiency final 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.

3.4 Cost sharing

In the water resources, water network plus and the wastewater network plus controls we have a cost sharing arrangement. In these controls, 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 calculated 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 calculate the company's view of costs based on a 50% weight on the company's final cost proposals in its August 2019 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'.

Table 3.7 sets out the cost sharing rates for PR19 and net totex that is subject to cost sharing at the end of the 2020-25 period. We calculate cost sharing rates based on totex gross of grants and contributions (but after making adjustments for operating leases and excluding costs of strategic regional water resources development costs, third party costs and pension deficit recovery costs). At the end of the 2020-25 period, we will apply cost sharing to totex net of grants and contributions.

For final determination we introduce an uncertainty mechanism for business rates and abstraction charges. Under the uncertainty mechanism these costs are subject to different cost sharing rates. We discuss the uncertainty mechanism in section 4.4.5. Our allowance for business rates and abstraction charges costs are excluded from table 3.7.

Table 3.7: Cost sharing rates for 2020-25 and totex for end-of-period reconciliation

	Water resources	Network plus – water	Network plus – wastewater
Totex for cost sharing rates – September 2018 business plan (£m)	84.0	574.7	1,445.5
Totex for cost sharing rates – August 2019 (£m)	86.6	559.3	1,426.3
Weighted company view of totex for cost sharing rates (£m)	85.3	567.0	1,435.9
Gross allowed totex for cost sharing rates (£m)	80.9	533.7	1,321.3
Cost sharing ratio	1.06		1.09
Cost sharing rate – outperformance	44%		41%
Cost sharing rate – underperformance	56%		59%
Grants and contributions before deduction of income offset (£m) [8]	-	25.3	49.4
Abstraction charges and business rates (£m)	14.5	70.1	34.8
Net allowed totex subject to cost sharing reconciliation (£m) [9]	66.4	438.4	1,237.1

3.5 Allowed expenditure in residential retail

Table 3.8 sets out our total expenditure allowance for residential retail. Our allowance does not include any of our allowed pension deficit recovery costs. These costs have been wholly allocated to wholesale controls. Wessex Water did not submit any cost adjustment claims in residential retail.

Based on our benchmarking analysis, Wessex Water is among the least efficient companies in residential retail on a forward-looking basis. Our allowance for the company is 13% lower than what it requests. Our challenge is therefore significant. We maintain our view that our residential retail allowance provides an appropriate basis for setting cost allowances for Wessex Water.

[8] Amendment made to Grants and contributions before the deduction of income offset (£m) Network plus – water and Network plus – wastewater.
[9] Amendment made to Net allowed totex subject to cost sharing allocation (£m) Network plus – water and Network plus – wastewater.

Table 3.8: Expenditure, residential retail, 2020-25 (£ million, nominal)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Residential retail	27.3	28.0	28.7	29.3	29.9	143.1
Company view	30.6	31.7	32.8	33.9	35.1	164.1

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.

3.6 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 are to consider direct procurement for customers for discrete, large-scale enhancement projects expected to cost over £100 million, based on whole-life totex.

There is sufficient evidence that there are no projects suitable for a direct procurement for customers process within Wessex Water’s proposed plan.

We expect any major schemes which may arise due to significant changes to Wessex Water’s business plan to be reviewed against the direct procurement for customers criteria, as detailed in the PR19 methodology If the criteria are met, we expect Wessex Water to undertake further work to review detailed costs and commitments to ensure delivery is via the most efficient route, and to assess delivery via direct procurement for customers, to ensure that customers receive the best value.

4 Calculation of allowed revenue

Key changes from the draft determination

The key changes we are making to the calculation of allowed revenue in the draft determination are:

- We allow £2,398.2 million of revenue across all price controls for Wessex Water in the final determination, compared to £2,303.9 million in the draft determination and £2,510.3 million in the company's April 2019 revised business plan.
- The allowed return on capital for the wholesale price controls is 2.92% (on a CPIH basis, 1.92% on a RPI basis), a reduction of 0.16 percentage points from our draft determination, based on our assessment of market evidence. The allowed retail margin for the household retail control remains at 1.0%, consistent with the draft determination.
- Taking account of company representations, we have revised our approach to the calculation of the mix of operating and capital expenditure following our totex interventions.
- In order to calculate the mix of operating and capital expenditure we follow the approach set out in 'Securing cost efficiency technical appendix'. We set out how we apply the technical intervention in the 'Aligning risk and return technical appendix' and we have published our calculation of the PAYG rates for each company alongside our determinations.
- increase PAYG rates to bring forward allowed revenue by £41 million to address a notional financeability constraint.
- Allowed revenue includes Wessex Water's contribution to the innovation competition.
- We revise our approach to calculating grants and contributions.
- We reflect Wessex Water's latest information on its actual performance in 2018-19 and expected performance in 2019-20 from its 15 July submission.

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.

4.1.1 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.

- Pay as you go (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 RCV which is recovered over a longer period of time.
- Allowed return on capital – this is calculated based on our assessment of the allowed return on 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 includes income from connection charges, infrastructure charges and section 185 diversion recharges. The total grants and contributions amount deducted from totex may not agree to this amount, as we only include grants and contributions income relating to the price control (and some income is outside the price control).
- 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. In a change from our draft determination, we also now include diversions recharges which are in respect of the New Roads and Street Works act 1991 activities and other non-section 185 diversions. 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.
- Innovation competition – this represents the additional revenue that the company will collect from its customers for the purpose of a collectively funded innovation

competition for the period 2020-25. The amount each company's customers will contribute will be proportionate to individual company revenue at draft determinations. We expect the revenue collected from customers to be ring-fenced and administered so that it will not be used for purposes other than the innovation competition.

- 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 Wessex 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 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 – Final determination	Total - Draft determination
Pay as you go	54.9	377.4	519.3	88.6	1,040.2	937.5
RCV run-off	24.3	206.2	419.8	56.1	706.4	712.7
Allowed return on capital	9.3	123.9	258.7	12.8	404.8	434.3
Revenue adjustments for PR14 reconciliations	0.0	-10.2	13.0	0.0	2.8	11.1
Fast track reward	0.0	0.0	0.0	0.0	0.0	0.0
Tax	2.6	13.7	11.6	7.3	35.2	26.4
Grants and contributions after adjustment for income offset (price control)	0.0	23.4	45.1	0.0	68.5	49.1
Deduct non-price control income	0.0	-5.0	-4.0	-8.5	-17.5	-19.2
Innovation competition	0.0	3.1	5.2	0.0	8.3	0.0
Revenue re-profiling	0.0	-0.5	-1.2	0.2	-1.5	-0.7
Final allowed revenues	91.1	732.0	1,267.4	156.6	2,247.1	2,151.1

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

In our new strategy for regulating water and wastewater companies in England and Wales, we highlight that innovation is crucial for meeting the challenges the sector faces.

The adoption of innovative approaches is key to delivering long-term resilience and great customer service at an affordable price, and the sector will need to step up and increase innovation in order meet the strategic challenges it faces in a cost-effective and sustainable way. We also want to see companies work more effectively together and with their supply chain to better tackle these challenges.

Our outcomes and total expenditure approach facilitate this innovation, by giving companies the flexibility and freedom to adopt innovative means of delivering services. We are promoting innovation by setting Wessex Water stretching outcome performance commitments.

Our outcome delivery incentives approach means that companies have to return money to customers where they fall short, but it also gives companies the opportunity to earn additional financial payments if they successfully improve performance and deliver for customers above and beyond the level expected of most companies. This encourages companies to look for innovative ways of delivering better services to customers and improving the environment.

However, as well as our existing package of measures which encourages companies to innovate individually, we have been considering how we can stimulate innovation more widely in the sector and encourage collaborative innovation initiatives.

In our new strategy consultation[10], we explored options for customer-funded interventions designed to drive innovation to benefit customers in the longer-term. Having reviewed the responses to the consultation, we are publishing our decision in 'Driving Transformational Innovation in the Water Sector' alongside the PR19 final determinations, confirming that we are making up to £200 million available for innovation activities for the period 2020-25 through the introduction of an innovation competition. We will work together with companies and other stakeholders in the sector to set up a competition which will effectively drive innovation in the sector to the benefit of customers across England and Wales.

4.1.2 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.

[10] Ofwat's emerging strategy: Driving transformational innovation in the sector.

- 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 Wessex Water in its business plan and is unchanged in our final determinations.

Allowed revenue for the residential retail control is set on a nominal basis. We present the make-up of the allowed revenue in nominal prices in table 4.2.

Table 4.2: Retail margins, 2020-25 (nominal price base)

	Draft determination	Final determination
Total wholesale revenue - nominal (£m)	2,306.8	2,404.3
Proportion of wholesale revenue allocated to residential (%)	77.5%	77.5%
Residential retail costs (£m)	143.1	143.1
Total retail costs (£m)	**1,931.0**	**2,006.3**
Residential retail net margin (%)	1.0%	1.0%
Residential retail net margin (£m)	**19.6**	**20.3**
Residential retail adjustments (£m)[1]	5.2	3.7
Residential retail revenue (£m)[2]	**167.9**	**167.1**

[1] Residential retail adjustments for the PR14 residential retail service incentive mechanism and residential retail revenue reconciliations are set out in table 4.11. The figures in table 4.2 are in nominal prices, and the figures in 4.11 are in 2017-18 FYA CPIH deflated prices. The difference between the two tables is due to the difference in price bases.
[2] Residential retail revenue is the sum of the net margin, retail costs, and adjustments. Company view may not sum as this may include other adjustments.

We set out the calculation of residential retail revenue on an annual basis in the 'Wessex 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. For the final determinations we revise our approach to the calculation of PAYG rates to better reflect the source of changes we make to costs claimed by companies as a result of our totex cost assessment. Our revised approach follows a process of further consultation with companies following the submission of representations on the draft determination. We explain our revised approach in 'Securing cost efficiency technical appendix.

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

4.2.1 PAYG in allowed revenue

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 'Wessex 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 the 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
Totex allowance (£m)	84.7	516.2	1,272.8	118.8	1,992.5
Final determination PAYG rate (%)	64.1%	72.2%	40.3%	73.0%	51.5%
Pay as you go totex (£m)	54.3	372.4	512.4	86.7	1,025.8
Pension deficit recovery cost (£m)	0.7	5.0	6.9	1.9	14.4
Total pay as you go (£m)	54.9	377.4	519.3	88.6	1,040.2

Table 4.4: PAYG rates for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources
Original company plan (%)	62.4%	68.4%	36.0%	71.0%
Draft determination (%)	62.1%	66.5%	35.8%	71.0%
Final determination (%)	64.1%	72.2%	40.3%	73.0%

In the draft determination, we applied Wessex Water's approach to PAYG rates of recovering in each year an amount equivalent to operating costs plus capitalised infrastructure renewal expenditure from totex. We intervened to reduce PAYG rates by 0.5% to align PAYG rates to use operating costs net of grants and contributions prior to applying the technical intervention to reflect our view of the mix of operating and capital expenditure in allowed totex.

In its representations, Wessex Water states that in the event that there remains a difference between the company and Ofwat view of efficient level of costs, then PAYG rates should be recalculated in line with the natural rates. Wessex Water does not comment on the specific intervention to align PAYG rates with net operating costs.

For our final determination we apply the same approach as for the draft determination. Taking account of company representations, we have revised our approach to the calculation of the mix of operating and capital expenditure following our totex interventions.

In order to calculate the mix of operating and capital expenditure we follow the approach set out in ‘Securing cost efficiency technical appendix’. We set out how we apply the technical intervention in the ‘Aligning risk and return technical appendix’ and we have published our calculation of the PAYG rates for each company alongside our determinations

Following our assessment of financeability, we are increasing PAYG rates for all years for all wholesale controls by 2.08% to increase cash flows in the 2020-25 period and to align to credit ratios targeted by the company on a notional basis, bringing forward £41 million of allowed revenue from future periods. We set out our financeability assessment in section 5.2.

The movements in PAYG rates between the company plan, the draft determination and final determination reflect the differences in the mix of operating and capital expenditure in our totex allowance along with the increase to PAYG rates for notional financeability in the final determination.

4.2.2 Opening RCV adjustments

As part of its business plan Wessex 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 Wessex 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 follow the approach set out in ‘IN 18/09 Guidance for reporting operating leases in PR19 business plans’. We use the adjustment proposed in the company business plan.

Table 4.5: Opening RCV, 1 April 2020 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources
RCV – 31 March 2020	1,133.9		2,076.8	
% of RCV allocated by control	5.76%	94.24%	94.39%	5.61%
RCV – 31 March 2020	65.3	1,068.6	1,960.4	116.5
Midnight adjustments to RCV	-0.0	-38.5	-114.5	N/A
Midnight adjustments relating to operating leases	-	0.6	0.3	-
Opening RCV – 1 April 2020	65.3	1,030.6	1,846.2	116.5

4.2.3 Allowed return on capital

Companies are allowed a return on the RCV, equal to the allowed return on capital.

Wessex Water's revised business plan incorporates the early view allowed return on capital for the wholesale price controls of 3.30% - CPIH deflated (2.30% - RPI deflated) that we state in the PR19 methodology. This figure is a reduction from the company's proposal of 3.60% - CPIH deflated (2.60% - RPI deflated), from its original business plan. The allowed return on capital for the wholesale price controls in our final determinations is 2.92% – CPIH deflated (1.92% – RPI deflated). We set out the basis for the allowed return on capital in our 'Allowed return on capital technical appendix'.

The PR19 methodology confirmed we are transitioning to CPIH as our primary inflation index 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 4.6 and table 4.7 set out the opening and closing balance for each component of RCV as of 1 April 2020 and 1 April 2025 respectively.

The PR19 methodology confirms our protection of the value of the RCV as at 31 March 2020 across each of the wholesale price controls. This applies to the RCV that is defined as 'RPI inflated RCV' and 'CPIH inflated RCV' in tables 4.6 and 4.7; this RCV is run-off (or amortised) over time. Totex that is added to the RCV from 1 April 2020 is stated as 'post 2020 investment'.

In determining the 'Allowed return on capital' revenue building block, we apply the relevant deflated allowed return on capital to the average RCV for the year for each component (RPI inflated, CPIH inflated and post 2020 investment). This results in an allowed return on capital for each wholesale control over the period 2020-25 as set out in table 4.8.

Table 4.6: 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	32.6	515.3	923.1	58.2	1,529.3
CPIH inflated RCV	32.6	515.3	923.1	58.2	1,529.3
Other adjustments	-	-	-	-	-
Total RCV	**65.3**	**1,030.6**	**1,846.2**	**116.5**	**3,058.5**

Table 4.7: 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	24.8	445.1	803.8	35.2	1,308.9
CPIH inflated RCV	23.5	416.2	744.6	33.4	1,217.7
Post 2020 investment	24.3	128.8	677.9	25.9	856.9
Other adjustments	-	-	-	-	-
Total RCV	72.7	990.1	2,226.2	94.6	3,383.5

Table 4.8: Allowed 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	2.7	46.0	82.7	4.4	135.9
CPIH inflated RCV	4.1	67.9	121.8	6.6	200.3
Post 2020 investment	2.5	10.0	54.2	1.8	68.5
Other adjustments	-	-	-	-	-
Allowed return on capital	9.3	123.9	258.7	12.8	404.8
Company April 2019 – return on capital	11.0	144.9	308.1	15.1	479.2

Note allowed 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 allowed return on capital for each year of the price control for each wholesale control is shown in the 'Wessex Water - Allowed revenue appendix' in tables 4.1 to 4.4.

4.2.4 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 4.9 sets out the resultant RCV run-off revenue for each component of RCV for each wholesale control.

Table 4.9: RCV run-off on the RCV (5 year) (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
CPIH inflated RCV	9.1	99.1	178.5	24.8	311.5
RPI inflated RCV	9.1	92.2	158.7	25.1	285.2
Post 2020 investment	6.1	15.0	82.6	6.1	109.8
Total RCV run-off	24.3	206.2	419.8	56.1	706.4

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).

For the draft determination, we applied Wessex Water's RCV run-off rates which is to match the charge for current cost depreciation. Wessex Water does not make any representations in relation to RCV run-off rates and we continue to apply the company's RCV run-off rates for the final determination.

Table 4.10 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 and final determinations.

Table 4.10: RCV run-off rates for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources
Company April 2019 (%)	6.40%	3.99%	3.99%	10.24%
Draft determination (%)	6.40%	3.99%	3.98%	10.23%
Final determination (%)	6.40%	3.99%	3.98%	10.25%

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 'Wessex Water - Allowed revenue appendix' in table 5.1 to able 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, and the inflation correction to the RCV from the capital expenditure incentive scheme (CIS). 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. ‘Wessex Water - Accounting for past delivery final decisions’ provides a detailed explanation of all policy interventions we are making in the models. Table 4.11 summarises our interventions. Table 4.12 sets out the resulting adjustments to revenue and the RCV. The ‘Wessex 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 4.5.

The ‘Accounting for past delivery technical appendix’ sets our further details on our reconciliation of PR14 incentives, the residential and business retail service incentive mechanisms and our deliverability assessment.

For outcome delivery incentives, the information we use 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 plan 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 are designating 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 do not expect a significant impact on bills. If, contrary to expectations the bill impact is more significant, we 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 use forecast information for 2019-20 to reconcile these outcome delivery incentives. For the avoidance of doubt, no application is required in 2019 for in period determinations.

Table 4.11: Reconciliation of PR14 incentives, interventions (2017-18 prices, unless otherwise stated)

Incentive	Intervention(s)
Outcome delivery incentives	We are intervening to correct a company error. For performance commitment D3 (water supply interruptions > 3 hours), Wessex Water incorrectly uses the underperformance incentive rate to calculate the outperformance payments in the 2018-19 and 2019-20 reporting years. Overall, our interventions reduce the water revenue adjustment at the end of the 2015-20 period from £0.428 million to £0.051 million.
Residential retail revenue	We are intervening to round the company's modification factor figures to 2 decimal places to ensure consistency with the 'PR14 reconciliation rulebook'. Overall, our minor interventions reduce the total residential retail revenue payment at the end of the 2015-20 period from - £3.786 million to - £3.779 million.
Wholesale revenue forecasting incentive mechanism	No interventions required.
Totex	We are intervening to change the 'Water: Final menu choice' and 'Sewerage: Final menu choice' figures to full decimal accuracy as calculated in the PR14 populated final determination models. Our minor interventions reduce the water totex revenue adjustment at the end of the period from - £2.556 million to - £2.555 million and increase the wastewater totex revenue adjustment at the end of the period from - £6.925 million to - £6.940 million.
Land sales	No interventions required.
Residential retail service incentive mechanism	We are intervening to set Wessex Water's residential retail service incentive mechanism adjustment to +3.91% of residential retail revenue to reflect its performance from 2015-16 to 2018-19. This equates to +£7.252 million in total revenue over the period. This reduces revenue relative to the company's estimate of the mechanism's impact and is driven by updating our analysis to take account of companies' finalised scores for 2018-19.
PR09 blind year adjustments	No interventions required.

Table 4.12: Reconciliation of PR14 incentives, 2020-25 (£ million, 2017-18)

Incentive	RCV adjustments		Revenue adjustments	
	Company view[1]	Ofwat view[1]	Company view[1]	Ofwat view[1]
Outcome delivery incentives	0.8	0.8	28.6	28.2
Residential retail revenue	N/A	N/A	-3.8	-3.8
Wholesale revenue forecasting incentive mechanism	N/A	N/A	-20.6	-20.6
Totex	-91.7	-91.7	-9.5	-9.5
Land sales	-1.1	-1.1	N/A	N/A
Residential retail service incentive mechanism	N/A	N/A	10.9	7.3
PR09 blind year adjustments[2]	-61.1	-61.1	-0.4	-0.4
Water trading	N/A	N/A	0.0	0.0
Other adjustments	0.0	0.0	0.0	0.0
Total	**-153.1**	**-153.1**	**5.2**	**1.1**
Total post profiling[3]	N/A	N/A	5.2	1.1

[1] The company view is based on data from the 15 July 2019 company submissions. It does not reflect impacts of the subsequent representations. The Ofwat view is based on the 15 July 2019 company submissions and takes account of representations and any interventions we are making.
[2] PR09 blind year adjustments includes the CIS RCV inflation correction. We show these separately in 'Wessex Water - Accounting for past delivery appendix'.
[3] 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.

4.4 Other allowed revenue

Other components of allowed revenue are:

- The fast track reward, where applicable;
- 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 final 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.
- 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 4.13: Calculation of other allowed revenue (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Fast track reward	0.0	0.0	0.0	0.0	0.0
Tax	2.6	13.7	11.6	7.3	35.2
Grants and contributions (price control)	0.0	23.4	45.1	0.0	68.5
Deduct non-price control income	0.0	-5.0	-4.0	-8.5	-17.5

4.4.1 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 and enacted UK corporation tax rates and associated reliefs and allowances as at 30 September 2019. Any future changes to tax rates and allowances will be taken account of in the tax reconciliation model, further details are set out in the 'Aligning risk and return technical appendix'.

Wessex Water provided information in data tables relevant to the calculation of the expected tax charge. Wessex Water also provides two sets of revised tax information in its representation, to reflect changes to totex in the draft determination and additionally to reflect its view of capital expenditure. As the amount of capital expenditure allowed in the final determination is closest to the amount allowed in the draft determination, we accept the information provided by the company in appendix R4.1 and apply this to the final determination. Our financial model calculates a higher level of taxable profits for the final determination than the draft determination, so the resulting tax allowance is higher.

Table 4.14: Tax (£ million) – Breakdown by price control

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Tax	2.6	13.7	11.6	7.3	35.2

4.4.2 Grants and contributions

Companies receive grants and contributions from developers towards company expenditure to:

- reinforce the network as a consequence of new properties being connected;
- connect a new property (e.g. the meter and connection pipe);
- provide new water mains or public sewers (i.e. requisitions); and
- move an existing main or sewer or other apparatus at the request of a third-party (i.e. diversions).

Grants and contributions (price control)

Grants and contributions before the deduction of income offset allowances (i.e. 'gross' grants and contributions) are used to calculate net totex for cost sharing and within the developer services reconciliation adjustment, as explained in 'Our approach to regulating developer services'.

Grants and contributions after the deduction of income offset allowances (i.e. 'net' grants and contributions) are used to calculate net totex for use in the financial modelling. This ensures that income offset allowances, that are funded by existing customers rather than developers, are captured within net totex that is used to calculate pay-as-you-go revenue and RCV additions. Developer services costs that are funded by developers are excluded from net totex, and are instead treated as grants and contributions within the financial model (as shown in tables 3.2 and 4.1).

Our approach to calculating 'gross' and 'net' grants and contributions is outlined in 'Cost efficiency technical appendix'. The main difference from draft determinations is that we no longer estimate a cost recovery rate for each company. The starting point for each calculation is 'gross' grants and contributions reported in companies' business plans. To arrive at 'net' grants and contributions we deduct company-specific income offset allowances rather than assume a common recovery rate for all companies. We also apply the modelled base cost efficiency challenge to grants and contributions to ensure alignment between grants and contributions and cost assessment.

Table 4.15 below shows our assumed amounts of 'gross' grants and contributions (price control) that is used to calculate net totex for cost sharing. This includes a one-off contribution of £4.6 million Wessex Water did not originally include within grants and contributions in its business plan:

- Contribution from developers for the North Bristol Sewer, as Wessex Water describes in its business plan.

Table 4.15: Grants and contributions before the deduction of income offset allowances (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Grants & contributions (before deduction of income offset allowances)	0.0	25.3	49.4	0.0	74.7

Table 4.16 below shows our assumed amounts of 'net' grants and contributions (price control) that is captured within net totex that is used to calculate pay-as-you-go revenue and RCV additions.

Table 4.16: Grants and contributions after the deduction of income offset allowances (price control) (£ million) – breakdown by price control and category

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Grants & contributions (price control)	0.0	23.4	45.1	0	68.5

Grants and contributions (non-price control)

For final determinations, we set non-section 185 diversions income outside of the price control, as explained in 'Our approach to regulating developer services'.

Table 4.17 below shows our assumed amounts of grants and contributions (non-price control) that are made up of non-section 185 diversions income.

Table 4.17: Grants and contributions (non-price control) (£ million) – breakdown by price control and category

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Grants & contributions (non-price control)	0.0	0.9	4.0	0.0	4.9

4.4.3 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. For the final determination we confirm that diversions which are not requested under section 185 of the Water Industry Act 1991, for example, works under the New Roads and Street Works Act 1991 or those associated with High Speed 2, are also excluded from the price control. These are capital contributions and so do not get shown in tables 4.1 and 4.18.

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 final determination.

Table 4.18: Non-price control income (£ million) – Breakdown by price control

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Non-price control income	0.0	-5.0	-4.0	-8.5	-17.5

Note negative numbers represent a deduction from the allowed revenue.

4.4.4 Uncertainty mechanisms

Given the range of risk mitigation measures included in price controls, the PR19 methodology said that final determinations would only include bespoke uncertainty mechanisms where robust and compelling evidence was presented for that item. Wessex Water does not propose any uncertainty mechanisms.

We are including a PR24 reconciliation mechanism for business rates in our final determination for Wessex Water along with all other companies because:

- There is uncertainty about business rates costs because the Valuation Office Agency (VOA) will be carrying out revaluation exercises during 2020-25, and increases (or decreases) in cost levels could be material.
- Companies can only exercise limited control over cost levels by engaging with the VOA and, possibly, by considering the business rate implications of asset development choices.

We are also including a PR24 reconciliation mechanism for Environment Agency abstraction licence costs in our final determination for Wessex Water along with all other companies serving England[11] because:

- The Environment Agency expects to consult on changes to its basis for setting abstraction licence fees during 2020 meaning that there is material uncertainty about company cost levels in 2020-25.
- Companies can only exercise limited control over cost levels by engaging with the consultation process and providing accurate information when required for licence fee setting purposes.

In each case, the cost variance to the company's PR19 cost allowance will be subject to a 75 (customer share):25 (company share) symmetrical sharing rate in the totex reconciliation at PR24. This means that the company will still be incentivised to manage costs efficiently, whilst receiving appropriate protection against material cost increases. Conversely, customers will receive a benefit if outturn costs are lower than the allowance levels we have set.

[11] The Environment Agency's responsibilities apply only to England.

5 Risk analysis and financeability

Key changes from the draft determination

The key changes made to the risk analysis and financeability elements of the draft determination are:

- For the final determination, we apply our view of a sector risk range for totex, C-Mex, D-Mex and financing costs (including embedded debt) as part of our assessment of risk ranges for our final determination. We also apply updated views on risk ranges for outcome delivery incentives, determined under our Outcomes Framework.
- We revise our base notional dividend yield to 3.00% (from 3.15% in the draft determination) with dividend growth of 1.18%. This takes account of the allowed cost of equity in the final determination. We restrict the base dividend yield further to 2.01% in our notional financeability assessment for Wessex Water due to the high level of RCV growth in the final determination.
- We revise our approach to pension deficit recovery costs in our financial modelling of the notional company to match cash out flow for pensions deficit recovery costs to the allowed funding.
- For the final determination we advance allowed revenue by £41 million to ensure our determinations are financeable on the basis of the notional structure.

We consider the final determination is financeable on the basis of the notional capital structure.

Wessex Water is responsible for ensuring it delivers its obligations and commitments in the context of its choice of capital and financing structure. Wessex Water may need to take further steps to improve its financial resilience. We will closely monitor changes in levels of the company's gearing, credit ratings and other key financial metrics during 2020-25.

In this section we discuss the possible range of returns for the notional financial structure. In section 5.1 we present the risk ranges of our final determinations for Wessex Water. We comment also on the financeability of the final determination and any adjustments that we have made to the bill profile in section 5.2. We comment on the financial resilience of the actual company structure in section 5.3.

5.1 Risk analysis

The PR19 methodology set out that we expect companies to demonstrate a clear understanding of financial risk to the delivery of their business plans and to explain and demonstrate how they manage and mitigate that risk. It required 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 the company's assessment of P10/P90 confidence limit values[12].

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 it can differ between companies because the blended real cost of equity will vary according to the proportion of the RCV (and notional regulatory equity) that is indexed to RPI or CPIH[13]. The proportion of RCV (and notional regulatory equity) that is linked to RPI or CPIH varies 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.

In addition, base RoRE includes the margin for the retail price control. While the retail margin is 1% on retail and wholesale costs for all companies, it varies between companies when measured against regulatory equity.

Table 5.1 and figure 5.1 sets out the annual average risk ranges for Wessex Water in our final determination. The risk ranges show the plausible range of company returns based on Wessex Water's RCV and cost data for 2020-25, the allowed equity return and a notional gearing level of 60%. The final determination ranges reflect our approaches to the assessment of risk ranges for outcome delivery incentives and our approach to apply a common approach to the assessment of risk ranges for totex and financing costs for the sector.

Our PR19 methodology aims to increase the strength of financial incentives to better align the incentives placed on companies with the interests of customers. Our determinations aim to be stretching to encourage companies to deliver further efficiencies and better levels of service to customers. The incentives we put in place incentivise companies to outperform the cost allowances and performance commitments set in our determinations, our incentive mechanisms also aim to protect customer interests where companies underperform.

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

[13] 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.

Wessex Water has a significant scope to earn upside from outperformance as well as the risk of lower returns from underperformance with modest negative skew overall to its overall risk range, driven primarily by outcome delivery incentives. Our view is that an efficient company should be able to achieve the base return on the notional structure. The onus is on companies to manage the risk and effect of any downside scenarios while maintaining financial resilience.

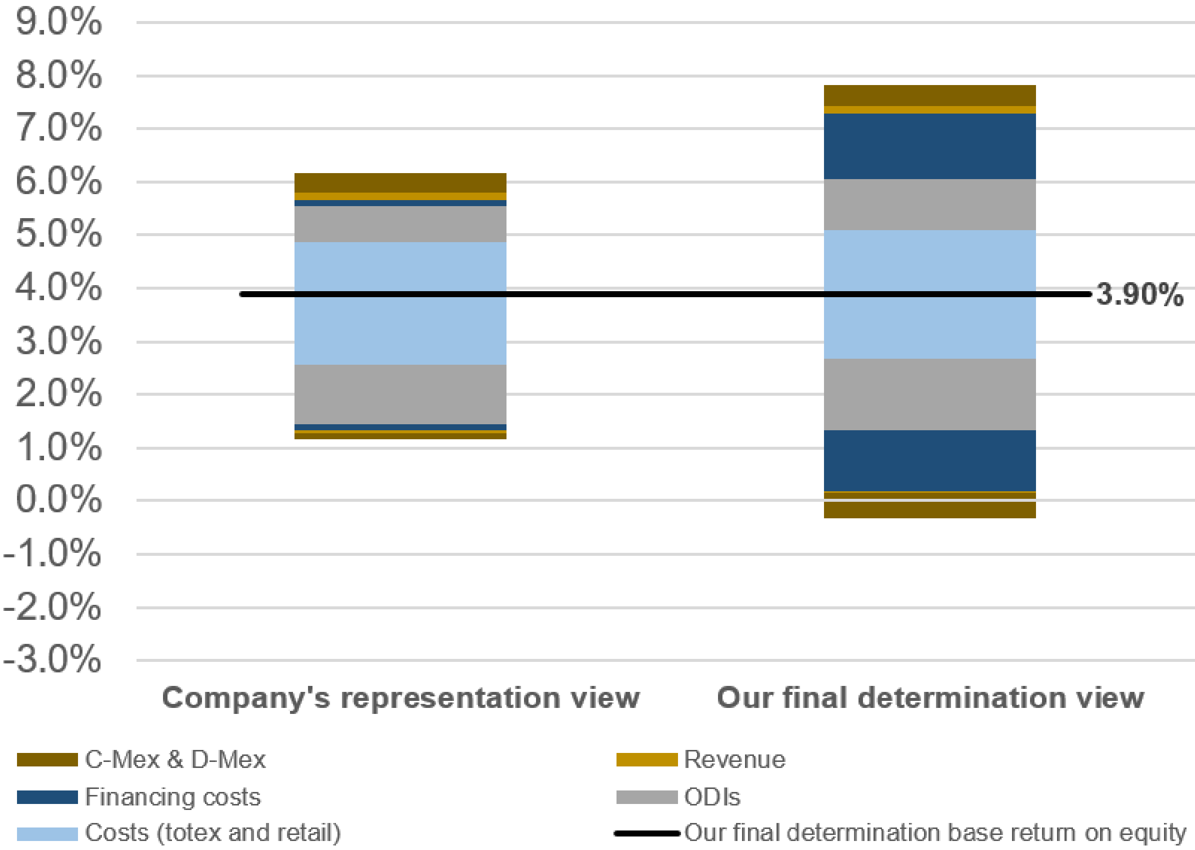
We asked companies to update their risk ranges in their representations. We state those risk ranges in table 5.1 against the cost allowances and base return on regulatory equity in our final determinations. These risk ranges are not fully comparable with our final determination ranges as they take account of company views of the cost efficiency and outcome delivery incentive stretch in our draft determinations which we revise for the final determinations.

Table 5.1: Wessex Water final determination risk ranges

	Range implied in company representation		Final determination ranges	
Base RoRE	-		3.90%	
Risk ranges	**Lower bound**	**Upper bound**	**Lower bound**	**Upper bound**
Totex	-1.19%	0.85%	-1.08%	1.06%
Outcome delivery incentives	-1.14%	0.67%	-1.35%	0.98%
Financing costs	-0.12%	0.12%	-1.16%	1.23%
Retail costs	-0.13%	0.13%	-0.13%	0.13%
C-MeX and D-MeX	-0.12%	0.36%	-0.42%	0.35%
Revenues (includes Retail)	-0.03%	0.15%	-0.03%	0.15%
Total	**-2.73%**	**2.27%**	**-4.17%**	**3.89%**

[1] We calculate the company's range based on the resubmitted ranges the company states in its representation that are in monetary terms. As we have calculated the ranges in the financial model used for the final determination we have not stated the company's view of the base equity return.

Figure 5.1: Company representation and final determination RoRE ranges for Wessex Water



Note representation view is based on Ofwat's calculation of the RoRE ranges for the company using the final determination financial model and is based on the company submission that accompanied its representation. To facilitate comparison with our final determination, we present the risk range around the base allowed return on equity for Wessex Water's final determination.

The final determination risk range reflects the following interventions that we make for all companies:

- The totex range is our assessment of the plausible range based on evidence of the historic sector performance and taking account of the company's cost sharing rates that apply in its final determination.
- The financing cost risk range is based on our assessment of the range for a notional water company including both embedded and new debt.
- The outcome delivery incentive risk range has been determined under our Outcomes Framework as set out in table 2.4.
- The C-MeX risk range is calculated as 12% upside and 12% downside of Residential Retail Revenue, reflecting the cap and collar limits for this incentive.
- The D-Mex risk range is calculated as 6% upside and 12% downside of developer services revenue, reflecting the cap and collar limits for this incentive.

Wessex Water's C-MeX risk range in its business plan was upside only reflecting its expected good performance, however, consistent with our approach for all companies we present the full C-MeX range in our determination view presentation.

We set out further details on the issues above in the 'Aligning risk and return technical appendix'.

5.2 Financeability

Companies in the water sector must make significant investment both to maintain and deliver required enhancements to the asset base. Therefore it is important that companies are able to access finance on reasonable terms if they are to meet their obligations and commitments to customers. In recent price review periods, almost all of the new investment in this sector has been funded by debt and retained earnings, however, there may be a requirement for direct equity investment where there is a very significant investment requirement, to ensure companies maintain good credit quality.

We must set our determinations in the manner which we consider best calculated to satisfy our duties. Our financeability assessment considers whether the allowed revenues, relative to efficient costs, are sufficient for an efficient company to finance its investment on reasonable terms and to deliver its activities in the long term, while protecting the interests of existing and future customers. In carrying out our financeability assessment, we assume that an efficient company is able to deliver a level of performance that is consistent with our efficient cost allowances.

Our financeability assessment assumes there is no out/underperformance with respect to the levels of service provided to customers. Our approach protects the interests of customers as it ensures companies and their investors bear the consequences of inefficiency and underperformance in delivery of their obligations and commitments to customers.

We carry out our financeability assessment on the basis of the notional capital structure that underpins our allowed return on capital as companies are entitled to determine the financial structure appropriate for their circumstances, provided they bear the associated risks. For example, if a company's choice of financing structure results in it incurring higher debt costs than reflected in our view of efficient allowed returns, the company will bear this cost. The approach is consistent with meeting all of our regulatory duties and with the approach we and other regulators have taken in previous reviews.

Our PR19 methodology requires companies to provide Board assurance that the business plan is financeable on both the notional and their actual capital structures and 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.

In its April business plan, Wessex Water set out that its ‘Board assures that the plan is financeable on both Ofwat’s notional capital structure and on the company’s actual capital structure, and that the plan protects customers’ interests in the short and long term.’ The company states that its plan targeted a credit rating of Baa1 on a notional basis.

Subsequently, we asked companies to provide additional Board assurance, in their representation to our draft determination, that they will remain financeable, taking account of the reasonably foreseeable range of plausible outcomes of their final determination including evidence of further downward pressure on the allowed return. Companies also took account of these issues in the risk analysis presented in section 5.1.

In its representation to our draft determination, Wessex Water sets out that the Board concludes it is not possible to provide assurance that the company is financeable based on the draft determination package on either a notional or actual basis. It bases this conclusion on an assessment that the draft determination does not deliver reasonable returns on capital and it does not take sufficient account of financial resilience. The company states the Board are fully aware of the licence duties and obligations and is considering all options available to secure financial resilience. Wessex Water states that if the representations are accepted, the Board would be able to make such an assurance.

We have carefully considered the representations made by Wessex Water including the qualified statements on assurance. We have considered this in the context that the allowed return which is based on market data is lower than our draft determination and the basis on which the company provided assurance about the financeability of its plan. However we are satisfied that the market data supports our view that allowed returns are sufficient to reward investors for the risks they face in a sector that already benefits from significant risk protections[14]. We set out the revisions we are making to our performance commitments and cost allowances elsewhere in this document. We consider the revenues allowed in our final determination, which reflect our assessment of efficient allowed costs, are sufficient for Wessex Water to meet its obligations and commitments to customers on the basis of the notional structure. We comment on the financial resilience of the actual structure in section 5.3.

[14] These protections include appointments that confer effective monopolies for specified geographic regions; our commitment to remunerate efficient investment in the RCV as at 31 March 2020; price limit reopeners; inflation indexation; totex cost sharing; allowances for special cost factor claims; outcome delivery incentives; and reconciliation mechanisms for wholesale revenue, the cost of new debt and tax

Our financeability assessment uses a suite of financial metrics based on those used in the financial markets and by the credit rating agencies. The key financial ratios are primarily cash flow measures of a company's earnings, leverage and ability to service its debt interest and principal repayments. We provide further detail of the key ratios in the 'Aligning risk and return technical appendix'.

RCV growth in Wessex Water's final determination exceeds 10%. Therefore consistent with our policy approach set out in the 'Aligning risk and return technical appendix' we consider it is appropriate for equity to contribute to the funding of this growth. In our financeability assessment we restrict the base dividend yield to maintain gearing around the notional level of 60% in 2025, consistent with the gearing level that underpins the calculation of our allowed return. The resulting dividend yield we assume is 2.01% with dividend growth of 1.18%.

In table 5.2 we set out some of the financial ratios provided by the company in its business plan, and in our draft and final determinations.

Our financial modelling of the notional company suggests that Wessex Water faces a financeability constraint. Therefore, consistent with the approach in the PR19 methodology, our final determination increases PAYG rates to bring forward £41 million of revenue to improve cash flows and the financial ratios. The financial ratios stated in table 5.2 include the effect of the increase to PAYG rates.

Our in the round assessment of notional financeability is made on the basis of the financial ratios from our financial model. It takes account of the evidence that the company provides plan regarding the levels and thresholds of the financial ratios that underpinned its assurance statement on the notional financeability in its business plan (also stated in table 5.2). We note that the qualified statements in the company's representations were made in the context of the draft determination. Our assessment of notional financeability for the final determination is made in the context of changes made in our final determination. We consider that Wessex Water's final determination is financeable based on the allowed revenues which include a reasonable allowed return on capital. The final determination is sufficient to ensure it will be in a position to deliver its obligations and commitments to customers.

Table 5.2: Ofwat calculation of key financial ratios – notional structure before reconciliation adjustments (5 year average)

	Business plan	Draft determinations	Final determinations
Gearing	62.94%	61.33%	60.09%
Interest cover	3.82	3.77	4.13
Adjusted cash interest cover ratio (ACICR)	1.76	1.67	1.50
Funds from operations (FFO)/Net debt	9.35%	9.23%	9.81%
Dividend cover	1.97	2.42	4.17
Retained cash flow (RCF)/Net debt	6.74%	7.26%	8.52%
Return on capital employed (RoCE)	6.21%	5.87%	6.03%

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.

In presenting the ratios for our final determinations we exclude the effect of differing accounting treatment of infrastructure renewal expenditure from the numerator of the adjusted interest cover ratio to improve comparability of the financial ratios between companies. If calculated on a consistent basis with the final determination, Wessex Water's draft determination adjusted interest cover would be 1.37x.

Wessex Water also sets out in its representations that the Ofwat financial model overstates the adjusted interest cover financial ratio due to the treatment of pension deficit recovery payments. We correct the treatment of pension deficit in the financial ratios for the final determination which lowers the financial ratios compare to our draft determinations. We discuss this issues further in the 'Aligning risk and return technical appendix'.

Wessex Water's financial ratios in its April business plan tables for the notional company take account of reconciliation adjustments. We set out in the table the ratios excluding these adjustments consistent with our assessment of notional financeability. We verified the recalculation of the ratios with the company.

We set out the average PAYG and RCV run-off rates along with the RCV growth over 2020 to 2025 for Wessex Water in table 5.3. RCV growth for the final determination is lower than in the company's April plan and in the draft determination. Overall, changes to allowed expenditure, the revised approach to determining the mix of operating and capital expenditure and the uplift to PAYG rates means less expenditure is added to RCV. We are not amending Wessex Water's RCV run-off rates.

Table 5.3: PAYG rates, RCV run-off and growth

	PAYG	RCV run-off	RCV growth
Company April 2019	47.3%	4.24%	15.29%
Draft determinations	47.5%	4.25%	12.22%
Final determinations	51.5%	4.24%	10.63%
The PAYG and RCV run-off rates are averages across five years and across all wholesale controls. We set out the changes we make to PAYG and RCV run-off rates along with the five year average for each control in section 4.2 and annual PAYG and RCV run-off rates in the 'Wessex Water - Allowed revenue appendix'. Changes to totex allowances and PAYG rates for individual controls can result in small changes to the average RCV run-off rates presented in the table above.			

In assessing the financeability of the notional company, we consider the headroom available in the final determination to allow the company to continue to meet its annual interest costs. We estimate 5 year headroom of £138 million above an adjusted cash interest cover of 1.0 times, providing headroom to our in period totex downside of £60 million and outcome delivery incentives downside of £66 million calculated as 1% return on regulatory equity. We set out further detail in relation to our approach to assessing headroom within final determinations in the 'Aligning risk and return technical appendix'.

5.3 Financial resilience

It is the responsibility of each company to choose and manage its financial structure to maintain financial resilience in the long term. A company's financial resilience can be impacted by its financing choices, for example, where a company chooses a structure with a high level of gearing, this can reduce available headroom to withstand cost shocks. Interest costs, levels of dividends paid and company performance in delivering obligations and commitments to customers can also impact on financial resilience.

Wessex Water is responsible for the financeability of the company and the maintenance of long-term financial resilience under its actual structure. We comment further on the financial resilience of the company's actual structure in figure 5.2.

Figure 5.2: Financial resilience of Wessex Water's actual financial structure

Wessex Water reported gearing of 64.7% at 31 March 2019. In its business plan it proposes a small increase in gearing to 68.8% in 2021 and 69.1% in 2025.

At the time of our determination it had a credit rating of A3 (negative) from Moody's and BBB+ (negative) from S&P and BBB+ (negative) from Fitch. Wessex Water has indicated that it will not pay out dividends if it will lead gearing to increase above 70%.

In its representation, the company provided board assurance that the company is financially resilient under its plan but set out it is not able to provide further assurance about its financial resilience until it has seen the impact of any changes made by Ofwat.

As stated in section 5.2 we consider the company to be financeable on the notional basis and there is a need for companies to ensure that that they are also financially resilient under their actual structures.

However, we have not accepted all of the company's representations and the allowed return is lower in the final determination reflecting market expectations on the cost of finance. The company may need to take further steps to improve its financial resilience.

As set out in section 7, the company has proposed a base dividend for 2020-25 that is consistent with its intention to maintain gearing below 70%. When considering the payment of any dividend we expect the Board to take account of the financial resilience of the company.

We will closely monitor changes in levels of the company's gearing, credit ratings and other key financial metrics during 2020-25 to test that adequate steps are being taken by management and that financial resilience is being maintained.

In its future reporting, we expect the company to explain clearly in its long-term viability statement how the Board has identified and assessed the potential risks to its financial resilience and the mitigating actions it is taking to address those risks. Wessex Water has committed to assess its financial resilience beyond 2025 in its next long-term viability statement.

6 Affordability and bill profile

Key changes from the draft determination

The key changes made to the affordability elements of the draft determination are:

- We revise Wessex Water's average bill profile from a large reduction upfront followed by flat real terms prices, to have a smaller reduction upfront, followed by a gradually falling real price over 2020–25.

6.1 Bill profile

Wessex Water proposes an average bill profile with a 5.9% reduction. Our bill profile contains a significantly greater reduction of 13% over 2020-25.

Wessex Water states in its August representation that Ofwat should consider re-profiling cash-flows to avoid future bill increases post 2025, while delivering greater resilience in the short term. We disagree with Wessex Water that re-profiling over the longer period is necessary as a matter of routine; our models and assessments allow for efficient expenditure where there is sufficient and convincing evidence of need. In exceptional cases, for example where there is high RCV growth or challenging financial ratios, we have re-profiled revenues to protect customers from bill shock in 2025-30.

We are changing our approach to setting average bill profiles from draft determinations, where the majority of companies were set profiles that included upfront bill cuts followed by flat real terms profiles, which would increase in nominal terms once inflation is taken into account. Wessex Water's bill profile changes to a gradual real terms reduction to provide customers with as much stability as possible in what they actually pay, post inflation (i.e. nominal bills). We set bills in this way for the following reasons;

- Research shows customers prefer consistent, predictable bills;
- Flat nominal bills will help households, particularly those who are financially vulnerable, to plan their finances;
- Profiling in this way is easy to understand and communicate to customers;
- Profiling bills in this way has extensive support from stakeholders including water companies, customer challenge groups and the Consumer Council for Water;
- Company revenues fall less sharply in 2020 with a gradual bill reduction, reducing impact of any step change in allowances.

Due to deteriorating financial ratios at the end of the period, unlike for some other companies we have not been able to model a completely flat nominal bill for Wessex Water. The company still has a gradual real terms bill reduction over the period but Wessex Water's average bills will go up year-on-year when inflation is added. We note that this increase will be below that which would have occurred under the company's draft determination bill profile.

Wessex Water raised a concern in its representation that as we profile revenue on a combined basis, its individual water and wastewater bills could differ. We have profiled the bills to ensure that there are no large differences between the water and wastewater bill profiles.

Table 6.1: Average bills (2017-18 CPIH deflated)

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Company April 2019	£457	£417	£417	£421	£425	£430
Draft determinations	£457	£390	£390	£390	£390	£390
Final determinations – before reprofiling	£457	£394	£399	£408	£405	£407
Final determinations	£457	£407	£405	£402	£400	£398

Throughout the price control we have put a strong emphasis on companies planning for the long term, both in terms of their goals and their bills. Following actions we set out at initial assessment of business plans, nine companies (Wessex Water was not one of these) undertook additional customer testing on their long-term bill profiles with several making adjustments as a result. We expect companies to continue to pay attention to this issue, taking customer views into account and planning in a way that ensures they control costs into the future.

6.2 Help for customers who are struggling to pay

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

In addition, Wessex Water commits to:

- increase the number of customers that receive support through social tariffs and WaterSure from around 43,000 in 2019-20 to 86,000 by 2024-25;
- introduce an free energy switching service to enable its customers to save money on energy bills;
- undertake 40,000 Homecheck water efficiency visits to help customers reduce their water use and their bill;
- continue to work with and fund third party debt advice partners; and
- continue to support projects which improve financial capability to benefit a diverse group of customers.

Wessex Water has four bespoke performance commitments on affordability and vulnerability, which will require it to:

- improve customer views of value for money;
- take 2,300 successful referrals per year from advice agencies for its affordability assistance schemes;
- achieve and maintain its British Standards Institution (BSI) standard for accessible services and maintain its Customer Service Excellence Award throughout 2020-25;
- increase the discounts given per 10,000 customers through its social tariff from £55,040 in 2019-20 to £87,029 by 2024-25.

Companies will be reporting their performance against the Priority Services Register (PSR) 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 6.2 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 6.2: Allowed revenue by year (£ million, 2017-18 prices)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Water resources	17.6	18.3	18.3	18.4	18.5	91.1
Water network plus	145.2	146.3	146.6	146.9	147.1	732.0
Wastewater network plus	251.5	253.4	253.9	254.1	254.5	1,267.4
Bioresources	30.3	31.5	31.5	31.6	31.6	156.6
Residential retail	32.8	29.4	29.6	29.6	29.7	151.1
Total	477.4	478.8	479.9	480.7	481.4	2,398.2

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 6.3 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 6.3: Base Revenue and K factors by charging year (2017-18 prices)

	Base (£m)	2020-21	2021-22	2022-23	2023-24	2024-25
Water resources	17.6	0.00%	3.95%	0.40%	0.50%	0.44%
Water network plus	145.2	0.00%	0.78%	0.31%	0.21%	0.13%
Wastewater network plus	251.5	0.00%	0.75%	0.28%	0.13%	0.16%

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 and revenues’. Further details of how we have applied the methodology to Wessex Water is set out in the ‘Bioresources revenue to remunerate fixed costs – Wessex Water’ model.

Table 6.4 sets out our view of the share of revenue to remunerate fixed costs.

Table 6.4: Classification of proportion of revenue to remunerate fixed costs and variable costs for bioresources

	Company view	Draft determination	Final determination
Part 1: Revenue to remunerate fixed costs £ million 2017-18 FYA CPIH deflated prices (2020-25)			
Total return on capital	N/A	14.2	12.8
Total run-off	N/A	58.0	56.1
Revenue to service RCV	**N/A**	**72.2**	**68.9**
Local authority and Cumulo rates for both treatment and disposal	N/A	9.1	9.1
Fixed share of other direct costs of treatment and disposal	N/A	2.8	2.4
Fixed share of other indirect cost of treatment and disposal	N/A	9.2	8.1
Fixed PAYG revenue	**N/A**	**21.1**	**19.7**
Fixed share of revenue to cover tax	N/A	0.0	0.0
Pension deficit repair contributions	N/A	1.9	1.9
Other fixed costs	**N/A**	**1.9**	**1.9**
Revenue to remunerate fixed costs	**117.4**	**95.2**	**90.5**
Part 2: Variable revenue (£/TDS) 2017-18 FYA CPIH deflated prices (2020-25)			
Unadjusted revenue (£m)	167.1	169.7	156.6
Revenue to remunerate fixed costs	117.4	95.2	90.5
Revenue to remunerate variable costs (£m)	**49.7**	**74.5**	**66.1**
Forecast volume of sludge (TDS)	362,786	379,219	362,786
Variable revenue (£/TDS)	**136.9**	**196.4**	**182.2**

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 Wessex 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 6.5: Bioresources control

	2020-21	2021-22	2022-23	2023-24	2024-25	2020-25
Unadjusted revenue (£m)	30.7	31.0	31.2	31.6	32.1	156.6
Forecast volume of sludge (TDS)	71,145	71,785	72,260	73,118	74,478	362,786
Variable revenue (£/TDS)	N/A	N/A	N/A	N/A	N/A	182.2

As part of the draft determination process we asked the company to explain the boundaries between the appointed and non-appointed activities within its bioresources strategy and to clarify how the risks and benefits are shared with customers. The company provided insufficient detail in response to our action in its business plan submission on 1 April. Subsequently, we raised a number of queries to understand Wessex Water's methodology for determining what it considers to be the appropriate value charged by the appointed business to the non-appointed business for the supply of biogas and biosolids produced during the sludge treatment process.

We were not convinced that the price of the biogas charged to the non-appointed business was the most appropriate value. While Wessex Water customers benefit from the company buying electricity at close to the wholesale price of electricity, we are not convinced that the charge for biogas reflects the costs of producing biogas nor its value in producing renewable energy. We are concerned that the company's approach may understate the price it should charge for biogas sold to the non-appointed business. We intervened in the draft determinations to adjust the value of the biogas transferred to the non-appointed business by reducing Wessex Water's revenue allowance by £10.2m.

Wessex Water opposed the proposed adjustment and made a number of representations. We agree with Wessex Water that there was an issue with the calculation of the adjustment and we have amended our view from £10.2m to £8.5m as a result. We identified that in Wessex Water's representation, it did not apply the correction consistently and therefore overstated the impact of the issue.

On the further points raised, Wessex Water has not provided any additional convincing evidence to justify its original approach. Overall it appears the appointed business may be making an inappropriately low charge for biogas supply to the non-appointed business. We are also not convinced why the appointed business pays the full retail cost of electricity purchases when this is not the market price that the non-appointed business would receive. This means that the non-appointed business benefits and Wessex's customers are materially worse off.

We are applying an adjustment of £8.5m to ensure that we protect customers, from paying more for their wastewater charges than they should.

We consider our approach better reflects the relationship between gas supply and income from electricity generation. It should still enable the non-appointed business to earn an appropriate return on the electricity generation assets and retain 100% of the Renewable Obligation Certificate (ROC) income.

This amounts to a reduction in revenue covered by customer bills and an addition in revenue coming from other sources of the amounts shown in table 6.6 below in each year and for the total AMP7 period.

Table 6.6: Intervention to reduce bioresources revenue

	2020-21	2021-22	2022-23	2023-24	2024-25	2020-25
Level of intervention (£m	1.697	1.697	1.697	1.699	1.696	8.487

We are not intervening in relation to biosolids income. Ofwat will be considering if any further action is required to satisfy itself that Wessex Water's costs and charging arrangements comply with transfer pricing obligations.

7 Putting the sector in balance

Key points

- Wessex Water is reported gearing of 64.7% as at 31 March 2019. Wessex Water forecasts that its level of gearing (68.8% by 2021 and 69.1% by 2025) will be close to trigger sharing payments under the gearing outperformance sharing mechanism in 2020-25, as set out in the 'Aligning risk and return technical appendix'. We are updating the gearing outperformance sharing mechanism to introduce a glidepath to the gearing level that the triggers sharing payments as set out in the 'Aligning risk and return technical appendix'.
- Consistent with the lower allowed return on equity in our final determination, we are revising our calculation of the dividend yield as a guide to the reasonable base dividend yield in the absence of out/underperformance in 2020-25. We set out that the acceptable level of base dividend yield can be expected to vary depending on the scale of a company's RCV growth in 2020-25 and future investment needs.
- Our current assessment of the company's proposed dividend policy indicates that the company is falling short in a number of areas and we expect greater transparency from the company when reporting on dividends paid over 2020-25 in the annual performance report.
- On executive pay, Wessex Water is in line with the 60% alignment to delivery for customers we identify as current good practice. We retain our expectation of the company that it will ensure its dividend and performance related pay policies demonstrate substantial alignment with the customer interest, underpinned by stretching performance targets throughout 2020-25.

In July 2018 we published our 'Putting the sector in balance: position statement'. The position statement sets 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 actual financial structures and performance related executive pay policies show appropriate alignment between returns to owners and executives and what is delivered for customers[15];
- companies with high levels of gearing share financing gains from high gearing with customers; and

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

- companies provide assurance and supporting evidence to demonstrate their long-term financial resilience and management of financial risks for the actual financial structure, taking account of their future investment needs.

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

In our final determinations, we have amended our gearing outperformance sharing mechanism to contain a glidepath. We explain this in the final determination 'Aligning risk and return technical appendix'.

Our assessment of Wessex Water's proposals is in table 7.1. We comment on the financial resilience of Wessex Water in section 5.2.

Table 7.1: Our assessment of Wessex Water's proposals to balance the interests of customers

Our assessment of the company's proposals to balance the interests of customers
Gearing outperformance benefit sharing mechanism The company has confirmed it would implement our default gearing outperformance mechanism within its business plan. The company expects gearing at the level that will be close to trigger sharing payments under the gearing outperformance sharing mechanism in 2020-25.
Voluntary sharing mechanisms Wessex Water proposes a sharing mechanism which will reinvest 20% of net outcome delivery incentive payments in community projects.
Dividend policy for 2020-25 Wessex Water confirms that it is committed to the expectations on dividend policy as set out in our 'Putting the sector in balance' position statement but under our current assessment it falls short in a number of areas as set out below. Its April submission indicated a base dividend yield of 2.7% over 2020-25. The company's dividend policy refers to all the areas included in the 'Putting the Sector in balance' position statement (out/underperformance & benefit sharing, employee interest & pension obligations, actual capital structure, need for future investment and financial resilience). The company confirms that before approving each quarterly dividend, the Board will take into account the current and projected performance in delivering the level of service customers expect, but provides insufficient detail on the specific obligations and commitments to customers that will be considered. The company has not confirmed that the level of performance delivery considered will be as set out in the final determination. When explaining how performance delivery will impact on dividends paid, the company has solely focused on the financial impact of penalties and rewards, in relation to performance commitments and not the wider impact of obligations and commitments to customers and other stakeholders. The company has committed to report annually how the above factors have been taken into account when determining the level of dividend. If the board agrees changes to its dividend policy these will be published with reasons in the Annual performance report. Consistent with the lower allowed cost of equity in our final determination, we have revised our calculation of the dividend yield that we consider to be reasonable for assessing the base dividend for water companies in 2020-25. We consider the acceptable level of base dividend yield is up to 4% but this can be expected to vary depending on the scale of a company's RCV growth and future investment needs. We set out further details in 'Aligning risk and return technical appendix'.

Our assessment of the company's proposals to balance the interests of customers
We expect Wessex Water to be transparent when explaining its dividend policy and reporting on dividends paid over 2020-25 to demonstrate how it has delivered on the commitments in relation to its dividend policy and to ensure it meets the expectations we set out in 'Putting the sector in balance' as updated in the final determination 'Aligning risk and return technical appendix'. Specifically, the company should provide further transparency on: • the specific obligations and commitments that will be considered under the policy, • how it has delivered against performance levels as set out in the final determination and elsewhere; and, • how performance delivery has impacted on the dividends paid.
Performance related executive pay policy for 2020-25 In our 'Aligning risk and return technical appendix' we identify that 60% alignment to delivery for customers is current good practice among the companies that we regulate. Based on our calculations Wessex Water's measures that are directly aligned to customer delivery are in line with good practice, however we consider that there is scope for it to improve this position. We expect Wessex Water's policy on performance related executive pay to demonstrate a substantial alignment to the delivery of service for customers throughout 2020-25. Wessex Water states that its proposals for executive performance related pay are in line with the expectations set out in our 'Putting the sector in balance' position statement. The policy has yet to be finalised, but the company indicates that it will consist of: • annual bonus based on 30% customer and 30% environment (2 baskets of measures including leakage, C-Mex, pollutions, sewer flooding, water quality and proportion of PR19 targets met), 20% employee (including staff engagement, training, turnover and health & safety) and 20% personal objectives. • long-term bonus which withholds a proportion for eligible annual bonus until the end of the 5 year regulatory period. • each year, only if the remuneration committee judges that in total at least 75% of all customer and environmental targets have been achieved will executive directors to be eligible for an award. • each year the remuneration committee will set stretching targets having regard inter alia to the performance commitments made in the business plan. Also the proportion of PR19 determination targets met and expenditure against determination will be amongst the measures included in the calculation of the bonus. • performance against a set of financial targets may act to gear up down the level of the bonus, in a way that bonuses where customer and environmental target are met are affordable, and bonuses for financial performance cannot come at the expense of service to customers and the environment. • annual reporting on how the company has met the guiding principles of the policy, and the reporting of any changes that have been made and the reasoning for the changes. The company proposes that its remuneration committee will agree further details of the proposed performance related pay package that will apply from April 2020. The targets themselves will be agreed at its meeting in March 2020 and annually thereafter. We expect the company's remuneration committee to ensure there is on-going rigorous challenge as to how the policies are applied and to ensure that only truly stretching performance is rewarded. In so doing, we expect it to be equipped with the appropriate powers to carry this out, including for example, the use of withholding periods, clawback arrangements and underpin / gateway arrangements. We expect Wessex Water to be transparent when explaining and reporting against its performance related executive pay policy in 2020-25, to ensure it meets the expectations we set out in 'Putting the sector in balance' as updated in the final determination 'Aligning risk and return technical appendix'.

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We regulate the water sector in England and Wales.

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