Affinity Water: PR19 – AFW Company Response - Table Commentaries

General Overview

The RP4 Pro Forma Sheet details the list of tables which we are submitting as part of the draft determination process. This includes all standard requirements applicable to Affinity Water, as listed below;

- Tables WS1, WS2, R1 and APP26, as requested in the schedule of data requirements RP4 (these tables are located in the file entitled AFW Data Table Master Aug 19)
- PR19 Draft Determinations Outcomes Representation data submission (file entitled AFW DD Outcomes Representations Data Table Aug 19)
- PR19 Draft Determinations Developer Services data request (file entitled AFW Developer Services Data Request Aug 19)

In addition to these standard requirements, we are re-submitting several tables to support our representations and some of the resulting changes and adjustments in AMP7 forecasts which have a material impact on the plan. We have followed Ofwat instructions (as answered in Ofwat's Q&A document, last updated on the 12th of August 2019) and have thus carefully applied a consistent approach for all data table changes. Changes have been made in the following manner;

- All data table changes applied have been made where there is a material impact on current and forecast figures, both in terms of financial and non-financial data.
- With the exception of WS1, WS1a, WS2, Wr2, WS2a, WS13, R9 and financial model tables, no historic or 2018-19 figures were updated in line with APR submission, unless they have changed as result of either;
  a) a new forecast for AMP7 (to be consistent with Ofwat Q&A document published on the 12th August, which states that Ofwat will take APR data directly from APR submissions)
  b) a re-stated past APR figure (for example, leakage)
  c) the figure having a material impact on our representations
  d) an Ofwat query
- The base data tables include all changes made as part of the PR14 data Reconciliation, as submitted on the 15th of July.
- All changes applied have been made using red font.
- Tables which are not being re-submitted have been hidden in the document, except for App1, App4, App6 and App28, which have been removed to avoid confusion with the developer services data request and the new outcomes representation data table.
- Data lines in the submitted tables listed below which have not changed have been kept in black, with IAP response data (either submitted on the 1st April or 15th July) . Every possible effort has also been made to ensure calculated cells have been highlighted in red where these have changed.

The full list of data tables being submitted to Ofwat are listed in Pro-forma sheet RP4.

Financial Model Based Data Tables

Changes since September Plan

We have followed the same modelling approach as our IAP response in April 2019. We have transitioned to the latest release of the Ofwat financial model, which is version 18z. The table inputs and outputs which have been updated are listed below.

Output Tables

The data tables covered by the financial forecasting and modelling exercise are:

- App7 – Proposed price Limits and average bills
- App8 – Appointee financing – Section A
- App10 – Financial ratios
- App11 – Income statement based on the actual company structure
- App11a – Income statement based on notional company structure
- App12 – Balance sheet based on the actual company structure
- App12a – Balance sheet based on the notional company structure
- App13 – Trade Receivables
- App14 – Trade and other payables
- App15 – Cashflow based on the actual company structure
- App15a – Cashflow based on the actual company structure
- App16 – Tangible fixed assets
- App17 – Appointee revenue summary
- App18 – Share capital and dividends
- App19 – Debt and interest costs
- Wr3 – Wholesale revenue projections for the water resources price control
- Wr4 – Cost recovery for water resources
- Wn3 – Wholesale revenue projections for the water network plus price control
- Wn4 – Cost recovery for water network plus
- R7 – Revenue and cost recovery for retail

Data Table Inputs

As a basis for the financial forecast, the following Financial Model tables have been updated:

- WS1 - Wholesale water operating and capital expenditure by business unit
- WS18 - Explaining the 2019 Final Determination for the water service
- App25 - PR14 reconciliation adjustments summary
- App29 - Wholesale tax
- App32 - Weighted average cost of capital for the Appointee

In addition to the financial tables, the following feeder models have changed since our last submission on the 15th July:

- Wholesale revenue forecasting incentive mechanism – Feeder Model
- Revenue adjustments Feeder Model

Table Category - Appointed (App)

App2 – Leakage additional information and old definition reporting

Lines 5,6,7: WRMP leakage targets

General Overview

The Business Plan guidance and line definition for line 5 states that it should be populated using the annual WRMP targets, however for 2016/17, 2017/18 and 2018/19 we have used APR data for leakage. Additionally, the leakage performance for 2017/18 has been restated to 177.2 Ml/d, as Annual Performance Report, due to the Iver burst incident.

Changes since May 2019 submission

In App2 (Line 5), the leakage reduction profile is expressed in annual values and is aligned with the delivery of the WRMP.

Lines 6 and 7 have subsequently changed as a result of line 5 changing. The property numbers in WS3 and the km of mains in WN2 (which are used to calculate lines 6 and 7 respectively) have not changed since our previous submission. Therefore, the changes in lines 6 and 7 in APP2 reflect solely the change in line 5 as a result of the Draft Determination.

Line 38: Leakage

Changes since May 2019 submission

- Changes since the previous submission in May 2019 have been made to reflect the changes in line 5.

Line 50: Average minutes per property for supply interruption greater and equal to three hours

General Overview

As stated in April, this line depicts our performance for 'Average minutes per property for supply interruption greater and equal to three hours'.

Changes since April 2019 Plan

- The Supply Interruptions performance forecast for AMP7 has been updated to reflect the DD intervention (AFW.OC.A8) on the Interruptions to supply PC and profile

App3 – Abstraction Incentive Mechanism - surface and ground water abstractions under the AIM threshold

General Overview

Because App3 has columns rather than rows, we have tabulated the commentary with bespoke comments per column regarding compliance and provided additional information where needed. Compliance and interpretation of column definitions in the App3 table are set out in the table below.

Column	Column reference	Item Reference	Column descriptor from APP3	Explanation
C	1	APP3001	"The unique ID of the associated performance commitment in table App1 (performance commitments and outcome delivery incentives)	Complies with OFWAT definition.
D	2	AIMAMP6_AS	For example: PR19XXX_ABC01"	Complies with OFWAT definition.
E	3	APP3002	Name of the abstraction site. This can be anonymised if necessary for national security reasons.	Complies with OFWAT definition.
F	4	APP3004	Select 'Surface water' or 'Ground water' from the drop-down menu	Complies with OFWAT definition.
G	5	APP3005	Name of the affected surface water body. This should be entered for all surface water and groundwater abstraction sites within scope.	Complies with OFWAT definition.
H	6	APP3006	Enter the baseline average abstraction relating to the trigger threshold as used in the 2016-17 to 2019-20 period (megalitres per day)	Does not comply with OFWAT definition. Numbers stated are the AIM baselines as of April 2016. Since then, some have changed, where sustainability reductions have not reduced the deployable output of AIM sites to zero Ml/d. Where this has happened, the new AIM baseline (and one used for the assessments) is the average licensed rate of the source. Where the sustainability reduction has reduced the source output to zero Ml/d, the source has been removed from AIM. Slip End source now has an AIM baseline which is 95% of the licensed abstraction when the flow constraint is in effect. See methodology for more details.

Column	Column reference	Item Reference	Column descriptor from APP3	Explanation
I	7	APP3007	Enter the measurement unit for the trigger threshold (river flow metric or groundwater level metric)	Complies with OFWAT definition.
J	8	APP3008	For the 2016-17 to 2019-20 period: enter the trigger threshold for the river flow or groundwater level value. The AIM is considered to be 'switched on' when the flow rate of the river or groundwater level is at or below this threshold.	Complies with OFWAT definition.
K-N	9	AIMAMP6_AP	For the four years 2016-17 to 2019-20: enter the AIM performance (Ml)	Years 2016-2017, 2017-2018 and 2018-2019 do comply. 2019-2020 does not comply with OFWAT definition. 2019-2020 performance has been estimated by completing the AIM score analysis from April 2019 until the end of July 2019 in line with the AIM methodology. As low river flows and high demand are not forecastable, the score for the remainder of the year (August to March) has been estimated as zero Ml, and so the estimated score for the year as a whole is what it was at the end of July 2019.
O	13	AIMAMP6_CAP	For the four years 2016-17 to 2019-20: enter the cumulative AIM performance (Ml)	Complies with OFWAT definition and includes forecast 2019-20 performance as per column 9.
P-S	14	AIMAMP6_NAP_PR19	For the four years 2016-17 to 2019-20: enter the normalised AIM performance (percentage) Use the February 2016 AIM guidance to calculate normalised AIM performance and then multiply by 100 to convert to a percentage (this represents the percentage	Years 2016-2017, 2017-2018 and 2018-2019 do comply. 2019-2020 does not comply with OFWAT definition. 2019-2020 performance has been estimated by completing the AIM score analysis from April 2019 until the end of July 2019 in line with the AIM methodology, and then multiplying the normalised AIM score by 100. As low river flows and high demand are not forecastable, the score for the remainder of the year (August to March) has been estimated as zero, and so the estimated score for the year as a whole is what it was at the end of July 2019.

Column	Column reference	Item Reference	Column descriptor from APP3	Explanation
			reduction in abstraction compared to the baseline).	The percentages were calculated using the normalised AIM scores to two decimal places but are presented as percentages to zero decimal places.
T	18	AIMAMP6_CNAP_PR19	For the four years 2016-17 to 2019-20: enter the cumulative normalised AIM performance (percentage)	Complies with OFWAT definition and includes forecast 2019-20 performance as per column 14. The percentages were calculated using the normalised AIM scores to two decimal places but are presented as percentages to zero decimal places.
U	19	APP3009	For the 2020-21 to 2024-25 period: enter the baseline average abstraction relating to the trigger threshold (megalitres per day)	Does not comply with OFWAT definition. Sustainability reduction sites which have not had the deployable output reduced to zero Ml/d have new AIM baselines (including assessment baseline for reductions) as the average licensed rate of the source. Where the sustainability reduction has reduced the source output to zero Ml/d, the source has been removed from AIM. Slip End source now has an AIM baseline which is 95% of the licensed abstraction when the flow constraint is in effect. See methodology for more details.
V	20	APP3010	Enter the measurement unit for the trigger threshold (river flow metric or groundwater level metric)	Complies with OFWAT definition.
W	21	APP3011	For the 2020-21 to 2024-25 period: enter the trigger threshold for the river flow or groundwater level value. The AIM is considered to be 'switched on' when the flow rate of the river or groundwater level is at or below this threshold.	Complies with OFWAT definition.
X-AB	22	AIMAMP7_AP	For the five years 2020-21 to 2024-25: enter the AIM performance (Ml)	Complies with OFWAT definition.

Column	Column reference	Item Reference	Column descriptor from APP3	Explanation
AC	27	AIMAMP7_CAP	For the five years 2020-21 to 2024-26: enter the cumulative AIM performance (Ml)	Complies with OFWAT definition.
AD-AH	28	AIMAMP7_NAP_PR19	For the five years 2020-21 to 2024-25: enter the normalised AIM performance (percentage)	Complies with OFWAT definition.
AI	33	AIMAMP7_CNAP_PR19	For the five years 2020-21 to 2024-26: enter the cumulative normalised AIM performance (percentage)	Complies with OFWAT definition.
AJ-AN	34	AIMAMP8_AP	For the five years 2025-26 to 2029-30: enter the AIM performance (Ml)	Complies with OFWAT definition.
AO	39	AIMAMP8_CAP	For the five years 2025-26 to 2029-30: enter the cumulative AIM performance (Ml)	Complies with OFWAT definition.
AP	40	APP3012	Underperformance penalty rate (£m per Ml for the abstraction site, to 6 decimal places)	Complies with OFWAT definition.
AQ	41	APP3013	Outperformance payment rate (£m per Ml for the abstraction site, to 6 decimal places)	Complies with OFWAT definition.
AR-AV	42	APP3014	For the five years 2020-21 to 2024-25: enter the underperformance penalty collar (Ml)	Does not comply with OFWAT definition. Not calculated specifically in APP3 and instead is provided in the outcomes representation data submission (OC1).
AW-BA	47	APP3015	For the five years 2020-21 to 2024-25: enter the underperformance penalty deadband (Ml)	Does not comply with OFWAT definition. Not calculated specifically in APP3 and instead is provided in the outcomes representation data submission (OC1).
BB-BF	52	APP3016	For the five years 2020-21 to 2024-25: enter the outperformance	Does not comply with OFWAT definition. Not calculated specifically in APP3 and

Column	Column reference	Item Reference	Column descriptor from APP3	Explanation
			payment deadband (Ml)	instead is provided in the outcomes representation data submission (OC1).
BG-BK	57	APP3017	For the five years 2020-21 to 2024-25: enter the outperformance payment cap (Ml)	Does not comply with OFWAT definition. Not calculated specifically in APP3 and instead is provided in the outcomes representation data submission (OC1).
	62		Contextual information on baseline abstraction period, trigger threshold (for example, flow quartile) and AIM performance	Complies with OFWAT definition.

Changes since April 2019 and APR19 submissions

- We have updated forecast for financial year 2019-2020 based on the performance from the period 1 April 2019 to 31 July 2019 (column 9 and 14) for catchments; Hiz, Oughton, Gade, Chess, Upper Lea and Cat Ditch.
- Based on this, we have updated the cumulative forecasts for the period 2016-2017 to 2019-2020 (columns 13 and 18) for catchments; Hiz, Oughton, Gade, Chess, Upper Lea and Cat Ditch.

App5 - PR14 reconciliation – performance commitments

Line WA-5: Abstraction incentive mechanism

Changes since April 2019 Plan

- The AIM score is expressed in Megalitres (to 1 decimal place). This has been updated to account for the updated forecast (at 31st July) performance for the year 2019-2020 in data table APP3.

App7 - Proposed price limits and average bills

Changes since April 2019 Plan

In response to Ofwat Intervention AFW.PD.A2c this table has been updated to reflect our representation which affects the following lines: -

- Line 21: Wholesale water resources k factor including PR14 reconciliation adjustments
- Line 22: Wholesale water network plus k factor including PR14 reconciliation adjustments

- Line 46: (Discount rate for reprofiling allowed revenue) was updated to reflect the number applied by Ofwat in the Draft Determination.

App8 - Appointee financing

Changes since April 2019 Plan

In response to Ofwat interventions AFW.PD.A2d and AFW.RR.A9 this table has been updated to reflect the actual 2018/19 position and our representation which affects the following lines: -

- Line 1: Net Debt
- Line 2: Equity Dividends Paid
- Line 3: Cash inflow from equity financing
- Line 8: Water ~ NPV effect of 50% of proceeds from disposals of interest in land at 2017-18 FYE CPIH deflated price base
- Line 11: Water ~ Totex menu RCV adjustment at 2017-18 FYE CPIH deflated price base

App10 - Financial ratios

Changes since April 2019 Plan

In response to Ofwat interventions AFW.PD.A2f and AFW.LR.A5 this table has been updated to reflect our representation which affects the following lines: -

- Lines 1 - 11
- Lines 23 - 33

App11 - Income statement based on the actual company structure

Changes since April 2019 Plan

In response to Ofwat intervention AFW.PD.A2g this table has been updated to reflect our representation which affects the following lines: -

- Line 1: Revenue
- Line 2: Operating Expenditure
- Line 3: Depreciation
- Line 9: Interest expense
- Line 14: UK Corporation tax
- Line 15: Deferred tax
- Line 17: Dividends

App11a - Income statement based on a notional company structure

Changes since April 2019 Plan

This table has been updated to reflect our representation which affects lines: -

- Line 1: Revenue
- Line 2: Operating Expenditure
- Line 3: Depreciation
- Line 9: Interest expense
- Line 14: UK Corporation tax
- Line 15: Deferred tax
- Line 17: Dividends

App12 - Balance sheet based on the actual company structure

Changes since April 2019 Plan

This table has been updated to reflect our representation which affects lines: -

- Line 2: Intangible assets
- Line 4: Investments ~ other
- Line 6: Retirement benefit assets
- Line 8: Inventories ~ actual company structure
- Line 9: Trade and other receivables
- Line 13: Trade and other payables
- Line 15: Borrowings
- Line 17: Current tax liabilities ~ actual company structure
- Line 22: Borrowings
- Line 25: Provisions
- Line 31: Deferred tax ~ actual company structure
- Lines 37 – 46

App12a - Balance sheet based on a notional company structure

Changes since April 2019 Plan

This table has been updated to reflect our representation which affects lines: -

- Line 2: Intangible assets
- Line 6: Retirement benefit assets
- Lines 8: Inventories ~ actual company structure
- Line 9: Trade and other receivables
- Line 13: Trade and other payables
- Line 17: Current tax liabilities ~ actual company structure
- Line 18: Provisions
- Line 22: Borrowings
- Line 31: Deferred tax ~ actual company structure

- Line 37: Retained profits ~ wholesale
- Line 38: Retained profits ~ residential retail
- Line 41: Capex creditor ~ wholesale
- Line 45: Cash and cash equivalents ~ wholesale
- Line 46: Cash and cash equivalents ~ residential retail

App13 - Trade receivables

Changes since April 2019 Plan

This table has been updated to reflect our representation which affects lines: -

- Line 1: Residential retail unmeasured trade receivables ~ net
- Line 2: Residential retail measured trade receivables ~ net
- Line 6: Residential retail measured income accrual
- Line 11: Trade and other receivables ~ net

App14 - Trade and other payables

Changes since April 2019 Plan

This table has been updated to reflect our representation which affects lines: -

- Line 1: Wholesale trade payables
- Line 2: Wholesale other payables
- Line 4: Wholesale creditors ~ residential retail
- Line 8: Residential retail unmeasured advance receipts
- Line 9: Residential retail measured advance receipts
- Line 16: Trade creditor days ~ water resources
- Line 17: Trade creditor days ~ water network plus

App15 - Cashflow based on the actual company structure

Changes since April 2019 Plan

This table has been updated to reflect our representation which affects lines: -

- Line 5: Changes in working capital ~ Inventories, trade and other receivables
- Line 6: Changes in working capital ~ Trade and other payables
- Line 10: Net interest paid
- Line 11: Tax Paid
- Line 13: Net Capex
- Line 17: Equity dividends paid
- Line 18: Net loans received
- Line 19: Cash inflow from equity financing

App15a - Cashflow based on a notional company structure

Changes since April 2019 Plan

This table has been updated to reflect our representation which affects lines: -

- Line 5: Changes in working capital ~ Inventories, trade and other receivables
- Line 6: Changes in working capital ~ Trade and other payables
- Line 10: Net interest paid
- Line 11: Tax Paid
- Line 13: Net Capex
- Line 17: Equity dividends paid

App16 - Tangible Fixed assets

Changes since April 2019 Plan

This table has been updated to reflect our representation which affects lines: -

- Line 1: Fixed asset cost at 31 March ~ wholesale water resources
- Line 2: Fixed asset cost at 31 March ~ wholesale water network plus
- Line 6: Fixed asset cost at 31 March ~ residential retail
- Line 9: Fixed asset additions in the year ~ wholesale water resources
- Line 10: Fixed asset additions in the year ~ wholesale water network plus
- Line 14: Fixed asset additions in the year ~ residential retail
- Line 25: Fixed asset accumulated depreciation at 31 March ~ wholesale water resources
- Line 26: Fixed asset accumulated depreciation at 31 March ~ wholesale water network plus
- Line 30: Fixed asset accumulated depreciation at 31 March ~ residential retail
- Line 46: Average asset lives for all fixed assets ~ residential retail

App17 - Appointee revenue summary

Changes since April 2019 Plan

- This table contains no user inputs but has changed due to changes on source data from other data tables.

App18 - Share capital and dividends

Changes since April 2019 Plan

This table has been updated to reflect our representation which affects lines: -

- Line 1: Nominal share value
- Line 2: Closing number of ordinary shares

- Line 8: Ordinary dividend

App19 - Debt and interest costs

Changes since April 2019 Plan

This table has been updated to reflect our representation which affects lines: -

- Line 3: Index-linked debt (opening)
- Line 4: Fixed rate debt issued
- Line 6: Index-linked debt issued
- Line 7: Fixed rate debt repaid
- Line 10: Indexation of index-linked loans
- Lines 11 - 16

App24 - Input proportions

General Overview

This table reports forecast proportions of expenditure (operating and capital) for the following input price categories for each business unit: -

- Labour
- Energy
- Chemical
- Materials, Plant, Equipment
- Other

Operating Expenditure:

We build our operating expenditure forecast by cost types, hence the relevant cost type was allocated to one of the above categories.

Capital Expenditure:

We looked at each individual investment portfolio and assessed this against the above categories.

Changes since April 2019 Plan

- As a result of the update to WS1 (from our response to draft determination), we have updated the input proportions in App24.

App24a - Real price effects (RPEs) and productivity assumptions

General Overview

We have updated this table because we have changed values within our tables WS1, WS2 and App24 tables.

Our underlying assumptions about input price inflation are unchanged since our April 2019 submission and remains as below:

		2020/21	2021/22	2022/23	2023/24	2024/25
Labour cost inflation	%	2.40%	2.40%	2.40%	2.40%	2.40%
Energy cost inflation	%	3.20%	2.30%	-0.20%	1.20%	2.50%
Materials cost inflation	%	2.00%	2.00%	2.00%	2.00%	2.00%
Other (no real increase)	%	2.00%	2.00%	2.00%	2.00%	2.00%

Changes since April 2019 Plan

The difference in RPEs from our previous submission is due to the mix of inputs in App24 changing as a consequence of revision to cost projections in Tables WS1 and WS2. Our capital expenditure input price inflation assumption remains unchanged. As in previous submissions we have derived efficiency changes by comparing expenditure in any one year with the level of expenditure in the preceding year.

Efficiency improvements carry a positive sign in the table, whereas decreases in efficiency have negative signs.

App25 - PR14 reconciliation adjustments summary

Changes since April 2019 Plan

This table is calculated based on revised values in tables R10 and WS13. We have not changed any of the input values in section A.

App26 - RoRE Scenarios

In response to Ofwat interventions AFW.RR.C3 and AFW.RR.C4 we have made the following changes:

The following lines have changed because of changes to tables that impact the financial outputs generated when applied to the financial model: -

- Line 12: Water network plus total revenue impact ~ Low RoRE case (pre-tax adjustment)
- Line 15: Water resources total revenue impact ~ Low RoRE case (pre-tax adjustment)
- Line 23: Water network plus expenditure ~ High RoRE case (pre-tax adjustment)
- Line 27: Water resources expenditure ~ High RoRE case (pre-tax adjustment)
- Line 40: Water network plus expenditure ~ Low RoRE case (pre-tax adjustment)
- Line 44: Water resources expenditure ~ Low RoRE case (pre-tax adjustment)

- Line 57: Residential retail cost impact ~ High RoRE case (pre-tax adjustment)
- Line 60: Residential retail cost impact ~ Low RoRE case (pre-tax adjustment)
- Line 83: Water network plus financing impact ~ High RoRE case (pre-tax adjustment)
- Line 84: Water resources financing impact ~ High RoRE case (pre-tax adjustment)
- Line 88: Water network plus financing impact ~ Low RoRE case (pre-tax adjustment)
- Line 89: Water resources financing impact ~ Low RoRE case (pre-tax adjustment)

Line 46 (Uncertainty mechanisms impact (water resources) ~ Low RoRE case (pre-tax adjustment)) has been updated to reflect the changes applied to our representation regarding uncertainty mechanisms (Metaldehyde).

Sections I ODI for a high RORE case (pre-tax adjustment) and J ODI for a low RORE case (pre tax adjustment) (lines 65 – 76) have been updated to reflect the changes applied in our representation regarding ODIs.

App29 - Wholesale tax

Changes since April 2019 Plan

Block A, Lines 1 & 2

- We have updated the total balance of the Plant & Machinery pool to reflect the actual pool balance at 31 March 2018, the latest estimate of the pool balance at 31 March 2019 and the latest forecast of the pool balance at 31 March 2020.

Block B, Lines 7 & 8

- We have updated the total balance of the Long-Life Asset pool to reflect the actual pool balance at 31 March 2018, the latest estimate of the pool balance at 31 March 2019 and the latest forecast of the pool balance at 31 March 2020.

Block D, Lines 19,20,21,22,24,26,27,28,29 & 31

- We have updated the percentage allocation of new capital expenditure to reflect changes in AMP7 capital expenditure.
- The analysis of new capital expenditure for tax purposes follows the methodology previously agreed with Chandler KBS, our Capital Allowances Adviser.

Block F, Lines 69 & 70

- We have updated allowable depreciation on capitalised revenue expenditure to reflect changes in the amount of new capital expenditure qualifying for a tax deduction based on depreciation (Block D, Lines 24 and 31).
- We have also updated the apportionment of brought forward capitalised revenue expenditure between Water Resources and Water Network Plus, to reflect a small change in the RCV split. This does not change the total amount of allowable depreciation; however, it does change the allocation of allowable depreciation between Water Resources and Water Network Plus.

App32 - Weighted average cost of capital for the Appointee

This table has been updated to reflect the DD WACC as published with the Draft Determinations. This change affects lines: -

- Line 2: Total Market Return (TMR)
- Line 3: Risk free rate (RFR)
- Line 5: Debt beta
- Line 6: Raw equity beta for listed company comparator
- Line 7: Actual gearing of listed company comparator
- Line 11: Cost of embedded debt
- Line 13: Ratio of embedded to new debt
- Line 17: Tax (marginal rate of corporation tax) for 2025-30
- Line 19: Retail margin deduction
- Line 22: Total Market Return (TMR)
- Line 23: Risk free rate (RFR)
- Line 25: Debt beta
- Line 26: Raw equity beta for listed company comparator
- Line 27: Actual gearing of listed company comparator
- Line 39: Retail margin deduction

Table Category - Wholesale (WR, WS, WN)

Wn1 - Wholesale water treatment (explanatory variables).

Line 1: Total number of raw water transport stations

Changes since April 2019 Plan

- For our APR19 submission we changed our interpretation of this line based on the response to the Ofwat query AFW-DD-CA-003-V2 (regarding pumping stations) to include all sites which operate as dual function for both source pumping and raw water transfer stations. As a result of Ofwat query AFW-DD-CA-003-V2, we have revised our 2017-18 numbers and forecast as the number of raw water transport stations has increased significantly.

Line 2: Total capacity of raw water transport stations

Changes since April 2019 Plan

- For our APR19 submission we have aligned with the response to the Ofwat query AFW-DD-CA-003-V2 (regarding pumping stations) to include all sites which operate as dual function for both source pumping and raw water transfer stations. As a result of Ofwat query AFW-DD-CA-003-V2, we have revised our 2017-18 numbers and forecast as the kW rating of raw water transport stations has increased significantly.

Line 3: Average pumping head - Raw water transport

Changes since April 2019 Plan

- As per APR19 submission, percentage allocation of total lift at site level derived from telemetry output has been calculated using verified annual abstraction from 2018/19. The verified annual abstraction has increased by 21.3Mld (955.47Mld) from forecast pumping volume since the April 2019 Plan. The forecast for APH from 2019-20 onwards has also been adjusted following Ofwat's Draft Determination intervention on leakage (AFW.OC.A13) and hence revised post MLE DI forecasts.
- There is an increase in the weighted average 'raw water transport' APH since April 2019 Plan. This reflects the increased utilisation of the LANE Low pressure system and specifically the EAST High Lift raw water transport pumps.

Lines 13-21: Total water treated at all works

Changes since April 2019 Plan

- The definition for these lines was further reviewed during APR 19 and as a result of this exports were removed, imports were added, and adjustments post MLE were included in the calculation of the DI volumes used for these lines.
- In addition, following DD intervention on leakage (AFW.OC.A13), post MLE DI forecasts were also adjusted.
- Finally, LITT has been added since the April 2019 Plan as it was recommissioned late in 2018-19.

Line 35: Total number of GW4 works

Changes since April 2019 Plan

- 2018-19 shows an increase of one from our April submission as reported in APR19 as LITT was commissioned into supply on 27th March 2019.
- 2019-20 shows an increase of one from our April submission as MUSL has had UV installed which replaces MUSH which was classified as a GW5 treatment site (as MUSH had GAC and UV) and has now been decommissioned.
- The increase for 2019-20 is reflected throughout the following years which also show an increase of one.

Line 36: Total number of GW5 works

Changes since April 2019 Plan

- 2019-20 shows a decrease of one from the April submission as MUSH has now been decommissioned.
- The decrease for 2019-20 is reflected throughout the following years which also show a decrease of one.

Line 40: Average pumping head - Raw water treatment

Changes since April 2019 Plan

- As per APR 19 submission in July, percentage allocation of total lift at site level derived from telemetry output has been calculated using verified annual abstraction from 2018/19. The verified annual abstraction has increased by 21.3Mld

(955.47Mld) from forecast pumping volume since April 2019 Plan. The forecast for APH from 2019-20 onwards has also been adjusted following DD intervention on leakage (AFW.OC.A11) and consequently the revised post MLE DI forecasts. In addition, a further review of all tanks on treatment works identified that 14 tanks previously classified as treated water tanks were contact tanks and APH was revised accordingly.

- FULL and LITT sources have been added since our April 2019 Plan as they were commissioned into supply on 14th January 2019 and 27th March 2019 respectively.
- In alignment to OFWAT guidance associated transport lift has been removed from sites with onsite treatment. The associated lift has been allocated to water treatment.

Lines 41-48: WTWS in size band

Changes since April 2019 Plan

- The definition for these lines changed from proportion of maximum production output to proportion of DI.
- As per APR19, LITT has been added since the April 2019 Plan as it was commissioned into supply on 27th March 2019.

Lines 49-56: Proportion of Total DI by band

Changes since April 2019 Plan

- The definition for these lines was further reviewed during APR19 and as a result of this review, exports were removed, imports were added and adjustments post MLE were included in the calculation of the DI volumes used for these lines.
- In addition, following Ofwat's Draft Determination intervention on leakage (AFW.OC.A13), post MLE DI forecasts were also adjusted.
- As per APR19, LITT has been added since the April 2019 Plan as it was commissioned into supply on 27th March 2019.

Wn2 - Wholesale water distribution (explanatory variables

Line 9: Capacity of Booster Pumping Stations

Changes since April 2019 Plan

- The capacity of the booster stations has increased for all years in line with the changes detailed in line 31 below relating to Ofwat query AFW-DD-CA-003-V2. The forecast for 19/20 onwards is also reflective of the review of all treatment works tanks.

Line 10: Capacity of service reservoirs

Changes since April 2019 Plan

- The capacity of service reservoirs has been amended to reflect the removal of CHAL as detailed in line 32. The capacity of all reservoirs was also revalidated as part of APR19.
- The capacity of service reservoirs has increased by 0.322 Megalitres for 18/19 and this increase has been applied to subsequent years.

Line 12: Distribution Input

Changes from May 2019 Submission

- Distribution Input, Total Leakage and Distribution Losses have been changed to reflect the overall AMP7 spot leakage reduction of 24.25Ml/d as described within our Draft Determination on pages 13 and 23.

Lines 13-20: Proportion of Distribution Input

Changes since April 2019 Plan

- The definition for these lines was further reviewed during APR 19 and as a result of this review, exports were removed, imports were added, and adjustments post MLE were included in the calculation of the DI volumes used for these lines.
- In addition, following DD intervention on leakage (AFW.OC.A13), post MLE DI forecasts were also adjusted.
- As per APR19, LITT has been added since the April 2019 Plan as it was commissioned into supply on 27th March 2019.

Lines 25-26: Total leakage and Distribution losses

Changes from May 2019 Submission

- Distribution Input and therefore, Total Leakage and Distribution Losses have been changed to reflect the overall AMP7 leakage reduction of 24.25Ml/d as described within our Draft Determination on pages 13 and 23. Additionally, the leakage performance for 2017/18 has been restated since originally published to 177.2 Ml/d, as is presented in our Annual Performance Report, due to the Iver burst incident.

Line 31: Number of Booster Pumping Stations

General Overview

The number of booster pumping stations is now aligned with the Revised Treated Water Distribution Pumping Stations Guidance document provided by OFWAT in query AFW-DD-CA-003-V2 and the revised RAG 4.08 guidance in March 2019.

Changes since April 2019 Plan

- The number of booster stations has increased to incorporate borehole pumps that have a dual function (abstraction and distribution). In addition, a further review of all tanks on treatment works identified that several tanks previously classified as treated water tanks were contact tanks and the number of booster pumping stations for the forecast from 19/20 onwards was revised accordingly. As a result of Ofwat query AFW-DD-CA-003-V2, we have revised our 2017-18 numbers and forecast, as the number of booster pumping stations has increased significantly.

Line 32: Total number of service reservoirs

Changes since April 2019 Plan

- As per APR19, the number of service reservoirs has decreased by one for 18/19 and this change has been applied to subsequent years. CHAL was incorrectly classified as treated water but is actually part of the treatment process.

Line 42: Average pumping head - Treated water distribution

Changes since April 2019 Plan

- As per APR19 submission in July, percentage allocation of total lift at site level derived from telemetry output has been calculated using verified annual abstraction and supply from 2018/19. The cumulative total of Post MLE area DI for 2018/19 has increased by 7.87Ml/d (953.22Ml/d) from forecast since the April 2019 Plan. The forecast for APH from 2019-20 onwards has also been adjusted following Ofwat's Draft Determination intervention on leakage (AFW.OC.A13) and revised post MLE DI forecasts. In addition, a further review of all tanks on treatment works identified that fourteen tanks previously classified as treated water tanks were contact tanks and APH was revised accordingly.
- FULL and LITT sources have been added since the April 2019 Plan as they were commissioned into supply on 14th January 2019 and 27th March 2019 respectively.
- Work during the APR19 identified a number of sites with contact tanks previously considered as part of distribution APH. The APH for these sites was re-distributed from Distribution to Treatment. Further work identified three sites (ANTH, HATT, HOLY) where the lift from PSPM was incorrect. This was amended using telemetry and static head.

Wn3 – Wholesale revenue projections for the water network plus price control

Changes since April 2019 Plan

This table has been updated to reflect our representation which affects lines: -

- Lines 3 – 12
- Line 25: Grants and Contributions for water network operating expenditure 2019-20 have been revised from £8.921m to £7.461m as per our revised representation for Ofwat Query AFW-DD-PD-001.

Wn4 – Cost recovery for water network plus

Changes since April 2019 Plan

In response to Ofwat interventions AFW.RR.A6 and AFW.RR.C1 this table has been updated to reflect our representation which affects the following lines: -

- Line 1: "Natural" RCV run off rate ~ water network plus
- Line 3: Other adjustments to RCV run off rate ~ water network plus
- Line 6: "Natural" RCV run off rate ~ water network plus
- Line 8: Other adjustments to RCV run off rate ~ water network plus
- Line 11: "Natural" PAYG rate ~ water network plus
- Line 13: Other adjustments to PAYG rate ~ water network plus

Wn5 – Weighted average cost of capital for the water network plus control

Lines 2,3,5,6,9,12,13,15,16: Wholesale WACC- based on assumed notional structure (nominal)

Changes since April 2019 Plan

This table has been updated to reflect the DD WACC as published with the Draft Determinations, this change affects lines: -

- Line 2: Total Market Return
- Line 3: Risk Free Rate
- Line 5: Debt beta
- Line 6: Asset beta
- Line 9: Cost of debt ~ water network plus
- Line 12: Total Market Return
- Line 13: Risk Free Rate
- Line 15: Debt beta
- Line 16: Asset beta

Wr1 - Wholesale water resources (explanatory variables)

Lines 1-4: Water from resource types

Changes since April 2019 Plan

- The definition for these lines was further evaluated during APR19 and as a result of this evaluation, exports were removed, imports were added, and adjustments post MLE were included in the calculation of the DI volumes used for these lines.
- In addition, following Ofwat's Draft Determination intervention on leakage (AFW.OC.A13), post MLE DI forecasts were also adjusted.
- Finally, LITT has been added since April 2019 Plan as it was recommissioned in 2018-19.

Line 12: Number of groundwater works excluding managed aquifer recharge (MAR) water supply schemes

Changes since April 2019 Plan

- 2018-19 shows an increase of two from the April 2019 plan as reported in APR19. LITT was commissioned into supply on 27th March 2019 (earlier than anticipated), and FULL was recommissioned and put back into operation.
- This increase of one (FULL) for 2019-20 is reflected throughout the following years which have also increased by one.

Line 16: Total number of sources

Changes since April 2019 Plan

- This has increased by two in 2018-19, and by one from 2019-20 onwards as a result of the changes in Line 12.

Line 20: Total number of intake and source pumping stations

Changes since April 2019 Plan

- The number of source pumping stations increased by two for 18/19 due to the recommissioning of FULL for flood protection purposes and LITT commissioned into supply on 27th March 2019, earlier than initially forecast. Forecast figures have also been amended to reflect this.

Line 21: Total capacity of intake and source pumping stations

The capacity is now aligned with the Revised Treated Water Distribution Pumping Stations Guidance in query AFW-DD-CA-003 –V2 provided by OFWAT.

Changes since April 2019 Plan

- Capacity has decreased as a consequence of a proportion of the borehole pump kWs now being allocated to the booster capacity (where they have been identified as dual source pumps). Forecast figures have been amended to reflect the revised guidance as well as the increase in source pumping stations detailed in line 20. In addition, MUSL in 2019-20 is no longer classified as a raw water transport station as it now has treatment on site therefore a larger proportion of kW has now been allocated to the source pumping capacity accounting for the capacity increase in this year whilst numbers remain constant. As a result of Ofwat query AFW-DD-CA-003-V2, we have revised our forecast, as the number of intake and source pumping stations has increased significantly.

Line 23: Average pumping head Raw water abstraction

Changes since April 2019 Plan

- As per APR 19, percentage allocation of total lift at site level derived from telemetry output has been calculated using verified annual abstraction from 2018/19. The verified annual abstraction has increased by 21.3Mld (955.47Mld) from forecast pumping volume since April 2019 Plan. The forecast for APH from 2019-20 onwards have also been adjusted following Ofwat's Draft Determination intervention on leakage (AFW.OC.A13) and revised post MLE DI forecasts.
- FULL and LITT sources have been added since April 2019 Plan as they were commissioned into supply on 14 January 2019 and 27 March 2019 respectively.

Wr2 - Wholesale water resource opex

General Overview

This table provides further analysis of operating expenditure for water resources.

Changes since April 2019 Plan

Lines 1,2 and 3: Power, Income and Local Authority cumulo rates

- 2018/19 has been updated to reflect actual figures which are in line with our APR.

Lines 4, 5 and 7: Other Direct, Other Indirect and Historical Cost Depreciation

- 2018/19 has been updated to reflect actual figures which are in line with our APR.

- AMP7 has been updated to reflect our representation and Ofwat intervention on cost efficiency AFW.CE.A1.

Wr3 - Wholesale revenue projections for the water resources price control

Changes since April 2019 Plan

This table has been updated to reflect our representation which affect lines: -

- Lines 3 - 9
- Line 11: PR14 reconciliation revenue adjustments ~ wholesale water resources

Wr4 - Cost recovery for water resources

Changes since April 2019 Plan

In response to Ofwat interventions AFW.RR.A6 and AFW.RR.C1 this table has been updated to reflect our representation which affects the following lines: -

- Line 1: "Natural" RCV run off rate ~ water resources
- Line 3: Other adjustments to RCV run off rate ~ water resources
- Line 6: "Natural" RCV run off rate ~ water network plus
- Line 8: Other adjustments to RCV run off rate ~ water resources
- Line 11: "Natural" post 2020 investment run off rate ~ water resources
- Line 13: Other adjustments to post 2020 investment run off rate ~ water resources
- Line 16: "Natural" PAYG rate ~ water resources
- Line 18: Other adjustments to PAYG rate ~ water resources

Wr5 - Weighted average cost of capital for the water resources control

Lines 2,3,5,6,9,12,13,15 &16: Wholesale WACC- based on assumed notional structure (nominal)

Changes since April 2019 Plan

This table has been updated to reflect the DD WACC as published with the Draft Determinations, this change affects lines: -

- Line 2: Total Market Return
- Line 3: Risk Free Rate
- Line 5: Debt beta
- Line 6: Asset beta
- Line 9: Cost of debt ~ water network plus
- Line 12: Total Market Return
- Line 13: Risk Free Rate
- Line 15: Debt beta
- Line 16: Asset beta

Wr6 - Water resources capacity forecasts

Lines A1-4, H8-11:

Changes since April 2019 Plan

The line guidance for pre-2020 capacities asks for capacities based on sources 'forecast forwards to account for any changes'. We have assumed these changes to mean climate change and sustainability reductions.

We have included existing inter-company transfer volumes that are not typically classified as DO, as AFW.CA.A6 requested they were included within the pre-2020 capacity. Similarly, although Grafham requires a new treatment works to remove an existing constraint, the entire volumetric benefit of this source has been included within pre-2020 capacity.

We have included the transfer volumes from the renewal of existing bulk supply agreements within the pre-2020 capacity.

Wr7 - New water resources capacity ~ forecast cost of options beginning in 2020-25

Changes since April 2019 Plan

As a result of Ofwat query AFW-DD-CMI-001, we were to include all our water resource zones (WRZs) within WR7 even if we were not proposing the delivery of schemes in these zones. The purpose is for consistency. In our earlier submission, we only had options in WRZ3, WRZ4 & WRZ7. Whilst this is still the case, we have now also included the other WRZs so that they reflect the correct WRZ numbering. i.e. WRZ1 now correctly refers to Misbourne. This should remove the confusion which was the driver behind the initial query.

The only change to numbers in WR7 are for the inclusion of Abingdon Reservoir. We had previously included the 'post 2020 capacity' Ml/d values as 100Ml/d in error. However, the costs relate to 50Ml/d and therefore the 'post 2020 capacity' should reflect this volume instead from 2038-39.

WS1 - Wholesale water operating and capital expenditure by business unit

Lines 1, 2, 3,4: Operating expenditure

2018/19 has been updated with APR data.

Lines 7,12,13,14,15: Other operating expenditure

Changes since April 2019 Plan

- 2018/19 has been updated with APR data..
- Line A7 (Other operating expenditure) for the year 2019/20 has been revised from £70.266m to £68.806m as per our revised representation for Ofwat Query AFW-DD-PD-001 refers.
- AMP7 has been updated to reflect our representation which affects lines: -
  - Line 7: Other operating expenditure excluding renewals
  - Line 12: Maintaining the long-term capability of the assets ~ infra
  - Line 13: Maintaining the long-term capability of the assets ~ non-infra

- Line 14: Other capital expenditure ~ infra
- Line 15: Other capital expenditure ~ non-infra

Lines 20-21: Totex

Changes since April 2019 Plan

- 2018/19 has been updated with APR data..
- Line C20 (Grants and Contributions operating expenditure) for the year 2019/20 has been revised from £8.921m to £7.461m as per our revised representation for Ofwat Query AFW-DD-PD-001.

Lines 23-24: Cash Expenditure (excluding Atypical expenditure)

2018/19 has been updated with APR data.

WS1a – Wholesale water operating and capital expenditure by business unit including operating leases reclassified under IFRS16

General Overview

We have updated our figures where we accept Ofwat's interventions. On items in our Draft Determination representation, the figures reflect our representation arguments. Changes per line are summarised below.

Section A – Operating expenditure (excluding Atypical expenditure)

Lines 1, 2, 3,4: Operating expenditure

2018/19 has been updated with APR data.

Line 7: Other operating expenditure excluding renewals

Changes since April 2019 Plan

- 2018/19 has been updated with APR data.
- Line A7 (Other operating expenditure) for the year 2019/20 has been revised from £72.939m to £71.479m as per our revised representation for Ofwat Query AFW-DD-PD-001.
- AMP7 has been updated to reflect our representation which affects line 7 (Other operating expenditure excluding renewals).

Section B: Capital Expenditure (excluding Atypical expenditure)

Lines 12 – 16:

Changes since April 2019 Plan

- Update to AMP6 Year 4 forecasts to reflect our published accounts.
  - Lines 12, 13, 14, 15.
- Ofwat action AFW.CE.A1 – amendment of costs in response to Ofwat's cost efficiency challenges in the Draft Determination and areas of our representation.
  - Lines 12, 13, 14, 15.
- Ofwat action AFW.CE.A2 – revised the Portfolio to account for the larger allowance of £83.302m for "strategic regional solutions". We have apportioned some to capital

expenditure and some to operational expenditure to comply with the Regulatory Accounting Guideline.
    - Line 15.
- Line 16 (infrastructure network reinforcement) has been updated for 18/19 as per APR submission.

Section C: Totex

Lines 20-21:

Changes since April 2019 Plan

- 2018/19 has been updated with APR data.
- Line C20 (Grants and Contributions operating expenditure) for the year 2019/20 has been revised from £8.921m to £7.461m as per our revised representation for Ofwat, Query AFW-DD-PD-001.

Section D: Cash Expenditure (excluding Atypical expenditure)

Lines 23-24:

2018/19 has been updated with APR data.

WS2 - Wholesale water capital and operating enhancement expenditure by purpose

General Overview

We have updated our figures where we accept Ofwat's interventions. On items in our Draft Determination representation, the figures reflect our representation arguments. Changes per line are summarised below.

Section A: Enhancement expenditure by purpose ~ capital

Changes since April 2019 Plan

- Update to AMP6 Year 4 forecasts to match our published accounts.
    - Lines 1, 2, 4, 5, 6, 7, 8, 11, 13,14, 15, 17, 18, 19, 22.
- Ofwat action AFW.CE.A1 – amendment of costs in response to Ofwat's cost efficiency challenges in the Draft Determination and areas of our representation for AMP 7.
    - Lines 8, 10, 11, 14, 18, 21, 22, 24.
- Ofwat action AFW.CE.A1 – reallocation of £12.366m for four of our Supply 2040 schemes from line 8 to line 14 as directed by Ofwat in the Draft Determination (Ofwat's supply demand balance and resilience feeder models).
    - Lines 8, 14.
- Ofwat action AFW.CE.A2 – revised the Portfolio to account for the larger allowance of £83.302m for "strategic regional solutions". We have apportioned some to capital expenditure and some to operational expenditure to comply with the Regulatory Accounting Guideline.
    - Line 24.
- Draft final WRMP – revision of schemes to balance supply and demand.

- Lines 8, 10.

Section B: Enhancement expenditure by purpose ~ operating

Changes since April 2019 Plan

- Update to AMP6 Year 4 forecasts to reflect our published accounts.
  - Lines 49, 51, 57.
- Ofwat action AFW.CE.A1 – amendment of costs in response to Ofwat's cost efficiency challenges in the Draft Determination and areas of our representation.
  - Lines 49, 51, 57.
- Ofwat action AFW.CE.A1 – new line "Enhancement-Opex-implicit-allowance_ST_DD" to include Ofwat's implicit enhancement opex allowance (deduction) in accordance with its feeder model.
  - Line 63.
- Ofwat action AFW.CE.A2 – revised the Portfolio to account for the larger allowance of £83.302m for "strategic regional solutions". We have apportioned some to capital expenditure and some to operational expenditure to comply with the Regulatory Accounting Guideline.
  - Line 64.

WS2a - Wholesale water cumulative capital enhancement expenditure by purpose

General Overview

We have updated our figures where we acknowledge DD interventions. On items in our Draft Determination representation, the figures reflect our representation arguments. Changes per line are summarised below.

Section A: Enhancement expenditure by purpose ~ capital

Changes since April 2019 Plan

- Ofwat action AFW.CE.A1 – amendment of costs in response to Ofwat's cost efficiency challenges in the Draft Determination and areas of our representation.
  - Lines 8, 10, 11, 14, 18, 21, 22, 24.
- Ofwat action AFW.CE.A1 – reallocation of £12.366m for four of our Supply 2040 schemes from line 8 to line 14 as Draft Determination (Ofwat's supply demand balance and resilience feeder models).
  - Lines 8, 14.
- Ofwat action AFW.CE.A2 – revised the Portfolio to account for the larger allowance of £83.302m for "strategic regional solutions". We have apportioned some to capital expenditure and some to operational expenditure to comply with the Regulatory Accounting Guideline.
  - Line 24.
- Draft final WRMP – revision of schemes to balance supply and demand.
  - Lines 8, 10.

WS4 - Wholesale water other (explanatory variables)

Lines 4-5: Demand and supply side enhancements to the water balance

There have been no changes since our previous submission of WS4 in spring 2019. The demand management benefits reflect our revised dWRMP19 and the leakage profile in bedded within lines 4 and 5 also matches the April 2019 submission.

Lines 6-8: Energy Consumption

Changes since April 2019 Plan

- Lines 6 and 7 have an interdependency on the forecast average pumping head for raw water abstraction and water transport, and this forecast has been updated requiring a further modification to lines 6 and 7, due to the apportionment of energy usage changing.
- The 2017/18 values haven't changed, but the decimal places have been standardised to two.
- Both lines 6 and 7 have been updated from 2018/19 to 2024/25 resulting in line 8 summation updating too.
- The final numbers reported in the 18/19 APR have been included.

Line 12: Volume of leakage above or below the sustainable economic level

Changes since May 2019 submission

- We have revised the amount of leakage above or below the SELL value in line with the total leakage targets in APP2 which have changed since the May 2019 submission in line with the interventions within our Draft Determination and our restated leakage figure 2017/18 and 2018/19.

WS13 - PR14 wholesale revenue forecast incentive mechanism for the water service

General Overview

This table is populated from our revised WRFIM model which we have updated to be consistent with our representation, and accompanying, consistent revenue feeder model.

Our representation in response to AFW.PD.A5, reduces the value of our claim for additional revenue resulting from excess grants and contributions, by £4.640m. This is our calculation of the amount by which actual and forecast grants and contributions in 2018/19 and 2019/20 exceed the final determination expectation. This adjusts our claim to reflect the greater controllability of infrastructure charges since the 1st April 2018 reform to the charging rules. To enter the adjustment into the WRFIM model, we divided £4.640m by 5 to produce an annual adjustment figure of £0.928m.

We also revised our 2019/20 forecast of grants and contributions from £17.0m to £15.6m. This is a consequence of study of actual activity and receipts in the first three months of 2019/20.

We use these values to reduce the value of the line 'Recovered revenue – water' in the WRFIM model. The evolution of these figures is tabulated below.

Table: Valuations of Excess Grants and Contributions relative to FD14, included in WRFIM Feeder Model, £m outturn prices

	2015/16	2016/17	2017/18	2018/19	2019/20	Total
1st April 2019 Submission	0.310	4.137	4.079	5.927	7.417	21.870
15 July 2019 Update	0.310	4.137	4.079	6.756	7.416	22.698
31st August 2019 Update[1]	-0.766	3.157	3.235	5.840	5.091	16.557

WS18 - Explaining the 2019 Final Determination for the water service

Changes since April 2019 Plan

This table has been updated to reflect our represented plan which affects: -

- Line 9: Change in the average residential customer water bill over AMP 7.

Table Category - Retail (R)

R1 - Residential retail

General Overview

We confirm that entries in this table are consistent with our April 2019 Plan

R3 - Residential retail ~ further information on bad debt and customer services

General Overview

We confirm that entries in this table are consistent with our April 2019 Plan

R7 - Revenue and cost recovery for retail

This table has been updated to reflect our representation and DD intervention AFW.CE.A1 which affects lines: -

- Line 1: Total cost to serve
- Line 2: Net margin (excl tax and interest)
- Line 3: Current tax ~ residential retail
- Line 13: Revenue ~ Water ~ residential retail measured
- Line 14: Revenue ~ Water ~ residential retail unmeasured

R8 – Net retail margins

General Overview

We confirm that entries in this table are consistent with our April 2019 Plan

[1] Note: Our line, 31st August 2019 Update uses November to November inflation to index variances to FD14 to outturn prices, where Ofwat's WS13 table line 26 uses FYA indexation

R9 - PR14 reconciliation of household retail revenue

Line 7: Unmetered water-only customer

Changes since April 2019 Plan

We have changed the 16/17 value in this line to 667,225 in accordance with Ofwat query reference AFW-DD-PD-002 and to fulfil action AFW.PD.A3a.

Line 37-42: Modification factor

Changes since April 2019 Plan

We have changed the values in these cells so that they are truncated at 2 decimal places.

R10 - PR14 Service incentive mechanism

Changes since April 2019 Plan

Line 9: SIM forecast revenue adjustment at 2107-18 FYA CPIH deflated price base

We have changed the value from minus £8.562m to minus £12.482m, so that this cell is equal to Draft Determination Service Incentive Mechanism assessment (Ofwat action reference AFW.PD.C009).

Table Category – Additional Data Requested

AFW Table OC1

General Overview

The Ofwat guidance for this table states that: "Table OC1 should be used to record any changes to P10 and P90 data (levels and payments), taking the PC/ODI parameters set at Draft Determinations as fixed. Companies should not take into account any proposed changes to these parameters on which they are making representations when completing this table."

We have followed this guidance, and have entered data keeping the targets and rates from the Ofwat Draft Determination appendix located here: https://www.ofwat.gov.uk/wp-content/uploads/2019/07/PR19-draft-determinations-Affinity-Water-Outcomes-performance-commitment-appendix.pdf

- As stated in the table guidance, the OC1 values do not take into account any of our representations – they state the P10 and P90 values associated with the performance commitments set at Draft Determination, where these have been applied. We have

used all the reward and penalty rates from the Outcomes performance commitment appendix.

- We have noted a gap in definition of the P10/P90 Performance levels and Penalties, as the Decimal places for each line are set to different numbers, which would provide inconsistent penalty and reward payments (for example Supply Interruptions, which should be rounded to 0 decimal places). We have therefore set the P10 and P90 penalties and rewards payment at 3 decimal places for all performance commitments.

For OC1, we have applied P10 and P90 performance levels where this was practically feasible and have done so using one of the following methods;

A. We have used the P90 to PCL ratio provided by Ofwat for specific performance commitments where these were available (Supply Interruptions, Leakage, PCC and Low pressure) multiplied by the difference between P10 and P90 values to the performance commitment. These values are then added (P10) or subtracted (p90) to and from the Performance commitment set at Draft Determination. The below shows a working example for Leakage.

$$Leakage\ P90 = \left\{(IAP\ PCL - IAP\ P90) \times \left(\frac{PCL}{P90}\right)\right\} - DD\ PCL$$

Where DD PCL is the Draft Determination performance commitment level. Conversely, the P10 value for leakage is calculated as follows;

$$Leakage\ P10 = \left\{(IAP\ P10 - IAP\ PCL) \times \left(\frac{PCL}{P90}\right)\right\} + DD\ PCL$$

Which gives the values expressed for each year of Amp 7 in OC1, based on the performance commitment level expressed in the Draft Determination.

B. We have used the Difference between the P10 and P90 values used at IAP and applied the difference (addition for P10 and subtraction for P90) to the new performance commitment provided at Draft Determination. Below is an example using mains bursts.

$$Mains\ bursts\ P10 = (IAP\ P10 - IAP\ PCL) + DD\ PCL$$

In this case, the difference of 12.2 is applied to the new performance commitment level of 133.5, applied at Draft Determination, which gives 145.7.

C. We have used the P10 and/or P90 values provided at IAP, as these have not changed since our revised plan IAP figures (the performance commitment also stays the same).
D. We were unable to calculate either P10 or P90 values at IAP and thus have only provided either the corresponding P10 or P90 values in the template (for example on river restoration)
E. We did not set P10 or P90 values at IAP for this Performance commitment and did not add them at Draft Determination.
F. It was not practically feasible to calculate P10 and P90 values for this performance commitment at IAP or for this revised plan.

The below table depicts how we have applied the above calculation methodologies for each of the performance commitments, carefully noting the individual exceptions which are described in the commentary below the table. The methodologies applied are noted using the corresponding lettered bullet points described above.

Performance Commitment	Reference	P10 Values & Penalties	P90 Values & Rewards	Comments
Water quality compliance (CRI)	PR19AFW_W-A1	Methodology C	Methodology F	
Water supply interruptions	PR19AFW_W-D1	Methodology A	Methodology A	
Leakage (Megalitres per day, three-year average, absolute level)	PR19AFW_W-B1	Methodology A	Methodology A	
Leakage (Megalitres per day, three-year average, % reduction from 2019-20 baseline)	PR19AFW_W-B1	Methodology F	Methodology F	We did not calculate P10 and P90 values for percentage reduction, as this was not practically feasible.
Per capita consumption (Litres per person per day, three-year average, absolute level)	PR19AFW_R-B1	Methodology A	Methodology A	
Per capita consumption (Litres per person per day, three-year average, % reduction from 2019-20 baseline)	PR19AFW_R-B1	Methodology F	Methodology F	We did not calculate P10 and P90 values for percentage reduction, as this was not practically feasible.
Mains repairs	PR19AFW_W-D4	Methodology B	Methodology E	
Unplanned outage	PR19AFW_W-D3	Methodology B	Methodology E	
Risk of severe restrictions in a drought	PR19AFW_W-D2	Methodology F	Methodology F	
Priority services for customers in vulnerable circumstances	PR19AFW_R-N3	Methodology F	Methodology F	
Average time properties experience low pressure	PR19AFW_W-D5a	Methodology F	Methodology F	
Customers in vulnerable circumstances satisfied with our service (receiving financial help)	PR19AFW_R-C2	Methodology F	Methodology F	

Customers in vulnerable circumstances who found us easy to deal with (receiving financial help)	PR19AFW_R-C3	Methodology F	Methodology F	
Environmental innovation - delivery of community projects	PR19AFW_W-B2	Methodology E	Methodology C	At IAP we had recorded the number of projects cumulatively over the years - this is now being reported in units per year.
Reducing the total number of void properties by identifying false voids	PR19AFW_R-C4	Methodology C	Methodology C	
River restoration	PR19AFW_W-B3	Methodology C	Methodology C	
Abstraction reduction	PR19AFW_W-B4	Methodology B	Methodology B	We are accepting the abstraction reduction target of 27.33 Ml/D (green schemes only) by the end of Amp7, which forms the basis for our P10 and P90 values.
Number of sources operating under the Abstraction Incentive Mechanism	PR19AFW_W-B5	Methodology C	Methodology C	
Properties at risk of receiving low pressure	PR19AFW_W-D5b	Methodology A	Methodology A	
Number of occupied properties not billed (Gap sites)	PR19AFW_W-C2	Methodology C	Methodology E	
Unplanned interruptions to supply over 12 hours	PR19AFW_W-N1	Methodology E	Methodology E	
Customer contacts for discolouration	PR19AFW_W-N2	Methodology B	Methodology E	
BSI accreditation	PR19AFW_R-N4	Methodology C	Methodology C	
Cyber security & resilience	PR19AFW_R-N6	Methodology F	Methodology F	
Customers in vulnerable circumstances satisfied with our service (not receiving financial help)	PR19AFW_R-N7	Methodology F	Methodology F	
Customers in vulnerable circumstances who found us easy to deal with (not receiving financial help)	PR19AFW_R-N8	Methodology F	Methodology F	

Value for Money Survey	PR19AFW_R-N9	Methodology F	Methodology F	
WINEP Delivery	PR19AFW_NEP01	Methodology C	Methodology C	

Additional Notes

- We are committed to delivering a 20% reduction in leakage, from a baseline of 178.5Ml/d in three-year average terms, which forms the basis for the p10 and p90 calculations for the leakage 3-year average.
- The PCC P10 and P90 values are derived from our forecast PCC reduction profile, as submitted at IAP in Litres per person per day (which represents the same percentage reduction profile as the Outcome Performance Appendix) which is detailed in our Company response: outcome delivery AFW-OD . We also take note that reporting in litres per person per day is consistent with the incentives rates for PCC, measured in litres/person/day.

AFW Table OC2.1, OC2.2 and OC2.3

General

We have made entries in columns E to BM only where our representation proposes alterations to performance commitment parameters from those published in Draft Determination. In columns BO rightwards, we provide a full set of P10 and P90 information, as required in the guidance.

Row 12: Mains Repairs

The entries in this line are consistent with our proposed changes to the mains repair penalty rate, to reduce it from -£0.160m to -£0.096m per unit and to increase the performance commitment from 133.5 to 159.1 bursts per 1000/km. We also propose to introduce an underperformance collar at 200 mains repairs per 1000km and an outperformance payment cap at 126.2 bursts per 1000/km. Please see our associated Company response: outcome delivery AFW-OD document for our explanation of this rate.

Row 21: River Restoration

The Draft Determination sets this ODI as an underperformance only incentive. We propose instead that it also sets reward incentives. We propose a reward value of £0.215m per river restoration morphological project units delivered more than the performance commitment level.

Row 24; Properties at risk of receiving low pressure penalty rate

We are representing on the penalty rate, to reduce it from -£0.459m to -£0.105m per 10,000 properties at risk of receiving low pressure. Please see our associated Delivering Outcomes Representation document for our explanation of this rate.

Row 26: Unplanned interruptions to supply greater than 12 hours

We propose to change this ODI so that it is a reputational ODI only, so we have entered NFI in this row.

Row 27: Customer contacts for discolouration

We have entered Yes in the change PC column because we propose to remove this ODI and substitute a new performance commitment that includes other aesthetic parameters in addition to colour. Further information is given in the section on Row 48, below.

Row 29: Cyber security and resilience

We have entered Yes in the change PC column because we propose to change the name of the ODI from ‘Cyber security and resilience’ to ‘IT Resilience’ as further described in the section Row 49 below.

Row 32: Value for Money Survey

As stated in our Company response: outcome delivery AFW-OD, we are representing on the measurement of the VFM score, moving from a percentage satisfaction to a score based

satisfaction matrix, measured from 0 to 10. This remains a reputational ODI with no financial incentives.

	Units	2020/21	2021/22	2022/23	2023/24	2024/25
PC target	New PC Survey score	7.60	7.65	7.70	7.75	7.8

Row 48: Customer contacts per 1000 population for water quality (taste, odour and appearance)

We propose that the ODI for customer contacts for discolouration be extended to also include taste and odour, so this row of the table replaces the Draft Determination customer contacts for discolouration ODI with the extended measure. Discoloured water, taste, odour and appearance.

We propose a penalty and reward financial incentive, - £2.044m and £2.044m per contact per 1000 population. This is the same rate as for the customer contact indicator that is being replaced. We propose a collar and cap at 0.9 and 0.7 respectively, which also corresponds to our P10 and P90 levels. We propose that this ODI would be an in-period revenue only adjustment,100% allocated to the Network Plus business segment.

Row 49: IT Resilience

We propose to change the name of the Draft Determination ODI 'Cyber security and resilience' to 'IT Resilience' as we consider that this description better fits the constituents of the IT Incident Impact Score being incentivised by this ODI.

Block (Columns BG to CG)

For most ODIs, we are not proposing changes from the Draft Determination, so the P10 and P90 values and financial amounts are identical to those recorded in table OC1. There are differences in the following rows of the table which arise because we are making representations on these items:

- Row 12 – Mains repairs
- Row 21 – River restoration
- Row 24 – Properties at risk of receiving low pressure
- Row 27 – Customer contacts for discolouration

AFW Table OC3

General Overview

The Ofwat guidance for this table states that: "Table OC3 should be used to record any updates to ODI rate input parameters (such as marginal benefit or marginal cost values), as compared to the post-IAP submissions that companies provided in either February or April

2019. These data were previously provided as part of companies' App1a data table submissions."

We have followed this guidance.

Rows 6-33, Column I: Triangulated WTP/Marginal benefits estimate

We have not changed any of our WTP/Marginal benefits estimates since the IAP response, so these cells are left blank.

Rows 6-33, Column J: Marginal cost

We have not changed any of our marginal costs estimates since the IAP response, so these cells are left blank.

Rows 6-33, Column K: Number of households

We are not restating the number of households we entered in our IAP response, so these cells are left blank.

Rows 6-33, Column L: Totex sharing rate (customer share)

We are not changing the Totex sharing rate Ofwat proposed in the Draft Determination,[2] so these cells are left blank.

Row 39, Column I: IT Resilience Triangulated WTP/Marginal benefits estimate

This is a reputational ODI, so this cell shows "N/A".

Rows 39, Column J: IT Resilience Marginal cost

This is a reputational ODI, so this cell shows "N/A".

Row 39, Column K: IT Resilience Number of households

This is the number of households we entered in our Revised Plan.

Row 39, Column L: IT Resilience Totex sharing rate (customer share)

This is a reputational ODI, so this cell shows "N/A".

Row 39, Column I: Customer contacts for Water Quality (Discolouration, Taste, Odour and Appearance) Triangulated WTP/Marginal benefits estimate

The rate uses an alternative calculation to the standard ODI calculation, so this cell shows "N/A".

Rows 39, Column J: Customer contacts for Water Quality (Discolouration, Taste, Odour and Appearance) Marginal cost

The rate uses an alternative calculation to the standard ODI calculation, so this cell shows "N/A".

Row 39, Column K: Customer contacts for Water Quality (Discolouration, Taste, Odour and Appearance) Number of households

This is the number of households we entered in our Revised Plan.

[2] Page 24, https://www.ofwat.gov.uk/wp-content/uploads/2019/07/PR19-draft-determinations-Affinity-Water-draft-determination-1.pdf

Row 39, Column L: Customer contacts for Water Quality (Discolouration, Taste, Odour and Appearance) Totex sharing rate (customer share)

This is the Totex sharing rate Ofwat proposed in the Draft Determination.[2]

AFW Table OC4

General Overview

The Ofwat guidance for this table states that: “Table OC4 should be used to provide shadow reporting data across all applicable bespoke performance commitments for the 2018-19 reporting year. We appreciate that this won't be feasible for some commitments (e.g. scheme specific PCs), and we don't expect companies to provide data in these cases.”

We have populated all the cells in this template, including the light grey cells, as we wish to ensure that Ofwat has the most up-to-date figures for all of the AMP7 PCs.

We have stated our Shadow Reporting figures for the following PCs:

- Water supply interruptions
- Leakage (Megalitres per day, three-year average, absolute level)
- Leakage (Megalitres per day, three-year average, % reduction from 2019-20 baseline)
- Per capita consumption (Litres per person per day, three-year average, absolute level)
- Per capita consumption (Litres per person per day, three-year average, % reduction from 2019-20 baseline)
- Mains repairs
- Unplanned outage
- Risk of severe restrictions in a drought
- Priority services for customers in vulnerable circumstances

For the following PCs we have reported our 2018-19 actuals, as we understand that these are on the same basis as the PCs for AMP7:

- Water quality compliance (CRI)
- Number of sources operating under the Abstraction Incentive Mechanism
- Properties at risk of receiving low pressure
- Unplanned interruptions to supply over 12 hours
- Value for Money Survey
- IT Resilience
- Customer contacts for Water Quality (Discolouration, Taste, Odour and Appearance)

We have reported our shadow performance for the following PCs, which we are also proposing to change in OC2.3:

- Customer contacts for discolouration
- Cyber security & resilience

The following PCs are new for AMP7, so we do not have shadow reporting data:

- Customers in vulnerable circumstances satisfied with our service (receiving financial help)
- Customers in vulnerable circumstances who found us easy to deal with (receiving financial help)
- Environmental innovation - delivery of community projects
- Customers in vulnerable circumstances satisfied with our service (not receiving financial help)
- Customers in vulnerable circumstances who found us easy to deal with (not receiving financial help)
- BSI accreditation
- WINEP Delivery

The following PCs are cumulative over each AMP, so we do not have shadow reporting data for them:

- River restoration
- Abstraction reduction

We do not have data for the following PCs:

- Average time properties experience low pressure
- Number of occupied properties not billed (Gap sites)
- Reducing the total number of void properties by identifying false voids

Developer Services Data Request

General Overview

Following on from the discussions in the Q&A call with Ofwat on the 16th of August, the following points must be noted when reviewing the data tables:

- Format updated in line with the revised request issued by Ofwat on 16/08/2019 and follow up note issued 20/08/2019.
- AMP7 amounts are reported in 2017-18 FYA (CPIH deflated) price base with other amounts being reported in Outturn (nominal).
- Diversions costs are reported on a gross basis (i.e. before income is netted off).
- Figures are consistent with those stated in our Annual Performance Reviews (APR) for the relevant year.
- Line definitions are consistent with those provided by Ofwat on the template.

The Wastewater data table is intentionally left blank.

Section A1: (Diversions expenditure – water)

Diversions expenditure reported as all s185 (Line A1) due to other categories being negligible (NRSWA and non-s185).

Section A2: (Diversions income – water)

Diversions income reported as all s185 (Line A2 5) due to other categories being negligible (NRSWA and non-s185).

Section B: (Connections volume data – water)

Connection volumes reported in Line B9 are per App28 Line A1 (April 2019 submission).

Connection volumes for Line B10 are unchanged from App28 Line A2 (April 2019 submission).

Line B12 volumes are bulk connections to a NAV. These are in addition to our residential and business connection numbers reported above. This includes NAVs serving the following developments: Martello Lakes (bulk connection completed during 2015/16), Bishops Stortford Silver Leys and Bidwell developments (bulk connections completed during 2018/19). Since the beginning of the 2018/19 financial year we have seen a steady increase in the number of applications where the proposal is for the development to be served by a NAV. We expect this level of interest to continue through the remainder of AMP6 and into AMP7 resulting in a sustained level of bulk supply connections.

It is our experience that where a developer appoints a Self-Lay Provider (SLP) to carry out works on their development, this would most commonly consist of all the contestable works for that development. It is highly unusual for us to carry out any of the contestable works where an SLP is appointed. This relationship is demonstrated in the figures reported in Lines B14, B15 and B16.

Section C: (Properties volume data - water)

Property volumes reported in Lines C18 and C19 are per App28 Lines A1 and A2 (April 2019 submission) and our response to AFW-DD-CA-002 (submitted 02/05/2019). In our response to that query we stated that "our definition of connections is interchangeable with properties", there is no change in this approach.

New property numbers served by NAVs have not been accounted for within the property volumes previously provided for App28. Historical property volumes served by NAVs have been estimated due to incomplete data at the time of submission. In terms of a forecast, actual volumes from year-to-year can be difficult to predict as they are linked to economic factors outside our control which can impact the phasing of construction programmes.

Property volumes reported for Lines C25, C26 and C27 follow the logic set out in Section B above. That is, we would expect that a developer asks us to carry out all or none of the contestable works for an individual development, rather than a proportion.

Section D: (Total cost of contestable activities (£m)

Costs for all contestable activities for connections and requisitions carried out by us are also as per our response to AFW-DD-CA-002 except for 2019/20 which is per our revised representation for AFW-DD-PD-001. AMP5 amounts are as per our management accounting records.

Costs reported within Lines D32, D33 and D34 (Asset Value Payments) are per our response to AFW-DD-CA-002 with the addition of AMP5 amounts from management accounting records. Asset Value Payments to SLPs will cease from April 2020 in line with the changes to the Charging Rules for New Connection Services published by Ofwat. During AMP7 amounts will be offset against infrastructure charges.

Amounts are consistent with our approach set out in Sections above, in that developers would ordinarily instruct us to carry out all or none of the contestable works for an individual development. Amounts on Line D31 are lower than those reported in AFW-DD-CA-002 Line B7 by a value equal to the non-contestable element of the works.

Section E: (App28 data (£m))

AMP6 and AMP7 Data

Amounts are taken from our App28 submission in April 2019.

AMP5 Data

The annual totals for infrastructure charge and requisitioned mains are calculated using our management accounting records which provide the total value of all receipts for each financial year of AMP5 by category.