Anglian Water
PR14 RECONCILIATION SUBMISSION

July 2019

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BUSINESS IN THE COMMUNITY

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Leading Utilities of the World

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British Construction Industry Award

Utility Week Awards

PR14 Reconciliation Information

1. APP5 – PR14 RECONCILIATION – PERFORMANCE COMMITMENTS

Introduction

For every financial ODI reported in App5 we can confirm the following:

- The amount being claimed is the same as the outperformance payment or underperformance penalty determined by our reported performance (with the exception of SIM and leakage - see below)
- No mitigating factors have been applied to the forecast performance
- There was no ambiguity in the definition of the ODI
- No adjustment has been applied to reflect issues with the past reporting of data
- We have not refined our methodology for reporting.

In accordance with the reporting requirements, we have made no forecast of outperformance payments or underperformance penalties in respect of SIM in table App5. We have reported our SIM forecast revenue adjustment in table R10 line 9 (£26.146m 2017/18 prices).

As our Leakage performance commitment has in-period ODI adjustments we have been careful to ensure that we have only entered the amount that we expect to claim for PR19 (£3.090m, the outperformance payment for 2018/19) in App27, line 1 as the "total to be applied at PR19". We expect to claim any adjustment for 2019/20 in an in-period ODI determination in December 2020.

We submitted a revised version of App5 and App6 in our response to the Initial Assessment of Business Plans (IAP) on 1 April. In this version, we have replaced the forecasts of 2018/19 performance from those versions with confirmed actual values. We have reviewed our forecasts for 2019/20. Two of these - for leakage and external sewer flooding - have changed from the forecasts we included in our IAP response.

We comment on the 2018/19 actuals and forecasts for 2019/20. In accordance with Ofwat action ANH.PD.A2 we have paid particular focus to those ODIs where Ofwat said it viewed the evidence provided in our business plan to be insufficient.

Forecasts for 2019/20 are our own and have not been subject to external assurance. The translation of forecast performance levels into outperformance payments has been subject to internal assurance. No assurance has been undertaken by our Customer Challenge Group.

In accordance with the reporting requirements, all monetary amounts in this table are in 2012/13 prices.

W-A2: Water supply interruptions

For 2019/20 we are forecasting to do better than the performance commitment level, with a resulting outperformance payment.

Forecast year	2018/19	2019/20
Performance commitment level (minutes)	12	12
Actual/forecast performance level	8 minutes 44 seconds	11 minutes
Variance from performance commitment level (minutes)	2	1
Reward cap (minutes)	10	10
Outperformance payment rate (£m/minute)	2.8	2.8
Outperformance payment (£m)	= 12 (performance commitment level) -10 (reward cap) x 2.8 (outperformance payment rate) = £5.7m	= 1 (outperformance level) x 2.8 (outperformance payment rate) = £2.8m

We have made considerable operational changes and investments since 2015 to improve our performance on supply interruptions. These include:

- The establishment of a dedicated restoration team
- Development of techniques which allow us to by-pass mains bursts through temporary pipework
- The purchase of ten tankers which enable us to maintain inputs of water into our networks while we repair bursts
- A range of behavioural and cultural initiatives aimed at enhancing the priority given to supply restoration.

As a result of these initiatives, we have out-performed the performance commitment level in the first four years of the current price control period. Our forecast of out-performance in year 5 is based on the evidence of the four years.

W-A3: Properties at risk of persistent low pressure

No performance commitment level was set for 2018/19. We delivered a net reduction of 10 properties in 2018/19, which equates to a total of 287 properties at risk of persistent low pressure. For 2019/20 we are forecasting performance better than the performance commitment level, with a resulting outperformance payment.

Forecast year	2018/19	2019/20
Performance commitment level (no. properties)		257
Actual/ forecast performance level (no. properties)	287	150
Variance from performance commitment level (no. properties)		107
Reward deadband (no. properties)		230
Outperformance payment rate (£m/prop)		0.075
Outperformance payment (£m)		= 230 (reward deadband) - 150 (forecast performance) - x 0.075 (outperformance payment rate) = £6.0m

Our forecast for year 5 is based on the success we have achieved since 2015 in reducing the number of properties at risk of low pressure and reflects our long term plan to reduce the number further. It will be achieved through the completion of a set of traditional schemes (tpically involving mains laying, booster pumping stations or improvements to connectivity) and through cost effective booster solutions for improving pressure to individual or small groups of properties. The schemes we have planned for the coming year, which will reduce the number of properties to 150, are summarised in the following table:

Scheme name	No. of properties	Comments
Christopher Close, Cromer	31	Network improvements
Scampton	5	Cross connection to rezone
Fir Park Owersby	6	Scheme delivered in 18-19, analysing summer logging to confirm
Pavenham	4	Network improvements
Horton	9	Network booster
Scole	24	Mainlaying to reduce headloss
Winceby	13	Single property boosters
Deadmans Cross	10	Mainlaying to reduce headloss
Everton Harwell	11	Network booster
Swinderby Newark Rd	5	Single property boosters
Top Farm West Somerton	3	Single property boosters
Single Property Booster programme	26	Single property boosters
TOTAL	147	

This brings the number of properties to 140 however there is an element of risk built into the programme to account for additions during 2019/20 summer logging and any delays to delivery of schemes.

To prevent a number of 'at risk' areas that were identified during summer 2018 logging, we have promoted these schemes to prevent them being at risk of persistent low pressure:

Scheme name	No. of properties	Comments
Rectory Farm	1	Single property booster
Scunthorpe Manor Farm	1	Single property booster
Scole	141	Mainlaying to reduce headloss (same investment as above)
Oving	49	Booster

| Blackhorse Drove | 81 | Mainlaying due to high headloss |

W-A4: Water quality contacts

In 2018/19 we outperformed the performance commitment level for this measure and earned a small outperformance payment. For 2019/20 we are forecasting performance to match the performance commitment level, with no resulting outperformance payment or underperformance penalty.

Forecast year	2018/19	2019/20
Performance commitment level (no. per 1,000 properties)	1.23	1.23
Actual/forecast performance level (no. per 1,000 properties)	1.18	1.23
Variance from performance commitment level (no. per 1,000 properties)	0.05	0
Outperformance payment rate (£m)	1.178	1.178
Outperformance payment (£m)	= 0.05 (outperformance) x 1.178 (outperformance rate) = £0.0589m	0

The number of contacts we have received from customers about the taste, odour or appearance of their drinking water has reduced from around 1.5 per 1,000 properties in 2015. This has been achieved by targetting our mains replacement and cleansing programmes on areas with high numbers of contacts and training our network technicians in better valve operation to minimise the disturbance of network sediments. Performance has also improved as a result of the implementation of our supply interruptions strategy as fewer customers now experience interruptions and restoration of supplies is more rapid.

Customer communications have also played a key role in our improvement. Our proactive 'Keep Water Healthy' campaign informs customers about the risks to water acceptability from their own pipework – for example, from dirty taps or non-compliant fittings. Following supply incidents, we routinely now use social media and other channels to alert customers to the possibility of harmless changes to their water following incidents (e.g. cloudy appearance due to the presence of air) to save them having to contact us.

Our forecast for 2019/20 is that we will match our performance commitment level. This is based on our experience of the last four years and our performance to date for 2019.

W-B1: Value for money perception - variation from baseline against WaSCs (water)

In three of the first four years of the current price control period we have exceeded our performance commitment level for this measure. We attribute this to the work we have done to improve our service and contain bills. However, experience shows that the survey results from 'Water Matters' can vary significantly between years, which makes forecasting difficult. For 2019/20 we are therefore forecasting performance to match the performance commitment level, with no resulting outperformance payment or underperformance penalty.

Forecast year	2018/19	2019/20
Performance commitment level (variance from baseline against WASCs)	0	0

Actual/ forecast performance level (variance from baseline against WASCs)	1	0
Variance from performance commitment level	1	0
Outperformance payment rate	0.25	
Outperformance payment (£m)	= 1 (outperformance) x 0.025 (outperformance rate) = £0.025m	0
Underperformance penalty (£m)	0	0

W-C1: Percentage of population supplied by single supply system

No performance commitment level was set for 2018/19. We achieved a small improvement in this measure by the completion of four resilience schemes, as set out in our 2018/19 APR.

For 2019/20 we are forecasting performance to match the performance commitment level, with no resulting underperformance penalty. Our forecast is based on expected completion of named schemes, including the major Grafham resilience scheme. There was no outperformance payment available for this ODI.

Forecast year	2018/19	2019/20
Performance commitment level (% properties on single supply system)		24.7
Actual/ forecast performance level (% properties on single supply system)	44.9	24.7
Variance from performance commitment level (% properties on single supply system)		0
Underperformance penalty (£m)		0

W-C2: Frequency of service level restrictions (hosepipe bans)

We foresee no prospect of imposing a hosepipe ban before 31 March 2020. For 2019/20 we are forecasting performance to match the performance commitment level of no more than one hosepipe ban in a ten year period. No performance commitment level was set for 2018/19.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

W-D1: Security of Supply Index (SoSI) - dry year annual average

We reported a SoSI of 100 for 2018/19 as a result of implementing our Water Resources Management Plan (WRMP). No performance commitment level was set for 2018/19.

For 2019/20 we are forecasting performance of 100 to match the performance commitment level.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

W-D2: Security of Supply Index (SoSI) - critical period (peak) demand

We reported a SoSI of 100 for 2018/19 as a result of implementing our Water Resources Management Plan (WRMP). No performance commitment level was set for 2018/19.

For 2019/20 we are forecasting performance of 100 to match the performance commitment level.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

W-D3: Per property consumption (PPC) (litres/household/day reduction)

Our performance commitment was to reduce PPC by 7 l/hh/d from our AMP6 (2014/15) base of 312 l/hh/d by 2019/20. Our strategy for achieving this was through a combination of behavioural change by our customers and continued switching to metered billing. We have been disappointed by the relatively low levels of switching by customers for whom we have provided a meter under our enhanced metering programme. Many customers are resistant to switching even when shown the savings they would make and told about our two year switch back guarantee.

No performance commitment level was set for 2018/19. Our outturn was 323 l/hh/d, which is 11l/hh/d more than our AMP6 baseline. This was due to the hot, dry summer of 2018 which led to a significant increase in domestic demand for water.

Our experience of 2018/19 shows us how the impact of the weather can dwarf the impact of our own interventions. Because use of water by customers, particularly for garden watering, is highly weather-dependent forecasting performance for 2019/20 is difficult. In the first four years of the current price control period we have made no in-roads into our AMP6 base so it would be inappropriate to forecast one now. Our prudent estimate is 314 l/hh/d, which represents 2l/hh/d more than our AMP6 base. This would attract a maximum underperformance penalty of £7.8m.

Forecast year	2018/19	2019/20
Performance commitment level (l/hh/day reduction)		7
Actual/ forecast performance level (l/hh/day reduction)	-11	-2
Variance from performance commitment level		-9
Penalty collar (l/hh/day reduction)		0
Variance from performance commitment level (adjusted for penalty collar)		-7
Underperformance penalty rate (£m/(l/hh/day/year)		0.224
Underperformance penalty		= 7 (collared underperformance level) x £0.224m (underperformance penalty rate) x 5 (years) = £7.8m

W-D4: Leakage - three-year average

Total leakage in 2018/19 was 191Ml/d, higher than we forecast in the business plan because of the combined impact of the freeze thaw event of March 2018 and the hot, dry summer of 2018. On a three year average, which is the basis for measuring our performance commitment, leakage for 2018/19 was 186 Ml/d. This bettered our performance commitment level and attracted an outperformance payment of £3.1m.

Although we are forecasting to reduce leakage in 2019/20, performance on the three year average basis will be affected by the 2018/19 outturn. We are forecasting to outperform the performance commitment level, with an associated outperformance payment of £3.6m. This represents a change from the forecast in our IAP response.

As our leakage performance commitment has in-period ODI adjustments we have been careful to ensure that we have only entered the amount that we claimed for PR19 (£3.1m, the outperformance payment for 2018/19) in App 27 line 1 as the "total to be applied at PR19". We claimed the adjustment for 2017/18 in an in-period determination in December 2018 and expect to claim the adjustment for 2019/20 in an in-period ODI determination in December 2020.

Forecast year	2018/19	2019/20
Performance commitment level (Ml/d lost to leakage, three year average)	192	192
Actual / forecast performance level (Ml/d lost to leakage, three year average)	186	185
Variance from performance commitment level	6	7
Outperformance payment rate (£m/Ml/d/year)	0.509	0.509
Outperformance payment (£m)	= 6 (outperformance level) x 0.509 (outperformance rate) = £3.1m	= 7 (outperformance level) x 0.509 (outperformance rate) = £3.6m

The outperformance that we forecast of our leakage performance commitment level is consistent with the leakage strategy we set in our PR14 business plan. That strategy was informed by our PR14 customer research, which told us that customers placed a high priority on leakage reduction and were prepared to pay to bring leakage levels down.

Our leakage forecasts will be delivered by continuation of the strategy we have implemented since 2015 and which delivered leakage reductions in the first three years of the period. Key components of this strategy include the following:

- We have devoted considerable resources to leakage detection, maintaining a large team of detection technicians and making use of new technologies such as noise loggers
- We have substantially increased our ability to manage pressure in our networks. We will have delivered 400 new pressure management schemes and achieved 50% coverage of the network by 2020
- We will have split 150 of our district metering areas (DMAs) into smaller areas to enable quicker location of leaks.

We have developed an integrated enhanced leakage reduction methodology which has delivered a 3 Ml/d per year reduction in base leakage through targeted interventions in high or recurring leakage areas. This includes targeted mainlaying, communication pipe replacements and shared service pipe splits.

W-E1: Percentage of SSSIs (by area) with favourable status

In 2018/19 we reported 99% by area of the SSSIs in our ownership to be in favourable status. We have seen a marked improvement in this measure during the price control period because English Nature recategorised Rutland Water, our largest SSSI, as favourable. This re-categorisation is attributable to many years of investment at Rutland Water on biodiversity projects and erosion reduction through shoreline restoration.

No performance commitment level was set for 2018/19.

For 2019/20 we are forecasting again to significantly outperform the performance commitment level of 50%.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

W-E2: Environmental compliance (water)

No performance commitment level was set for 2018/19. In 2018/19 we delivered one obligation which counts towards this performance commitment measure. This was an Eels Regulations scheme at Heigham, Norwich. This increased the total number of obligations delivered in AMP6 that count towards this performance commitment to five.

For 2019/20 we are forecasting performance to match the performance commitment level, with no resulting underperformance penalty. There is no outperformance payment available for this ODI.

Forecast year	2018/19	2019/20
Performance commitment level (obligations delivered)		16
Actual/ forecast performance level (obligations delivered)	5	16
Variance from performance commitment level (obligations delivered)		0
Underperformance penalty (£m)		0

Our environmental compliance (water) performance commitment delivery is dependent upon our meeting the regulatory obligation dates agreed for each project or site. Our project governance is overseen by Totex Investment Group, which is made up of our Management Board members. They have executive oversight and hold the project teams to account for their planned delivery dates.

We have phased our delivery of these schemes based on the obligation dates specified by the Environment Agency. In the final year of the AMP the number of obligations due increases significantly. We are keeping a close view of the performance against these delivery dates for our projects on a monthly basis through our Totex Delivery Index performance report. The remaining programme is scheduled to complete in January 2020 for the water obligations.

During AMP6 we have been in dialogue with the Environment Agency about the delivery of the obligations that count against this performance commitment. The EA requested that we include an additional two schemes in AMP6 at Tetney Weir and Cloves Bridge and have agreed to delay a scheme at Tinwell to AMP7 and to remove a scheme at Marham as the source will no longer be in operation in AMP7. There remain a total of 16 schemes within the programme.

The table below shows the obligations that we have delivered in the AMP up until the end of 2018/19.

Driver	Site name	EA obligation date	Actual date of scheme completion	Environment Agency sign-off
Eels Regulations	Heigham	01/12/2020	25/01/2019	05/03/2019
Eels Regulations	Cadney PS	31/12/2017	08/12/2017	08/03/2018
Eels Regulations	Ardleigh	31/12/2018	11/12/2017	07/03/2018
Eels Regulations	Tetney Weir (NEW OUTPUT)	01/03/2016	28/04/2016	01/03/2016
Eels Regulations	Cloves Bridge - Eel Pass (NEW OUTPUT)	01/12/2017	28/04/2016	01/03/2016

The table below shows the obligations that have not yet been signed off and those that have had a change agreed by the Environment Agency, which may mean that the obligations do not need to be delivered in AMP6.

Driver	Site name	EA obligation date	Planned date for scheme completion	Additional notes
Eels Regulations	Marham	Removed		Coming out of the programme as source to be lost in AMP7. EA have confirmed removal.
Eels Regulations	Tinwell	Delayed to AMP7		Was delayed to AMP 7 by EA between draft NEP and final.
Eels Regulations	Stoke Ferry	01/12/2019	29/11/2019	
Eels Regulations	Costessey	01/12/2019	08/11/2019	
Eels Regulations	Covenham	31/12/2019	21/02/2017	Whilst the original construction work is complete at Covenham, it will not be reported until additional work agreed with the EA has been signed off, this is expected in December 2019.
Eels Regulations	Wansford	31/03/2020	14/11/2019	
Eels Regulations	Offord	01/03/2020	15/01/2020	
Eels Regulations	Sproughton	31/03/2020	20/11/2019	
Eels Regulations	Cloves Bridge - Eel Screen	31/03/2020	20/12/2019	
Eels Regulations	Trowse Newton	31/03/2020	29/11/2019	
Restoring Sustainable Abstraction	Mattishall	31/03/2020	25/04/2019	
Restoring Sustainable Abstraction	Hunstanton	31/03/2020	31/10/2019	

Restoring Sustainable Abstraction	Norwich and the Broads	31/03/2020	14/08/2019	

W-F1: Operational carbon (% reduction from 2015 baseline)

In 2018/19 gross operational greenhouse gas emissions were 29% below the 2014/15 baseline. The main factors driving this were a reduction in the grid electricity emissions factor, our energy efficiency initiatives and greater self-generation of renewable power. These factors offset higher overall electricity consumption due to water demand during the hot, dry summer and a change in the global warming potential for methane and nitrous oxide. No performance commitment level was set for 2018/19.

For 2019/20 we are forecasting performance to match the performance commitment level.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

W-F2: Embodied carbon (% reduction from 2010 baseline)

In 2018/19 we achieved a 58% reduction in capital carbon against our 2010 baseline.

For 2019/20 we are forecasting performance to match the performance commitment level.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

W-G1: Survey of community perception

We measure our performance by asking a sample of customers through survey whether they agree that Anglian Water cares about the communities it serves. Our performance commitment is to increase the percentage of customers who 'agree slightly' or 'agree strongly' to this question from 56% (our AMP6 baseline) to 60%. In 2018/19 our score was 57%.

For 2019/20 we are forecasting to underperform the performance commitment level. This is based on the evidence from our community perception surveys of the first four years of the price control period. With the assistance of new media channels, such as social media applications, we now engage with customers and their communities more than ever before. However, we have not been able to match the stretching performance targets we set at the beginning the regulatory period.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

W-H1: Water infrastructure

Commentary on this serviceability ODI and its associated sub-measures is provided in the commentary to App6.

W-H2: Water non-infrastructure

Commentary on this serviceability ODI and its associated sub-measures is provided in the commentary to App6.

W-I1: Mean zonal compliance (MZC)

In 2018/19 we underperformed the performance commitment level and for 2019/20 we are forecasting the same. However, we forecast that we will be within the penalty deadband so there will be no underperformance penalty. There was no outperformance payment available for this ODI.

Forecast year	2018/19	2019/20
Performance commitment level (%)	100	100

Actual/ forecast performance level (%)	99.95	99.96
Variance from performance commitment level (%)	-0.05	-0.04
Penalty deadband (%)	99.95	99.95
Underperformance penalty (£m)	O	O

For the last fifteen years our outturn performance on MZC has ranged from 99.95 to 99.97. In recognition of the very high priority customers attach to drinking water quality, we devote substantial resources to the activities necessary to achieve a high score. These activities will continue in 2019/20. Our forecast for 2019/20 is based on the substantial historical evidence of our performance against this measure and our performance to date in 2019.

S-A2: Properties flooded internally from sewers - three-year average (reduction)

This ODI measures the change from our 2014/15 baseline. Both baseline and report year figures are shown as three year averages to smooth out the impact of exceptional years. We count properties flooded due to both overloaded sewers and other causes and include incidents attributable to severe weather. In 2018/19 there were 342 properties reported, compared to 475 in 2014/15, which is a reduction of 133 properties.

For 2019/20 we are forecasting to outperform the performance commitment level, with a resulting outperformance payment of £8.6m. This forecast is informed by knowledge of our good performance in 2017/18 and 2018/19, which make up two thirds of the 2019/20 figure.

Forecast year	2018/19	2019/20
Performance commitment level (no. of properties flooded, reduction)		27
Actual/ forecast performance level (no. of properties flooded, reduction)	133	143
Variance from performance commitment level (no. of properties flooded, reduction)		116
Reward deadband (no. of properties flooded, reduction)		30
Reward cap (no. of properties flooded, reduction)		78
Outperformance reward rate (£m/property/year)		0.036
Outperformance payment (£m)		= 78 (reward cap) - 30 (reward deadband) x 0.036 (outperformance reward rate) x 5 (years) = £8.6m

The following activities have contributed to the reductions in the number of properties experiencing sewer flooding which we have achieved to date and forecast to achieve to the end of the regulatory period:

• Continued investment in our Keep It Clear campaign which aims to educate customers and other stakeholders about the consequences of inappropriate sewer use and encourage change in waste disposal behaviours
• A number of the programmes have been prioritised based on reducing overall flood risk across our customer base rather than removing single properties from a flood register
• A programme of rehabilitating and replacing sewers and rising mains where their structural characteristics give rise to repeat flooding incidents

- Greater use of non-return valves where these provide the most cost efficient means of protecting individual properties
- Programmes to reduce infiltration of ground and surface water where infiltration is reducing available sewer capacity
- Investment to improve our ability to monitor flows in networks
- Programmes of Planned Preventative Maintenance (PPM), targetted on high-risk sewers and pumping stations. In 2015 we recruited 21 additional technicians across Collection and Maintenance for proactive inspections of high-risk assets to inform our PPM programmes
- A programme of installing auto control and resets on our pumping stations targeted on repeat issues.

S-A3: Properties flooded externally from sewers - three-year average (reduction)

This ODI measures the change from our 2014/15 baseline. Both baseline and report year figures are shown as three year averages to smooth out the impact of exceptional years. We count floodings due to both overloaded sewers and other causes and include incidents attributable to severe weather. In 2018/19 there were 4,148 areas reported, compared to 6,181 reported in 2014/15 which is a reduction of 2,033 areas.

Compared to our IAP response, we have revised our forecast for 2019/20 based on our improved knowledge of performance during 2018/19. This has no effect on our penalty in 2019/20 as we were already forecasting to avoid any penalty.

For 2019/20 we are forecasting to outperform the performance commitment level, thus avoiding an underperformance penalty. Our forecast is based on achieving the average level of performance we achieved in the first 4 years of AMP6 (on a single year basis). There is no outperformance payment payable for this ODI.

Forecast year	2018/19	2019/20
Performance commitment level (no. of properties flooded, reduction)		22
Actual/ forecast performance level (no. of properties flooded, reduction)	2,033	2,234
Variance from performance commitment level (no. of properties flooded, reduction)		2,212
Underperformance penalty (£m)		0

The following activities have contributed to the reductions in the number of properties experiencing sewer flooding which we have achieved to date and forecast to achieve in the last two years of the regulatory period:

•Continued investment in our Keep It Clear campaign which aims to educate customers and other stakeholders about the consequences of inappropriate sewer use and encourage change in waste disposal behaviours

•A number of the programmes have been prioritised based on reducing overall flood risk across our customer base rather than removing single properties from a flood register

•A programme of rehabilitating and replacing sewers and rising mains where their structural characteristics give rise to repeat flooding incidents

•Greater use of non-return valves where these provide the most cost efficient means of protecting individual properties

•Programmes to reduce infiltration of ground and surface water where infiltration is reducing available sewer capacity

•Investment to improve our ability to monitor flows in networks

• Programmes of Planned Preventative Maintenance (PPM), targetted on high-risk sewers and pumping stations. In 2015 we recruited 21 additional technicians across Collection and Maintenance for proactive inspections of high-risk assets to inform our PPM programmes

• A programme of installing auto control and resets on our pumping stations targeted on repeat issues.

S-A4: Percentage of sewerage capacity schemes incorporating sustainable solutions

We completed ten sewerage capacity schemes within the qualifying business cases during 2018/19. Two of these included significant elements of sustainable solutions. Over the four years to date of the price control period this gives us a total of 23 schemes with elements of sustainable solutions out of a total of 56 schemes completed. This translates into 41 per cent for the performance commitment measure compared to a 2019/20 PCL of 25 per cent.

For 2019/20 we are forecasting performance to achieve the performance commitment level.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

S-B1: Value for money perception variation from baseline against WaSCs (wastewater)

In all four years of the current price control period we have exceeded our performance commitment level for this measure. We attribute this to the work we have done to improve our service and contain bills. However, experience shows that the survey results from 'Water Matters' can vary significantly between years, which makes forecasting difficult. For 2019/20 we are therefore forecasting performance to match the performance commitment level, with no resulting outperformance payment or underperformance penalty.

Forecast year	2018/19	2019/20
Performance commitment level (variance from baseline against WASCs)	0	0
Actual/ forecast performance level (variance from baseline against WASCs)	1	0
Variance from performance commitment level	1	0
Outperformance payment rate	0.025	
Outperformance payment (£m)	=1 (outperformance) x 0.025 (ouperformance rate) = £0.025m	0
Underperformance penalty (£m)	0	0

S-C1: Percentage of bathing waters attaining excellent status

In 2018, 33 of the 49 bathing waters in our region, representing 65%, were assessed as 'excellent'. No performance commitment level was set for 2018/19.

For 2019/20 we are forecasting performance to match the performance commitment level, with no resulting outperformance payment or underperformance penalty.

Forecast year	2018/19	2019/20
Performance commitment level (%)		67
Actual/ forecast performance level (%)	65	67

Variance from performance commitment level (%)		0
Outperformance payment (£m)		0
Underperformance penalty (£m)		0

There are 49 designated bathing waters in our region. We are forecasting that 33 will achieve 'excellent' status for 2019, which will represent an increase of one on the number of excellent bathing waters in 2018. The status of each bathing water is calculated on the basis of sample results over the previous four years.

Forecasting bathing water compliance is difficult because bathing water quality is affected not solely by discharges from our assets but also by other factors, such as run-off from land and discharges from private sewerage assets. In turn, these third party risks are heavily influenced by the weather. For example, we know that intense summer rainfall increases the run-off of pollutants from land and extended periods of high UV light give rise to high concentrations of marine algae, which harbour *E coli*.

We have made substantial investment during the current price control period in pursuit of our performance commitment level for bathing waters. This includes improvements to our own assets – for example, we are increasing capacity, utilizing technological advances, at Great Yarmouth and have built storage tanks in Southend. We have also made various improvements to the waste water treatment process at Pyewipe WRC (Grimsby). Our investment has included the recruitment of coastal catchment managers, who work with relevant stakeholders to identify and address third party risks. These managers also investigate all failures very thoroughly, giving us an excellent understanding of the root causes.

Our forecast for 2019 is informed by

- our knowledge of the sample results for 2016, 2017 and 2018
- our understanding of the impact of our investments on bathing water quality
- our assessments of third party risks
- the results of samples we have received to date for 2019.

N.B. Following the completion of our assurance process for this submission, we received Bathing Water results from samples taken during the heavy rainfall that fell in June. The effect of these samples may be to reduce our forecast of the number of excellent bathing waters. As the assurance process was complete before this information became available, the full impact of these new samples on bathing water assessments is not yet clear, and as the forecasts had been signed off internally, it was not appropriate to make amendments to the audited data. This note is to ensure that our stakeholders have the most up to date information available at the time of publication.

S-C1: Percentage of SSSIs (by area) with favourable status

In 2018/19 we reported 99% by area of the SSSIs in our ownership to be in favourable status. We have seen a marked improvement in this measure during the price control period because English Nature re-categorised Rutland Water, our largest SSSI, as favourable. This re-categorisation is attributable to many years of investment at Rutland Water on biodiversity projects and erosion reduction through shoreline restoration.

No performance commitment level was set for 2018/19.

For 2019/20 we are forecasting again significantly to outperform the performance commitment level of 50%.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

S-C3: Pollution incidents (category 3)

For 2018/19 and 2019/20 we are forecasting to outperform the performance commitment level, with resulting outperformance payments totaling £5.9m.

Forecast year	2018/19	2019/20
Performance commitment level (no. of incidents)	298	298
Actual/ forecast performance level (no. of incidents)	185	219
Variance from performance commitment level	113	79
Outperformance reward rate (£m/incident/year)	0.0285	0.0285
Outperformance payment (£m)	= 113 (forecast outperformance) x 0.0285 (outperformance reward rate) x 5 (years) = £3.2m	= 79 (forecast outperformance) x 0.0285 (outperformance reward rate) x 5 (years) = £2.3m

The reduction in the number of pollution incidents has been driven largely by the same activities discussed for internal sewer flooding. This is because the root causes of pollution incidents are typically the same as those for sewer flooding: sewer blockages (often caused by inappropriate sewer use by customers), lack of realtime information about sewer flows, untargetted maintenance of sewers and pumping stations and infiltration of sewers by ground and surface water. The strategy for pollution incidents prevention includes predictive analytics using pump run-time differential and flow meter trend analysis; network visualisation and weather data integration alongside enhanced pumping station upgrades to enable greater visibility of network performance. It also comprises enhanced monitoring at our Water Recycling Centres and a community engagement Pollution Watch campaign.

S-C4: Environmental compliance (wastewater)

No performance commitment level was set for 2018/19. In 2018/19 we completed schemes which delivered three obligations counting against this performance commitment measure. All three were at the Great Dunmow Water Recycling Centre, one under the Urban Wastewater Treatment Directive and two under the Water Framework Directive No Deterioration ND1 and ND2 drivers. In the first three years of AMP6 we met 36 obligations, which brings our total number of obligations delivered that count towards this performance commitment to 39.

For 2019/20 we are forecasting performance to match the performance commitment level, with no resulting underperformance penalty. No outperformance payment is available for this ODI.

Forecast year	2018/19	2019/20
Performance commitment level (obligations delivered)		81
Actual/ forecast performance level (obligations delivered)	39	81
Variance from performance commitment level		0
Underperformance penalty		0

Our environmental compliance (wastewater) performance commitment delivery is dependent upon our meeting the regulatory obligation dates agreed for each project or site. Our project governance is overseen by Totex Investment Group, which is made up of our Management Board members. They have executive oversight and hold the project teams to account for their planned delivery dates.

We have phased our delivery of these schemes based on the obligation dates specified by the Environment Agency. In the final year of the AMP the number of obligations due increases significantly. We are keeping a close view of the performance against these delivery dates for our projects on a monthly basis through our Totex Delivery Index performance report. The remaining programme is scheduled to complete in January for the wastewater obligations.

The table below shows the 39 obligations that we have delivered in the AMP up until the end of 2018/19.

Site name	EA obligation delivery date	EA sign off date
Great Dunmow (3 obligations)	31/03/2020	31/03/2019
Ditchingham	31/03/2018	31/03/2018
Stanningfield	31/03/2018	31/03/2018
Watton	31/03/2018	31/03/2018
Broadholme	31/03/2018	31/03/2018
Chalton	31/03/2018	31/03/2018
Corby	31/03/2018	31/03/2018
Neatishead King St.	22/12/2017	31/03/2017
Great Whelnetham	31/03/2018	31/03/2018
Dunstable	31/03/2018	31/03/2018
Redgrave	22/12/2017	31/03/2017
Grimston (2 obligations)	31/03/2018	31/03/2018
Lavenham	31/03/2018	31/03/2018
Ingoldisthorpe (2 obligations)	31/03/2018	31/03/2018
Hundon	31/03/2018	31/03/2018
Southminster	31/03/2018	31/03/2018
Upminster (Bury Fm)	31/03/2018	31/03/2018
North Hykeham	31/03/2018	31/03/2018
Poringland	31/03/2018	31/03/2018
Balsham STW	22/12/2017	31/03/2017
Stanbridgeford	31/03/2018	31/03/2018
Newnham (Northants)	31/03/2018	31/03/2018
Soham	31/03/2018	31/03/2018
Deepings	31/03/2018	31/03/2018

Attleborough	31/03/2018	31/03/2018
Letchworth (2 obligations)	31/03/2018	31/03/2018
Long Stratton	31/03/2018	31/03/2018
Sleaford	31/03/2018	31/03/2018
Lakenheath (2 obligations)	31/03/2018	31/03/2018
Tuddenham (2 obligations)	31/03/2018	31/03/2018
Wymondham (2 obligations)	31/03/2018	31/03/2018

The process for delivery of these obligations is as follows:

1. Completion of scheme - both capital and operational solutions are delivered as part of our totex approach
2. Scheme is internally signed off as fulfilling the required obligations by our Totex Investment Group
3. Scheme is signed off by the Environment Agency as fulfilling their requirements - usually their procedure is to do this at the end of the reporting year
4. The obligations are then reported as complete in our reporting to stakeholders, including through our APR.

The table below shows the 45 obligations that have not yet been signed off. Of those obligations three have had a change agreed by the Environment Agency, which means that the obligations do not need to be delivered in AMP6 and will instead be replaced by three alternative schemes.

Site name	EA obligation date	Planned delivery date
Great Finborough	31/03/2020	Awaiting EA sign-off
Stonham Aspal	31/03/2020	Awaiting EA sign-off
Wragby	31/03/2020	Awaiting EA sign-off
Easton on the Hill	31/03/2020	Awaiting EA sign-off
Ketton	31/03/2020	Awaiting EA sign-off
Long Melford	31/03/2020	Awaiting EA sign-off
Pulham St Mary	31/03/2020	Awaiting EA sign-off
Shimpling	31/03/2020	Awaiting EA sign-off
Holbrook	31/03/2020	Replaced by Thorney
Thorney	31/03/2020	Awaiting EA sign-off
Glemsford	31/03/2020	Awaiting internal sign-off
Bildeston	31/03/2020	Awaiting internal sign-off
Old Newton	31/03/2020	Awaiting internal sign-off
Ely (New)	31/03/2020	Awaiting internal sign-off

Ashwell	31/03/2020	Awaiting internal sign-off
Wrestlingworth	31/03/2020	Awaiting internal sign-off
Littleport	31/03/2020	Awaiting internal sign-off
Haslingfield	31/03/2020	Awaiting internal sign-off
East Langton	31/03/2020	Awaiting internal sign-off
Great Easton (Leics)	31/03/2020	Awaiting internal sign-off
Middleton (Northants)	31/03/2020	Awaiting internal sign-off
Doddinghurst	31/03/2020	Awaiting internal sign-off
Foxton (Cambs)	31/03/2020	Awaiting internal sign-off
Hoxne	31/03/2020	Replaced by Mendlesham
Mendlesham	31/03/2020	24/09/2019
Towcester	31/03/2020	Replaced by Sandy
Sandy	31/03/2020	15/10/2019
Necton (Sporle)	31/03/2020	09/07/2019
Guilden Morden	31/03/2020	15/07/2019
Swaffham	31/03/2020	27/07/2019
Clare	31/03/2020	14/08/2019
West Stow	31/03/2020	20/08/2019
Everdon	31/03/2020	06/09/2019
Weedon	31/03/2020	06/09/2019
Badwell Ash	31/03/2020	20/09/2019
Long Bennington	31/03/2020	24/09/2019
Great Barford	31/03/2020	27/09/2019
Foxton (Leics)	31/03/2020	30/09/2019
Castle Acre	31/03/2020	11/10/2019
Kibworth	31/03/2020	28/10/2019
Tempsford	31/03/2020	31/10/2019
Louth	31/03/2020	12/11/2019
North Somercotes	31/03/2020	23/12/2019

| Rattlesden | 31/03/2020 | 16/01/2020 |
| Ulceby | 31/03/2020 | 24/01/2020 |

S-D1: Operational carbon (% reduction from 2015 baseline)

In 2018/19 gross operational greenhouse gas emissions were 29% below the 2014/15 baseline. The main factors driving this were a reduction in the grid electricity emissions factor, our energy efficiency initiatives and greater self-generation of renewable power. These factors offset higher overall electricity consumption due to water demand during the hot, dry summer and a change in the global warming potential for methane and nitrous oxide. No performance commitment level was set for 2018/19.

For 2019/20 we are forecasting performance to match the performance commitment level.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

S-D2: Embodied carbon (% reduction from 2010 baseline)

In 2018/19 we achieved a 58% reduction in capital carbon against our 2010 baseline.

For 2019/20 we are forecasting performance to match the performance commitment level.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

S-E1: Survey of community perception

We measure our performance by asking a sample of customers through survey whether they agree that Anglian Water cares about the communities it serves. Our performance commitment is to increase the percentage of customers who 'agree slightly' or 'agree strongly' to this question from 56% (our AMP6 baseline) to 60%. In 2018/19 our score was 57%.

For 2019/20 we are forecasting to underperform the performance commitment level. This is based on the evidence from our community perception surveys of the first four years of the price control period. With the assistance of new media channels, such as social media applications, we now engage with customers and their communities more than ever before. However, we have not been able to match the stretching performance targets we set at the beginning the regulatory period.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

S-F1: Sewerage infrastructure

Commentary on this serviceability ODI and its associated sub-measures is provided in the commentary to App6.

S-F2: Sewerage non-infrastructure

Commentary on this serviceability ODI and its associated sub-measures is provided in the commentary to App6.

R-A1: Qualitative service incentive mechanism (SIM) score

For 2018/19 we came first in the qualitative SIM survey and in 2019/20 we are forecasting performance to match the performance commitment level.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

R-A2: Service incentive mechanism (SIM)

The Service Incentive Mechanism is a comparative measure. There is no pre-fixed performance commitment level and outperformance payments and underperformance penalties will be determined on the basis of companies' relative performance over the relevant years (2015/16 to 2018/19).

In 2018/19 we have achieved a SIM score of 90. We have made no change to the forecast SIM score for 2019/20. In accordance with the reporting requirements, we have made no forecast of outperformance payments or underperformance penalties in respect of SIM in table App5. We have made a forecast of the outperformance payment we might receive, based on the performance of ourselves and others during the regulatory period to date, in table R10 line 9.

R-A3: Customer Satisfaction Index prepared by UK Institute of Customer Service

For 2018/19 we scored 75.85 on the UK CSI, which ranked us 14th out of the 28 utility companies included in the measure. This outperformed the average utility sector score of 74.1.

For 2019/20 we are forecasting performance to match the performance commitment level. No performance commitment level was set for 2018/19.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

R-B1: Fairness of bills perception - variation from baseline against WaSCs

In all four years of the current price control period we have exceeded our performance commitment level for this measure. We attribute this to the work we have done to improve our service and contain bills. However, experience shows that the survey results from 'Water Matters' can vary significantly between years, which makes forecasting difficult. For 2019/20 we are therefore forecasting performance to match the performance commitment level, with no resulting outperformance payment or underperformance penalty.

Forecast year	2018/19	2019/20
Performance commitment level (variance from baseline against WASCs)	0	0
Actual/ forecast performance level (variance from baseline against WASCs)	2	0
Variance from performance commitment level	2	0
Outperformance payment rate	0.025	
Outperformance payment (£m)	=2 (outperformance) x 0.025 (outperformance rate) = £0.05m	0

R-B2: Affordability perception - variation from baseline against WaSCs

In all four years of the current price control period we have exceeded our performance commitment level for this measure. We attribute this to the work we have done to contain bills and provide support to those who have difficulty paying their bills. However, experience shows that the survey results from 'Water Matters' can vary significantly between years, which makes forecasting difficult. For 2019/20 we are therefore forecasting performance to match the performance commitment level, with no resulting outperformance payment or underperformance penalty.

Forecast year	2018/19	2019/20

Performance commitment level (variance from baseline against WASCs)	0	0
Actual/ forecast performance level (variance from baseline against WASCs)	2	0
Variance from performance commitment level	2	0
Outperformance payment (£m)	0	0
Underperformance penalty (£m)	= 2 (outperformance) x 0.025 (outperformance rate) = £0.05m	0

R-C1: Operational carbon (% reduction from 2015 baseline)

In 2018/19 gross operational greenhouse gas emissions were 29% below the 2014/15 baseline. The main factors driving this were a reduction in the grid electricity emissions factor, our energy efficiency initiatives and greater self-generation of renewable power. These factors offset higher overall electricity consumption due to water demand during the hot, dry summer and a change in the global warming potential for methane and nitrous oxide. No performance commitment level was set for 2018/19.

For 2019/20 we are forecasting performance to match the performance commitment level.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

R-C2: Embodied carbon (% reduction from 2010 baseline)

In 2018/19 we achieved a 58% reduction in capital carbon against our 2010 baseline.

For 2019/20 we are forecasting performance to match the performance commitment level.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable.

R-D1: Survey of community perception

We measure our performance by asking a sample of customers through survey whether they agree that Anglian Water cares about the communities it serves. Our performance commitment is to increase the percentage of customers who 'agree slightly' or 'agree strongly' to this question from 56% (our AMP6 baseline) to 60%. In 2018/19 our score was 57%.

For 2019/20 we are forecasting to underperform the performance commitment level. This is based on the evidence from our community perception surveys of the first four years of the price control period. With the assistance of new media channels, such as social media applications, we now engage with customers and their communities more than ever before. However, we have not been able to match the stretching performance targets we set at the beginning the regulatory period.

This is a reputational ODI and no outperformance payments or underperformance penalties are applicable

2. APP6 – PR14 RECONCILIATION – SUB MEASURES

Introduction

For all of the serviceability ODIs and sub-measures reported in App6 we can confirm the following:

• No mitigating factors have been applied to the forecast performance
• There was no ambiguity in the definition of the ODI
• No adjustment has been applied to reflect issues with the past reporting of data
• We have not refined our methodology for reporting.

On the basis of our forecast performance we forecast no underperformance penalties. No outperformance payments were available for any of the four serviceability ODIs.

For the following sub-measures there is a material difference between our forecast performance and the reference level. In the relevant sections, we set out the reasons behind these differences.

• Customer contacts - discolouration
• Distribution Maintenance Index
• Pollution incidents
• Sewer collapses
• Sewer blockages
• WwTW failing numeric consents.

We have updated 2018/19 performance with actual performance. Forecasts at sub-measure level for 2019/20 are our own and have not been subject to external assurance. The translation of forecast sub-measure performance levels into serviceability status (RAG) has been subject to internal assurance. No assurance has been undertaken by our Customer Challenge Group.

W-H1: Water infrastructure

We developed a bespoke serviceability ODI for water infrastructure (WI) at PR14. The key features of the ODI were the following:

• We would make an annual assessment of WI serviceability, defined as Red, Amber or Green (RAG)
• The serviceability assessment in any year would depend on the status of four sub-measures
• The status of each sub-measure would be determined by performance against a pre-defined upper control limit in the current and prior years, and would also be defined as Red, Amber or Green (RAG). A separate reference level was also set for each sub-measure, indicating expected performance.
• Underperformance penalties would be payable for serviceability assessments of Red or Amber, with no scope for outperformance payments.

In 2018/19 three of our water infrastructure indicators were assessed as Green. The unplanned interruptions over 12 hours indicator was above the upper control limit and therefore is assessed as Amber. Under the mechanism of our serviceability assessment this means that the overall assessment for the water infrastructure sub-service remains Green. As set out in the following sections, we forecast performance of all the sub-measures to match or exceed the respective upper control limits in 2019/20 and therefore be assessed as Green. We forecast WI serviceability as a whole to be also Green in 2019/20.

Unplanned interruptions >12 hours

The total number of properties affected by unplanned interruptions of greater than 12 hours in 2018/19 was 2,267 (1,263 in 2017-18). One event at Weston Underwood, representing 52% of the properties interrupted, accounted for 1,177 properties. This performance is above our upper control limit and therefore performance for the year is assessed as Amber.

We have forecast performance of this sub-measure to match the reference level for 2019/20. By definition, this is within the upper control limit for the sub-measure and therefore the status of the sub-measure is Green.

Reactive mains bursts

Performance remained under the upper control limit in 2018/19, in spite of the challenges posed by the after-effects of the 'Beast from the East' combined with the hot, dry summer putting stress on the pipes through soil movement. This had a notable impact on the number of bursts we experienced compared to previous years, but our programme of proactive leak detection meant that the impact to the customer was minimised. Our total number of reactive mains bursts exactly matched the model predictions for 2018/19. This performance is below our upper control limit and therefore performance for the year is assessed as Green.

We have forecast performance of this sub-measure to match the reference level for 2019/20. By definition, this is within the upper control limit for the sub-measure and therefore the status of the sub-measure is Green.

Customer contacts - discolouration

Discolouration (brown/black or orange) is a subset of the acceptability of water to consumers measure reported by the DWI annually in the Chief Inspector's Report. The number of discolouration contacts (brown/black or orange) received per 1,000 population served in 2018 was 0.37. This performance is below our upper control limit and therefore performance for the year was assessed as Green.

We have forecast performance of this sub-measure to outperform the reference level for 2019/20. By definition, this is within the upper control limit for the sub-measure and therefore the status of the sub-measure is Green.

The following activities have had the greatest impact on our performance on discolouration:

• We have consistently maintained our planned preventative maintenance programme of systematic mains flushing in 150 district metered areas (DMAs) within our Public Water Supply Zones (PWSZs) at highest risk of discolouration
• We have tackled the substantial discolouration issue in Hartlepool with a targeted flushing programme
• In Belstead PWSZ (Ipswich), which is our biggest risk area, we have implemented the programme of measures covered by our Regulation 28 notice with the DWI. The work in Belstead includes mains flushing, network reconfiguration, mains renovation and enhanced maintenance activities at Belstead WTW.

Distribution Maintenance Index

The Distribution Maintenance Index (DMI) is a measure of the condition of drinking water infrastructure. It can be impacted by water quality exceedances for iron, manganese or turbidity. The DMI for 2018 was 0.07 per cent (measured as non-compliance). This represented a slight reduction in compliance when compared with the 2017 figure of 0.05 per cent. There were eleven iron exceedances from customer taps in 2018 compared with the five iron exceedances in 2017. There were no manganese or turbidity exceedances at any Public Water Supply Zone in 2018. This performance is below our upper control limit and therefore performance for the year is assessed as Green.

We have forecast performance of this sub-measure to outperform the reference level for 2019/20. By definition, this is within the upper control limit for the sub-measure and therefore the status of the sub-measure is Green.

The activities listed in the previous section (customer contact - discolouration) have also had the greatest impact on our DMI performance.

W-H2: Water non-infrastructure

We developed a bespoke serviceability ODI for water non-infrastructure (WNI) at PR14. The key features of the ODI were the following:

- We would make a annual assessment of WNI serviceability, defined as Red, Amber or Green (RAG)
- The serviceability assessment in any year would depend on the status of three sub-measures
- The status of each sub-measure would be determined by performance against a pre-defined upper control limit in the current and prior years, and would also be defined as Red, Amber or Green (RAG). A separate reference level was also set for each sub-measure, indicating expected performance.
- Underperformance penalties would be payable for serviceability assessments of Red or Amber, with no scope for outperformance payments.

In 2018/19 all three of our water non-infrastructure indicators were assessed as Green. This is because all three were within their upper control limits. Under the mechanism of our serviceability assessment this means that the overall assessment for the water non-infrastructure sub-service remains Green.

As set out in the following sections, we forecast performance of all the sub-measures to match or exceed the respective upper control limits in 2019/20 and therefore be assessed as Green. We forecast WNI serviceability as a whole to be also Green in 2019/20.

WTW with coliforms detected

Coliforms were detected at five WTWs in 2018, a small increase on the 2017 total. Coliforms were detected on a single occasion at Welton, Bracebridge Heath, Hillington, Glandford and Dalton Piercy WTWs. In all cases, our investigations were deemed satisfactory and no enforcement action was initiated by the DWI. This performance is below our upper control limit and therefore performance for the year is assessed as Green.

We have forecast performance of this sub-measure to match the reference level for 2019/20. By definition, this is within the upper control limit for the sub-measure and therefore the status of the sub-measure is Green.

Percentage service reservoirs with >5% coliforms

The percentage of service reservoirs with coliforms detected in more than 5 per cent of samples has remained at zero per cent for 2018. This performance is below our upper control limit and therefore performance for the year is assessed as Green.

We have forecast performance of this sub-measure to match the reference level for 2019/20. By definition, this is within the upper control limit for the sub-measure and therefore the status of the sub-measure is Green.

WTW turbidity

There were no WTWs with a turbidity 95-percentile greater than or equal to 0.5 NTU (nephelometric turbidity units) for 2018. This performance is below our upper control limit and therefore performance for the year is assessed as Green.

We have forecast performance of this sub-measure to match the reference level for 2019/20. By definition, this is within the upper control limit for the sub-measure and therefore the status of the sub-measure is Green.

S-F1: Sewerage infrastructure

We developed a bespoke serviceability ODI for sewerage infrastructure (SI) at PR14. The key features of the ODI were the following:

- We would make an annual assessment of SI serviceability, defined as Red, Amber or Green (RAG)
- The serviceability assessment in any year would depend on the status of four sub-measures

- The status of each sub-measure would be determined by performance against a pre-defined upper control limit in the current and prior years, and would also be defined as Red, Amber or Green (RAG). A separate reference level was also set for each sub-measure, indicating expected performance.
- Underperformance penalties would be payable for serviceability assessments of Red or Amber, with no scope for outperformance payments.

In 2018/19, all four of our sewerage infrastructure indicators were assessed as Green. This is because all four were within their upper control limits. Under the mechanism of our serviceability assessment this means that the overall assessment for the sewerage infrastructure sub-service remains Green.

As set out in the following sections, we forecast performance of all the sub-measures to match or exceed the respective upper control limits in 2019/20 and therefore be assessed as Green. We forecast SI serviceability as a whole to be also Green.

Pollution incidents

During 2018 there were 82 category 1-3 pollution incidents which were attributed to serviceability assets (does not include transferred sewers), namely combined sewer overflows (CSOs), rising mains and foul sewers. This performance is below our upper control limit and therefore performance for the year is assessed as Green.

We have forecast performance of this sub-measure to outperform the reference level for 2019/20. By definition, this is within the upper control limit for the sub-measure and therefore the status of the sub-measure is Green.

We set out in the commentary to App5 the key components of our strategy which have led to a reduction in the number of pollution incidents.

Sewer collapses

There were 113 burst rising mains and 101 sewer collapses, totaling 214 for 2018/19. This is a slight decrease from 2017/18 which saw 246. This performance is below our upper control limit and therefore performance for the year is assessed as Green.

We have forecast performance of this sub-measure to outperform the reference level for 2019/20. By definition, this is within the upper control limit for the sub-measure and therefore the status of the sub-measure is Green.

A programme of rehabilitating and replacing sewers, rising mains and ancillary structures (e.g. silt traps) has contributed to the reduction in the number of sewer collapses.

Internal flooding (overloaded + other causes)

This measure is the sum of properties flooded from public sewers due to sewer overloaded (including those attributable to severe weather) and other causes. Incidents attributable to sewers that transferred to us in 2011 are excluded. We reported 112 properties for 2018/19. This comprised 16 (28 in 2017/18) overloaded properties and 96 (133 in 2017/18) properties due to other causes. Of the 16 properties flooded internally due to overloaded sewers, 7 were caused by severe weather events. This performance is below our upper control limit and therefore performance for the year is assessed as Green.

We have forecast performance of this sub-measure to match the reference level for 2019/20. By definition, this is within the upper control limit for the sub-measure and therefore the status of the sub-measure is Green.

Sewer blockages

Public sewer blockage numbers have decreased this report year from 11,936 in 2017/18 to 11,908 in 2018/19, and are still within the upper control limit and below the reference level. This performance is below our upper control limit and therefore performance for the year is assessed as Green.

We have forecast performance of this sub-measure to outperform the reference level for 2019/20. By definition, this is within the upper control limit for the sub-measure and therefore the status of the sub-measure is Green.

The following activities have contributed to the reductions in the number of sewer blockages:

- A programme of rehabilitating and replacing sewers, rising mains and ancillary structures (e.g. silt traps) where their structural characteristics give rise to blockages
- Continued investment in our Keep It Clear campaign which aims to educate customers and other stakeholders about the consequences of inappropriate sewer use and encourage change in waste disposal behaviours
- Programmes of Planned Preventative Maintenance (PPM), targeted on high-risk sewers. In 2015 we recruited 11 additional technicians in Collection for proactive inspections of high-risk sewers to inform our PPM programmes.

S-F2: Sewerage non-infrastructure

We developed a bespoke serviceability ODI for sewerage non-infrastructure (SNI) at PR14. The key features of the ODI were the following:

- We would make an annual assessment of SNI serviceability, defined as Red, Amber or Green (RAG)
- The serviceability assessment in any year would depend on the status of two sub-measures
- The status of each sub-measure would be determined by performance against a pre-defined upper control limit in the current and prior years, and would also be defined as Red, Amber or Green (RAG). A separate reference level was also set for each sub-measure, indicating expected performance.
- Underperformance penalties would be payable for serviceability assessments of Red or Amber, with no scope for outperformance payments.

As set out in the following sections, one of the sub-measures underperformed against its upper control limit in 2018/19 and therefore was assessed as Amber. However, given that the other sub-measure was Green in 2018/19 the SNI serviceability measure was Green for 2018/19. For 2019/20, we forecast SNI serviceability as a whole to be also Green and for both sub-measures.

Population equivalent (PE) WWTW in breach of consent

Three Water Recycling Centres (WRC) - Bocking, Great Billing and Southwold - failed in 2018 against the qualifying criteria. These WRCs represent 5.00 per cent of our total resident population served by works with numeric consents of 6,898,228.

Water Recycling Centre	Failing Category
Bocking WRC	UWWTR P
Great Billing WRC	OSM Sanitary LUT
Southwold WRC	OSM Sanitary LUT

The size of the population at Great Billing (326,000), which is our largest WRC, is the main reason for exceeding the upper control limit. It represents 4.7% population equivalent. We do not expect this to recur in 2019/20 due to improvements to the operation made at the WRC.

This sub-measure underperformed its upper control limit in 2018/19 (and was assessed as Amber) but we forecast it to match its reference level in 2019/20 and be assessed as Green.

WWTW failing numeric consent

This is a measure of the percentage of our WWTWs which were compliant during 2018, according to the Environment Agency End of Year (EoY) Performance report. Out of 756 discharges with numeric consents, ten were non-compliant for 2018. At 98.68 per cent compliance for 2018, this is a deterioration compared to 2017 (eight works out of 718, 98.89 per cent).

The ten non-compliant WRCs were Bocking, Great Billing, Ingoldmells, Newton Marsh, Southend, Southwold, Spalding, Stanbridgeford, Towcester and Westleton.

This performance is below our upper control limit and therefore performance for the year is assessed as Green.

Although, as in 2017, we have 718 operator self monitoring (OSM) sampling points and 715 sites, the EA are now counting all numeric discharges from which final effluent can be discharged and those numeric discharges which are non-OSM. This approach is consistent across the industry.

To improve discharge permit compliance, the following improvements have or will be implemented:

- A new range of daily process reports have been produced and monitored on a daily basis for High Risk Sites. Continuation of high level reporting on a daily, weekly and monthly basis.
- A Water and Water Recycling Joint Compliance Investigation plan has been implemented to improve compliance performance.
- Development of risk tools for end of pipe and process performance.
- Continuation of the Advanced Licence to Operate for Optimisers.
- Development of new Technical Training Courses and materials for operational staff.

We have forecast this sub-measure to outperform the upper control limit for 2019/20. This is on the evidence of performance in the first two years of the regulatory period and earlier. The status of the sub-measure is therefore Green.

3. APP9 – ADJUSTMENTS TO RCV FROM DISPOSALS OF INTEREST IN LAND

Lines 1 and 12: Forecast at previous review - water and wastewater

We have reported the net proceeds from the disposal of interests in land for 2014/15 as forecast at PR14.

As the forecast at PR14 was not allocated between water and wastewater disposals, a 50:50 allocation has been applied to the total forecast net proceeds which is broadly inline with the actual proceeds received.

We have amended the pre-populated cells in line 12 to reflect our data tables at IAP response as agreed with Ofwat.

Lines 2 and 13: Actual and current forecast sales - water and wastewater

For the years 2014/15 to 2018/19, total actual land sale proceeds net of all costs and net book values are reported. The split between water and wastewater is based on the operational purpose of the sites being disposed.

For 2018/19 and 2019/20, forecast sales of £500,000 less anticipated associated costs of £50,000 have been entered, split 70:30 between water and wastewater.

We are not currently anticipating any significant land disposals during this period, with water tower disposals forming the majority of the forecast.

The variance to our Plan as submitted in September 2018 relates primarily to overage received on prior-year sales, which due to its inherent uncertainty in terms of both timing and value was not included in the previous forecasts.

The forecast for 2019/20 remains unchanged.

Line 4: WACC - fully post tax on notional structure

This line reflects the real full post tax WACC that applied at PR14.

Line 15: WACC - fully post tax on notional structure

This line reflects the real full post tax WACC that applied at PR14.

4. APP23 - INFLATION MEASURES

We have updated forecast with actuals for remaining months of 2018/19 and April 2019.

Lines 1 to 13: Retail Price Index

The 2019/20 RPI forecasts are broadly consistent with the consensus forecasts from leading investment banks.

Lines 14 to 26: Consumer Price Index (with housing)

The forecast reflects the 1% wedge between RPI and CPIH, as reflected in the calculated cells in line 36.

Line 27: Indexation rate for index linked debt percentage increase

This line reflects RPI index linked debt.

Lines 37 to 38: Long term inflation rates

RPI forecast based upon Bank of England longterm forecast and forecast RPI/CPIH wedge.

5. APP25 – PR14 RECONCILIATION ADJUSTMENTS SUMMARY

Section A: Further 2010-15 reconciliation adjustments

Lines 1 to 6

These are pre-populated cells from the final 2010-15 reconciliation adjustments.

Lines 7 to 12

These lines reflect the outputs of the Revenue adjustments feeder model (PR19-Revenue-adjustments-feeder-model-01l-for-publication) and the RCV adjustment feeder model (PR19-RCV-adjustments-feeder-model-June-2018-update).

Lines 13 to 24

These lines reflect the outputs of the updated reconciliation models.

6. APP27 – PR14 RECONCILIATION – FINANCIAL OUTCOME DELIVERY INCENTIVES SUMMARY

Table App27 records a summary of the financial adjustments arising from the actual and forecast performance levels as calculated under the PR14 reconciliation rulebook methodology and reported in our APRs and table App5. The table includes both in-period and end-of-period adjustments with a breakdown by PR14 price control element and a breakdown by the proposed allocation to the PR19 price controls. For end-of-period ODIs, we have not accrued for any outperformance payments or underperformance penalties, as the revenue adjustments from these are not certain. We have provided our best estimates of the total revenue adjustments for AMP6 in the "total to be applied at PR19" column.

Table App27 is consistent with the information submitted in Tables App5 and App6 (except for our in-period leakage ODI, which is explained below).

In accordance with the reporting requirements for App5, we have made no forecast of outperformance payments or underperformance penalties in respect of SIM in table App27. We have reported our SIM forecast revenue adjustment in table R10 line 9.

As our Leakage performance commitment has in-period ODI adjustments we have been careful to ensure that we have only entered the amount that we expect to claim for PR19 (£3.090m, the outperformance payment for performance in 2018/19) in line 1 and line 16 as the "total to be applied at PR19". This is an adjustment to our Plan as submitted in September 2018 and our IAP response in March 2019, reflecting our final 2018/19 outturn. We expect to claim the adjustment for 2019/20 in an in-period ODI determination in December 2020.

We have also made changes to the pre-populated cells I13 and I36 so that they reflect our response to IAP query ANH-DD-PD-002.

Compared to our IAP response we have made changes to replace 2018/19 forecasts with 2018/19 actual performance and have changed our forecasts of performance in 2019/20 for leakage and external flooding. We set out these changes in App5 and the commentary to App5. This version of App27 has been revised in accordance with those revisions in App5.

Lines 34 to 40 In-period ODI revenue adjustments input to PR19 financial model (2017-18 prices)

These lines reflects the outputs of the Revenue adjustments feeder model (PR19-Revenue-adjustments-feeder-model-01l-for-publication).

Lines 41 to 47 End of period ODI revenue adjustments input to PR19 financial model (2017-18 prices)

These lines reflect the outputs of the Revenue adjustments feeder model (PR19-Revenue-adjustments-feeder-model-01l-for-publication).

Lines 48 to 52 End of period ODI RCV adjustments input to PR19 financial model (2017-18 prices)

These lines are zero as we have no ODIs linked to RCV.

7. WS13 – PR14 WHOLESALE REVENUE FORECAST INCENTIVE MECHANISM FOR THE WATER SERVICE

Line 3: Company has accepted WRFIM licence modification

Modification of condition B of our licence was published by Ofwat in November 2016.

Line 9: Allowed revenue - water

Allowed 2014/15 wholesale water revenue as set out in the letter, "Final determination of price controls" addressed to Peter Simpson from Cathryn Ross, dated 12 December 2014.

Line 11: K - water.

Wholesale water revenue K factor for each each of AMP6 is summarised in the table below.

Description	2015/16	2016/17	2017/18	2018/19	2019/20
Final Determination K	0.00%	1.34%	0.89%	0.58%	0.56%
ODI K prior year adjustment				-0.15%	-0.75%
ODI K adjustment			0.16%	0.76%	1.35%
K	0.00%	1.34%	1.05%	1.19%	1.16%

The K factor for 2015/16 was set at zero, and for 2016/17 reflects the figure set out in the the letter, "Final determination of price controls" addressed to Peter Simpson from Cathryn Ross, dated 12 December 2014.

The K factor for 2017/18 reflects the K set out in the final determination letter referred to above, adjusted for the in period ODI reward of £0.5m (2012/13 prices) for report year 2015/16 as set out in Ofwat's document "Final determination of Anglian Water's in-period outcome delivery incentives for 2015-16", dated 15 December 2016.

The K factor for 2018/19 reflects the K set out in the final determination letter, adjusted for the in period ODI reward of £2.6m (2012/13 prices) for report year 2016/17 as set out in Ofwat's document "Final determination of in-period ODIs for 2016/17", dated 15 December 2017.

The K factor for 2019/20 reflects the K set out in the final determination letter, adjusted for the in period ODI reward of £4.6m (2012/13 prices) for report year 2017/18.

Line 12: Total revenue forecast - water

The total allowed wholesale revenue for each year of AMP6 reflects the revenue before any adjustment for under/over recovery of revenue from prior years (year *t-2*) or AMP5 blind year adjustment is taken into account.

The subsequent adjustment for under/over recovery of revenue from prior years is as per the WRFIM mechanism set out in the PR14 Rulebook.

Line 13: RCM blind year 2014/15 adjustment for implementing via WRFIM - water

The RCM adjustment as notified to us by Ofwat in their document "Consultation on the final 2010-15 reconciliation - company-specific index - Anglian Water", published October 2016.

Line 14: Percentage of RCM adjustment by year - water

We informed Ofwat in a letter dated 4 November 2016 that we would apply 100% of the blind year adjustment to our 2017/18 allowed revenue.

Lines 15 to 18: Revenue recovered

The data reported is household and non-household measured and unmeasured wholesale revenue.

Report year 2015/16

Data is taken from table 2I of the APR. The value of measured non-household revenue for 2015/16 as reported in the APR has been corrected for £11.5m of non-potable supply revenue that should have been reported as third party revenue within the control.

Report year 2016/17 to 2018/19

Data is taken from table 2I of the APR.

Report year 2019/20

Data is taken from the spread sheet model used to calculate forecast revenue, consistent with the revenue cap.

Line 19: Water: Third party revenue - household

We have no household third party revenue.

Line 20: Water: Third party revenue - non-household

Third party revenue from non-households relates to non-potable supplies to a discreet system in the Immingham area. Projections for 2019/20 are consistent with recent trends.

Line 22: Water: Grants and contributions

Report years 2015/16 to 2018/19

Data is taken from table 2I of the APR.

Report year 2019/20

We have updated our forecast out turn for the current year. This is consistent with the data in App28 submitted as part of our response to the IABP.

Line 24: Water: Capital contributions from connection charges and revenue from infrastructure charges (PR14 FD)

Grants and contributions allowed revenue as set out in the FD in 2012/13 prices.

Line 27: Main revenue adjustment as incurred - water

Report year 2017/18

The main revenue adjustment incurred of -£1.8m relates to report year 2015/16 revenue over-recovery of £1.7m (out-turn prices) compared to allowed revenue.

This reflects a greater recovery of grants and contributions revenue compared to that forecast when setting charges.

Report year 2018/19

The main revenue adjustment incurred of -£9.2m relates to report year 2016/17 revenue over-recovery of £8.1m (out-turn prices) compared to allowed revenue.

This reflects an over-recovery of main charges as a result of prior year accounting adjustments (£2.9m) and higher customer numbers than forecast when setting tariffs.

Actual recovery of grants & contributions revenue was also higher than forecast when setting charges, reflecting increased levels of connection charges.

Report year 2019/20

The main revenue adjustment incurred of -£12.9m relates to report year 2017/18 revenue over-recovery of £11.2m (out-turn prices) compared to allowed revenue.

This reflects an over-recovery of main charges driven by a combination of reduced optant metering (where unmeasured charges are higher than the average measured bill) and higher household demand, together with prior year accounting adjustments (£5.3m).

Actual recovery of grants & contributions revenue was also higher compared to forecast when setting charges, reflecting higher levels of connection charges.

Line 28: Penalty adjustment as incurred - water

Report year 2017/18

The over-recovery in report year 2015/16 of £1.7m represents 0.4% of the allowed wholesale revenue of £443.0m. This is within the 2% dead-band and therefore no penalty arises.

Report year 2018/19

The over-recovery in report year 2016/17 of £8.1m represents 1.8% of the allowed wholesale revenue of £453.5m. This is within the 2% dead-band and therefore no penalty arises.

Report year 2019/20

The over-recovery in report year 2017/18 of £11.2m represents 2.4% of the allowed wholesale revenue of £465.5m. Therefore a penalty of 2.4% attaches to the total value of the over-recovery.

Line 30: WRFIM Total reward / (penalty) at the end of AMP6 - water

The value of the aggregated main revenue adjustment for year 4 (repriced to report year 2019/20 prices £10.099m) and year 5 (£0.065m). This is gives the total penalty at the end of AMP6.

Report year 2018/19

We have reported an over-recovery of £9.4m, representing 2.0% of allowed revenue (£476.8m).

This reflects an over-recovery of main charges against allowed revenue, resulting from prior year accounting adjustments (£3.2m) and higher customer demand in the hot, dry 2018 summer, partially off-set by more customers switching to metered supply than forecast when setting charges. Actual recovery of grants and contributions revenue is higher than the revised forecast used when setting charges, reflecting an increased level of connection charges.

The calculation of allowed revenue reflects the FD14 updated for RPI plus K, adjusted for the following:

- The in-period Leakage ODI out-performance pre-tax payment of £2.6m for report year 2016/17 (re-priced to £3.6m (post tax)); and
- Over-recovery of revenue in report year 2016/17 of £8.1m (re-priced to £9.2m); and
- Accelerated repayment of £6.0m of the forecast over-recovery for report year 2017/18, in line with the revised PR14 Rulebook published 15 December 2017 and as detailed in email correspondence between us and Ofwat dated 14 November and 11 December 2017 respectively.

Report year 2019/20

Recovered revenue is forecast to be over-recovered by £0.065m, representing less than 0.1% of allowed revenue (£506.8m). This arises from small rounding differences in the charge setting process when solving charges back to allowed revenues.

The calculation of allowed revenue reflects the FD14 updated for RPI of 3.2% plus K as per the Final Determination letter, adjusted for the following:

- The forecast in-period Leakage ODI out-performance pre-tax payment of £4.6m for report year 2017/18 (re-priced to £6.6m (post tax)); and

- Over-recovery of revenue in report year 2017/18 of £11.2m plus penalty (re-priced to £13.0m); and
- The accelerated repayment in report year 2018/19 of £6.0m of report 2017/18 over-recovery (re-priced to £6.4m).

Line 31: WRFIM Total reward / (penalty) at the end of AMP6 - water

This line reflects the outputs of the Revenue adjustments feeder model (PR19-Revenue-adjustments-feeder-model-01h).

8. WS15 – PR14 WHOLESALE TOTAL EXPENDITURE OUTPERFORMANCE SHARING FOR THE WATER SERVICE

Line 6: Water: Final menu choice

In the pre-populated tables this has only been entered to one decimal place. We have corrected this to equal line 4 (Water: Implied menu choice). We notified Ofwat of this error and agreed it should be corrected.

Line 9: Water: Actual Totex

We have updated the tables with the actual 2018/19 results in line with our APR. We realised through this process that in our April estimate of 2018/19 out-turn, which was obviously done before our full Regulatory Accounting process, we had not allocated capex fully to the Business Unit of principle use. We therefore see an increase in Sewerage totex in 2018/19 and a corresponding decrease in Water totex in 2018/19. We have adjusted 2019/20 to retain the two year cumulative forecast.

When taking WS15 and WWS15 combined, actual totex in 2018/19 was £928m, which is just £5m lower than our pre year end estimate in our April submission.

Line 10 to 14

We have updated these figures with year end actuals from our full Regulatory Accounting process and these align with our APR.

Line 15: Water: Transition expenditure

This line is pre-populated. Ofwat have recognised that the pre-populated figure has been incorrectly pre-populated with companies' business plan forecasts of transition expenditure rather than actual transition expenditure. The correct entry for this cell should be £25.310 million and has been corrected in our submission.

Line 16: Water: PAYG ratio

This line is pre-populated from the PR14 Final Determination.

Lines 17 to 23: Business rates IDoK

We have left Block F blank on the basis that we have assessed the change in cost of business Rates and do not consider the thresholds to trigger an IDoK have been met. Given this, and the fact that including the data in the model when there is no IDoK triggered interferes with the calculations of the model, we have for transparency included the table as it would have been had we completed it.

F	Business rates IDoK					2017/18	2018/19	2019/20	2015-20
17	Company specific water business rate sharing rate	WS15017	%	2	-				75.00%
18	Menu Cost Sharing Rate	WS15018	nr	2	-				0.49
19	Menu Choice Expenditure Factor	WS15019	%	2	-				100.72%
20	Water business rate constant 2017, 2018, 2019	WS15020	nr	3	2012-13 FYA (RPI)	43.175	43.175	43.175	

21	Water business rate constant 2017, 2018, 2019	WS15021	nr	3	Outturn	48.51	50.159	51.714	
22	Applicable Water Business Rate Costs	WS15022	nr	3	Outturn	41.935	41.569	41.567	
23	Water: IDoK Business rates adjustment	WS15023	nr	3	Outturn	O	O	O	

Line 18: Menu Cost Sharing Rate

This is a pre populated cell, which Ofwat had populated as 0.50. The correct input should be from the PR14 FD menu feeder model and should therefore be 0.49. We have corrected this in the table.

Line 19: Menu Choice Expenditure Factor

This is a pre populated cell, which Ofwat had populated as 100.00%. The correct input should be from the PR14 FD menu feeder model and should therefore be 100.72%. We have corrected this in the table.

Lines 26 to 27: Totex menu revenue adjustment and RCV adjustment

These lines reflects the outputs of the Revenue adjustments feeder model (PR19-Revenue-adjustments-feeder-model-01h) and the RCV adjustment feeder model (PR19-RCV-adjustments-feeder-model-June-2018-update).

9. WS17 – PR14 WATER TRADING INCENTIVE RECONCILIATION

The data table and commentary for WS17 were previously provided in July 2018 as part of our PR14 Reconciliation Information submission. No changes have been made to the data table since then. We have updated the commentary for our July 2019 submission.

Inter water Company trading forms a key element of our current water supply arrangements. These are classified as trades or bulk transfers – see table below. The bulk transfers are exports from our system and are parts of water sharing agreements under the requisite reservoir orders.

Trading party	AWS WRZ	Direction	Max. Average (Ml/d)	Max. Peak (Ml/d)
Severn Trent Water	Ruthamford North	Export	18.00	18.00
Affinity Water	Ruthamford South	Export	91.00	109.00
Affinity Water	South Essex	Export	7.80	7.80
Cambridge Water	Thetford	Import	0.25	0.25
Essex & Suffolk Water	South Essex	Import	3.00	4.50

We currently have a sharing ratio with Affinity of 70:30 in our favour. This will revert to 50:50 on 1 April 2025.

The most recent trading agreement is with Cambridge Water and is dated 31 October 2013. There were no new trades that started in the period 2015 to 2020.

We have considered water resources trading options in the development of our 2019 Water Resources Management Plan. However, none form part of our final Plan because other options (primarily demand management and internal transfers) are more favourable. Nonetheless we will continue discussions with relevant companies, especially as we prepare our 2024 Water Resources Management Plan. At this stage, there are no new trades which would qualify for water trading incentives during AMP7.

Line 1: Does the company have an Ofwat-approved trading and procurement code?

We published a Trading and Procurement Code in August 2018 which closed for consultation on 21 September 2018. We published an updated Trading procurement Code which is available on our website https://www.anglianwater.co.uk/about-us/our-strategies-and-plans/draft-water-resources-management-plan/water-resources-market-information/ .

10. WWS13 – PR14 WHOLESALE REVENUE FORECAST INCENTIVE MECHANISM FOR THE WASTEWATER SERVICE

Line 9: Allowed revenue - wastewater

Allowed 2014/15 wholesale wastewater revenue as set out in the letter, "Final determination of price controls" addressed to Peter Simpson from Cathryn Ross, dated 12 December 2014.

Line 11: K - wastewater

Wholesale wastewater revenue K factor for each year of AMP6.

The K factor for report year 2015/16 was set at zero, and for report years 2016/17 to 2019/20 reflects the figures set out in the the letter, "Final determination of price controls" addressed to Peter Simpson from Cathryn Ross, dated 12 December 2014.

Line 12: Total revenue forecast - wastewater

The total allowed wholesale revenue for each year of AMP6 reflects the revenue before any adjustment for under/over recovery of revenue from prior years (year *t-2*) or AMP5 blind year adjustment is taken into account.

The subsequent adjustment for under/over recovery of revenue from prior years is as per the WRFIM mechanism set out in the PR14 Rulebook.

Line 13: RCM blind year 14/15 adjustment for implementing via WRFIM ~ wastewater

The RCM adjustment as notified to us by Ofwat in their document "Consultation on the final 2010-15 reconciliation - company-specific index - Anglian Water", published October 2016.

Line 14: Percentage of RCM adjustment by year ~ wastewater

Ofwat were informed in a letter dated 4 November 2016 that we would apply 100% of the blind year adjustment to our 2017/18 allowed revenue.

Lines 15 to 18: Revenue recovered

The data reported is household and non-household measured and unmeasured wholesale revenue.

Report year 2015/16 to 2018/19

Data is taken from table 2I of the APR.

Report year 2019/20

Data is taken from the spread sheet model used to calculate forecast revenue consistent with the revenue cap.

Line 19: Wastewater: Third party revenue - household

We have no third party revenue from households.

Line 20: Wastewater: Third party revenue - non-household

We have no third party revenue from non-households.

Line 22: Wastewater: Grants and contributions

Report years 2015/16 to 2018/19

The data is taken from table 2I of the respective APR.

In relation to report years 2015/16 and 2016/17 the RAG Guidelines for the respective APR set out that the calculation of "Grants and Contributions – Wastewater" for Table 2E required sewer adoption supervision fees to be included in line 2E.10 "Other contributions". However, Table 2I, which reconciles recovered revenue to the revenue governed by the price control, set out that line 2I.19 "Grants & contributions (price control)" should be equal to lines 2E.7 and 2E.8, and so excluded these supervision fees. However, the sewer adoption supervision fees were included in the calculation of allowed wholesale revenue set out in FD14. Therefore, on the basis of their exclusion from the revenue recovered as set out in Table 2I line 2I.22, revenue will incorrectly appear under-recovered by the relevant amount.

We raised this issue with Ofwat in an email to Peter Jordan dated 13 September 2016.

These sewer adoption supervision fees amounted to £2.0m for report year 2015/16 and £2.1m for report year 2016/17 (out-turn prices).

The PR14 reconciliation rulebook sets out at section 3.6 that the WRFIM calculation for year t is based on the output of Table 2I for year t-2. On this basis the allowed revenue for report years 2017/18 and 2018/19 would be increased to true-up for the under-recovery of grants & contributions in the respective year t-2 as reported in table 2I. However, because an element of this reported under-recovery results from excluding the sewer adoption supervision fees, for each year impacted (report years 2017/18 and 2018/19) we made an adjustment to the WRFIM model to reduce the allowed revenue by the appropriate amount. This is reflected in our submission of PR14 Reconciliation Information.

We have updated our forecast out turn for the current year, 2019/20. This is consistent with the data in App28 submitted with the response to the IABP.

Line 24: Wastewater: Capital contributions from connection charges and revenue from infrastructure charges (PR14 FD)

Grants and contributions allowed revenue as set out in the FD in 2012/13 prices.

Line 27: Main revenue adjustment as incurred - wastewater

Report year 2017/18

The main revenue adjustment incurred of £4.2m relates to report year 2015/16 revenue under-recovery of £3.8m (out-turn prices) compared to allowed revenue. This adjustment takes account of the exclusion of £2.0m of sewer adoption supervision fees from grants and contributions revenue as noted above in relation to line 22.

This reflects primarily an under recovery of grants and contributions revenue compared to that reforecast when setting charges.

Report year 2018/19

The main revenue adjustment incurred of £1.0m relates to report year 2016/17 revenue under-recovery of £0.9m (out-turn prices) compared to allowed revenue. This adjustment takes account of the exclusion of £2.1m of sewer adoption supervision fees from grants and contributions revenue as noted above in relation to line 22.

This reflects main charges revenue over-recovery (primarily due to prior year accounting adjustments) partially off-setting under recovery for grants and contributions revenue compared to that reforecast when setting charges.

Report year 2019/20

The main revenue adjustment incurred of -£3.1m relates to report year 2017/18 revenue over-recovery of £2.7m (out-turn prices) compared to allowed revenue.

This reflects an over-recovery of main charges driven by a combination of reduced optant metering (where unmeasured charges are higher than the average measured bill) and higher household demand, together with prior year accounting adjustments (£2.5m).

Actual recovery of grants & contributions revenue was in line with that reforecast when setting charges.

Line 28: Penalty adjustment as incurred - wastewater

Report year 2017/18

The under-recovery in report year 2015/16 of £5.8m set out in APR table 2I represents 0.9% of the allowed wholesale revenue of £649.7m. This is within the 2% dead-band and therefore no penalty arises.

The under-recovery for report year 2015/16 of £3.8m reflected in the WRFIM model (allowing for the exclusion of sewer adoption supervision fees of £2.0m from table 2I) represents 0.6% of the allowed wholesale revenue.

Report year 2018/19

The under-recovery in report year 2016/17 of £3.0m set out in APR table 2I represents 0.4% of the allowed wholesale revenue of £662.1m. This is within the 2% dead-band and therefore no penalty arises.

The under-recovery for report year 2016/17 of £0.9m reflected in the WRFIM model (allowing for the exclusion of sewer adoption supervision fees of £2.1m from table 2I) represents 0.1% of the allowed wholesale revenue.

Report year 2019/20

The over-recovery in report year 2017/18 of £2.7m represents 0.4% of the allowed wholesale revenue of £681.5m. This is within the 2% dead-band and therefore no penalty arises.

Line 30: WRFIM Total reward / (penalty) at the end of AMP6 - wastewater

The value of the aggregated main revenue adjustment for year 4 (repriced to report year 2019/20 prices £4.946m) and year 5 (£0.062m). This is gives the total penalty at the end of AMP6.

Report year 2018/19

We have reported an over-recovery of £4.6 million, representing 0.6% of allowed revenue (£709.8m).

This reflects an over-recovery of main charges against allowed revenue resulting from prior year accounting adjustments and higher demand in the hot, dry 2018 summer, partially off-set by more customers switching to a metered service than forecast when setting charges. Actual recovery of grants and contributions revenue was higher than the re-forecast used when setting charges, reflecting increased levels of connection charges.

Report year 2019/20

Recovered revenue is forecast to be over-recovered by £0.062m, representing less than 0.1% of allowed revenue (£737.5m). This arises from small rounding differences in the charge setting process when solving charges back to allowed revenues.

The calculation of allowed revenue reflects the FD14 updated for November 2018 RPI of 3.2% plus K as per the Final Determination letter, adjusted for the following:

• Over-recovery of revenue in report year 2017/18 of £2.7m (re-priced to £3.1m); and
• The accelerated repayment in report year 2018/19 of £4.0m of report 2017/18 over-recovery (re-priced to £4.3m).

Line 31: WRFIM Total reward / (penalty) at the end of AMP6 - wastewater

This line reflects the outputs of the Revenue adjustments feeder model (PR19-Revenue-adjustments-feeder-model-01h)

11. WWS15 - PR14 WHOLESALE TOTAL EXPENDITURE OUTPERFORMANCE SHARING FOR THE WASTEWATER SERVICE

Line 6: Sewerage: Final menu choice

In the pre-populated tables this has only been entered to one decimal place. We have corrected this to equal line 4 (Sewage: Implied menu choice). We notified Ofwat of this error and agreed it should be corrected.

Line 9: Sewerage: Actual Totex

We have updated the tables with the actual 2018/19 results in line with our APR. We realised through this process that in our April estimate of 2018/19 out-turn, which was obviously done before our full Regulatory Accounting process, we had not allocated capex fully to the Business Unit of principle use. We therefore see an increase in Sewerage totex in 2018/19 and a corresponding decrease in Water totex in 2018/19. We have adjusted 2019/20 to retain the two year cumulative forecast.

When taking WS15 and WWS15 combined, actual totex in 2018/19 was £928m, which is just £5m lower than our pre year end estimate in our IAP Response.

Line 10 to 14 Adjustment to Totex

We have updated these figures with year end actuals from our full Regulatory Accounting process and these align with our APR.

Line 15: TTT control: logging up / down of scope swaps

This is zero for all years as this relates to the Thames Tideway, which is not applicable for Anglian Water.

Line 16: TTT control: Land -100.0 (customer : company) cost sharing factor

This is zero for all years as this relates to the Thames Tideway, which is not applicable for Anglian Water.

Line 17: Sewerage: Transition expenditure

This line is pre-populated. Ofwat have recognised that the pre-populated figure has been incorrectly pre-populated with companies' business plan forecasts of transition expenditure rather than actual transition expenditure. The correct entry for this cell should be £26.964 million and has been corrected in our submission.

Line 18: Sewerage: PAYG ratio

This line is pre-populated from the PR14 Final Determination.

Lines 21 to 22

These lines reflects the outputs of the Revenue adjustments feeder model (PR19-Revenue-adjustments-feeder-model-01h) and the RCV adjustment feeder model (PR19-RCV-adjustments-feeder-model-June-2018-update)

12. R9 - PR14 RECONCILIATION FOR HOUSEHOLD RETAIL REVENUE

Lines 1 to 6: Forecast customer numbers

The forecast of household customers is as set out in the PR14 final determination company specific appendix table AA2.2.

Lines 7 to 12: Reforecast customer numbers

As part of the annual charge setting process a revised forecast of customer numbers for each customer type is made. For each year 2015/16 to 2019/20, the reforecast of customer numbers is that used to set the respective years charges.

Lines 13 to 18: Actual customer numbers

The actual number of billed household customers for each customer type for 2015/16 to 2018/19 is reported in the company regulatory accounts, table 2F.

For 2019/20 the forecast is as per the reforecast used when setting charges.

Lines 19 to 24: Actual revenue collected

The actual revenue collected for each customer type for 2015/16 to 2018/19 is reported in the company regulatory accounts, table 2F.

For 2019/20 the forecast is as per the customer reforecast in section B multiplied by the 2019/20 household tariffs.

Lines 25 to 30: Revenue sacrifice

We have not forgone retail revenue for any report years and therefore all cells are zero.

Line 44: Discount rate

The materiality test is within the defined threshold. The discount rate has therefore been left blank and will be defined by Ofwat if required.

Line 45: Residential retail revenue adjustment at the end of AMP6

The table below sets out the reported and forecast performance for allowed retail revenue recovery taken from Ofwat's household retail revenue reconciliation model Calc sheet.

Residential retail revenue adjustment at the end of AMP6

	2015/16 to 2019/20
Year 1 adjustment	£1.428m
Year 2 adjustment	-£3.447m
Year 3 adjustment	-£5.523m
Year 4 adjustment	£1.482m
Year 5 adjustment	£0.190m
Total net adjustment	**-£5.869m**
Financing adjustment	-£0.520m

Residential retail revenue adjustment at the end of AMP6	-£6.390m

2018/19 - Year 4

The updated forecast retail revenue is £1.5m under recovered based on the weighted average number of unique customers by service. This reflects a minor under-accrual from the prior year, and changes in the mix of actual customers compared to the reforecast , off-set by higher average usage for the Aquacare concessionary tariff as compared to the forecast when setting charges (meaning the cross-subsidy recovered through charges were in sufficient to off-set the level of discount given).

2019/20 - Year 5

The current forecast is for an under-recovery of allowed revenue of £0.2m. This arises from small rounding differences in the charge setting process when solving charges back to allowed revenues.

Line 46: Residential retail revenue adjustment at 2017-18 FYA CPIH deflated price base

This line reflects the output of the Revenue adjustments feeder model (PR19-Revenue-adjustments-feeder-model-01h).

13. R10 - PR14 SERVICE INCENTIVE MECHANISM

Lines 1 to 5: Qualitative performance

Data provided for 2015 to 2019 has been taken from the official Ofwat Customer Experience Survey and calculated in accordance with the methodology outlined in Ofwat's guidance document published in 2015.

The pre-populated value for line 5 (Qualitative SIM score (out of 75)) for 2015-16 shows a value of 63.84. This is produced by calculating a score for the year as a simple average of the four quarterly survey scores – 4.405. Our actual published survey score for 2015-16 was 4.41, which translates into a score for the year of 63.94.

As we move into the CMEX shadow year we aim to continue to deliver a consistently great and improving service to our customers. We recognise increasing customer expectations will require innovative and efficient new ways of working to maintain industry leading levels of performance, which saw Anglian Water achieve 1st place in the Service Incentive Mechanism Qualitative measure for 2017/18 and 2018/19.

The forecasted score for 2019/20 has been calculated using the results achieved in Wave 1 and 2 of the CMEX pilot. Anglian Water achieved an average score of 8.43 within the Customer Service Survey. To calculate row 5, we have applied the same methodology as used for calculating SIM and changed the maximum survey score to reflect the change to a 10 point scale.

Line 6: Quantitative composite score

Data provided in Line 6 has been taken from our APR.

The forecast of our quantitative performance for 2019/2020 is set at a level which reflects our continued commitment to delivering excellent customer service, putting things right first time and driving continuous improvements to meet increasing customer expectations. The current figures for 2019/20 are based on previous performance under SIM guidelines as we are unable to apply the proxy calculation until the changes to complaints reporting comes into affect in July 2019.

Line 9: SIM forecast revenue adjustment at 2017/18 FYA CPIH deflated price base

We have made a number of assumptions in estimating whether we were due an outperformance payment or an underperformance penalty and what the magnitude of either might be. These are:

• Our fourth year total SIM score
• Other companies fourth year SIM scores
• The way that Ofwat will apportion the rewards available for SIM.

We have accounted for these assumptions in the following ways:

1. We have assumed that our fourth year total SIM score will be the same as our current year score (taking into account the forecast of the quarter 4 qualitative SIM score and using our current quantitative score to predict the score for the full year)
2. We have estimated other companies' fourth year SIM total scores on the same performance being achieved by all companies as in the third year
3. We have estimated that Ofwat will approximately apportion outperformance payments in a linear relationship between mean score and top score with a mean score gaining no payment and top score gaining 6% retail revenue. As we are currently the top performer in the industry, we have assumed an outperformance payment of 6% of retail revenue.

This outperformance payment equates to £26.15m in 2017/18 prices (this has been updated based upon updated inflation numbers from App23).

14. WRFIM MODEL

Inputs - Data: Model inputs

Company has accepted WRFIM licence modification

Modification of condition B of our licence was published by Ofwat in November 2016.

Inputs - Data: WRFIM parameters

The WRFIM parameters are as set out in the PR14 Rulebook.

Inputs - Data: Revenue

Allowed Revenue

Allowed 2014/15 wholesale water revenue as set out in the letter, "Final determination of price controls" addressed to Peter Simpson from Cathryn Ross, dated 12 December 2014.

K - Water

The Wholesale water K factors are as set out in the letter, "Final determination of price controls" addressed to Peter Simpson from Cathryn Ross, dated 12 December 2014. The factors for each year of AMP6 are summarised in the table below along with any additional adjustments.

Description	2015/16	2016/17	2017/18	2018/19	2019/20
Final Determination K	0.00%	1.34%	0.89%	0.58%	0.56%
ODI K prior year adjustment	N/A	N/A	N/A	-0.15%	-0.75%
ODI K adjustment	N/A	N/A	0.16%	0.76%	1.35%
K	0.00%	1.34%	1.05%	1.19%	1.16%

The K factor for 2017/18 reflects the K set out in the final determination letter referred to above, adjusted for the in period ODI reward of £0.5m (2012/13 prices) for report year 2015/16 as set out in Ofwat's document "Final determination of Anglian Water's in-period outcome delivery incentives for 2015-16", dated 15 December 2016.

The K factor for 2018/19 reflects the K set out in the final determination letter, adjusted for the in period ODI reward of £2.6m (2012/13 prices) for report year 2016/17 as set out in Ofwat's document "Final determination of in-period ODIs for 2016-17", dated 15 December 2017.

The K factor for 2019/20 reflects the K set out in the final determination letter, adjusted for the in period ODI reward of £4.6m (2012/13 prices) for report year 2017/18 based on leakage performance.

K - Wastewater

The Wholesale wastewater K factors are as set out in the letter, "Final determination of price controls" addressed to Peter Simpson from Cathryn Ross, dated 12 December 2014. The factors for each year of AMP6 are summarised in the table below. No further adjustments have been made.

Description	2015/16	2016/17	2017/18	2018/19	2019/20
Final Determination K	0.00%	0.86%	0.72%	0.73%	0.12%
ODI K adjustment	N/A	N/A	N/A	N/A	N/A

| K | 0.00% | 0.86% | 0.72% | 0.73% | 0.12% |

Recovered Revenue

Report year 2015/16 to 2018/19

Data is taken from table 2I of the APR.

Report year 2019/20

Data is taken from the spread sheet model used to calculate forecast revenue.

Inputs - Data: Blind year adjustments

Blind year adjustment 2014/15

The Revenue Correction Mechanism adjustment as notified to us by Ofwat in their document "Consultation on the final 2010-15 reconciliation - company-specific index - Anglian Water", published October 2016.

Percentage of RCM adjustment by year

Ofwat were informed in a letter dated 4 November 2016 that we would apply 100% of the blind year adjustment to our 2017/18 allowed revenue.

Inputs - Data: Accelerated return of over-recovered revenue

Over-recovered revenue returned to customers after one year - 2017/18

During the process of calculating allowed revenue and charges for 2018/19, it became apparent that due to a combination of reduced optant metering and higher household demand than forecast, together with prior year accounting adjustments, the 2017/18 revenue would be higher than allowed.

In these situations we endeavour to return any over recovery to customers as soon as possible. Therefore an abatement was made against allowed revenue for 2018/19, of £6m and £4m for water and wastewater respectively, during the 2018/19 charge setting process. This was in line with the revised PR14 Rulebook published 15 December 2017, and as detailed in correspondence between us and Ofwat dated 14 November and 11 December 2017 respectively.

Over-recovered revenue returned to customers after one year - 2018/19

No abatement was made against allowed revenue for 2019/20.

Calcs - WRFIM-Water

Penalty adjustment as incurred

Report years 2015/16 to 2016/17

Revenue performance was within the 2% dead-band and therefore no penalty arises.

Report year 2017/18

The over-recovery represents 2.4% of the allowed wholesale revenue. Therefore a penalty adjustment of £150k (including financing adjustment and 2 year lag of inflation) applies.

Report years 2018/19

Revenue performance was within the 2% dead-band and therefore no penalty arises.

Report year 2019/20

Revenue performance is forecast to be within the 2% dead-band and therefore no penalty arises.

Main revenue adjustment as incurred

Report year 2017/18

The main revenue adjustment incurred of -£1.8m relates to report year 2015/16 revenue under-recovery of £1.7m (out-turn prices) compared to allowed revenue.

This reflects primarily an under recovery of grants and contributions revenue compared to that forecast.

Report year 2018/19

The main revenue adjustment incurred of -£9.2m relates to report year 2016/17 revenue over-recovery of £8.1m (out-turn prices) compared to allowed revenue.

This reflects an over-recovery of main charges against allowed revenue as a result of prior year accounting adjustments (£2.9m) and higher customer numbers than forecast when setting tariffs.

Actual recovery of grants & contributions revenue was also higher than reforecast when setting charges (outturn prices), reflecting increased levels of connection charges.

Report year 2019/20

The main revenue adjustment incurred of -£12.9m relates to report year 2017/18 revenue over-recovery of £11.2m (out-turn prices) compared to allowed revenue.

This reflects an over-recovery of main charges driven by a combination of reduced optant metering (where unmeasured charges are higher than the average measured bill) and higher household demand, together with prior year accounting adjustments (£5.3m).

Actual recovery of grants & contributions revenue was also higher compared to reforecast when setting charges (outturn prices), reflecting higher levels of connection charges.

Total reward / (penalty) at the end of AMP6

The value of the aggregated year 4 (report year 2018/19) and year 5 (report year 2019/20) main revenue adjustment and penalty adjustment, priced at report year 2019/20 outturn prices.

Report year 2018/19

We have reported an over-recovery of £9.4 million, representing 2.0% of allowed revenue (£476.8m).

This reflects an over-recovery of main charges against allowed revenue resulting from prior year accounting adjustments (£3.2m) and higher demand in the hot, dry 2018 summer, partially off-set by more customers switching to a metered service than forecast when setting charges. Actual recovery of grants and contributions revenue was higher than the re-forecast used when setting charges, reflecting increased levels of connection charges.

The calculation of allowed revenue reflects the FD14 updated for RPI plus K, adjusted for the following:

• The in-period Leakage ODI out-performance pre-tax payment of £2.6m for report year 2016/17 (re-priced to £3.6m (post tax)); and
• Over-recovery of revenue in report year 2016/17 of £8.1m (re-priced to £9.2m); and
• Accelerated repayment of £6.0m of the forecast over-recovery for report year 2017/18, in line with the revised PR14 Rulebook published 15 December 2017 and as detailed in email correspondence between us and Ofwat dated 14 November and 11 December 2017 respectively.

Report year 2019/20

Recovered revenue is forecast to be over-recovered by £0.065m, representing less than 0.1% of allowed revenue (£506.8m). This arises from small rounding differences in the charge setting process when solving charges back to allowed revenues.

The calculation of allowed revenue reflects the FD14 updated for November 2018 RPI of 3.2% plus K as per the Final Determination letter, adjusted for the following:

• The in-period Leakage ODI out-performance pre-tax payment of £4.6m for report year 2017/18 (re-priced to £6.6m (post tax); and

- Over-recovery of revenue in report year 2017/18 of £11.2m plus penalty (re-priced to £13.0m); and
- Reversal of the accelerated repayment in report year 2018/19 of £6.0m of report year 2017/18 over-recovery (re-priced to £6.4m).

Calcs - WRFIM - Wastewater

Penalty adjustment as incurred

Report years 2015/16 to 2018/19

Revenue performance was within the 2% dead-band and therefore no penalty arises.

Report years 2019/20

Revenue performance is forecast to be within the 2% dead-band and therefore no penalty arises.

Main revenue adjustment as incurred

In relation to report years 2015/16 and 2016/17 the RAG Guidelines for the respective APR set out that the calculation of "Grants and Contributions – Wastewater" for Table 2E required sewer adoption supervision fees to be included in line 2E.10 "Other contributions". However, Table 2I, which reconciles recovered revenue to the revenue governed by the price control, set out that line 2I.19 "Grants & contributions (price control)" should be equal to lines 2E.7 and 2E.8, and so excluded these supervision fees. However, the sewer adoption supervision fees were included in the calculation of allowed wholesale revenue set out in FD14. Therefore, on the basis of their exclusion from the revenue recovered as set out in Table 2I line 2I.22, revenue will incorrectly appear under-recovered by the relevant amount.

We raised this issue with Ofwat in an email to Peter Jordan dated 13 September 2016.

These sewer adoption supervision fees amounted to £2.0m for report year 2015/16 and £2.1m for report year 2016/17 (out-turn prices).

The PR14 reconciliation rulebook sets out at section 3.6 that the WRFIM calculation for year t is based on the output of Table 2I for year t-2. On this basis the allowed revenue for report years 2017/18 and 2018/19 would be increased to true-up for the under-recovery of grants & contributions in the respective year t-2 as reported in table 2I.   However, because an element of this reported under-recovery results from excluding the sewer adoption supervision fees, for each year impacted (report years 2017/18 and 2018/19) we made an adjustment to the WRFIM model to reduce the allowed revenue by the appropriate amount. This is reflected in our submission here of PR14 Reconciliation Information,

Report year 2017/18

The main revenue adjustment incurred of £4.2m relates to report year 2015/16 revenue under-recovery of £3.8m (out-turn prices) compared to allowed revenue. This adjustment takes account of the exclusion of £2.0m of sewer adoption supervision fees from grants and contributions revenue as noted above.

This reflects primarily an under recovery of grants and contributions revenue compared to that reforecast when setting charges.

Report year 2018/19

The main revenue adjustment incurred of £1.0m relates to report year 2016/17 revenue under-recovery of £0.9m (out-turn prices) compared to allowed revenue. This adjustment takes account of the exclusion of £2.1m of sewer adoption supervision fees from grants and contributions revenue as noted above.

This reflects main charges revenue over-recovery of £2.1m (primarily due to prior year accounting adjustments) off-setting under recovery for grants and contributions revenue compared to the reforecast when setting charges.

Report year 2019/20

The main revenue adjustment incurred of -£3.1m relates to report year 2017/18 revenue over-recovery of £2.7m (out-turn prices) compared to allowed revenue.

This reflects an over-recovery of main charges driven by a combination of reduced optant metering (where unmeasured charges are higher than the average measured bill) and higher household demand, together with prior year accounting adjustments (£2.5m).

Actual recovery of grants & contributions revenue was in line with forecast.

Total reward / (penalty) at the end of AMP6

The value of the aggregated year 4 (report year 2018/19) and year 5 (report year 2019/20) main revenue adjustment and penalty adjustment, priced at report year 2019/20 outturn prices.

Report year 2018/19

We have reported an over-recovery of £4.6 million, representing 0.6% of allowed revenue (£709.8m).

This reflects an over-recovery of main charges against allowed revenue resulting from prior year accounting adjustments and higher demand in the hot, dry 2018 summer, partially off-set by more customers switching to a metered service than forecast when setting charges. Actual recovery of grants and contributions revenue was higher than the re-forecast used when setting charges, reflecting increased levels of connection charges.

Report year 2019/20

Recovered revenue is forecast to be over-recovered by £0.062m, representing less than 0.1% of allowed revenue (£737.5m). This arises from small rounding differences in the charge setting process when solving charges back to allowed revenues.

The calculation of allowed revenue reflects the FD14 updated for November 2018 RPI of 3.2% plus K as per the Final Determination letter, adjusted for the following:

- Over-recovery of revenue in report year 2017/18 of £2.7m (re-priced to £3.1m); and
- Reversal of the accelerated repayment in report year 2018/19 of £4.0m of report 2017/18 over-recovery (re-priced to £4.3m).

15. HOUSEHOLD RETAIL MODEL

Inputs - Forecast customer numbers

The forecast of household customers is as set out in the PR14 final determination company specific appendix table AA2.2.

Inputs - Re-forecast customer numbers

As part of the annual charge setting process a revised forecast of customer numbers for each customer type is made. For years 2015/16 to 2019/20 the reforecast of customer numbers is that used to set the respective years charges.

Inputs - Actual customer numbers

The actual number of billed household customers for each customer type for 2015/16 to 2018/19 is reported in the company regulatory accounts, table 2F.

For 2019/20 the forecast is as per the reforecast used when setting charges.

Inputs - Actual revenue collected

The actual revenue collected for each customer type for 2015/16 to 2018/19 is reported in the company regulatory accounts, table 2F.

For 2019/20 the forecast is as per the customer reforecast in section B multiplied by the 2019/20 household tariffs.

Inputs - Revenue sacrifice

We have not foregone retail revenue for any report years and therefore all cells are zero.

Inputs - Actual revenue collected (net)

See final section for commentary on performance compared to the control.

Inputs - Modification factor

The modification factors are as set out in the PR14 final determination company specific appendix table AA2.2.

Calcs - Residential retail revenue adjustment at the end of AMP6

The table below sets out the reported and forecast performance for allowed retail revenue recovery taken from Ofwat's household retail revenue reconciliation model Calc sheet.

Residential retail revenue adjustment at the end of AMP6

	2015/16 to 2019/20
Year 1 adjustment	£1.428m
Year 2 adjustment	-£3.447m
Year 3 adjustment	-£5.523m
Year 4 adjustment	£1.482m
Year 5 adjustment	£0.190m
Total net adjustment	**-£5.869m**
Financing adjustment	-£0.520m
Residential retail revenue adjustment at the end of AMP6	**-£6.390m**

2015/16 - Year 1

Actual reported retail revenue was £1.4m under recovered based on the weighted average number of unique customers by service. This reflects changes in the mix of actual customers compared to the reforecast. It also reflects the increased take-up of our concessionary tariffs Watersure and Aquacare Plus as compared to forecast. The cross-subsidy for these tariffs is accounted for through retail revenue.

2016/17 - Year 2

Actual reported retail revenue was £3.4m over recovered based on the weighted average number of unique customers by service. This reflects the under-accrual from the prior year (£2.3m), changes in the mix of actual customers compared to the reforecast and the increased take-up of the concessionary tariffs LITE and Aquacare Plus but at lower levels of average usage as compared to forecast when setting charges. This means the cross-subsidy for these tariffs, accounted for through retail revenue, is over-recovered.

2017/18 - Year 3

Actual reported retail revenue was £5.5m over recovered based on the weighted average number of unique customers by service. This reflects changes in the mix of actual customers compared to the reforecast and again an increased take-up of the concessionary tariffs LITE and Aquacare Plus but at lower levels of average usage as compared to forecast when setting charges.

2018/19 – Year 4

Actual reported retail revenue was £1.5m under recovered based on the weighted average number of unique customers. This reflects a minor under-accrual from the prior year, and changes in the mix of actual customers compared to the reforecast, off-set by higher average usage for the Aquacare Plus concessionary tariff compared to the forecast when setting charges (meaning the cross subsidy recovered through charges were insufficient to off-set the level of discount given).

2019/20 – Year 5

The current forecast is for an under-recovery of allowed revenue of £0.2m. This arises from small rounding differences in the charge setting process when solving charges back to allowed revenues.

16. TOTEX MENU MODEL

We have updated the Totex Menu Model with actuals for 2018/19 and updated forecast for 2019/20. Please see commentary for WS13 and WWS13 for an explanation of changes.

17. RCV ADJUSTMENTS FEEDER MODEL

We have updated the RCV Adjustments Feeder Model with actuals for 2018/19 and updated forecast for 2019/20. Please see commentary for WS13, WWS13 and App9 for an explanation of changes.

18. REVENUE ADJUSTMENTS FEEDER MODEL

We have updated theRevenue Adjustments Feeder Model with actuals for 2018/19 and updated forecast for 2019/20. Please see commentary for WS13, WWS13, WS15, WWS15, App27. R9 and R10 for an explanation of changes.

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LED612/11/17