YKY.PD.A7

YorkshireWater

Contents

1. Introduction

We submitted our PR19 business plan to Ofwat in September 2018. Ofwat reviewed the plan and published its initial assessment of plans (IAP) in January 2019. The assessment included a series of required and advised actions for us to complete by 1 April 2019, as well as several actions that required completion after 1 April 2019. This document provides our response to IAP action **YKY.PD.A7**. This action was submitted to Ofwat on 15 July 2019.

IAP Action YKY.PD.A7

PR14 reconciliations: Further to the actions we have set out to address our concerns over the evidence provided in its business plan for the individual reconciliations, we will require the company to refresh all of its PR14 reconciliations to replace its 2018-19 forecast performance with 2018-19 actual performance and update the evidence for its forecast 2019-20 performance taking into account of the actual 2018-19 performance.

This document provides a refresh of the PR14 reconciliations that were originally published in July 2018. The original submission for July 2018 remains on our website and can be viewed at: https://www.yorkshirewater.com/ourbusinessplan

The Yorkshire Water PR14 reconciliation July 2019 submission to Ofwat consists of:

- a suite of completed and audited data tables
- a document providing detailed commentaries for each data table
- three PR14 reconciliations models and two feeder models
- a high-level summary narrative explaining the context of the PR14 reconciliation and the resulting proposed adjustments as well as details of our past performance over the 2015 to 2020 period (this document).

These documents are submitted as part of this IAP action.

2. Assurance of our IAP response

Our aim is to deliver a PR14 performance reconciliation that is in line with the Ofwat guidance and PR14 reconciliations rule book. Good assurance needs to be provided at the right time, be proportionate to the level of risk identified, ask the right questions and assess the quality of evidence supporting the statements made. Our assurance approach is risk based and aligned to the 'three levels of assurance' framework. This is best practice and is set out in Yorkshire Water's published Assurance Plan for 2018-19 and 2019-20.

Level 1 assurance: We have named data providers and data managers who are responsible for providing accurate information in line with any guidance provided.

Level 2 assurance: We have named senior managers and directors who review, check, challenge and approve the information provided. They have signed an assurance statement to confirm the data and overall submission are correct. In addition, oversight is provided by colleagues within Regulation and the Board Investment Committee has reviewed and approved the forecasts presented.

Level 3 assurance: Deloitte and Jacobs review the accuracy of the information presented. The external independent financial auditors, Deloitte, and the technical assurers, Jacobs, have provided assurance statements in support of this submission. The split of table assurance is shown in Table 2.1. The statement from Deloitte and Jacobs is provided separately to Ofwat as part of this submission.

There have been no material issues outstanding on the PR14 reconciliation, and all actions have been closed before submission by the 15 July 2019.

Table 2.1 – Level 3 assurance on the PR14 reconciliation data tables

Purpose	Table	Content	Provider
Past delivery: Reconciling 2015 to 2020 performance	App5	PR14 reconciliation – performance commitments	Jacobs
	App6	PR14 reconciliation - sub- measures	Jacobs
	App9	Adjustments to RCV from disposals of interest in land	Deloitte
	App23	Inflation measures	Deloitte
	App25	PR14 reconciliation adjustments summary	Deloitte
	App27	PR14 reconciliation – financial outcome delivery incentives summary	Deloitte
Water services mechanisms	WS13	PR14 wholesale revenue forecast incentive mechanism for the water service	Deloitte
	WS15	PR14 wholesale total expenditure outperformance sharing for the water service	Deloitte
	WS17	PR14 water trading incentive reconciliation	Deloitte
Wastewater services mechanisms	WWS13	PR14 wholesale revenue forecast incentive mechanism for the wastewater service	Deloitte
	WWS15	PR14 wholesale total expenditure outperformance sharing for the wastewater service	Deloitte
Household retail reconciliation and SIM	R9	PR14 reconciliation of household retail revenue	Deloitte
	R10	PR14 service incentive mechanism	Jacobs

3. What is the PR14 reconciliation?

At the 2014 price review (PR14), Ofwat introduced a number of incentive mechanisms that had the potential to reward or penalise companies where they out or under-performed against agreed targets for improving performance for customers. Ofwat also introduced mechanisms that shared with customers benefits from efficiencies achieved or legitimate additional costs in the delivery of services.

As part of PR14, we defined seven long-term outcomes supported by 26 performance commitments. A total of 14 out of our 26 performance commitments have a financial outcome delivery incentive (ODI) attached to them. The remainder are reputational incentives. In addition to these performance commitments, we committed to timely and efficient investments, customer engagement and sharing gains with customers.

Reconciling performance is a regulatory tool for making companies accountable for their performance against their PR14 final determination. A key part of the 2019 price review (PR19) is the assessment and calculation of adjustments to take account of Yorkshire Water's performance over the period 2015 to 2020.

These reconciliation mechanisms are set out below:

- **Outcome delivery incentives** – outperformance payments for companies that exceed their stretching performance commitment levels, and underperformance penalties if performance is below their performance commitment levels.
- **Wholesale total expenditure (totex) sharing** – where a company's out or under-performance on totex is shared with customers.
- **Wholesale revenue forecasting incentive mechanism (WRFIM)** – financial incentives for companies to make accurate forecasts for wholesale revenue, ensuring under and over-recovery is reconciled.
- **Water trading incentive** – incentive payments for new water trades that start in the 2010-15 period.
- **Land disposals** – adjusting the RCV to share any proceeds from disposals of interest in land equally with customers.
- **Residential retail** – the total revenue allowance is adjusted for actual customer numbers.

In addition, the PR19 methodology consultation document describes the reconciliation required by companies for the service incentive mechanism (SIM).

4. Accounting for past delivery

In 2014, we contacted over 30,000 customers, our regulators and the Yorkshire Forum for Water Customers (the Forum) to ask them what they wanted us to focus on. We used this feedback to define seven key long-term themes, known as customer outcomes, which have formed the basis of our AMP6 2015 to 2020 business plan. In order to measure and understand whether we're achieving these outcomes in the near and long-term future, we worked with our customers and stakeholders to identify the right measures of success for each outcome. So, for each outcome there are several measures, known as performance commitments, and there are 26 of them. These commitments are our promises to our customers and stakeholders.

As well as committing to delivering on performance and service outcomes for our customers, we also committed to timely and efficient investments, customer engagement and sharing gains with customers.

A total of 14 out of our 26 performance commitments have a financial outcome delivery incentive (ODI) attached to them. The remainder have reputational incentives attached to them.

We report how well we are doing against our 26 performance commitments annually within our Annual Performance Report (APR). Our APR also reports on our financial performance. We apply assurance to the data within the APR and the overall APR publication. Our assurance is risk-based and uses a method called 'three levels of assurance'. This is best practice and makes sure that our assurance activities are proportionate to the level of risk of error associated with the information or publication. Our annual performance reporting process is certified to the Quality Management System standard ISO9001:2015. We apply the principles of this standard to the assurance processes for our other publications. The APR is reviewed and approved by the Yorkshire Water Board prior to its publication.

The Forum is updated on our performance throughout the year. Prior to the publication of the APR, the independent external technical auditor attended a meeting of the Forum to discuss the assurance findings. This helps support our transparency commitment to our customers.

It is important to assess and account for our delivery both achieved and forecast to be achieved, against the plans Yorkshire Water made and our Final Determination for the 2015 to 2020 period. This assessment will help Ofwat understand how well we have already delivered for our customers and how we are able to deliver for them for the next planning period 2020-25. It will also enable any adjustments we propose to our revenues and RCV for the 2020-25 period to be assessed as part of the business planning process.

4.1 Summary of our performance in the 2015 to 2020 period

To date, our business and operational performance has been strong with Yorkshire Water achieving an overall performance commitment outperformance (reward) position in each of the first four years of the 2015 to 2020 period. This was despite several challenging events faced by the business and many of our customers over the period, such as significant flooding in 2015.

Throughout the period we have performed well against our 26 performance commitments and the associated performance targets. Many performance commitments have been achieved and are assessed as being in outperformance (reward). Table 2.1 provides a summary of our 26 performance commitments achieved and failed to date and our forecast position to the end of the 2015- 2020 period.

We describe the performance commitments where we have out-performed our targets and achieved an outperformance (reward) position beyond the relevant outperformance (reward) deadband for the measure. We also describe those commitments where we have failed to perform as planned and either missed our target but remained within the relevant underperformance penalty deadband for the measure and the applicable year or breached the underperformance penalty deadband resulting in the financial consequence of a penalty.

Table 2.1. Summary of performance commitment performance for the 2015 to 2020 period (at 2012-13 price basis)

Performance Summary (duplicate measures removed)	**Actual** 2015-16	**Actual** 2016-17	**Actual** 2017-18	**Actual** 2018-19	**Forecast** 2019-20	**Total**
PCs achieved / outperformance payment earned	15	15	13	13	22	
PCs failed (within deadband)	1	1	2	1	2	
PCs failed and underperformance payment accrued (outside deadband)	0	0	1	1	1	
PCs failed (reputational only)	1	1	1	2	1	
PCs not applicable in year	9	9	9	9	0	
Outperformance Payment (£m) *2012-13 price basis*	5.74	8.78	19.23	14.96	28.91	77.62
Underperformance Payment (£m) * *2012-13 price basis*	0.00	0.00	(6.57)	(6.12)	(4.59)	(17.29)
Overall net position (£m) *2012-13 price basis*	**5.74**	**8.78**	**12.66**	**8.84**	**24.33**	**60.34**

* *The underperformance payment 'penalty' value assessed against PC's with an attached financial outcome delivery incentive is reinvested in service improvement and does not contribute to revenue or RCV adjustments in the 2020-25 period.*

4.2 Factors influencing past performance

Although we have shown strong overall performance across the 2015 to 2020 period, we have faced some challenging circumstances during which we have worked hard to mitigate the most significant impacts to our operations.

2015-16 floods

We, and many of our customers, were impacted by some of the worst flooding ever experienced in parts of Leeds, Bradford, York and the Calder Valley over the Christmas and New Year period in 2015-16. Water services were maintained to all customers, despite flooding of more than 100 works and pumping stations.

We experienced unexpected totex to recover the performance and condition of assets damaged during the floods on 26 December 2015. We received £51.9m (at 2012-13 prices) of insurance reflecting the fair value of estimated exceptional costs to restore the assets, and within our statutory accounts recorded exceptional opex costs of £25.15m (at 2012-13 prices) during the period of construction to rectify the damage incurred. Given that these costs were covered by insurance we have excluded them from the actual totex so that none of these costs will be recovered from our customers via the PR14 reconciliation adjustments.

2018 freeze / thaw event

Extreme winter weather hit our region (commonly referred to as the Beast from the East) in early 2018. Freeze-thaw then impacted us through March and April 2018. We performed well due to our advance preparedness and comprehensive response to events. Our annual preparations for a potential cold weather event commenced back in November 2017, with the provision of additional equipment and resource and contingency plans prepared. We actively recruited more leakage inspectors and obtained increased repair resource from our contract partners.

Our executive team considered long-range weather forecasts and took the decision to deploy resources to prepare for a predicted increase in both leakage and water demand. Both the operational company incident management team (CIMT) and the executive led crisis management team (CMT) were formed to manage the response during the event. Whilst the significant freeze then thaw situation did have an impact on some of our performance commitment service levels in the short-term, we managed to maintain supplies and services to all but a small number of customers. Ofwat acknowledged in its June investigation report that Yorkshire Water had performed well and communicated with customers throughout the event.

Most issues reported by customers during the period were caused by frozen private supplies or isolated bursts on our network. Our earlier decisions to source and mobilise significant additional resource enabled us to minimise the impact on our customers by responding rapidly to any supply interruptions.

Prolonged warm summer of 2018

In the summer of 2018 we experienced a period of prolonged hot, dry weather. Dry weather persisted until the late autumn when sustained rainfall provided rapid reservoir and groundwater replenishment.

Prolonged dry weather from June onwards saw customer demand for water increase by almost 20%, resulting in rapid water loss (depletion) from reservoirs as a result of very little rain to refill them. Depletion rates of up to 7% a week of water made it essential that we managed water resources carefully. We crossed our 'control lines' in our Drought Plan in 2018. These are trigger points which, once reached, result in escalated levels of action to maintain resilient water supplies. We applied for, and were granted, two drought permits to temporarily increase river abstractions limits, however these permit applications were a precautionary measure and we did not need to use them in practice. We learn from each drought and update our Drought Plan accordingly. Our planning enables us to act quickly because options have been assessed for their potential environmental impact and mitigation strategies developed.

The prolonged hot, dry weather resulted in a significantly reduced soil moisture level in our region leading to ground movement and therefore increased burst rate. The effects of this weather caused additional 'reactive' leakage to occur that under an 'average year' would not normally be observed, meaning whilst additional volumes of leakage have been saved (compared to an average year), this was offset through the weather-related impacts. This relationship has created difficulty for the company in achieving our stretching current outperformance targets. Although, we did not meet the stretching outperformance targets we set ourselves in 2018-19, we have rephased our proposed target levels for the next six years and we are still committed to reducing leakage by 40%.

We increased our energy consumption in the dry winter and warm summer of 2018, from 598GWh in 2017-18 to 620GWh in 2018-19. To ensure resilient water supplies during extreme weather, we increase the amount of pumping we undertake through our water grid network to ensure water is available when and where it is needed. This impacted on our energy generation performance commitment. Utilising our grid network to transfer water across the region in order to ensure continuous supply to all customers can sometimes lead to a change in source water type for some supply areas, which we know some customers can identify as a change in taste. There was therefore an impact on drinking water contacts.

4.3 2015-16 Performance

In 2015-16 we met or exceeded 24 of our 26 performance commitments. Our overall service performance was strong and met a net overall outperformance (reward) position.

Performance commitments where we out-performed our targets that results in a financial outcome delivery incentive outperformance (reward) for the year were:

- **Pollution incidents (ref. SA3)**: We had 180 category 1 to 3 incidents under this performance commitment definition against a target of 237 incidents. We out-performed beyond the outperformance (reward) deadband for this measure (211 incidents).
  Throughout the 2015 to 2020 period we targeted our investment to minimise environmental pollution from our assets. Further investment has been allocated to target not only meeting our performance commitment service levels, but to target a sector upper quartile performance by the end of the first year of the AMP7 period (the 2020-25 period).

- **Solutions delivered by working with others (ref. WC1 and SB3)**: This commitment identifies and fund shares solutions to be delivered through working with third party multi-agencies, organisations or individuals, outside our normal operational supply chain partners. We delivered 4 solutions against a target of 3. This attracted a small outperformance (reward) incentive, which is reinvested in future working with others solutions.

The two commitments that we did not meet in 2015-16 were:

- **Drinking water quality compliance (ref. WA1)**: We achieved 99.954% compliance compared to a target of 99.960% due to high nickel, lead and iron failures in the distribution system. Although we did not meet the target our performance was within the allowable deadband of acceptable performance and therefore does not attract a financial underperformance penalty.

- **Renewable energy generation (refs. WD1, SC1, and RC1)**: We delivered 11.3% of our overall energy requirements from energy we generated through renewable technology, compared to our target of 12%. This under performance was due to the significant damage to some of our key energy generation equipment at our sites during the flooding over the Christmas and New Year period for 2015-16. Failure of this performance commitment carries no financial outperformance (reward) or underperformance (penalty) payment. However, this could have a reputational impact with our customers and stakeholders.

4.4 2016-17 Performance

In 2016-17 we met or exceeded 24 of our 26 performance commitments. Performance commitments where we out-performed our targets that results in a financial outcome delivery incentive outperformance (reward) for the year were:

- **Water supply interruptions (ref. WB2)**: We achieved performance of 9.78 mins lost supply against a target of 12.81 mins and outperformance (reward) deadband of 12.00 mins. We exceeded our targeted performance for this measure by investing in a balance of capital improvements to target some of our high-risk areas to reduce the number of properties that can only be supplied from a single source of clean water on our network. Whilst our plan to date has delivered year on year performance improvements, we will continue to review our ways of working both in capital delivery and operations to minimise any interruptions to our customer supply on both planned and unplanned work.

- **Internal sewer flooding incidents (ref. SA1)**: This measure includes incidents due to blocked and defective gullies and overloaded sewers in high rainfall events up to a defined return period. We recorded 1,769 incidents against a target of 1,898 and outperformance (reward) deadband of 1,808 for the year. We achieved significant reduction in the number of incidents due to overloaded sewers across the 2015-17 years and forecast this to continue. Whilst we continually review any possible solutions to address properties that experience internal flooding and promote any that are affordable, when reviewing cost-benefit we originally re-directed £30m of funding from our original £95m plan for hydraulic flooding due to overloaded sewers into the initial £25m programme to address flooding due to other causes. This has enabled us to promote solutions to resolve many more internal flooding issues and reduce the impact on customers of any cyclical network cleaning programme that may have been in place to mitigate recurrent incidents.

- **Pollution incidents (ref. SA3)**: We again out-performed beyond the outperformance (reward) deadband for this measure (211 incidents) with 217 incidents against a target 224.

- **Solutions delivered by working with others (ref. WC1 and SB3)**: We delivered 5 solutions against a target of 3 for the year. This attracted a small outperformance (reward) incentive, which is reinvested in future working with others solutions.

The two commitments that we did not meet for 2016-17 were:

- **Drinking water contacts (ref. WA3)**: We reduced the number of customers who needed to contact us about drinking water quality (discolouration, taste, odour, or illness) down from 10,007 in 2015-16 to 9,093, but we failed to meet our improving performance commitment target of 8,120 contacts in the year. Although we did not meet the target our performance was within the deadband of acceptable performance and therefore does not attract a financial underperformance penalty.

- **Renewable energy generation (refs. WD1, SC1, and RC1)**: We achieved 10.4% of our energy needs generated through the use of renewable technology, compared to our target of 12%. As explained above, this was due to the continued outages of key energy generation equipment at our sites following the flooding in 2015-16.

4.5 2017-18 Performance

In 2017-18 we met or exceeded 22 out of our 26 performance commitments. Performance commitments where we out-performed our targets that results in a financial outcome delivery incentive outperformance (reward) for the year were:

- **Water supply interruptions (ref. WB2)**: We achieved 6.96 mins performance against a target of 12.00 mins and outperformance (reward) deadband also of 12.00 mins.

- **Internal sewer flooding incidents (ref. SA1)**: We recorded 1,682 incidents against a target of 1,919 and outperformance (reward) deadband of 1,808 for the year.

- **Pollution incidents (ref. SA3)**: We over-achieved beyond the outperformance (reward) deadband (remains at 211 incidents) with 202 incidents against a target of 211.

- **Solutions delivered by working with others (ref. WC1 and SB3)**: We delivered 12 solutions against a target of 3 for the year. This attracted a small outperformance (reward) incentive, which is reinvested in future working with others solutions.

The four commitments that we did not meet in the year were:

- **Drinking water quality compliance (ref. WA1)**: We achieved 99.953% compliance compared to a tightened target of 100.000%. This performance is within the deadband of acceptable performance and therefore does not attract a financial underperformance penalty.

- **Drinking water contacts (ref. WA3)**: Despite continuing to reduce the number of contacts from 9,093 in 2016-17 to 8,100, we missed the tightened target of 6,108. This has resulted in a financial underperformance penalty. The year on year improvement has been driven by changes to our original plan of mains rehabilitation towards a mix of mains rehabilitation and network flushing activities. This performance commitment is reported by financial year and has a financial underperformance penalty of £0.0035m for every contact outside the deadband of acceptable performance resulting in a financial underperformance penalty of £6.57m (at 2012-13 prices) in the current reporting year. The underperformance value will not be returned to customers via a revenue or RCV adjustment, instead it will be invested to make service improvements.

- **Leakage (ref. WB1):** We achieved a performance of 300.3 Ml/d water lost from our network compared with our target of 297.1 Ml/d. This performance is within the deadband of 302.1 Ml/d and therefore does not attract a financial underperformance penalty. Our leakage performance was impacted by severe winter weather in December 2017 when freezing temperatures contributed to a 58 Ml/d increase in our leakage performance. This was addressed by more leakage reduction activities over Christmas and we recovered our performance to meet our leakage target by the end of February. This meant we were better placed to mitigate the impacts of the 'Beast from the East' in March 2018. This second winter weather event increased our leakage by 41 Ml/d but the concentrated leakage activities across our network made sure there were few prolonged supply interruptions for customers.

- **Renewable energy generation (refs. WD1, SC1, and RC1)**: Although we improved the proportion we generate from renewable technologies from the previous year to 11.4%, we still missed the 12% target. Key energy generation equipment is still out of service or not performing at target capacity, largely due to delays in capital schemes. This is a reputational incentive.

4.6 2018-19 Performance

This section of the report replaces the forecast information that was submitted in July 2018 to provide actual performance for 2018-19.

As part of the PR14 reconciliation in July 2018, we forecast that we would meet 24 out of our 26 performance commitments in 2018-19. In 2018-19 we met or exceeded 21 out of our 26 performance commitments.

Performance commitments where we out-performed our targets that results in a financial outcome delivery incentive outperformance (reward) for the year were:

- **Water supply interruptions (ref. WB2)**:

  We achieved performance of 10.46 mins loss of supply per property served against a target of 12.00 mins and outperformance (reward) deadband also of 12.00 mins. This has resulted in an outperformance (reward) for the current year of £4.018m.

  Water supply interruptions was a performance commitment that we identified as an Upper Quartile measure. We therefore set ourselves a challenging target for the year of 6.00 minutes. This was the forecast that we submitted as part of the PR14 reconciliation submission in July 2018.

  The prolonged hot summer resulted in increased demand, a significantly increased soil moisture deficit leading to burst pipes and increased activity on the network by Yorkshire Water and our service partners. A lead measure for water supply interruptions is the volume of emergency jobs we receive which are due to a customer reporting no water, a catastrophic burst or an asset alarm received in our control room. During the summer months (July, August and September) we saw a 73% increase in these measures based on the same period in 2017-18. In July we received more than double the number of the previous year. We mitigated a further deterioration in performance this year by implementing several initiatives as part of our ongoing Customer Minutes Lost programme. These initiatives were based on an improved operational response, delivered by the control room engineers managing network failures, and the restoration team, mitigating the impact of events by responding quickly to restore customers supplies.

- **Internal sewer flooding incidents (ref. SA1)**:

  We recorded 1,692 incidents against a target of 1,919 and outperformance (reward) deadband of 1,808 for the year. This has resulted in an outperformance (reward) for the current year of £6.670m. The forecast that we submitted as part of PR14 reconciliation in July 2018 was 1,796 incidents.

  Performance in 2018-19 was a slight increase compared to performance achieved in 2017-18. This is partly due to low flows in sewers as a result of the dry weather leading to a higher likelihood of a blockage.

- **Pollution incidents (ref. SA3b)**:

  We again out-performed beyond the outperformance (reward) deadband (remains at 211 incidents) with 188 category 3 incidents against a target of 211. This has resulted in an outperformance (reward) for the current year of £4.258m. The forecast that we submitted as part of PR14 reconciliation in July 2018 was 180 category 3 pollution incidents.

- **Solutions delivered by working with others (ref. WC1 and SB3)**:

  We delivered 11 solutions against a target of 3 for the year. As part of the PR14 reconciliation submission in July 2018, we forecast we would deliver 10 solutions.

  We met our annual target and are significantly ahead of our cumulative target for 2015 to 2020. This attracted a small outperformance (reward) incentive, which is reinvested in future working with others solutions. The outperformance (reward) for the current year is £0.016m.

The five commitments that we did not meet in the year were:

- **Drinking water quality compliance (ref. WA1)**: We achieved 99.962% compliance in 2018-19. This performance is an improvement from the previous year but does not meet our target of 100.000%. This performance is within the deadband of acceptable performance and therefore does not attract a financial underperformance penalty.

- **Drinking water contacts (ref. WA3)**: Despite continuing to reduce the number of contacts from 8,100 in 2017-18 to 7,964 in 2018-19, we missed the target of 6,108. This has resulted in a financial underperformance penalty. This performance commitment has a financial underperformance penalty of £6.125m (at 2012-13 prices) in the current reporting year. In line with our Final Determination, the underperformance penalty value will not be returned to customers via a revenue or RCV adjustment, instead it will be reinvested on further asset improvements within three years of the failure to make service improvements.

- **Serious pollution incidents (ref. SA3a)**: We are very disappointed with the number of serious pollution incidents we experienced in the year. We had 11 serious pollution incidents in 2018 against a target of no more than two. This is also a deterioration from the previous year. Of the 11 serious pollution incidents, six were incurred during a period where the watercourses were notably or exceptionally low. However, this is not an excuse and we know we need to do better. The performance commitment for serious pollution incidents is a reputational commitment. The Environment Agency is responsible for enforcing laws that protect the environment. As a result, breaches of environmental regulations can result in the company paying a fine or being prosecuted in the criminal courts. Serious pollution incidents are managed through this process. Therefore, this is a reputational incentive measure.

- **Renewable energy generation (refs. WD1, SC1, and RC1)**: We achieved 11.3% of our energy needs generated through the use of renewable technology, compared to our target of 12%. We work hard to minimise our electricity consumption and maximise the amount of energy we generate. Despite increasing the amount of energy being generated, a dry winter and warm summer resulted in an increase in consumption. To make sure supply and demand was maintained, energy intensive resilience plans had to be put in place, such as the greater use of river abstraction to allow reservoir stocks to be replenished. This is a reputation incentive performance commitment.

- **Service Incentive Mechanism (ref. RA1)**: Our target is to improve our performance year on year. Unfortunately, we have seen a slight decrease in our overall score from 84.3 points out of 100 in 2017-18 to 84.0 points out of 100 in 2018-19. We are disappointed in this performance, particularly because we have seen significant reductions in the number of unwanted telephone contacts, written complaints and escalations. Higher than usual numbers of mains bursts caused by long spells of dry weather during the 2018 summer affected both resolution times and keeping customers informed, which impacted on the survey results.

4.7 2019-20 Forecast Performance

This section of the report updates the forecasts for 2019-20 (the remainder of AMP6), taking into account the actual performance in 2018-19. As part of the PR14 reconciliation in July 2018, we forecast that we would meet 23 out of our 26 performance commitments in 2019-20. We are now forecasting that we will meet or exceed 21 out of our 26 performance commitments. Performance commitments where we forecast to out-perform our targets that result in a financial outcome delivery incentive payment are:

- **Leakage (ref. WB1):** We forecast to make improvements in the final year of the period, planning to achieve a performance of 269.0 Ml/d water lost from our network compared with a target of 287.1 Ml/d. Delivering to this forecast would represent a 10% leakage performance improvement over the last two years of AMP6. This performance is better than deadband of 274.0 Ml/d and therefore will attract a financial outperformance payment of £0.25m. We previously forecast that we would achieve a performance of 235.0 Ml/d as part of our July 2018 PR14 reconciliation submission.

- **Water supply interruptions (ref. WB2):** We continue to forecast to achieve performance of 4.00 mins for 2019-20 against a target of 12.00 mins and payment deadband also of 12.00 mins (capped at 8.08 mins). Again, this will result in a payment for outperformance of £10.23m. Our forecast remains the same as the forecast we submitted in the July 2018 PR14 reconciliation submission.

- **Internal sewer flooding incidents (ref. SA1):** We continue to forecast to have 1,463 incidents for 2019-20 against a target of 1,919 and an outperformance payment deadband of 1,808. This performance will therefore result in a payment for outperformance. There is an outperformance payment cap of 1,651 incidents, which will limit the outperformance payment level to £9.03m. Our forecast remains the same as the forecast we submitted in the July 2018 PR14 reconciliation submission.

- **Pollution incidents (ref. SA3b):** We forecast 162 category 3 incidents in 2019-20. This is below the target and outperformance payment deadband of 211 incidents, resulting in an outperformance payment of £9.07m. We previously forecast that we would achieve a performance of 155 category 3 pollution incidents as part of our July 2018 PR14 reconciliation submission.

- **Length of river improved (WC1 and SB4):** We continue to forecast that we will improve 463km of river length under the Water Framework Directive component measures against a target of 440km. This performance is better than the outperformance payment deadband of 446km and will earn an outperformance payment of £0.23m. Our forecast remains the same as the forecast we submitted in the July 2018 PR14 reconciliation submission. It should be noted that an error was identified with our target for SB4 after the PR14 final determination had been published. Further to our correspondence with Ofwat on this issue, it was advised that the original target would not be changed but a business decision was made to only claim an outperformance payment greater than the revised, internal target. As such, no outperformance payment is expected on SB4. More information on this can be found within our IAP action response YKY.PD.A3.

- **Solutions delivered by working with others (ref. WC2 and SB3):** We are now forecasting that we will deliver 10 further solutions in 2019-20 (compared to a previous target of 8). This will generate a small outperformance payment of £0.10m, which is to be reinvested in future working with others solutions for the 2020-25 period. Our forecast remains the same as the forecast we submitted in the July 2018 PR14 reconciliation submission.

We have forecast that we will fail to meet five performance commitments in 2019-20.

- **Drinking water quality compliance (ref. WA1):** We forecast to achieve 99.962% compliance in 2019-20. This is against a target of 100.000%. This performance is within the deadband of acceptable performance and therefore does not attract an underperformance payment. Our forecast remains the same as the forecast we submitted in the July 2018 PR14 reconciliation submission.

- **Drinking water contacts (ref. WA3):** We are now forecasting performance of 7,500 customer contacts in 2019-20. We previously forecast that we would achieve 7,200 contacts as part of our July 2018 PR14 reconciliation submission. As the target remains at 6,108 with no deadband in place we forecast a financial underperformance payment of £4.59m (at 2012-13 prices). The underperformance penalty value will not be returned to customers via a revenue or RCV adjustment, instead it will be invested to make service improvements. At PR14 customers determined that they would prefer to see reinvestment to drive material improvements in failing services, rather than receive a small rebate and continue to suffer service failures or performance that is not at targeted levels. We have ensured that the reinvested funds within this AMP and for the 2020-25 period are not included in totex out or underperformance sharing mechanisms.

- **Serious pollution incidents (ref. SA3a):** We are now forecasting that we will experience 3 serious pollution incidents in 2019. We previously forecast 0 serious pollution incidents as part of our July 2018 PR14 reconciliation submission. This measure is reported on a calendar basis and we have provided an updated forecast as we are six months through the calendar year. This is a reputational performance commitment.

- **Amount of land conserved and enhanced (ref. WC3/SB5):** This measure is in hectares of the amount of land we conserve and enhance, for example Biodiversity 2020, Ancient Woodlands and Sites of Special Scientific Interest (SSSI). The land can be company owned or not. This measure is a cumulative end of period commitment and we forecast to have conserved and enhanced 11,689 hectares of land, compared to a performance target of 11,736 hectares. This performance is within the deadband of acceptable performance (11,501 hectares) and therefore does not attract a financial underperformance payment.

- **Service incentive mechanism (ref. RA1):** As of the 1 April 2019, the SIM measure has been replaced with a new measure called the customer measure of experience (C-Mex) in 2020. C-Mex is a mechanism to incentivise water companies to provide an excellent customer experience for residential customers, across both the retail and wholesale parts of the value chain. However, for those companies that have a performance commitment linked to SIM, Ofwat has provided a proxy calculation. To forecast our performance in 2019-20 we have used the Customer Service C-Mex pilot score as the qualitative element. For the quantitative element we have used the actual unwanted call numbers and written complaints numbers as reported in 2018-19 as a base measure of our performance, the aim being to improve on this in 2019-20. Our forecast for 2019-20 is a SIM score of 81.5 out of 100. A breakdown of how we have calculated this score is provided within the Annual Performance Report. We previously forecast a SIM score of 87 as part of our July 2018 PR14 reconciliation submission.

Further evidence to support a number of our forecasts has been provided as part of our IAP Action **YKY.PD.A3**.

4.8 Upper quartile measures

As part of our development of new service commitments for PR19, we spent a significant amount of time talking to customers and getting their views on the service we provide both now and in the future. It was clear from this engagement that although customers are broadly content with the service they receive, they believe that our performance could be much improved in areas which mean the most to them: leakage, pollution incidents and instances of sewer flooding. Although they like our performance on interruptions to supply, they still think we could do better.

As a result of this feedback from our customers, and also responding to the Ofwat PR19 methodology, considering our new long-term strategy and from reviewing our current performance every month, we set a new aim to be in the top 25% of water companies in the next AMP for several priority areas of service. We announced this aim in December 2017. In order to meet this new ambition, we made a significant investment of £230m in service improvement.

We are working to:

- reduce leaks by 40%;
- cut category 3 pollution incidents by 40%;
- reduce sewer flooding by 70%; and
- reduce, as far as possible, the average interruption time for each property to two minutes.

Although, we did not meet the stretching outperformance targets we set ourselves for leakage in 2018-19, we have rephased our proposed target levels for the next six years and are still committed to reducing leakage by 40%. We have committed to a 25% reduction in leakage across the five years of AMP7.

Our pollution performance for category 3 pollution incidents improved slightly in 2018 from 2017 and we continue to be committed to reduce pollution incidents further in line with our ambitions of cutting incidents by 40%.

We improved our performance in 2018-19 for external sewer flooding compared with the previous year. Our performance for internal flooding in 2018-19 was a slight increase compared with the previous year. We continue to be committed to meeting our ambitions of reducing sewer flooding by 70%.

We did not meet our stretching outperformance targets that we set ourselves for water supply interruptions in 2018-19. However, our Customer Minutes Lost programme is implementing several initiatives, which provide us with confidence that we will meet our ambitious target in 2019-20 and beyond.

5. PR14 Reconciliation Proposed Adjustments

5.1 Summary of the PR14 reconciliation proposed adjustments

The PR14 reconciliation has been undertaken against the Yorkshire Water Final Determination (FD). The incentive mechanisms will generate RCV and revenue adjustments for Yorkshire Water for the PR19 price control (2020-25 period). The adjustments will apply to relevant controls (water and wastewater network plus and the household retail controls).

The totality of the proposed adjustment is:

Total adjustment:

- Revenue adjustment £64.3m
- RCV adjustment (£129.3m)

This compares with a revenue adjustment of £70.8m and an RCV adjustment of (£138.1m) as reported at the PR14 reconciliation from July 2018.

Table 3.1 below provides a high-level summary against the relevant price controls of the proposed adjustments as a result of the July 2019 PR14 reconciliation exercise we have undertaken as part of the PR19 business planning process in accordance with Ofwat's requirements and guidance.

Table 3.1 – Proposed PR14 reconciliation adjustments

Price Control	***Revenue adjustment £m*** *2017-18 FYA (CPIH deflated)*	***RCV adjustment £m*** *2017-18 FYA (CPIH deflated)*
Total Wholesale Water adjustments	26.467	7.817
Total Wholesale Wastewater adjustments	41.599	(137.074)
Total Household Retail adjustments	(3.756)	-

The largest variance changes have been a result of outcome delivery incentives (ODIs), the wholesale revenue forecasting incentive mechanism (WRFIM) and the wholesale total expenditure (totex) reconciliation.

The variance in the revenue adjustment for ODIs compared to the PR14 reconciliation in July 2018 is primarily because of a reduction in the outperformance (reward) for water supply interruptions, category 3 pollution incidents and leakage due to performance not being as strong as originally forecast.

The variance between our forecast 2018-19 and actual 2018-19 for WRFIM water is due to an increase of £12m above forecast. £8m is due to an increase in main charges received and £3m due to an increase in grants and contributions. The variance between our forecast 2018-19 and actual 2018-19 for WRFIM waste water is due to a reduction of £8m against forecast. £5m is due to under recovery of main charges and a reduction in grants and contributions than forecast.

A total of (£127m) overspend of water totex and outperformance of £103m wastewater totex means that we are now reporting a total underperformance of £24m compared to a neutral position of £0m outperformance in the previous July 2018 PR14 reconciliation. In summary, the main reasons for this include:

- additional operating costs in 2018-19 due to the impact of the prolonged dry summer
- emerging capital expenditure cost pressures driven mainly by increased costs relation to our transition to an updated SAP platform

Tables 3.2 to 3.4 below details the breakdown of adjustment values by each incentive and reconciliation mechanism against the associated price control, and whether the adjustment applies to revenues or the RCV.

PR14 and PR09 Incentive mechanism adjustments allocation analysis

Table 3.2 - Wholesale Water – 2017-18 FYA (CPIH deflated)

Incentive mechanism	***Data tables***	***Revenue adjustment £m***	***RCV adjustment £m***
Outcome delivery incentives	*App27*	*35.393*	*-*
Wholesale total expenditure (totex) reconciliation	*WS15*	*6.854*	*51.672*
Wholesale revenue forecasting incentive mechanism (WRFIM)	*WS13*	*(17.253)*	*-*
Water trading incentive	*WS17*	*-*	*-*
PR09 2010-15 reconciliation	*App25*	*1.473*	*3.468*
Land disposals	*App9*	*-*	*(1.519)*
PR09 CIS reconciliation	*App25*	*-*	*(45.804)*
Total Wholesale Water adjustments		26.467	7.817

Table 3.3 - Wholesale Wastewater – 2017-18 FYA (CPIH deflated)

Incentive mechanism	***Data tables***	***Revenue adjustment £m***	***RCV adjustment £m***
Outcome delivery incentives	*App27*	*53.466*	*-*
Wholesale total expenditure (totex) reconciliation	*WWS15*	*(6.048)*	*(71.159)*
Wholesale revenue forecasting incentive mechanism (WRFIM)	*WWS13*	*(8.851)*	*-*
PR09 2010-15 reconciliation	*App25*	*3.032*	*3.662*
Land disposals	*App9*		*0.456*
PR09 CIS reconciliation	*App25*		*(70.033)*
Total Wholesale Wastewater adjustments		*41.599*	*(137.074)*

Table 3.4 - Retail Household – 2017-18 FYA (CPIH deflated)

Incentive mechanism	***Data tables***	***Revenue adjustment £m***	***RCV adjustment £m***
Household retail	*R9*	*(3.756)*	*n/a*
PR14 SIM incentive	*R10*	*-*	*n/a*
Total Household Retail adjustments		*(3.756)*	***-***

5.2 Total expenditure (Totex) outperformance

Our investment in services is delivering improved service for customers. Overall, we are expecting to overinvest in services and assets by £93m (at 2012-13 prices) compared with the allowed expenditure of £3.42bn for the period 2015 to 2020.

It is important to note that we have experienced significant unexpected totex to recover the performance and condition of assets damaged during the floods on 26 December 2015. In this case we received £51.9m (2012-13 prices) of insurance reflecting the fair value of estimated exceptional costs to restore the assets. This is not reflected in our allowed totex. Adjusting for this exceptional totex changes the overinvestment from £93m to £41m (at 2012-13 prices).

Furthermore, after our original PR19 submission we responded to a query received from Ofwat (YKY-DD-OC-003) on the 11th April 2019. Remaining consistent with the approach detailed in that response we are forecasting a total underperformance (penalty) for drinking water quality contacts of approximately £17m (2012-13 price base) in AMP6. As we are reinvesting this sum, in AMP6, as part of our upper quartile plans we need to further adjust totex investment. This ensures this investment is excluded from the totex sharing mechanism and that our shareholders bear the full financial responsibility for this underperformance. Adjusting for this sum changes the overinvestment from £41m to £24m (at 2012-13 prices).

For the water service, we have delivered the required performance for £39m (at 2012-13 prices) less than the allowance in the first three years. This has been a function of efficient planning and delivery of projects coupled with some rephasing of works to ensure effective delivery later in the plan.

In the last year we have seen an acceleration of delivery of activity to meet our drinking water improvements coupled with additional costs to reduce the number of times customers need to contact us about the appearance of their drinking water. We have also injected significant additional activity into the plan for the remainder of the period to drive up service standards in response to feedback from customers, who told us they expect better service from us.

We have also experienced further unexpected totex to support additional find and fix activity associated with leakage as we saw an unprecedented number of network outbreaks caused by the Beast from the East and the prolonged dry summer.

To date we have achieved, and continue to forecast that we will achieve, acceptable service level performance on all our water and cross business performance commitments, except for drinking water quality contacts which, in 2018-19, has attracted an underperformance penalty of £6m and for the AMP we are forecasting total underperformance of approximately £17m (2012-13 price base). This sum our shareholders are reinvesting this AMP to improve performance for customers within the water programme. The reinvestment and additional activity within the period is forecast to result in a financial outperformance (reward) in the areas of water supply interruptions and leakage.

Overall, we forecast to overspend the water totex allowance by £145m (at 2012-13 prices). Adjusting for the underperformance reinvestment, as explained above, reduces the underlying overspend to £127m (see table 3.5). This is an increase of £33m to our forecast overspend from our PR14 reconciliation July 2018 forecast of £94m.

For the wastewater service, we have delivered the required performance for £116m (at 2012-13 prices) less than the allowance in the first three years. As with the water programme, this has been a function of efficient planning and delivery of projects. In addition, our national environmental improvement programme went through a significant reprioritisation with the Environment Agency. This meant that we had to update our programme which has resulted in expenditure occurring in the latter years of the programme.

In the latter two years of the plan we observe increased activity from the updated national environment programme coupled with significant additional activity into the plan to drive up service standards associated with reducing sewer flooding of homes and pollution incidents in response to customer expectations.

Our investment to date has supported the successful delivery of our wastewater or cross business performance commitments in the first four years of the current period. To date we have achieved and continue to forecast to achieve strong service level performance on all our wastewater or cross business performance commitments. The reinvestment of outperformance and additional activity within the period is forecasting to result in a financial outperformance (reward) in the areas of internal flooding and pollution.

Overall, we are forecasting an outperformance of £51m (at 2012-13 prices) against the wastewater totex allowance. Adjusting for the exceptional flood recovery totex increases the underlying outperformance to £103m. This is an increase of £9m to our forecast outperformance from our July 2018 forecast of £94m.

5.3 PR19 adjustment for PR14 Totex

The forecast outperformance that we have calculated using the Ofwat published model is shown in table 3.5 below.

Table 3.5 – Totex summary

Outperformance	Price base	2015-16	2016-17	2017-18	2018-19	2019-20	2015-20
Outp - Water	2012-13	75	8	(44)	(86)	(81)	(127)
Outp - Waste	2012-13	99	51	17	(62)	(3)	103
Outp - Total	2012-13	174	59	(27)	(148)	(83)	(24)

The underperformance in wholesale water results in the following PR19 adjustment is shown in table 3.6.

Table 3.6 – Water totex adjustments

Water Totex adjustments	Item ref	Price base	Totex £m
Water: Revenue adjustment from totex menu model	WS15024	2012-13 FYA (RPI)	5.987
Water: RCV adjustment from totex menu model	WS15025	2012-13 FYA (RPI)	45.136
Water: Totex menu revenue adjustment at 2017-18 FYA CPIH deflated price base	WS15026	2017-18 FYA (CPIH deflated)	6.854
Water: Totex menu RCV adjustment at 2017-18 FYA CPIH deflated price base	WS15027	2017-18 FYA (CPIH deflated)	51.672

The out performance in wholesale wastewater results in the following PR19 adjustment is shown in table 3.7.

Table 3.7 – Wastewater totex adjustments

Water Totex adjustments	Item ref	Price base	Totex £m
Wastewater: revenue adjustment from totex menu model	WWS15019	2012-13 FYA (RPI)	(5.283)
Wastewater: RCV adjustment from totex menu model	WWS15020	2012-13 FYA (RPI)	(62.158)
Wastewater: Totex menu revenue adjustment at 2017-18 FYA CPIH deflated price base	WWS15021	2017-18 FYA (CPIH deflated)	(6.048)
Wastewater: Totex menu RCV adjustment at 2017-18 FYA CPIH deflated price base	WWS15022	2017-18 FYA (CPIH deflated)	(71.159)

5.4 Opex performance

We have split the allowed PR14 totex into wholesale water and wastewater opex and capex for the purposes of explaining our opex outperformance and used existing (and forecast) APR operating cost actuals to calculate under or outperformance for the period. Changes to both financial accounting standards and regulatory accounting treatment need to be understood in order to understand underlying performance, and these changes have been listed below on table 3.8 (overleaf).

Accounting changes and exceptional items

The following changes have been made to provide a revised outperformance number, and these are listed in table 3.8.

- Some infrastructure renewals accounting moved from capex to opex in 2015 as a result of the move to new international accounting standards. This totals £91.5m (£50.58m and £40.9m).
- We have experienced significant unexpected totex to recover the performance and condition of assets damaged during the floods on 26 December 2015. In this case we received £51.9m (2012-13 prices) of insurance reflecting the fair value of estimated exceptional costs to restore the assets, and within our statutory accounts recorded exceptional opex costs of £25.15m (2012-13 prices) during the period of construction to rectify the damage incurred.
- We have introduced inter price control charges for the consumption of water by waste sites and the treatment of clean water sludges, as well as refined overhead allocations resulting in more cost allocation to wholesale water.

Opex movements within 2015 to 2020

Actual opex remained close to FD for both water and sewerage for 2015 to 2017 once the IAS16 budget transfers have been taken into account for both water and waste. For years 2018 to 2020 we have (and are) investing significantly more additional activity to drive up service standards in response to feedback from customers and Ofwat's PR19 methodology which outlines the upper quartile (UQ) targets for leakage, supply interruptions, pollution and sewer flooding. A further £58m of opex funding has been budgeted within water wholesale and £17m within waste wholesale. Exceptionally dry and warm weather during 2018-19 further increased expenditure across the water service beyond these budget additions.

There have been significant opex movements during 2018-19. Continued investment in leakage was made to achieve the leakage target, where the number of network repairs increased as a result of ground movement. The leakage target for the year was met, with resource levels employed substantially above planned numbers.

Continued efficiencies are however challenged by:

- The ongoing Traffic Management Act implementation by several Local Authorities relating to permitting charges for road works, which mainly impacts the water wholesale price control given the location of water assets in the highways.
- Increases in Environment Agency (EA) Subsistence and Application charges previously funded by government through Grant Aid.
- The impact of the EA's refusal to allow continued recycling of green waste to agriculture.
- Further increases to the insurance premium as a consequence of significant historic claims (e.g. December 2015 flooding event).

Table 3.8 – Opex underperformance compared to FD after adjusting for IAS16 infrastructure renewal, (all values in 2012-13 price basis)

Actual and forecast opex performance	2015-16 £m	2016-17 £m	2017-18 £m	2018-19 £m	2019-20 £m	2015-20 £m
Wholesale water derived opex - allowed expenditure from menu	152.08	153.32	154.13	154.71	155.74	769.98
Wholesale water actual opex	160.83	164.06	169.88	213.99	203.94	912.71
Wholesale water opex performance	**(8.75)**	**(10.74)**	**(15.75)**	**(59.28)**	**(48.20)**	**(142.73)**
Wholesale wastewater derived opex - allowed expenditure from menu	158.65	158.88	158.88	158.88	158.88	794.17
Wholesale wastewater actual opex	164.17	183.46	155.56	168.59	163.44	835.23
Wholesale wastewater opex performance	**(5.53)**	**(24.58)**	**3.32**	**(9.71)**	**(4.56)**	**(41.06)**
Total opex underperformance	**(14.28)**	**(35.32)**	**(12.43)**	**(68.99)**	**(52.76)**	**(183.79)**

Changes in accounting treatment and exceptional items	2015-16 £m	2016-17 £m	2017-18 £m	2018-19 £m	2019-20 £m	2015-20 £m
Water IAS 16	9.80	9.70	10.80	9.89	10.39	**50.58**
Waste IAS 16	7.60	7.70	6.50	9.43	9.68	**40.91**
Exceptional items - waste - to adjust	1.41	16.53	7.21	-	-	**25.15**
Account for APR improvements - Net changes to wholesale water	-	-	6.80	6.80	6.80	**20.40**
Account for APR improvements - net changes to wholesale wastewater	-	-	(6.80)	(6.80)	(6.80)	**(20.40)**
Total change in accounting and exceptional items	18.81	33.93	24.51	19.32	20.07	116.64
Variance	4.53	(1.39)	12.08	(49.67)	(32.69)	(67.14)

5.5 Capex reconciliation

In total we are forecasting to invest £1,818m of regulatory capital in our assets to support both delivery of our performance commitments made to our customers in the FD and our stretched aspirations to target UQ performance on the PR19 comparative measures.

Table 3.9 below identifies the Capital split by wholesale water and wastewater in comparison to the FD allowed.

Table 3.9 - Summary of capex reconciliation (in 2012-13 price basis)

	Final Determination (£m)	Forecast Outturn (£m)
Wholesale water	713.7	764.6
Wholesale wastewater	1,144.0	1053.3
Total Programme	**1857.7**	**1817.9**

Our total programme forecast outturn of investment this AMP has increased £13m (to £1,818m) compared to our original PR19 submission. This reflects several emerging cost pressures though is driven mainly by increased costs relating to our transition to an updated SAP platform.

Since our original PR19 submission last year we have also seen cost movements between the water and wastewater programmes. Our original allocation of contingency sums across the programmes assumed a more even distribution however cost pressures on the wastewater programme have not materialised since last year whereas cost pressures on the water programme (water treatment quality and base) are greater than expected. As a result, we are forecasting to invest £765m on our wholesale water programme (from £731m in our original PR19 submission) and £1,053m on our wholesale wastewater programme (from £1,074m in our original PR19 submission).

Wholesale water programme

Gross regulated capital expenditure associated with the wholesale water (WW) programme in the 2018-19 reporting year was £180.5m (2012-13 price base) against the FD in year of £135.0m. With the associated income totalling £14.6m in comparison to the £11.9m allowed in the FD the net expenditure in the 2018-19 reporting year was £165.9m against the FD of £123.2m.

Although there are timing differences in some areas of the WW programme when compared to the original FD profile, we continue to see cost pressures to deliver our regulatory water quality improvements at some of our key water treatment works as well as reprioritising of investment to support emerging performance issues.

Income on the WW programme in 2018-19 is higher than that allowed in the FD. Income has been impacted due to requests for mains diversions and new domestic connections being at a lower level than that identified in the FD and a reduction to our water infrastructure connection charge, in line with the new agreed charging arrangements at the start of the report year. The increased income however, which offsets this reduction, is due to the inclusion of Section 45 (S45) new water connections which are not included within the FD.

Actual net capital expenditure to the end of 2018-19 against WW programme FD of £585.3m totals £582.4m. This investment has supported the successful delivery of our water or cross business performance commitments in the first four years of the current period. To date we have achieved, and continue to forecast that we will achieve, acceptable service level performance on all our performance commitments, except for drinking water quality contacts which, in 2018-19, has attracted an underperformance penalty of £6m and for the AMP we are forecasting a total underperformance of ~£17m (2012-13 price base). This sum our shareholders are reinvesting this AMP to improve performance for customers within the water programme.

When reviewing the income variance to the end of 2018-19 to that allowed in the FD, the same trend continues on reduced 3rd party mains diversion requests and water new connections offset by additional S45 income leading to more income to date compared to the FD allowance.

As part of the Annual Performance Report (APR) return, in line with FRS102, an accounting adjustment is made to the total regulated capital expenditure each year to ensure any costs associated with activities to maintain the operating capability of existing assets, such as repairs to existing structures, re-pointing, cleaning, flushing, jetting, and clearing major obstacles, is transferred to operating costs. These adjustments are shown in table 3.10 below along with further non-regulatory financial accounting adjustments made in 2015-16 and 2016-17 and atypical expenditure through to 2017-18 to address the damage caused by the floods in December 2015.

The FD for the WW programme is £713.7m and as part of our internal annual business planning process we have identified areas of efficiency and savings for business choices totalling over £20m. After reviewing performance to date against our agreed performance commitment service level targets, a plan was approved at the Yorkshire Water Board to reinvest £71m of the total wholesale programme outperformance to target further service level improvements within the current period. This is to support our aspirations to deliver upper quartile industry performance to our customers in the areas of water quality and leakage and to target frontier performance on water supply interruptions.

Subsequent to our original PR19 submission we responded to a query received from Ofwat (YKY-DD-OC-003) on the 11th April 2019. We have remained consistent with the approach detailed in that response. We now forecast that for drinking water contacts a total underperformance penalty of ~£17m (2012-13 price base) in AMP6. We are reinvesting this sum, inflated to outturn prices, as part of our upper quartile plans and have included this investment in table WS1. We have also entered an adjustment, equivalent to the underperformance reinvestment which has taken place in AMP6, as part of table WS15 (Block D line 14 Water: Disallowables). This excludes this investment from the totex sharing mechanism and ensures that our shareholders bear the full financial responsibility for this underperformance.

Table 3.10 - Wholesale water programme capex (in 2012-13 price base)

Wholesale Water Programme (£m) 2012-13 price base	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Annual Performance Report (Table 2B)	**9.7**	**94.1**	**132.7**	**151.2**	**156.1**	**171.9**	**715.6**
Less: Flood Recovery	0.0	(0.0)	(0.1)	(0.4)	0.0	0.0	(0.5)
Less: Other Financial Accounting adjustments	0.0	(0.7)	(0.3)	0.0	0.0	0.0	(1.0)
Add: Capital transfer to Operating expenditure (IAS16)	0.0	9.8	9.7	10.8	9.9	10.4	50.6
Regulatory Capital expenditure	**9.7**	**103.1**	**142.0**	**161.6**	**165.9**	**182.2**	**764.6**
Final Determination	0.0	187.4	151.5	123.2	123.2	128.4	713.7
Outperformance and (Underperformance)	**(9.7)**	**84.3**	**9.5**	**(38.4)**	**(42.8)**	**(53.8)**	**(50.9)**

Since our original PR19 submission our Board approved reinvestment plans, to target UQ performance, have seen delivery delays due to re-allocation of resources to support the business as we saw an unprecedented number of network outbreaks caused by extreme weather changes.

Despite these delays reinvestment of this outperformance within the AMP will result in a forecast outturn on the WW programme of £764.6m and further financial outperformance (reward) in the areas of water supply interruptions and leakage.

Forecast water income for the final year of the current reporting period reflects known projects in delivery for requisitions and diversions whilst broadly maintaining the level of S45 contributions at the current report year level.

Changes we made on the calculation of infra connection charges as a consequence of revised new connection charging rules took effect from April 2018. The reduced water infra connection charge, from £380 as identified in the original FD to £75 per property, reflects the average historic and forecast network reinforcement expenditure planned over the remainder of the reporting period and the removal of income offsetting arrangements. In our original PR19 submission we had forecast an immediate shift to the lower infrastructure connection charge, but with some developments already in contract at the previous rate we did not see the reduction expected in practice. Our current forecast for 2019-20 assumes our new charges approach to be largely in effect.

By the end of the current reporting period we are forecasting in total £65m in total in comparison to the £52m included in the FD.

As discussed above our Outcome Delivery Incentive (ODI) upper quartile plans have seen delivery delays compared to our original forecast. We do however remain committed to investing more on additional leakage find and fix, as well as new leakage finding technologies to target further reductions beyond the 10 Ml/d identified in the FD. Our aim is to drive down leakage to around 269 Ml/d by 2019-20 resulting in a forecast outperformance (reward) of £0.25m. This forecast reflects both the delay to our UQ programme and also the higher outturn leakage position in 2018-19 compared to our original forecast.

Our UQ plans are also targeting better ways of working on planned interruptions to supply, in line with industry best practice. Performance in 2018-19 varied adversely to our original forecast because of the extended hot and dry period during the summer, which meant there was an increase in the number of mains repairs we were carrying out. We are continuing to forecast that we will reduce our current interruption levels to supply levels down to 4 minutes in 2019-20.

Our Management & General support programme continues to be proportionately allocated to the Water and Wastewater programmes in line with our FD with 48% of the overall £276m programme being allocated over the reporting period to the WW programme, as reported in the APR 2017-18.

Wholesale waste water programme

Gross regulated capital expenditure associated with the wholesale wastewater (WWW) programme in the current reporting year was in total £290.7m (2012-13 price base) against the FD in year of £240.2m. With the associated income totalling £10.9m in comparison to the £11.4m allowed in the FD the net outturn in the current reporting year was £279.8m against the FD of £228.8m.

As with the water programme there are timing differences in some areas of the WWW programme when compared to the FD profile. Additional investment within the AMP is associated with the two new renewable energy and waste treatment facilities at Knostrop (Leeds) and Calder Valley (Huddersfield).

Actual income on the wastewater programme in the current year is lower than that allowed in the FD. Income has been impacted due to requests for sewer diversions and new domestic wastewater connections being at a lower level than that identified in the FD and the reduction to our wastewater infrastructure connection charge, in line with the new agreed charging arrangements at the start of the report year.

Actual net capital expenditure to the end of 2018-19 against the WWW programme FD of £915.3m totals £817.2m. Whilst we have identified savings and efficiencies in the delivery of the overall WWW programme, expenditure to date has been re-profiled to reflect the post FD changes to the National Environment Programme (NEP). This has led to significant timing differences on this programme in comparison to the original planned profile.

Our investment to date has supported the successful delivery of our wastewater or cross business performance commitments in the first four years of the current period. To date we have achieved and continue to forecast to achieve strong service level performance on all our performance commitments, except Pollution (Category 1 & 2). In 2018-19 there were 11 incidents. Of these, 6 were incurred during a period where the watercourses were either “notably” or “exceptionally” low. We anticipate that performance in 2019-20 will be improved and we are forecasting the occurrence of 3 incidents.

As part of the Annual Performance Report (APR) return, in line with FRS102, an accounting adjustment is made to the total regulated capital expenditure each year to ensure any costs associated with activities to maintain the operating capability of existing assets, such as repairs to existing structures, re-pointing, cleaning, flushing, jetting, and clearing major obstacles, is transferred to operating costs. These are identified to allow comparison of the total regulatory expenditure to that reported in the FD.

In total the FD for the WWW programme allowed was £1,144.0m and as part of our internal annual business planning process we identified areas of efficiency and savings for business choices totalling over £157m. After reviewing performance to date against our agreed performance commitment service level targets a plan was approved at the Yorkshire Water Board to re-invest £66m of the total wholesale programme outperformance to target further service level improvements within the current period. This is to support our plans to deliver upper quartile industry performance to our customers in the areas of internal flooding and pollution.

Reinvestment of outperformance will result in a forecast outturn on the Wholesale Wastewater programme of £1,053.3m and further financial outperformance (reward) in the areas of internal flooding and pollution.

Table 3.11 - Wholesale wastewater programme capex (in 2012-13 price base)

Wholesale Wastewater Programme (£m) 2012-13 price base	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Annual Performance Report (Table 2B)	**4.8**	**128.7**	**195.3**	**215.0**	**281.2**	**226.8**	**1,051.8**
Less: Flood Recovery	0.0	(5.5)	(7.3)	(16.0)	(10.8)	(0.4)	(40.0)
Less: Other Financial Accounting adjustments	0.0	(3.2)	3.7	0.0	0.0	0.0	0.5
Add: Capital transfer to Operating expenditure (IAS16)	0.0	7.6	7.7	6.5	9.4	9.7	40.9
Regulatory Capital expenditure	**4.8**	**127.6**	**199.4**	**205.6**	**279.8**	**236.1**	**1,053.3**
Final Determination	0.0	229.0	228.8	228.8	228.8	228.8	1,144.0
Outperformance and (Underperformance)	**(4.8)**	**101.4**	**29.4**	**23.2**	**(51.1)**	**(7.3)**	**90.7**

Forecast wastewater income for the final year of the current reporting period reflects known projects in delivery. Overall the income relating to requisitioned sewers remains broadly in line with our original PR19 submission however the timing of the receipts has shifted to 2019-20 as schemes have been delayed.

Changes we made on the calculation of infra connection charges as a consequence of revised new connection charging rules took effect from April 2018. The reduced wastewater infra connection charge, from £380 as identified in the original FD to £150 per property, reflects the average historic and forecast network reinforcement expenditure planned over the remainder of the reporting period. In our original PR19 submission we had forecast an immediate shift to the lower infrastructure connection charge but with some developments already in contract at the previous rate we did not see the reduction expected in practice. Our current forecast for 2019-20 assumes our new charges approach to be largely in effect.

By the end of the current reporting period we are forecasting in total £43m in total in comparison to the £52m included in the FD.

As discussed earlier our ODI upper quartile plans have seen delivery delays compared to our original forecast. We do however remain committed to investing more on additional sewer network rehabilitation and operational efficiency with regards to customer service and response times, ensuring we improve on the number of wastewater network escapes leading to internal flooding and environmental pollution.

Internal flooding performance in 2018-19 was improved versus our original PR19 submission however there was a marginal increase against the previous year. Our forecast for 2019-20 remains unchanged.

Pollution (Cat 3) performance in 2018-19 was improved on the previous year, although it was slightly above the forecast in our original PR19 submission. This was as a result of finding ourselves in an escalated position from June to the end of the year in 2018 for pollution performance. Our forecast for 2019-20 is improved marginally versus our original PR19 submission.

As identified in the Wholesale Water Programme commentary our Management & General support programme continues to be proportionately allocated to the Water and Wastewater programmes in line with our FD with 52% of the overall £276m programme being allocated over the reporting period to the Wholesale Wastewater programme, as reported in the APR 2017-18.

6. Customer support for proposed adjustments

At PR14 customers determined their preferred approach to how outperformance (rewards) and underperformance (penalty) payments should operate, i.e. the true-up of performance related rewards and other reconciliation mechanisms at the end of the AMP6 period.

To confirm their continued support, we undertook two stages of customer acceptability testing of the PR19 plan with customers (September 2018 and March 2019), including bill acceptability which incorporated the PR14 reconciliation proposed adjustments. The PR14 proposed adjustments in revenues and RCV equated to an approximate contribution of £4 on the average annual household combined bill.

The first stage of acceptability testing with customers took place prior to the September 2018 submission. In total, 86% of the 2,400 customers surveyed said they were supportive of the approach and the overall scale of the adjustments and how they impacted bills.

The second stage of acceptability testing with customers took place in March 2019 prior to submitting our response to Ofwat's Initial Assessment of Plans. In total, 88% of the 1,100 customers surveyed said they were supportive of the approach and the overall scale of the adjustments and how they impacted bills.

We also engaged the Yorkshire Forum for Water Customers (the Forum) throughout two stages of acceptability testing and gained its support for the approach taken. The PR14 reconciliation approach and proposed adjustment outcomes were discussed with the Forum ahead of the original submission of the PR19 business plan in September 2018, and the revised plan in April 2019 following Ofwat's Initial Assessment of Plans.

The evidence of customer support for the proposed adjustments and how we plan to improve services further was incorporated into the PR19 business plan submission in September 2018 and again in April 2019.

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